LG AIRCONDITIONER ENGINEERING PRODUCT DATA BOOK

MULTI F / MULTI F DX



5CIM0-06C(5CIM0-06B)

LG
Life's Good

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Introduction

Preface

New era brings the more sophisticated and advanced buildings which in turn demands for specialized and optimized direct expansion air conditioning systems. Also energy efficiency, environment friendly, low noise and low maintenance are the features which are essential for these systems.

As a part of vertical integration LG makes all the key components in house, which gives us an edge to LG to make better and latest technology products with best quality in optimized time.

MULTI F™ and MULTI F DX™ systems are equipped with inverter technology and R410A refrigerant which is perfect solution to various installation locations.

This Engineering product data book incorporates information about the product itself, and installation, designing for MULTI F™ and MULTI F DX™ system.

The comprehensive study of this book will improve your knowledge about the system and its application in detail.

LG Electronics Inc.

Air Conditioning Division

Publication history

Pub. No.	Frequency	Category	Type	Product name	Refrigerant	Outdoor units	Notes	Published in
5CIM0-03B	50Hz	CAC	Multi Inverter	Multi F Multi F DX	R410A	All models	Added Europe model names	Jul.2005
5CIM0-04A						All models	New edition of EPDB - Engineering data addition - Design and installation guideline addition	Feb.2006
5CIM0-04G						A4UW246FA1	Added outdoor unit model	Apr.2007
5CIM0-05A						-	Added indoor unit(B1/B2 chassis) models AMNH09GB1A1[MB09AHL N11] AMNH12GB1A1[MB12AHL N11] AMNH18GB2A1[MB18AHL N21] AMNH24GB2A1[MB24AHL N21]	Aug.2007
5CIM0-06A						A2UW146FA0 [FM14AH UE0] A2UW146FA1 [FM15AH UE1] A2UW146FA2 [FM15AH UL2] A2UW186FA0 [FM18AH UE0] A4UW246FA0 [FM25AH UE0] A4UW306FA0 [FM30AH UE0] A6UW406FA0 [FM40AH UH0] A7UW486FA0 [FM48AH UY0] A8UW566FA0 [FM56AH UY0] A7UW428FA0 [FM41AH UH0] A8UW488FA0 [FM49AH UH0] A9UW548FA0 [FM57AH UH0]	- Deleted outdoor unit models. - Deleted indoor unit models : SQ/SR/ST/TC/TE/TF/TD/BG chassis AMNH076DZ*0[MC07AH* NZ0] AMNH096DU*0[MC09AH* NU0] AMNH126DU*0[MC12AH* NU0] AMNH186D3*0[MC18AH* N30] AMNH246D3*0[MC24AH* N30] AMNH09GAF10[MA09AH1 NF0] AMNH12GAF10[MA12AH1 NF0] AMNH09GDE*0[MC09AH* NE0] AMNH07GDE*0[MC07AH* NE0] AMNH12GDE*0[MC12AH* NE0]	Jan.2008
						A2UW146FA3 [FM15AH UL3] A3UW216FA3 [FM21AH UE3] A4UW246FA3 [FM25AH UE3] A4UW276FA3 [FM27AH UE3] A5UW306FA3 [FM30AH UE3] A5UW406FA3 [FM38AH UH3] A7UW406FA3 [FM40AH UH3] A8UW486FA3 [FM48AH U33] A9UW566FA3 [FM56AH U33] A7UW428FA3 [FM41AH U33] A8UW488FA3 [FM49AH U33] A9UW548FA3 [FM57AH U33]	- Added outdoor unit models. - Added indoor unit models : AMNH18GD8*1[MC18AH* N81] AMNH24GD8*1[MC24AH* N81] AMNH09GAF*1[MA09AH* NF1] AMNH12GAF*1[MA12AH* NF1] AMNH07GDE*1[MC07AH* NE1] AMNH09GDE*1[MC09AH* NE1] AMNH12GDE*1[MC12AH* NE1]	

Step by step MULTI F / MULTI F DX system selection process (reference)

(1) **Calculate or obtain the maximum heat load for the area(s) to be air conditioned**

(2)

Indoor unit specifications .....p. 64, 81, 97, 120, 146, 161, 175, 195

Outdoor unit specifications .....p. 208, 307, 356

Capacity coefficient factor .....p. 346, 404

Air flow and temperature distributions .....p. 74, 89, 115, 125, 141, 155

(3) **Selection of BD unit and branch** .....p. 49, 309, 358, 567

(4)

Selection of the control system

Control wiring method.....p. 577

Description of devices .....p. 577

(5)

Electrical wiring

Electrical characteristics .....p. 303, 350, 408

Field wiring .....p. 304, 351, 409

⚠CAUTION

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is installed close to the sea shore, direct exposure to the sea breeze should be avoided and choose an outdoor unit with anti-corrosion treatment.

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1. Model line up

1.1 Indoor units

Category	Type	Chassis		Model names Capacity, kW(kBtu/h) 2.05 (7)	2.64 (9)	3.52 (12)	5.28 (18)	7.03 (24)
Wall mounted			S4	AMNH07GD4L0 [MS07AH N40]	AMNH09GD4L0 [MS09AH N40]	AMNH12GD4L0 [MS12AH N40]		
			S5				AMNH18GD5L0 [MS18AH N50]	AMNH24GD5L0 [MS24AH N50]
ART COOL			SP1		AMNH096AP*1 [MA09AH* NP1]	AMNH126AP*1 [MA12AH* NP1]		
			SF		AMNH09GAF*1 [MA09AH* NF1]	AMNH12GAF*1 [MA12AH* NF1]		
ART COOL Mirror			SZ	AMNH07GDZ*0 [MC07AH* NZ1]				
			SU		AMNH09GDU*0 [MC09AH* NU1]	AMNH12GDU*0 [MC12AH* NU1]		
			S3				AMNH18GD3*0 [MC18AH* N31]	AMNH24GD3*0 [MC24AH* N31]
			SE	AMNH07GDE*1 [MC07AH* NE1]	AMNH09GDE*1 [MC09AH* NE1]	AMNH12GDE*1 [MC12AH* NE1]		
			S8				AMNH18GD8*1 [MC18AH* N81]	AMNH24GD8*1 [MC24AH* N81]
Ceiling cassette	1-way		TC1		AMNH09GTCC0 [MT09AH NC1]	AMNH12GTCC0 [MT11AH NC1]		
	4-way		TE1		AMNH09GTEF0 [MT10AH NE1]	AMNH12GTEF0 [MT12AH NE1]	AMNH18GTEF0 [MT18AH NE1]	
			TH					AMNH24GTHF0 [MT24AH NH0]

* indicates color of panel(B:Blue, C:Cherry, D:Wood, M:Metal, R:Mirror, V:Silver, W:White wood, E:Red, G:Gold, H:White Silver, 1:KISS)

Category	Type	Chassis		Model names Capacity, kW(kBtu/h)				
				2.05 (7)	2.64 (9)	3.52 (12)	5.28 (18)	7.03 (24)
Ceiling concealed duct	High static pressure		BH				AMNH186BHA0 [MB18AH NH0]	AMNH246BHA0 [MB24AH NH0]
	Low static pressure		BT		AMNH096BTG0 [MB09AHL NT0]	AMNH126BTG0 [MB12AHL NT0]	AMNH186BTG0 [MB18AHL NT0]	
	Low static pressure (Slim)		B1		AMNH09GB1A0/1 [MB09AHL N10/1]	AMNH12GB1A0/1 [MB12AHL N10/1]		
			B2				AMNH18GB2A0/1 [MB18AHL N20/1]	AMNH24GB2A0/1 [MB24AHL N20/1]
	Built in		BP		AMNH096BPA0 [MB09AHB NP0]	AMNH126BPA0 [MB12AHB NP0]		
Ceiling & floor			VE		AMNH096VEA0 [MV09AH NE0]	AMNH126VEA0 [MV12AH NE0]		
			VB				AMNH186VBA0 [MV18AH NB0]	AMNH246VBA0 [MV24AH NB0]

1.2 Outdoor units

MULTI F™

Heat pump		A2UW146FA3 [FM15AH UL3]	A2UW166FA0 [FM17AH UL0]	A2UW166FA1 [FM17AH UL1]	A3UW186FA0 [FM19AH UE0]
No. of connectable indoor units		Max.2			Max.3
Total capacity index of connectable indoor units	kW	6.15	7.03		8.79
	kBtu/h	21	24		30
Power supply		1ø, 220-240V, 50Hz			
Chassis					

Heat pump		A3UW216FA3 [FM21AH UE3]	A4UW246FA3 [FM25AH UE3]	A4UW276FA3 [FM27AH UE3]
No. of connectable indoor units		Max.3	Max.4	
Total capacity index of connectable indoor units	kW	9.67	11.4	12.0
	kBtu/h	33	39	41
Power supply		1ø, 220-240V, 50Hz		
Chassis				

Heat pump		A5UW306FA3 [FM30AH UE3]	A5UW406FA3 [FM38AH UH3]
No. of connectable indoor units		Max.5	
Total capacity index of connectable indoor units	kW	14.1	15.2
	kBtu/h	48	52
Power supply		1ø, 220-240V, 50Hz	
Chassis			

MULTI F DX (1 phase)

Heat Pump		A7UW406FA3 [FM40AH UH3]	A8UW486FA3 [FM48AH U33]	A9UW566FA3 [FM56AH U33]
No. of connectable indoor units		Max.7	Max.8	Max.9
Number of BD units to be connected			Max.2	
Total capacity index of connectable indoor units	kW	15.2	18.5	21.4
	kBtu/h	52	63	73
Power supply			1ø, 220-240V, 50Hz	
Chassis				

MULTI F DX (3 phase)

Heat Pump		A6UW368FA0[FM37AH UE0]	A7UW428FA3[FM41AH U33]	A8UW488FA3[FM49AH U33]
No. of connectable indoor units		Max.6	Max.7	Max.8
Number of BD units to be connected			Max.2	
Total capacity index of connectable indoor units	kW	13.5	15.8	18.5
	kBtu/h	46	54	63
Power supply			3ø, 380-415V, 50Hz	
Chassis				

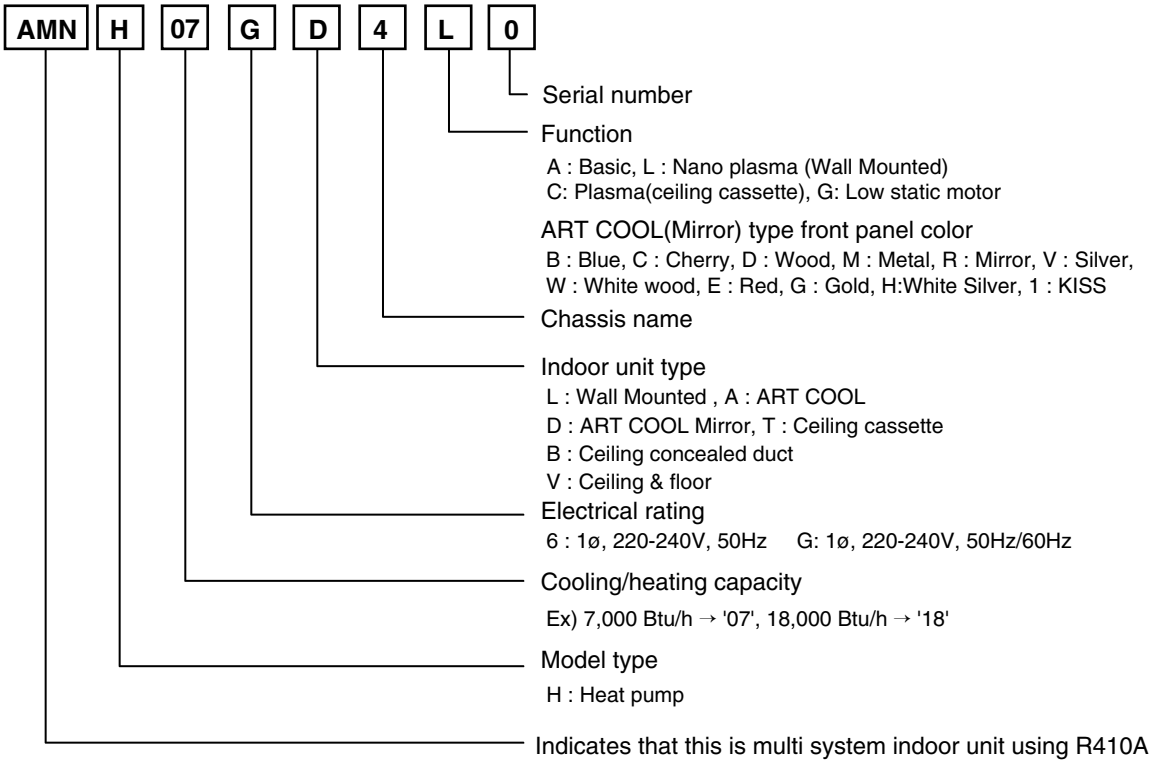
Heat Pump		A9UW548FA3[FM57AH U33]
No. of connectable indoor units		Max.9
Number of BD units to be connected		Max.3
Total capacity index of connectable indoor units	kW	21.4
	kBtu/h	73
Power supply		3ø, 380-415V, 50Hz
Chassis		

1.3 BD(Branch distributor) units

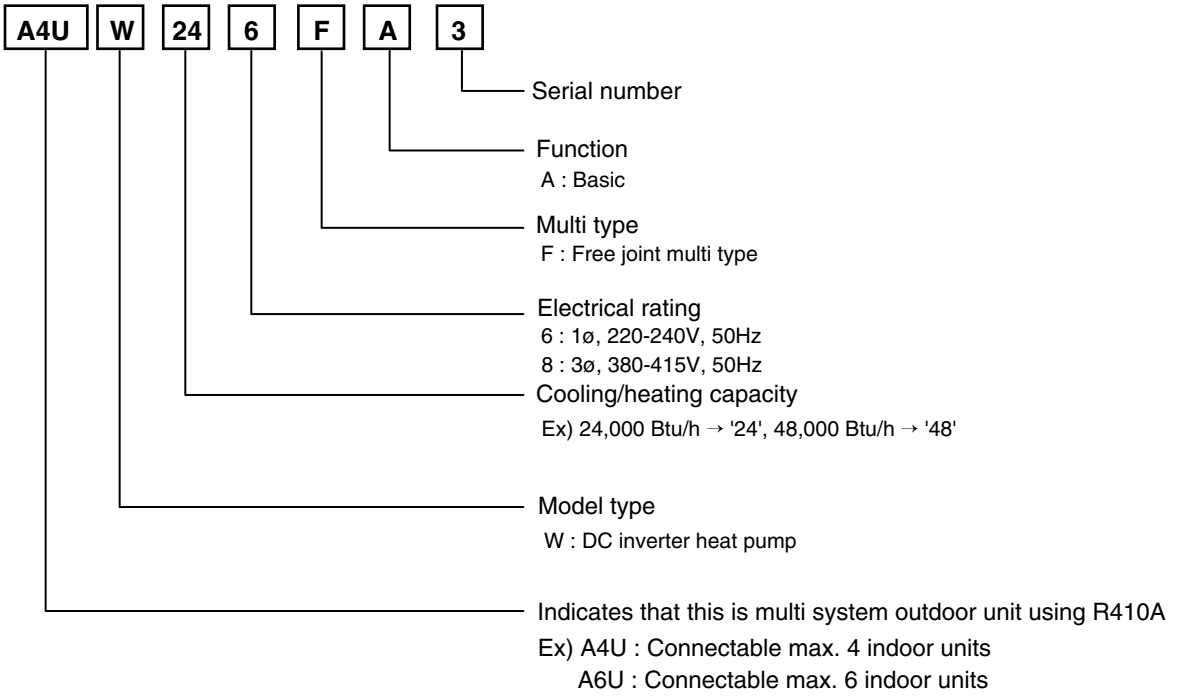
No. of connectable indoor units		Max. 2		Max. 3		Max. 4
Model name		PMBD3620	PMBD7220	PMBD3630	PMBD7230	PMBD3640
Connectable indoor unit capacity	kW	2.05~7.03	5.28~10.6	2.05~7.03	5.28~10.6	2.05~7.03
	kBtu/h	7~24	18~36	7~24	18~36	7~24
BD unit						

2. Nomenclature

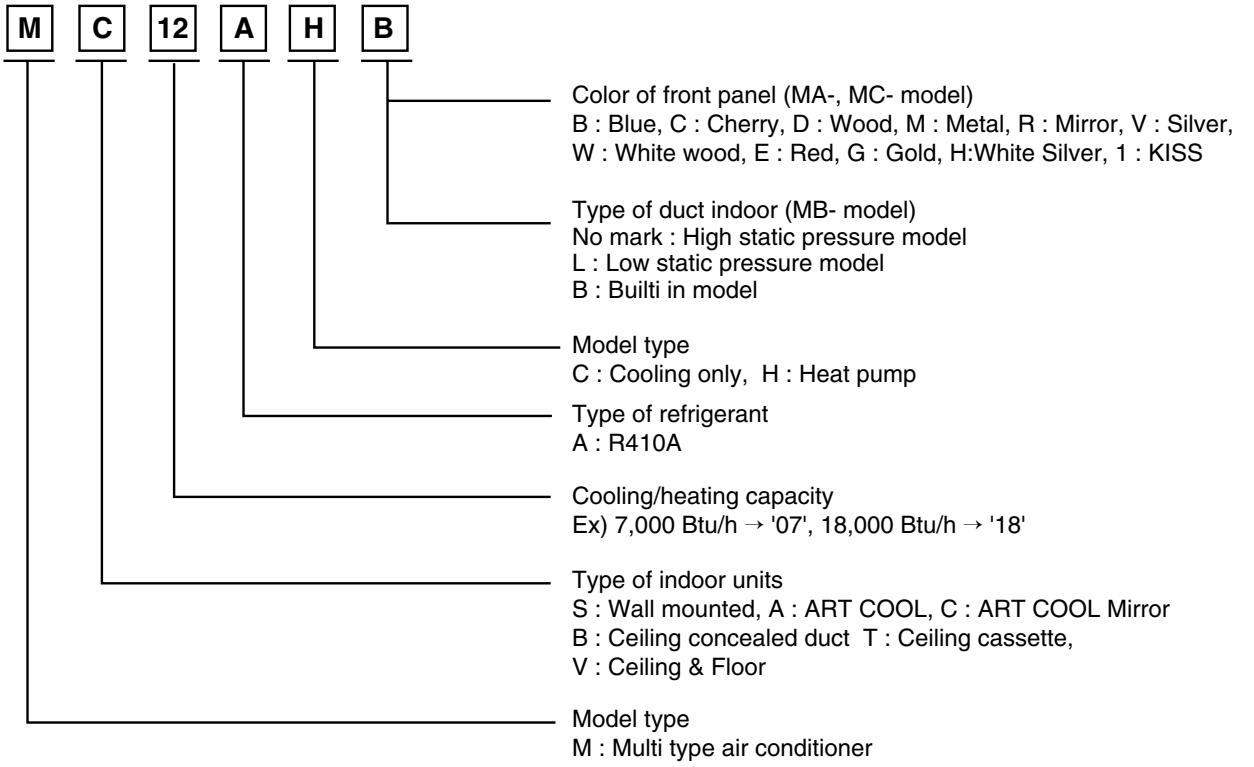
2.1 Indoor units(Global)



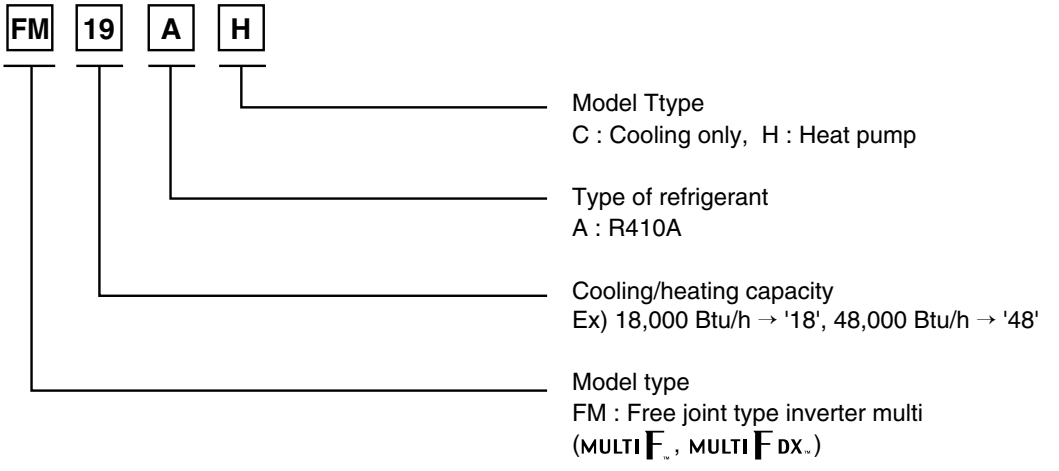
2.2 Outdoor unit(Global)



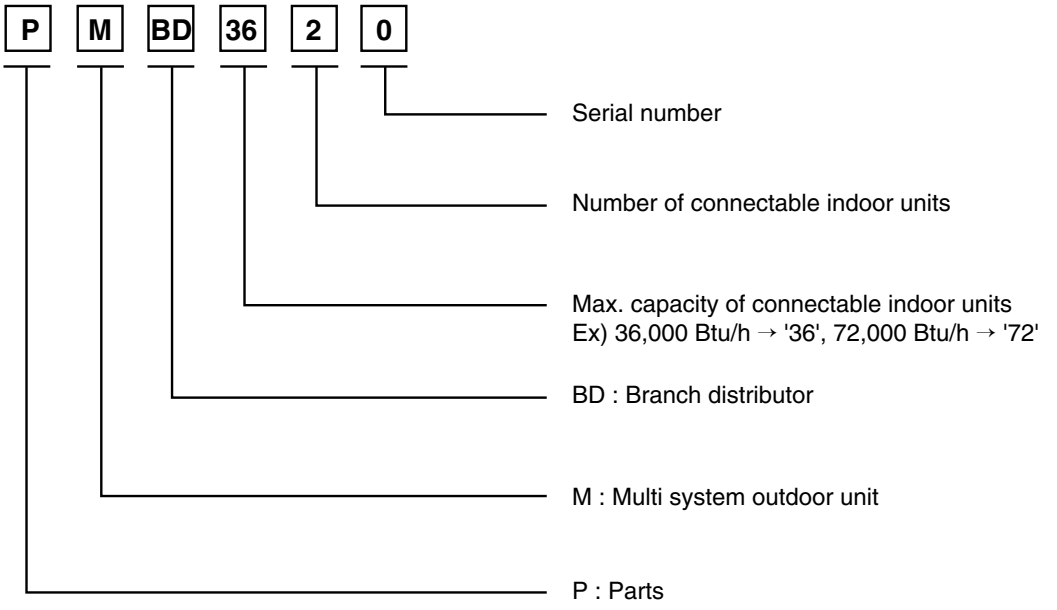
2.3 Indoor units(Europe)



2.4 Outdoor unit(Europe)



2.5 BD units(Global)



3. Appearance

3.1 Indoor units

• Wall Mounted

AMNH07GD4L0 [MS07AH N40]
AMNH09GD4L0 [MS09AH N40]
AMNH12GD4L0 [MS12AH N40]
AMNH18GD5L0 [MS18AH N50]
AMNH24GD5L0 [MS24AH N50]



• ART COOL

AMNH096AP*1 [MA09AH* NP1]
AMNH126AP*1 [MA12AH* NP1]



AMNH09GAF*1 [MA09AH* NF1]
AMNH12GAF*1 [MA12AH* NF1]



• Ceiling Cassette 1-way

AMNH09GTCC0 [MT09AH NC1]
AMNH12GTCC0 [MT11AH NC1]



• Ceiling Cassette 4-way

AMNH09GTEF0 [MT10AH NE1]
AMNH12GTEF0 [MT12AH NE1]
AMNH18GTEF0 [MT18AH NE1]
AMNH24GTHF0 [MT24AH NH0]



• ART COOL Mirror

AMNH07GDZ*0 [MC07AH* NZ1]
AMNH09GDU*0 [MC09AH* NU1]
AMNH12GDU*0 [MC12AH* NU1]
AMNH18GD3*0 [MC18AH* N31]
AMNH24GD3*0 [MC24AH* N31]



AMNH07GDE*1 [MC07AH* NE1]
AMNH09GDE*1 [MC09AH* NE1]
AMNH12GDE*1 [MC12AH* NE1]
AMNH18GD8*1 [MC18AH* N81]
AMNH24GD8*1 [MC24AH* N81]



• Ceiling Concealed Duct – High static pressure

AMNH186BHA0 [MB18AH NH0]
AMNH246BHA0 [MB24AH NH0]



• Ceiling Concealed Duct – Low static pressure

AMNH096BTG0 [MB09AHL NT0]
AMNH126BTG0 [MB12AHL NT0]
AMNH186BTG0 [MB18AHL NT0]



AMNH09GB1A0/1[MB09AHL N10/1]
AMNH12GB1A0/1[MB12AHL N10/1]
AMNH18GB2A0/1[MB18AHL N20/1]
AMNH24GB2A0/1[MB24AHL N20/1]



• Ceiling Concealed Duct – Built in

AMNH096BPA0 [MB09AHB NP0]
AMNH126BPA0 [MB12AHB NP0]



• Ceiling & Floor

AMNH096VEA0 [MV09AH NE0]
AMNH126VEA0 [MV12AH NE0]
AMNH186VBA0 [MV18AH NB0]
AMNH246VBA0 [MV24AH NB0]



* indicates color of panel(B:Blue, C:Cherry, D:Wood, M:Metal, R:Mirror, V:Silver, W:White wood, E : Red, G : Gold, H:White Silver, 1 : KISS)

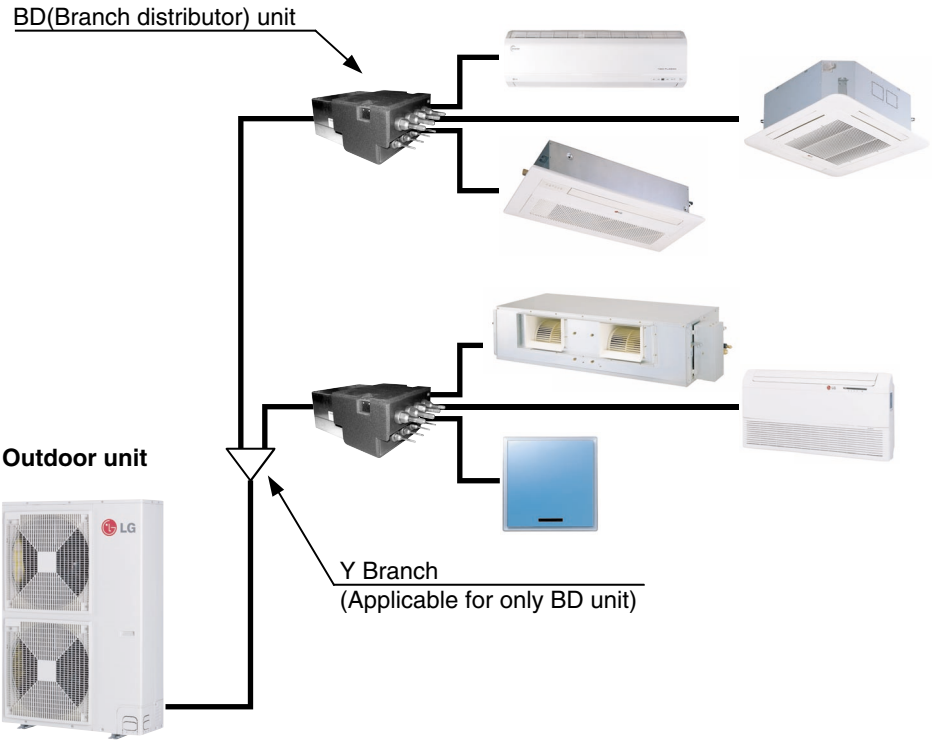
3.2 Outdoor units

LG multi system provides various indoor units such as wall mounted, ART COOL, ART COOL Mirror, ceiling cassette, ceiling concealed duct and ceiling & floor.

MULTI F™



MULTI F DX™



Outdoor units & branch distributor

MULTI F



A2UW146FA3 [FM15AH UL3]
A2UW166FA0 [FM17AH UL0]
A2UW166FA1 [FM17AH UL1]



A3UW186FA0 [FM19AH UE0]
A3UW216FA3 [FM21AH UE3]



A4UW246FA3 [FM25AH UE3]



A4UW276FA3 [FM27AH UE3]



A5UW306FA3 [FM30AH UE3]



A5UW406FA3 [FM38AH UH3]

MULTI F DX (1 phase)



A7UW406FA3 [FM40AH UH3]



A8UW486FA3 [FM48AH U33]
A9UW566FA3 [FM56AH U33]

MULTI F DX (3 phase)



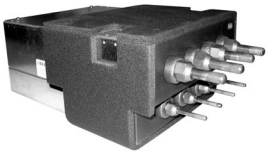
A6UW368FA0 [FM37AH UE0]



A7UW428FA3 [FM41AH U33]
A8UW488FA3 [FM49AH U33]
A9UW548FA3 [FM57AH U33]

Accessories

• **BD unit (Branch distributor unit)**



PMBD3620
PMBD3630
PMBD3640
PMBD7220
PMBD7230

• **Y-Branch(PMBL3620/PMBL5620)**



3.3 Control system(standard)

These controllers will be provided with the respective indoor units.

Type	Individual controller	Applicable model
Wired remote controller		Ceiling cassette
		Ceiling concealed duct
Wireless remote controller		Wall mounted Ceiling & floor
		ART COOL ART COOL Mirror

4. List of functions

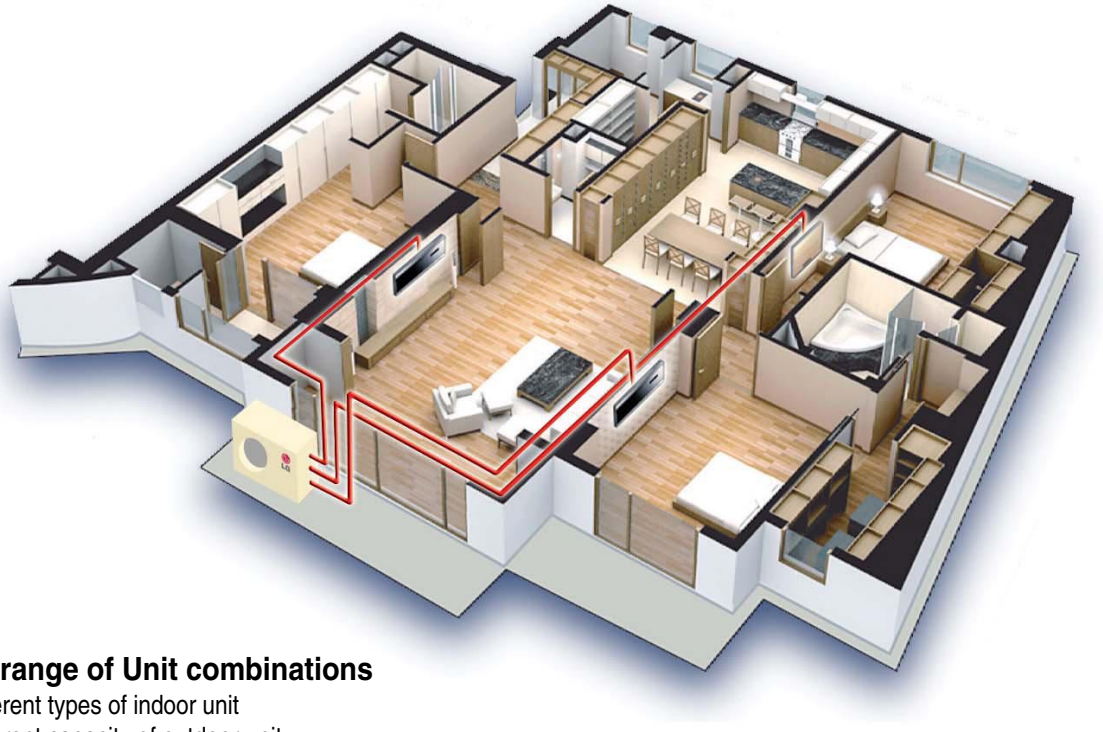
Category	Function	Wall Mounted	ART COOL	ART COOL Mirror	Ceiling Cassette 1-way	Ceiling Cassette 4-way	Ceiling & Floor	Ceiling Concealed Duct (High static)	Ceiling Concealed Duct (Low static)	Ceiling Concealed Duct (Built in)
Air flow	Air supply outlet	1	3	1	1	4	1	1	1	1
	Airflow direction control(left & right)	Manual	-	Auto	X	X	Manual	-	-	-
	Airflow direction control(up & down)	Auto	Auto	Auto	Auto	Auto	Auto	-	-	-
	Auto swing(left & right)	Manual	X	O	X	X	X	-	-	-
	Auto swing(up & down)	O	O	O	O	O	O	-	-	-
	Airflow steps(fan / cool / heat)	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3	4 / 5 / 4	4 / 5 / 4	3 / 4 / 3	3 / 3 / 3	3 / 3 / 3	3 / 3 / 3
	Chaos swing	O	O	O	X	X	X	X	X	X
	Chaos wind(auto wind)	X	X	X	O	O	O	O	O	O
	Jet cool(Power wind)	O	O	O	O	O	O	X	X	X
	Swirl wind	X	X	X	X	O*	X	X	X	X
Air purifying	Deodorizing filter	O	O	O	X	X	X	X	X	X
	Plasma air purifier	Option	Option	Option	Option	Option	Option	Accessory	-	-
	Prefilter(washable / anti-fungus)	O	O	O	O	O	O	O	O	O
Installation	Drain pump	-	-	-	O	O	-	Accessory	Accessory	Accessory
	E.S.P. control	-	-	-	-	-	-	O	O	O
	Electric heater(operation)	-	-	-	-	-	-	-	-	-
	High ceiling operation	-	-	-	O	O	-	-	-	-
Reliability	Hot start	O	O	O	O	O	O	O	O	O
	Self diagnosis	O	O	O	O	O	O	O	O	O
	Soft dry operation	O	O	O	O	O	O	O	O	O
Convenience	Auto changeover	X	X	X	X	X	X	X	X	X
	Auto cleaning	O*	O*	O*	X	X	X	X	X	X
	Auto operation(artificial intelligence)	O	O	O	O	O	O	O	O	O
	Auto restart operation	O	O	O	O	O	O	O	O	O
	Child lock	-	-	-	O	O	-	O	O	O
	Energy-Saving Cooling Mode	X	O*	O*	X	X	X	X	X	X
	Forced operation	O	O	O	O	O	X	X	X	X
	Group control	-	-	-	O	O	-	O	O	O
	Sleep mode	O	O	O	-	-	O	-	-	-
	Timer(on/off)	O	O	O	O	O	O	O	O	O
	Timer(weekly)	-	-	-	O	O	X	O	O	O
	Two thermistor control	-	-	-	O	O	X	O	O	O
Individual control	Standard wired remote controller	-	-	-	O	O	X	O	O	O
	Deluxe wired remote controller	-	-	-	Accessory	Accessory	X	Accessory	Accessory	Accessory
	Simple wired remote controller	-	-	-	Accessory	Accessory	X	Accessory	Accessory	Accessory
	Wired remote controller(for hotel use)	-	-	-	Accessory	Accessory	-	Accessory	Accessory	Accessory
	Wireless remote controller(simple)	Accessory	Accessory	Accessory	Accessory	Accessory	-	Accessory	Accessory	Accessory
	Wireless LCD remote control	O	O	O	Accessory	Accessory	O	Accessory	Accessory	Accessory
CAC network function	General central controller (Non LGAP)	X	X	X	X	X	X	X	X	X
	Dry contact	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory**	Accessory**	Accessory**
	Central control(LGAP)	O	O	O	O	O	O	O	O	O
	PDI(power distribution indicator)	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory
	PI 485	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory
Special function kit	CTIE	X	X	X	X	X	X	X	X	X
	Zone control	X	X	X	X	X	X	Accessory	Accessory	Accessory
Others	Thermistor	-	-	-	Accessory	Accessory	Accessory	Accessory	Accessory	Accessory

* Some of functions are slightly different depending upon models, refer individual function table on "PART 2. indoor units".
** For ceiling concealed duct models, auto-run function of dry contact is not applicable.
O : Applied X : Not applied – : No relation
Option : Model name & price are different according to options, and assembled in factory with main unit.
Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

5. Features

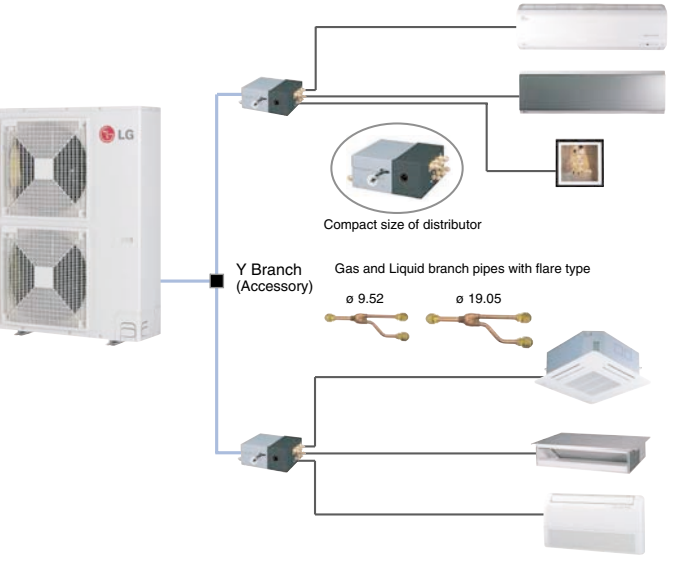
5.1 What's MULTI F / MULTI F DX

An LG Multi Split system is an advanced air conditioning system of superior quality that has the ability to operate at different temperatures and fan speeds in individual rooms. The multi split system can be made up of large indoor units for living areas and small indoor units for bedrooms, all operated from the one common outdoor unit. LG has wide range of indoor units available including the stylish ART COOL units. Conventional split units as well as ceiling cassettes and ceiling concealed ducted units.



- **Wide range of Unit combinations**
  12 different types of indoor unit
  13 different capacity of outdoor unit
- **Energy Saving**
  With LG inverter technology
- **Top Class Energy Lebel**
  With the PFC &the sine wave control technology and powerful BLDC compressor
- **Advanced Controls**
  Various controls available,such as remote controller, Central controller and Control on the internet
- **Max. 145m Long Piping**
  The FM56AH supports a piping length of up to 145m and high elevation of up to 30m for more flexibility in installation
- **High diversity of indoor unit combination**
  ART COOL, Wall Mounted, Ceiling &Floor, Ceiling Cassette, Ceiling Concealed Duct types.
- **Powerful operation**
- **Compact Size & ez Installation**

Multi FDX System

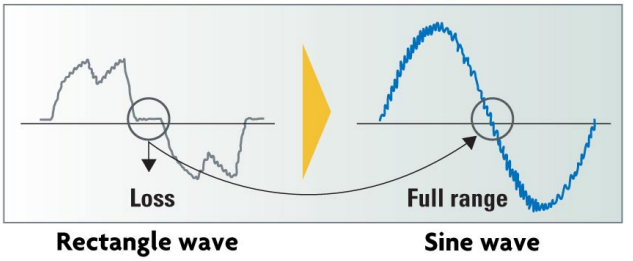


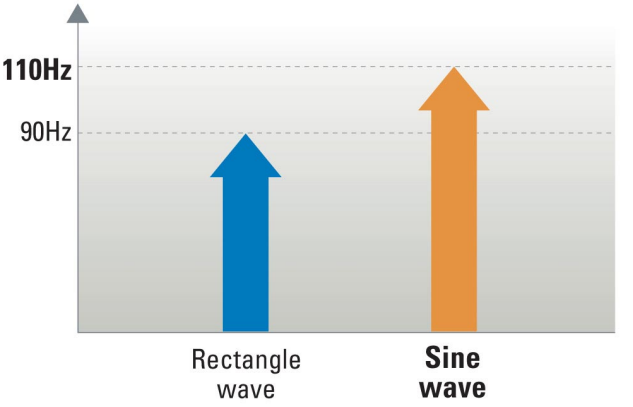
5.2 Technologies

Step-up Inverter by the PFC &the Sine Wave Control Technology (PFC :Power Factor Correction)

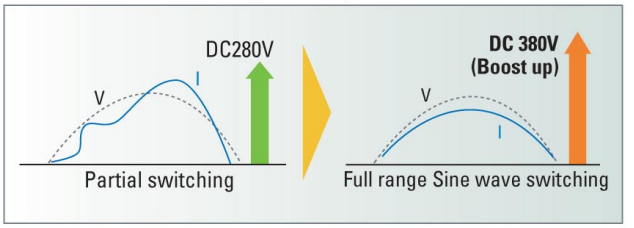
The LG air conditioner is manufactured using the PFC and the sine wave technology.By the PFC contorl,raising the operating voltage from the existing DC 280V to DC 380V can be done.Thereby,it makes the operation smooth in a high-frequency area. The sine wave control enables soft operation in a low frequency area,thereby expanding the product's operating range.This also markedly improves the product's energy efficiency.

- **Sine wave Control in BLDC Compressor**

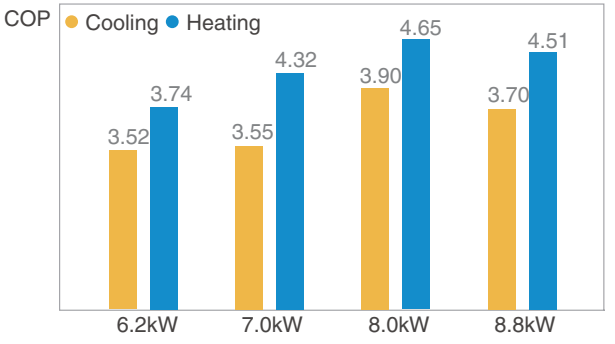




- **PFC Control in Power Input**

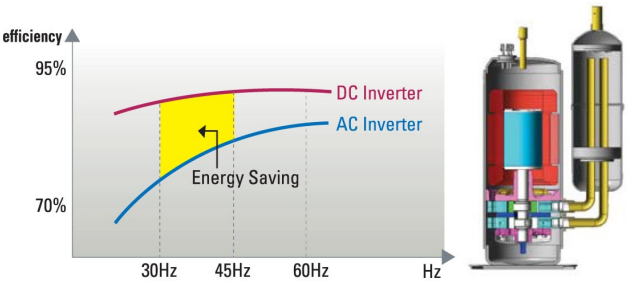


Top Class COP



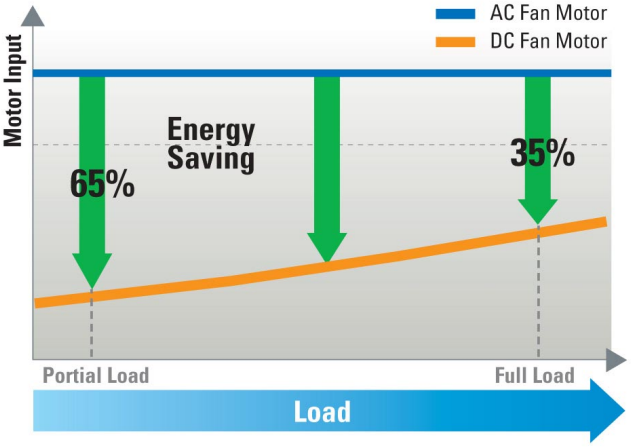
Powerful BLDC Compressor

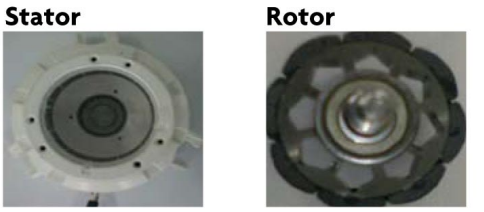
The LG inverter air conditioner comes with a BLDC compressor that uses a strong neodymium magnet.Its compressor thus has improved efficiency compared with AC inverter.Notably,during partial-load operation (30-45 Hz),the efficiency of the compressor motor of the LG inverter air conditioner increases, as opposed to the existing AC motors,and the subcooling effects of the bigger condensor will further increase the product's energy consumption efficiency.



BLDC Fan

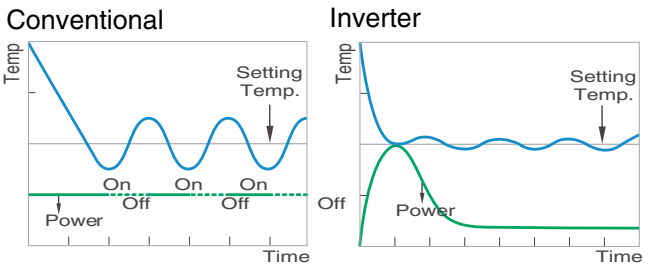
BLDC fan motor offers additional energy saving in operating mode.Compared with AC motors,BLDC fan motor can cut energy by 35%at full velocity.AC motor is operating at full velocity only,but BLDC Motor can change velocity according to load.Energy efficiency levels at low velocities in particular have been improved by 65%.





More Comfortable

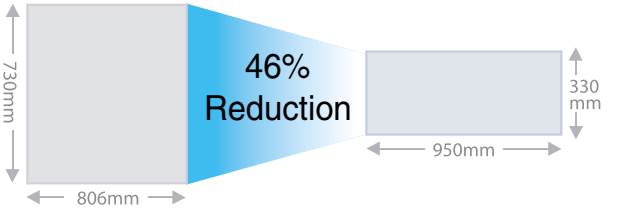
When the air conditioner is initially activated to either heating or cooling, the compressor will operate at maximum speed to reach the desired temperature quickly. Once the desired temperature is achieved, unlike conventional air conditioners that turn the compressor on and off, LG inverter units adjust and constantly vary the compressor speed to maintain the desired temperature with minimal fluctuation to ensure that your comfort is not compromised.



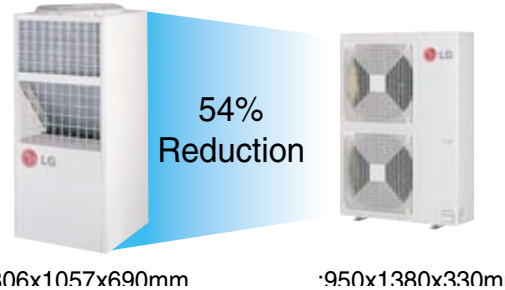
Slim &Compact Size

Easy &efficient installation of outdoor unit will provide the best solution for small offices and shops.

• **Foot Print Area (Top View)**



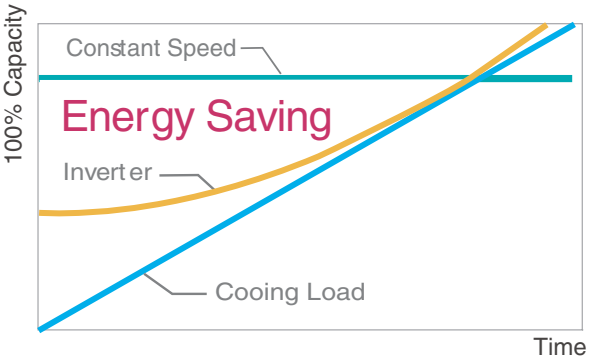
• **Volume**



806x1057x690mm 950x1380x330mm

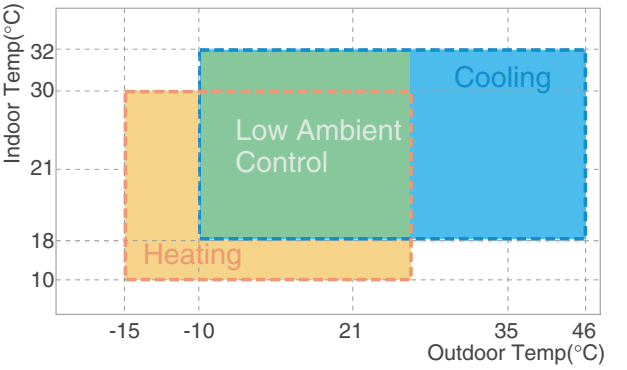
More Economical

An inverter's capacity will fluctuate in order to match the air-conditioning requirements, so an inverter can be more energy efficient than a constant speed compressor.



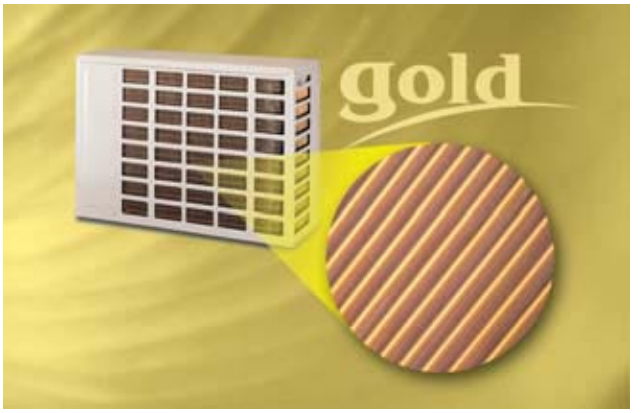
More Powerful

With a wider operation range for heating and cooling, the inverter is able to operate in even the most extreme outdoor temperatures. An inverter compressor can also operate faster than conventional air conditioners thus allowing the air conditioner to reach the set temperature faster and brings you comfort sooner.

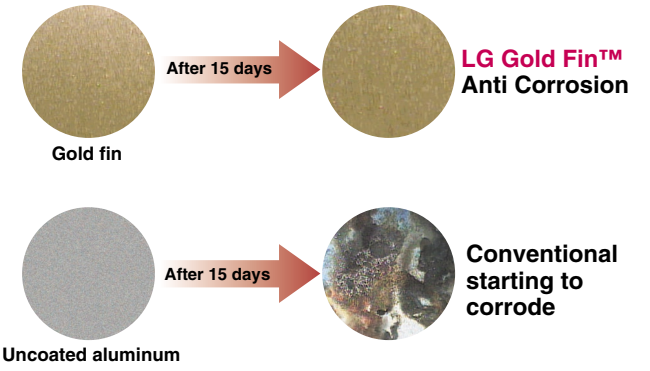


Anti Corrosion Gold Fin™

- LG 's Outdoor Heat Exchanger is coated with a golden anti-corrosive epoxy treatment on the aluminum coil to minimized corrosion. This maintains heat transfer properties of the coil for an extended time where as non-Gold Fin coils progressively lose efficiency due to surface corrosion. Standard on every LG air conditioner, this assists in areas suffering from pollution or near the ocean where the unit may subjected to higher levels of salt.



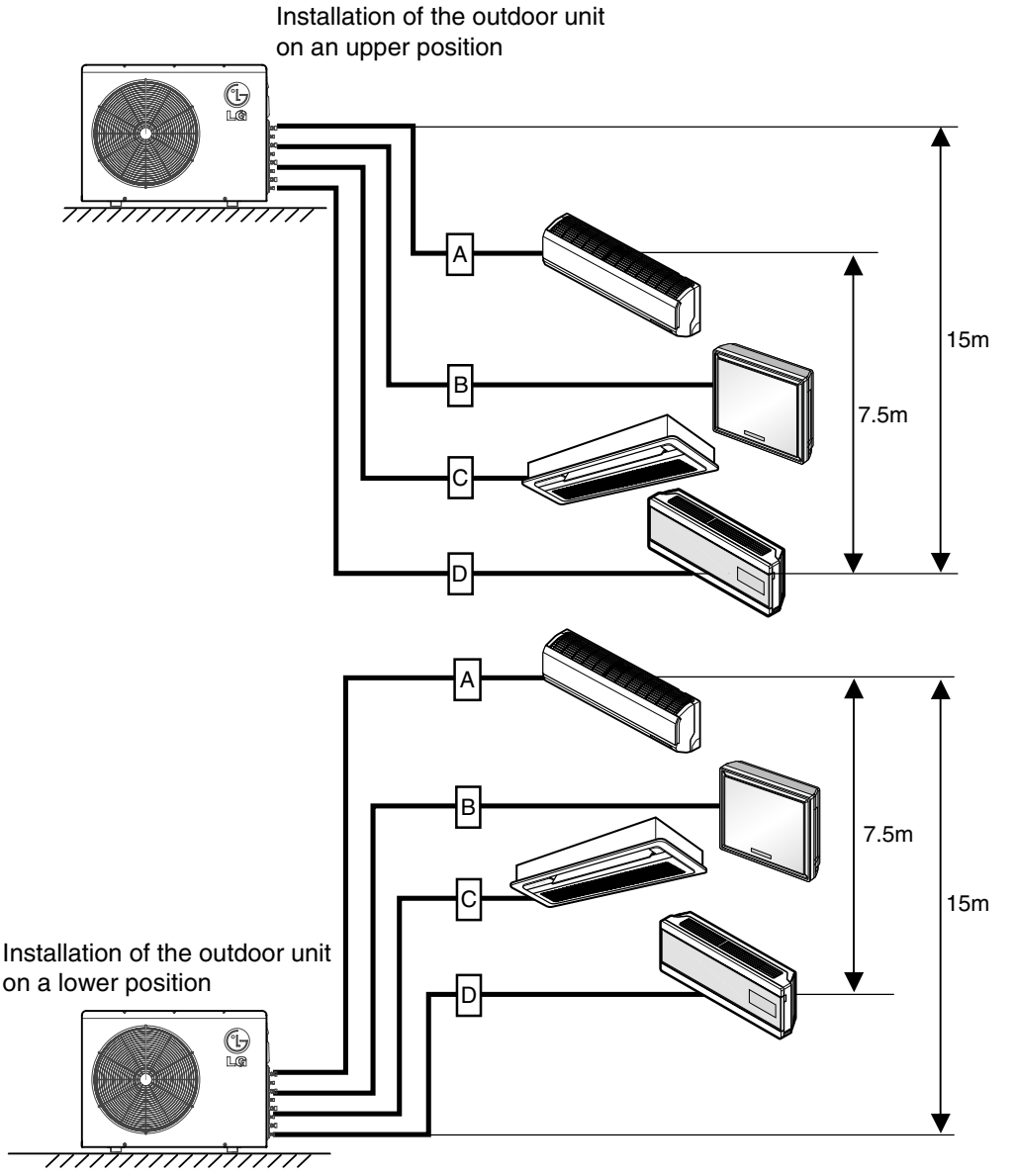
[Salt spray test for 15 days]



Long and high elevation piping

• Multi F and Multi F DX is an inverter multi system, which multi indoor units are connected to one outdoor unit. It saves energy greatly and makes the installation easy.

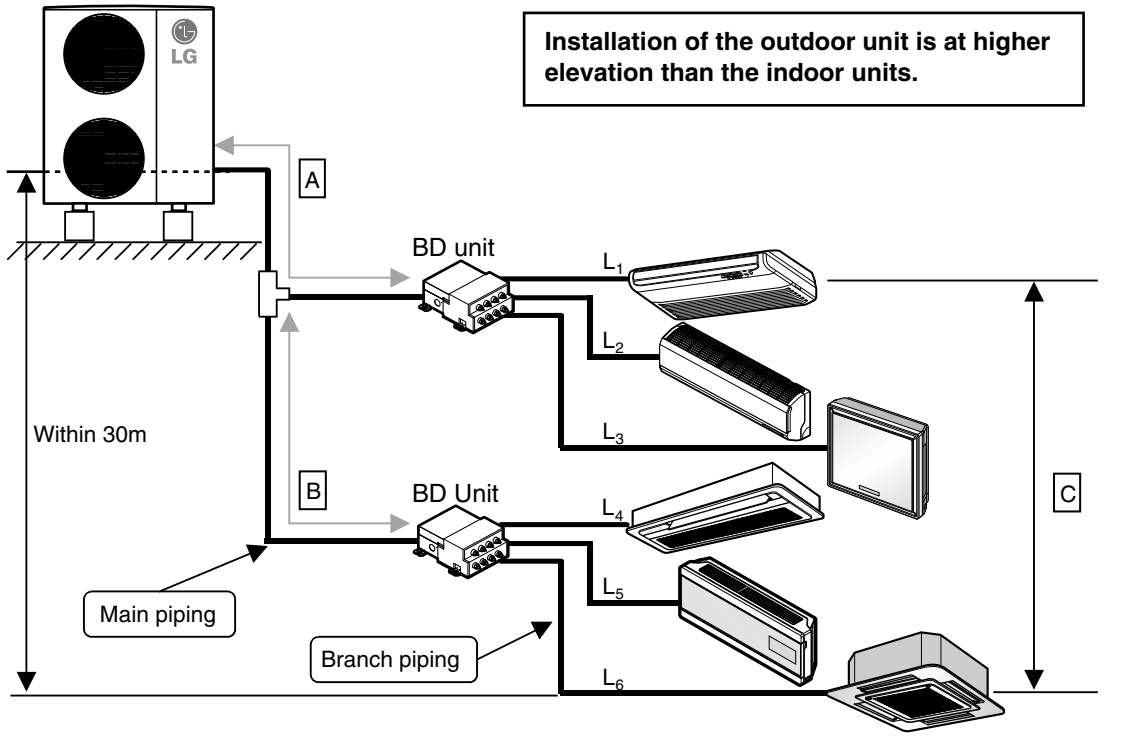
MULTI F™ System



Model [Outdoor unit]	Standard length(m)	Max. piping length of each indoor unit(m)					Max. total piping length(m)
	A,B,C,D	A	B	C	D		
A2UW146FA3 [FM15AH UL3]	7.5	20	20	-	-	-	30(A+B)
A2UW166FA0(1) [FM17AH UL0(UL1)]	7.5	20	20	-	-	-	30(A+B)
A3UW186FA0 [FM19AH UE0]	7.5	25	25	25	-	-	50(A+B+C)
A3UW216FA3 [FM21AH UE3]	7.5	25	25	25	-	-	50(A+B+C)
A4UW246FA3 [FM25AH UE3]	7.5	25	25	25	25	-	70(A+B+C+D)
A4UW276FA3 [FM27AH UE3]	7.5	25	25	25	25	-	70(A+B+C+D)
A5UW306FA3 [FM30AH UE3]	7.5	25	25	25	25	25	75(A+B+C+D+E)
A5UW406FA3 [FM38AH UH3]	7.5	25	25	25	25	25	85(A+B+C+D+E)

MULTI F DX™ System

A7UW406FA3 [FM40AH UH3]
A6UW368FA0 [FM37AH UE0]

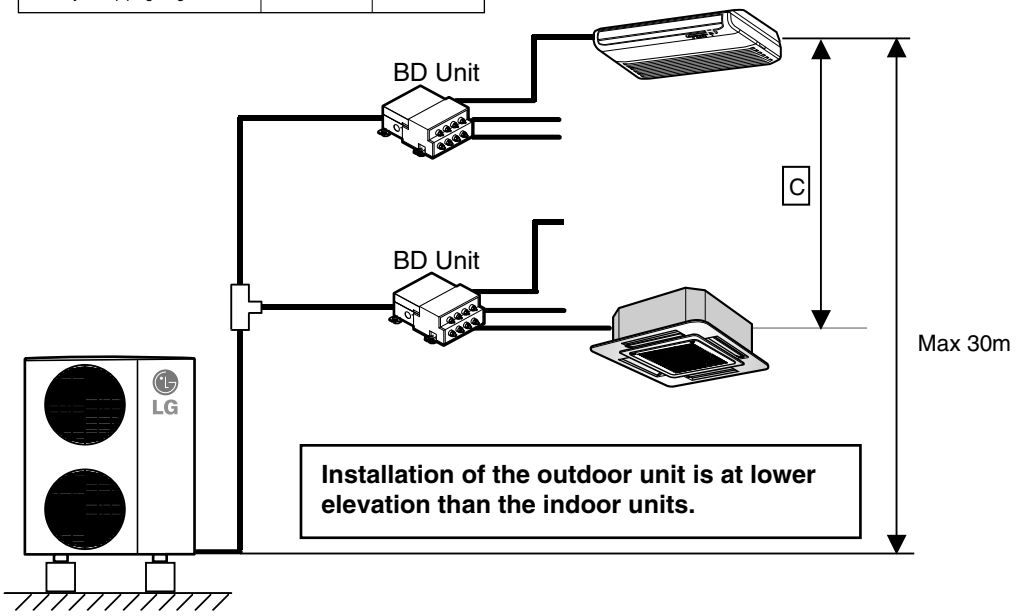


[Unit: m]

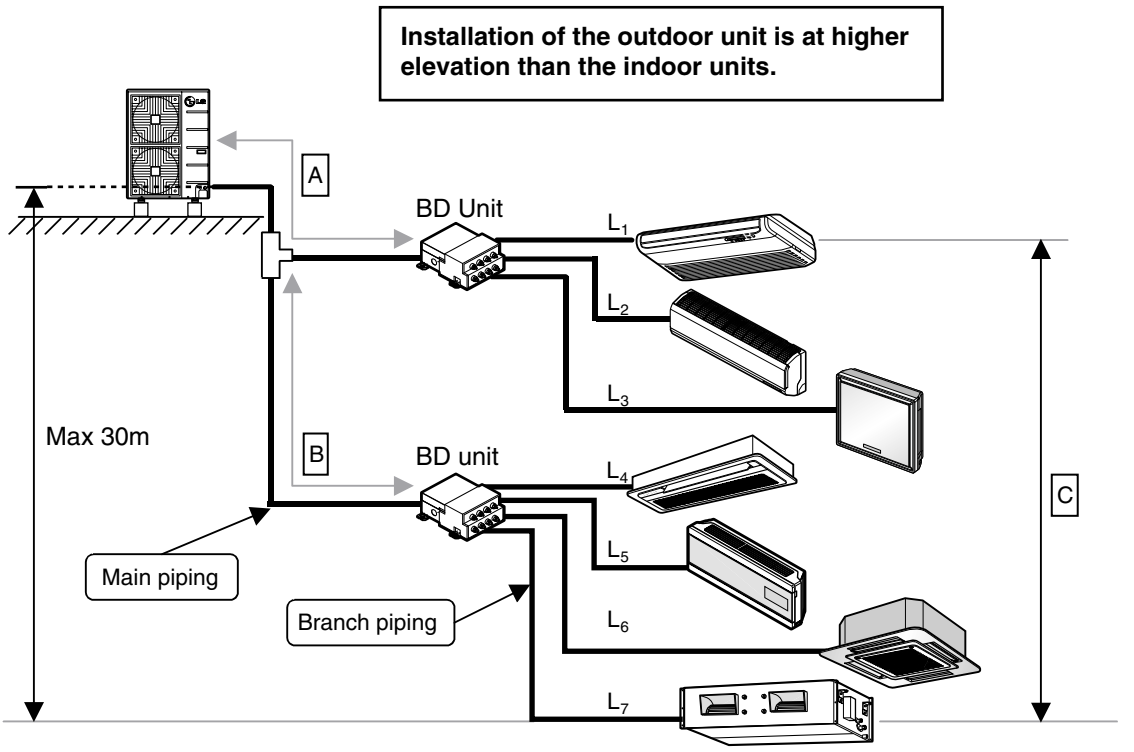
Piping	A7UW406FA3 [FM40AH UH3]	A6UW368FA0 [FM37AH UE0]
Total main piping length (A+B)	50	40
Total branch piping length (L_1+ L_2+ L_3+ L_4+ L_5+ L_6)	50	60
Each branch piping length (L_1 , L_2 , L_3 , L_4 , L_5 , L_6)	15	20
Total system piping length	100	100

[Unit: m]

Maximum elevation difference	A7UW406FA3 [FM40AH UH3]	A6UW368FA0 [FM37AH UE0]
Indoor unit ↔ Outdoor unit	30	30
Indoor unit ↔ Indoor unit(C)	15	15
Indoor unit ↔ BD unit	15	15
BD unit ↔ BD unit	15	15



A7UW428FA3 [FM41AH U33]

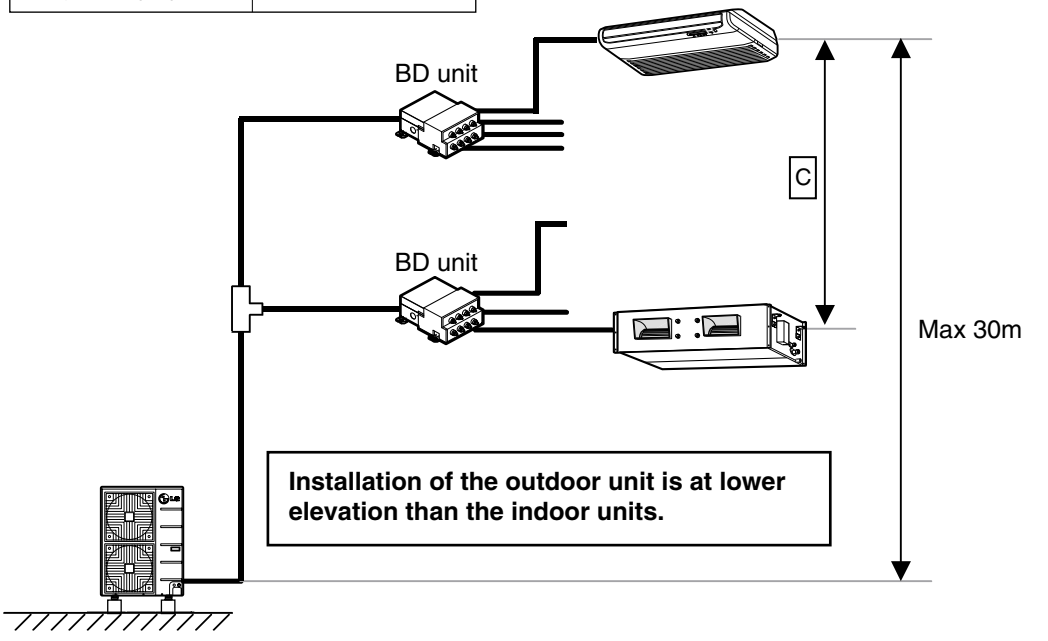


[Unit: m]

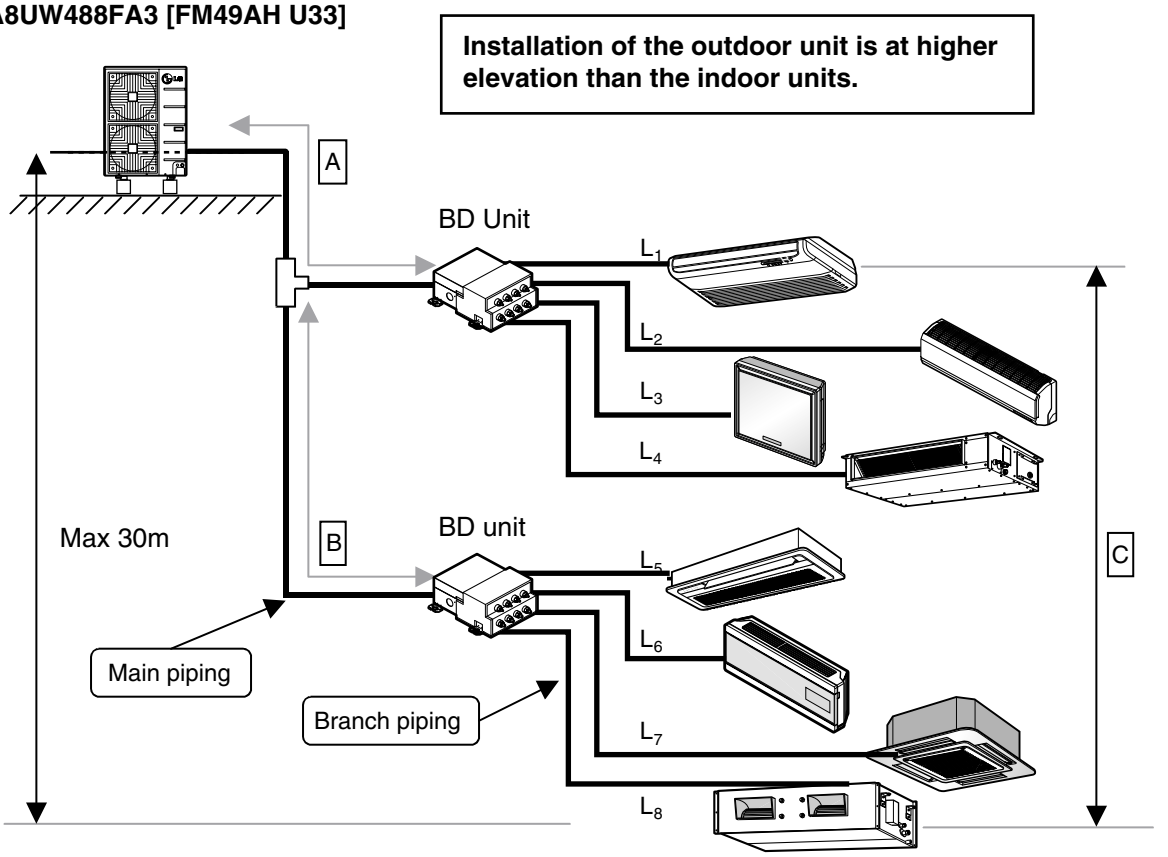
Piping	A7UW428FA3 [FM41AH U33]
Total main piping length (A+B)	55
Total branch piping length ($L_1+L_2+L_3+L_4+L_5+L_6+L_7$)	70
Each branch piping length ($L_1, L_2, L_3, L_4, L_5, L_6, L_7$)	15
Total system piping length	125

[Unit: m]

Maximum elevation difference	A7UW428FA3 [FM41AH U33]
Indoor unit ↔ Outdoor unit	30
Indoor unit ↔ Indoor unit (C)	15
Indoor unit ↔ BD unit	15
BD unit ↔ BD unit	15



A8UW486FA3 [FM48AH U33]
A8UW488FA3 [FM49AH U33]

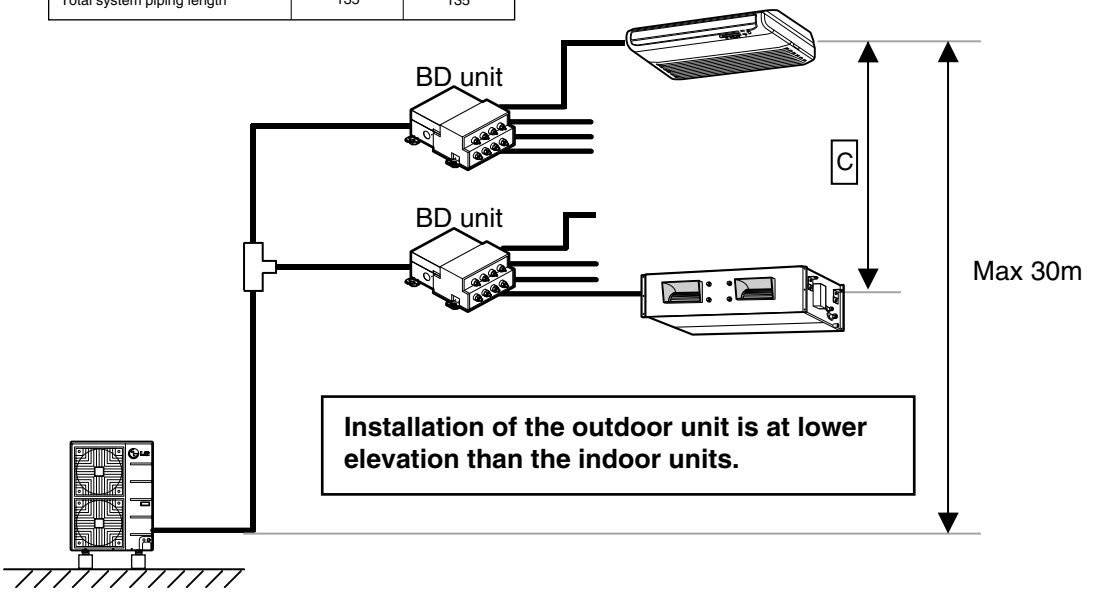


[Unit: m]

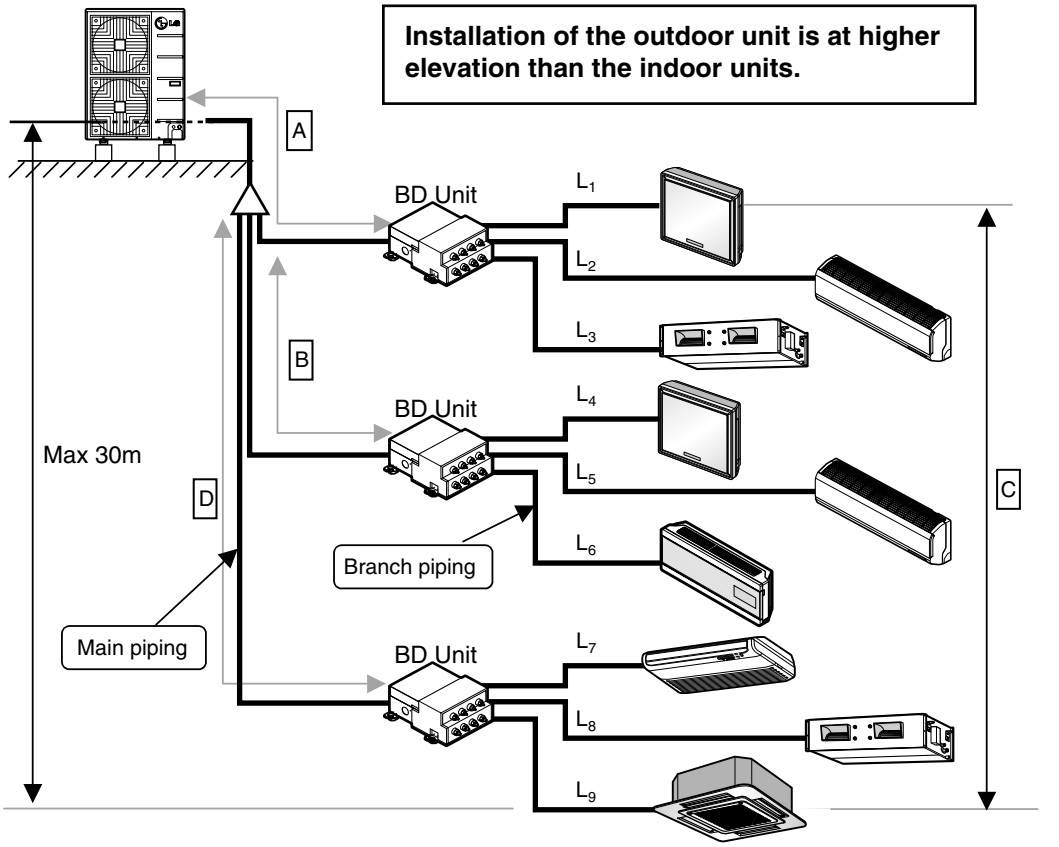
Piping	A8UW486FA3 [FM48AH U33]	A8UW488FA3 [FM49AH U33]
Total main piping length (A+B)	55	55
Total branch piping length ($L_1+L_2+L_3+L_4+L_5+L_6+L_7+L_8$)	80	80
Each branch piping length (L_1, L_2, L_3, L_4, L_5, L_6, L_7, L_8)	15	15
Total system piping length	135	135

[Unit: m]

Maximum elevation difference	A8UW486FA3 [FM48AH U33]	A8UW488FA3 [FM49AH U33]
Indoor unit ↔ Outdoor unit	30	30
Indoor unit ↔ Indoor unit (C)	15	15
Indoor unit ↔ BD unit	15	15
BD unit ↔ BD unit	15	15



A9UW548FA3 [FM57AH U33]
A9UW566FA3 [FM56AH U33]

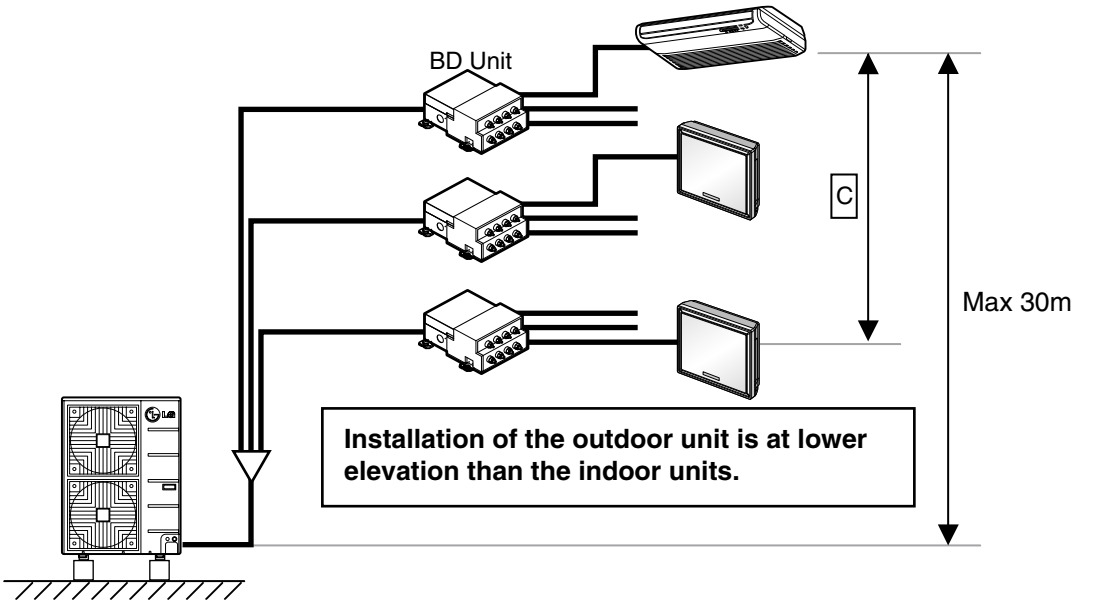


[Unit: m]

Piping	A9UW566FA3 [FM56AH U33]	A9UW548FA3 [FM57AH U33]
Total main piping length (A+B+D)	55	55
Total branch piping length ($L_1+L_2+L_3+L_4+L_5+L_6+L_7+L_8+L_9$)	90	90
Each branch piping length (L_1, L_2, L_3, L_4, L_5, L_6, L_7, L_8, L_9)	15	15
Total system piping length	145	145

[Unit: m]

Maximum elevation difference	A9UW566FA3 [FM56AH U33]	A9UW548FA3 [FM57AH U33]
Indoor unit ↔ Outdoor unit	30	30
Indoor unit ↔ Indoor unit (C)	15	15
Indoor unit ↔ BD unit	15	15
BD unit ↔ BD unit	15	15

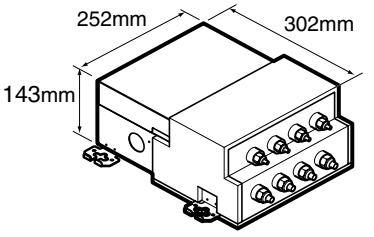


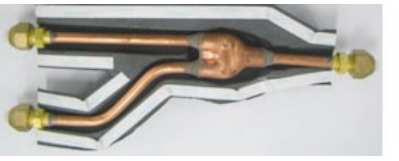
Flexible design and simple piping

MULTI F DX™

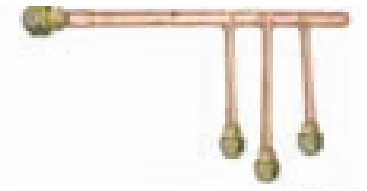
- Various BD unit for flexible design
- Available up to Max. 9 indoor units by simple piping
- Connecting to the BD unit without brazing

For 2 indoor units	For 3 indoor units	For 4 indoor units
		











5.3 Indoor units

Wall Mounted

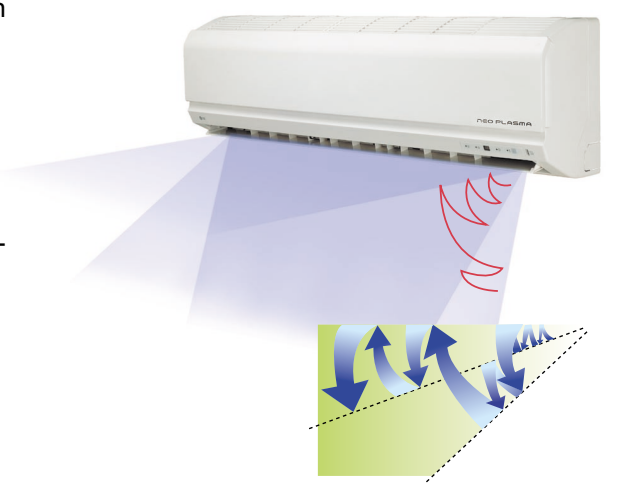
- Chaos swing
- Jet cool
- Sleep mode
- Healthy dehumidification
- Neo plasma air purifying system(accessory)
- Auto cleaning
- Wireless remote control



Chaos swing

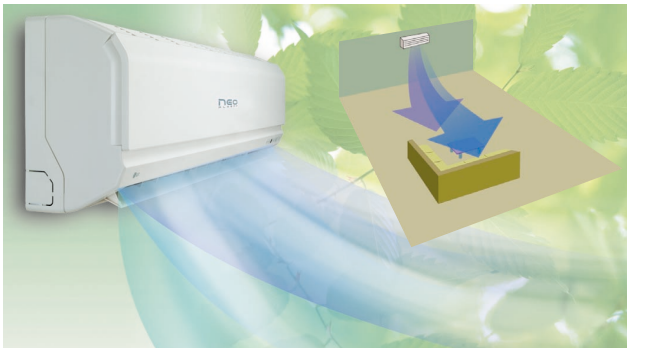
The most comfortable airflow for the human body can be found in nature. After countless analysis, LG has applied the scientific chaos theory to its air conditioning range, which effectively produces a natural, fresh breeze.

The chaso theory is a technology that recreates the flow of natural air by controlling the angle speed of the movement of the air vane. Chaos swing technology also minimizes the temperature difference between high and low places in the room, creating a more comfortable and cooler environment.



Jet cool

The jet cool function allows quick cooling. In this mode, strong, cool air is blown at high speed for 30 minutes.



Ultra silent

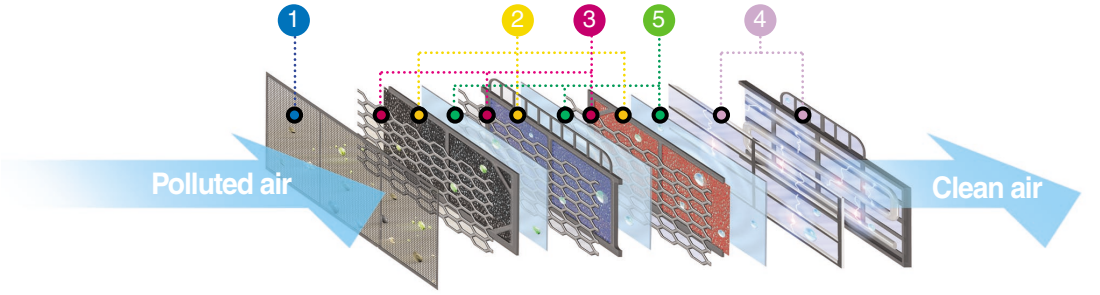
The indoor equipment, which adopts optimum fan and motor, implements a lowest-noise in the sleep mode. It offers you a quieter and more convenient sleeping environment and helps you concentrate when you work. In addition, the outdoor equipment drastically reduced vibration and noise that you can nearly feel them when hanging or installing indoors. Since it does not disturb your neighbors, it endears itself to you.



Healthy dehumidification

The hot and humid air has a tendency to rise by convection. Healthy dehumidification optimizes this algorithm to keep an optimum humidity without feeling cold in indoor place.

Neo plasma air purifying system



1 Prefilter

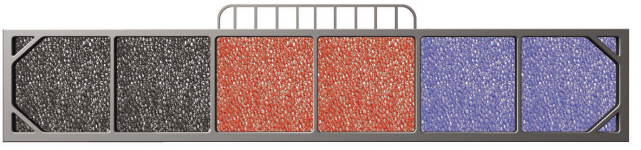
The antibacterial pre-filters primarily remove large dusts, molds, and quilt dusts.

2 Triple filter

The triple filters consist of a various organic-compound filter to eliminate displeasure and pain in the eyes and necks with various organic compounds.

It also has a formaldehyde filter to cut off formaldehyde, a prime cause of new-house syndromes, and prevents symptoms such as dermatitis, vomiting and pneumonia.

And lastly, it has a filter to remove ordinary odors that are causes of migraine and chronic fatigues.



3 Nano carbon filter

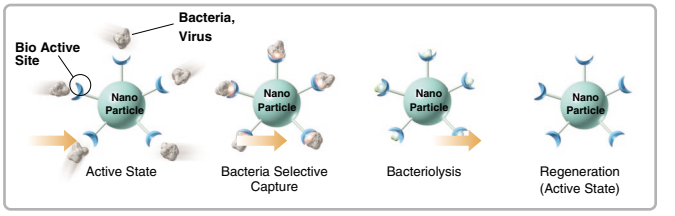
Nano-size carbon filters catch fine odorous particles again, and doubly and completely remove odors from the household, thus offering a pleasant environment.

4 Plasma filter

The plasma air purifying system developed uniquely by LG not only removes microscopic contaminants and dust, but also removes house mites, pollen, and pet fur to prevent allergic diseases like asthma.

5 Nano bio fusion filter

Nano bio fusion filters allow their nano-size bio enzymes to directly penetrate through cell walls of bacteria and allergen to decompose its cell nuclei and kill them.While conventional methods merely inactivate bacteria or destroy external cell walls, this innovative sterilization method can completely decompose bacteria's cell nuclei and kill them.



ART COOL

- New concept of interior design
- 4 different colors according to the ambience of room
- Ultra-slim design(depth129mm)
- 3 dimensional cooling system
- Air flow control
- Enables even & faster cooling
- The lowest noise level
- Nano plasma air purifying system(accessory)
- Auto clean system
- LCD luminous wired remote controller
- Energy-Saving Cooling Mode





ART COOL Mirror

- High grace interior design
- Various different colors according to the circumstances of room
- Wide discharge
- Even & faster cooling
- The lowest noise level
- Neo plasma air purifying system(accessory)
- Auto clean system
- Chaos swing
- LCD luminous wired remote controller
- Energy-Saving Cooling Mode

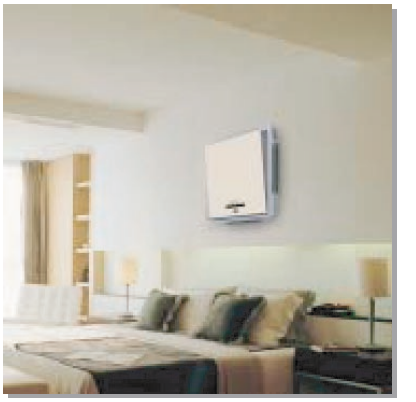




ART COOL - Innovation of new concept [3 dimensional cooling of bedroom]

Golden ratio of bedroom! New shape interior!

Alternation from general air-conditioner
To grace image of room air-conditioner
Bring you new interior bedroom



ART COOL Mirror - High grace living room and bed room

It is fit exclusily for your bed room and living room.
Perfect association with your furniture and interior.

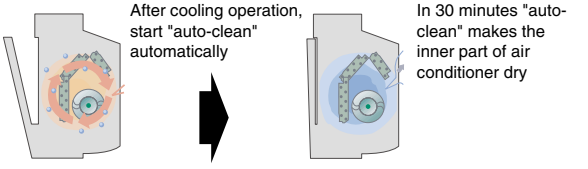
Various color

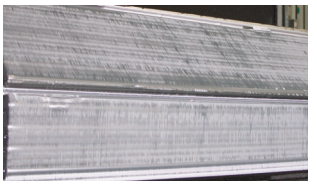
Choose your favored color
blue/cherry/mirror/metal/sliver/wood/white wood colors choice
make luxury interior!



Auto clean system

Auto clean helps to remove odor and save clean-up time. After using air-conditioner, "auto clean" makes the inner part of air conditioner dry for 30 minutes. It removes moisture and mold, so you can enjoy odor-free air and save time to clean up.



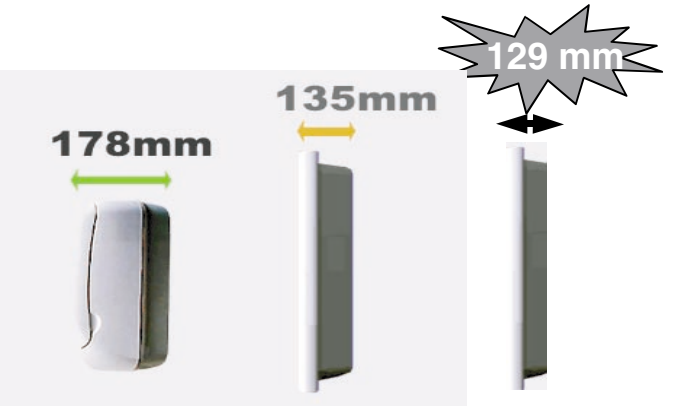
Before	After	Effect
		**Remove odor !** **Restrain mildew !** **Keep performance ! (Durability)** **Save time to clean up.**

Sophisticated design

International Forum Design reddot design award



Ultra-slim design(Depth 129mm)



Turbo fan

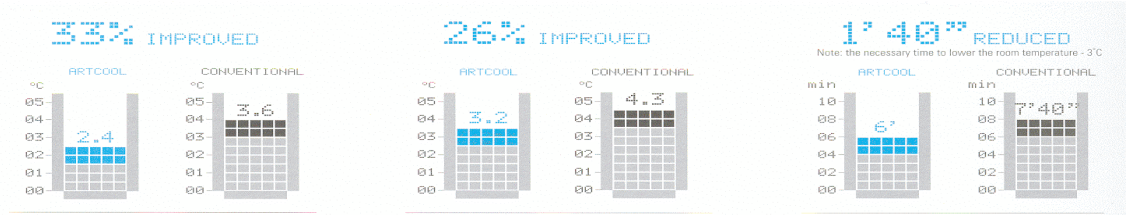


3-dimensional cooling system

New cube 3-dimension cooling system of ART COOL has Indirect cooling mode for sleep operation.
Being in sleep operation, cool air is discharged only right/left side!
Indirect cooling ensures you nice sleep.



Improved value of the 3-dimensional cooling



Vertical temperature difference | **Horizontal temperature difference** | **Time reaching temperature**

Air flow control

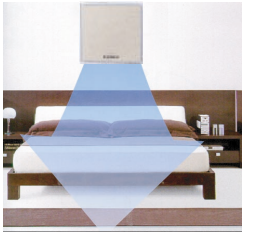
- In normal mode, 3 dimensional air flow cools air more fast and even widely
- The bottom-ward air flow provides you with speedy and powerful cooling
- When you sleep, side air flow provides indirect and soft cooling

Normal



'Fast & even widely '

Jet cool +



'Speedy & powerful'

Sleep mode



'Indirectly & softly'

Ceiling Cassette 1-way, 4-way

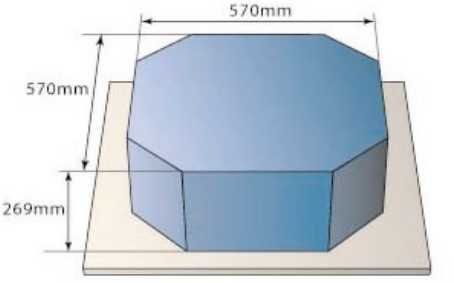
- Compact design and easy installation
- Low noise
- Hygienic and easy-to-clean filter
- 2-thermistor(unit body and remote controller)
- Jet cool
- Plasma air purifying system(accessory)
- High head drain pump(700mm)
- High-ceiling corresponding operation
- LCD wired remote controller
- Wireless remote controller(accessory)



Compact design and easy installation

Only about 269mm height in the ceiling is sufficient for installation space.

A smaller size than a textile(600X600) is very convenient for installation.

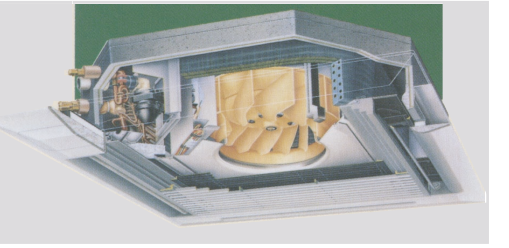


(AMNH186TEC0 [MT18AH NE0])

Low noise

The most advanced low-noise design.

The adoption of turbo-fan and round type heat exchanger provides the quietest operation.



Hygienic and easy to clean filter

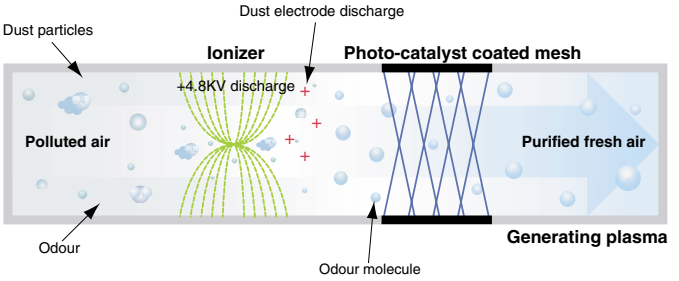
Washable and anti bacteria filter is adopted.

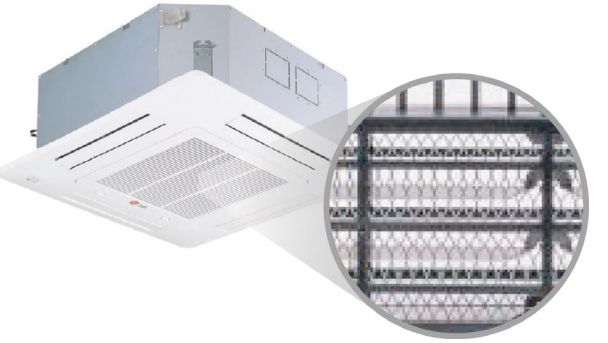
It is easy to open grille and replace clean filter.



Plasma air purifying system

The plasma air purifying function not only removes microscopic contaminants and dust, but also removes house mites, pollen, and pet fur helps to prevent allergic diseases like asthma.

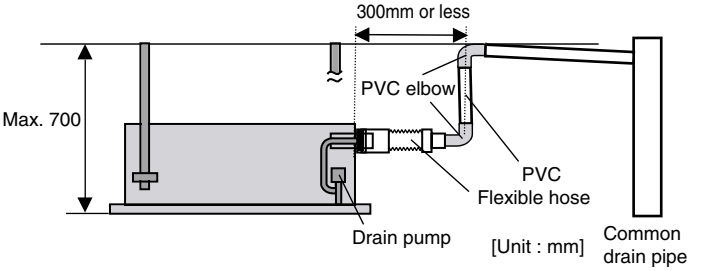




High head drain pump(700mm)

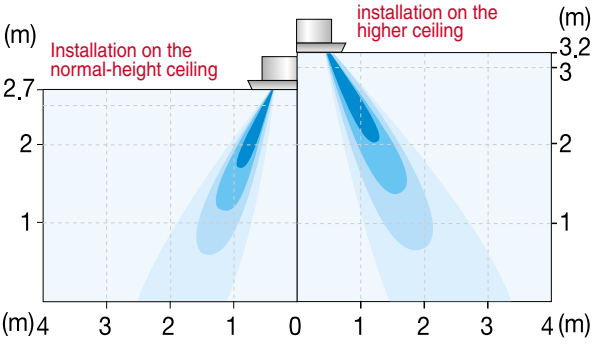
Built-in drain pump drains out water automatically.

A standard drain-head height of up to 700 mm is possible, creating the ideal solution for perfect water drainage.



High-ceiling corresponding operation

According to the height of the installation, it provides variability of indoor fan motor rpm. If the height of installation is low then you can adjust low rpm of indoor fan motor. On the other hand if the height of the installation is high you can adjust high rpm of indoor fan motor. Selection of speed can be done by slide switch at the back of the LCD wired remote controller.



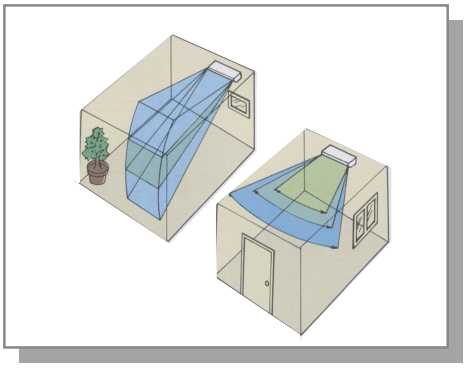
Ceiling & Floor

- Flexible installation
- 4-way airflow direction control
  (Automatic vertical airflow & manual horizontal airflow)
- LCD wireless remote controller

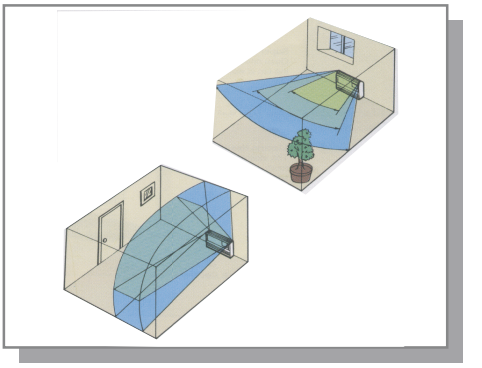


Flexible installation

It can be installed on the floor or ceiling according to your need.



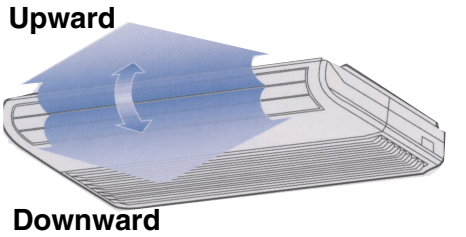
<Ceiling installation>



<Floor installation>

Vertical airflow & balanced temperature distribution

The heat distribution graph shows an example of even temperature distribution achieved by the auto-swing airflow.



Ceiling Concealed Duct – High static pressure

- Compact design and easy installation
- Phase control motor
- 2-thermistor control (unit body and remote controller)
- LCD wired remote controller
- Wireless remote controller(accessory)
- Plasma air purifying kit(accessory)
- High head drain pump(accessory)
- Zone controller(accessory)



Ceiling Concealed Duct – Low static pressure

- Compact, light design and easy installation
- Phase control motor
- 2-thermistor control (unit body and remote controller)
- LCD wired remote controller
- Wireless remote controller(accessory)
- High head drain pump(accessory)
- Zone controller(accessory)



Ceiling Concealed Duct – Built in

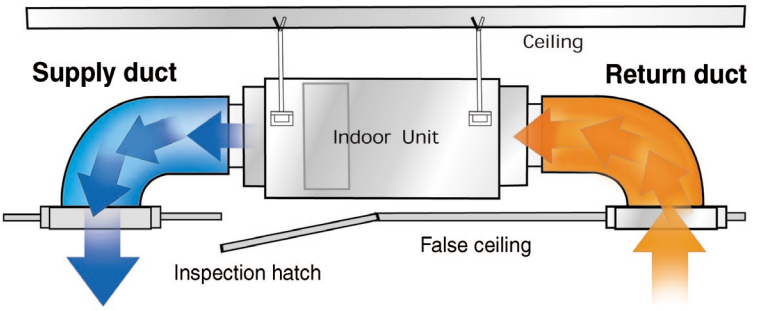
- Compact, light design and easy installation
- Phase control motor
- 2-thermistor control (unit body and remote controller)
- LCD wired remote controller
- Wireless remote controller(accessory)
- High head drain pump
- Zone controller(accessory)



Easy installation

Flexible duct is easy to install, regardless of room size or position.

It can be installed even in a limited space and saves construction cost with slim thickness

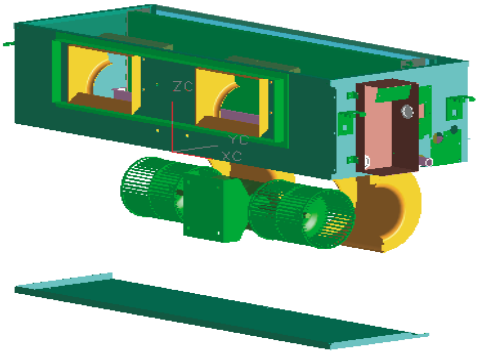


Innovative design of fan and housing system

Low noise ! Easy serviceability!

Plastic fan and housing assembly

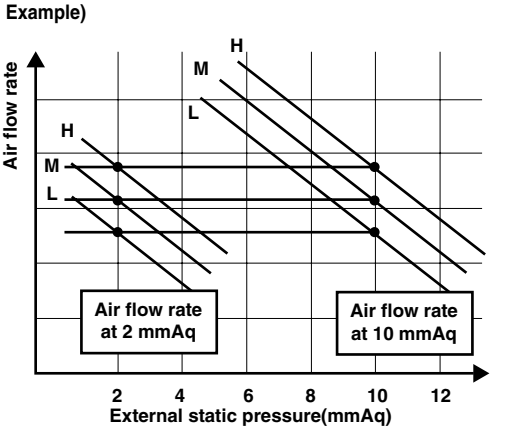
- Designed for low noise
- Designed to reduce weight
- Designed for easy service



This product guarantees lower sound level and gives less service expenses.

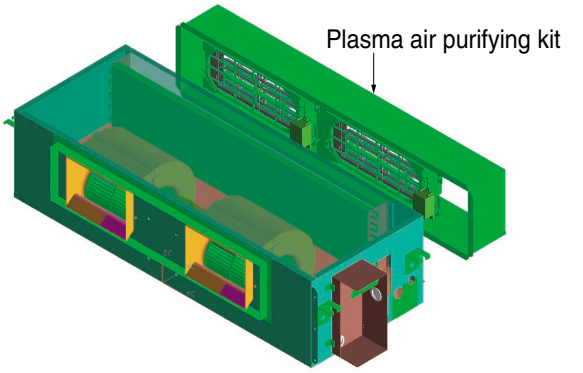
Phase control motor

Generally, when external static pressure increases air volume decreases. But by controlling the phase of motor while installing the product. E.S.P. is controlled from 0~10 mmAq. E.S.P. control provides required constant air volume irrespective of E.S.P. change. Desired E.S.P. can also be set through LCD wired remote control. Setting of the desired E.S.P. gives required combination of E.S.P. and airflow.



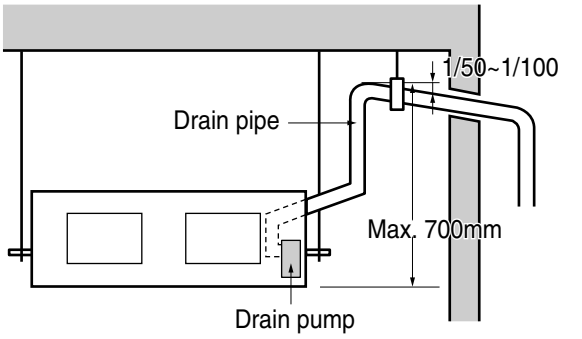
Plasma air purifying kit (accessory)

The plasma air purifying function not only removes microscopic contaminants and dust, but also removes house mites, pollen, and pet fur helps to prevent allergic diseases like asthma.



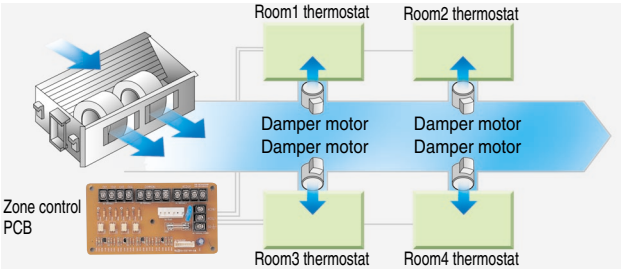
High head drain pump(accessory)

In some of the places natural drainage is not possible. For such places drain pump is very useful. It removes condensed water from the unit.



Zone controller(accessory)

It controls the temperature of each zone. Opening or closing of the damper is controlled by sensing the temperature of each zone. In the cooling mode, if the temperature of a particular zone is lower than set temperature then the damper is closed.
On the other hand if the temperature of a particular zone is higher than the set temperature, damper is opened to provide cooling to the zone and vice versa in the heating mode.



5.4 Outdoor units

MULTI F



A2UW146FA3 [FM15AH UL3]
A2UW166FA0 [FM17AH UL0]
A2UW166FA1 [FM17AH UL1]
A3UW186FA0 [FM19AH UE0]
A3UW216FA3 [FM21AH UE3]
A4UW246FA3 [FM25AH UE3]
A4UW276FA3 [FM27AH UE3]
A5UW306FA3 [FM30AH UE3]
A5UW406FA3 [FM38AH UH3]

- Multi piping system
- DC inverter system
  - High efficiency
  - Low noise
  - High reliability
- Can be combined with various indoor units
- Max. 85 meters piping length(40kBtu/h model)
- High E.E.R.(A-A)
- Powerful cooling & heating capacity
- Power operation and energy saving
- Low operation sound
- Outdoor BLDC fan motor control

MULTI F DX

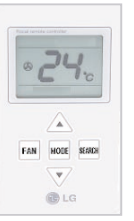


A7UW406FA3 [FM40AH UH3]
A8UW486FA3 [FM48AH U33]
A9UW566FA3 [FM56AH U33]
A6UW368FA0 [FM37AH UE0]
A7UW428FA3 [FM41AH U33]
A8UW488FA3 [FM49AH U33]
A9UW548FA3 [FM57AH U33]

- Simple piping using distributor
- DC inverter system
  - High efficiency
  - Low noise
  - High reliability
- Can be combined with various indoor units
- Max. 145 meters piping length(56kBtu/h model)
- Use single phase power supply
- High E.E.R.(A-A)
- Connectable to 6~8 indoor units by simple piping
- Powerful cooling & heating capacity
- Power operation and energy saving
- Low operation sound
- Outdoor BLDC fan motor control

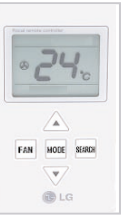
6. Control system(accessory)

6.1 Individual control system

Item		Model name	Image	Function	Applicable model
Wired remote controller	**Simple type**	PQRCUCA0		• On/off • Fan speed • Mode • Set temperature • Room temp • ESP function • Wireless remocon receiver	Ceiling cassette Ceiling & floor Ceiling concealed duct
	Deluxe type	PQRCUDS0		• On/off, fan speed, mode, tempeture • Room tempeture • Fan, plasma, swirl swing • Automatic • Vane control • ESP function • Reservation(simple/weekly) • Simple reservation • Timer function • Auto swing, child lock • LCD back-light	
	For hotel use	PQRCFCS0		• On/off • Fan speed • Set temperature • Room tempeture • ESP function • Wireless remocon receiver	

❉ For detail information, refer to the "Part 4 Network solution".

6.2 Central control system

Item		Model name	Image	Applicable model
Central controller	Simple central controller	PQCSA101S0		Wall mounted ART COOL ART COOL Mirror Ceiling cassette Ceiling & floor Ceiling concealed duct
	Simple central controller (function controller available)	PQCSB101S0		
	Function controller	PQCSC101S0		
	Deluxe central controller (without schedule function)	PQCSW501A0		
	Deluxe central controller (with schedule function)	PQCSW502A0		
	PC based central controller (without schedule function)	PQCSS501A0		
	PC based central controller (with schedule function)	PQCSS502A0		

❉ For detail information, refer to the "Part 4 Network solution".

6.3 Control device

Item		Model name	Image	Application model
BNU_LW	**LonWorks for BMS**	PQNFB16A0		Wall mounted ART COOL ART COOL Mirror Ceiling cassette Ceiling & floor Ceiling concealed duct
PDI (Power distributor indicator)		PQNUD1S00		
Product interface units	**PI485**	PMNFP14A0		
	CNU	PQNFG00A0		
	Dry_contact	PQDSA		
		PQDSB		

❉ For detail information, refer to the "Part 4 Network solution".

7. Combination

7.1 Selection procedure

MULTI F / MULTI F DX (1 phase)

Outdoor units selection

In general, outdoor unit may be selected as follows, though the location of the unit, and usage of the room, etc. should be considered.
The combination of indoor and outdoor unit was to be decided that the sum of indoor unit capacity index should be smaller than the max. combination capacity of outdoor unit. Up to Max.9 indoor units can be connected to one outdoor unit. It is recommended to choose a large capacity outdoor unit if the installation space is large enough.

Model name		Heat pump			
		A2UW146FA3 (FM15AH UL3)	A2UW166FA0(1) (FM17AH UL0/UL1)	A3UW186FA0 (FM19AH UE0)	A3UW216FA3 (FM21AH UE3)"
Rated capacity (kW)	Cooling	4.1	4.7	6.1	5.3
	Heating	4.7	5.3	7.0	6.3
Connectable indoor units	Number of indoor units	Max. 2 Uints	Max. 2 Uints	Max. 3 Uints	Max. 3 Uints
	Total capacity index(kW)	6.2	7.0	8.8	9.7

Model name		Heat pump			
		A4UW246FA3 (FM25AH UE3)	A4UW276FA3 (FM27AH UE3)	A5UW306FA3 (FM30AH UE3)	A5UW406FA3 (FM38AH UH3)
Rated capacity (kW)	Cooling	7.0	7.9	8.8	11.7
	Heating	8.4	9.1	10.1	13.5
Connectable indoor units	Number of indoor units	Max. 4 Uints	Max. 4 Uints	Max. 5 Uints	Max. 5 Uints
	Total capacity index(kW)	11.4	12.0	14.0	15.2

Model name		Heat pump		
		A7UW406FA3 [FM40AH UH3]	A8UW486FA3 [FM48AH U33]	A9UW566FA3 [FM56AH U33]
Rated capacity (kW)	Cooling	11.7	15.5	16.7
	Heating	13.5	16.4	17.9
Connectable indoor units	Number of indoor units	Max. 7 units	Max. 8 units	Max. 9 units
	Total capacity index(kW)	4.7~15.2	5.6~18.5	6.7~21.4

Indoor units selection

Look up the table on combination of indoor and outdoor unit', and determine the appropriate indoor unit capacity which satisfies the given thermal load.

For proper system operation, refer to the following:
1) At least 2 indoor units should be connected to outdoor unit.
2) Total capacity of indoor units connected should be minimum 40% of outdoor unit rated capacity.
3) Calculation method for the connectable total capacity of indoor unit sum up the capacity of indoor unit, but high static duct type indoor unit capacity weights 1.3 times.

Unit Capacity(kW)	2.1	2.6	3.5	5.3	7.0
Capacity Index	7	9	12	18	24

BD units selection (accessory)

BD Unit			PMBD3620	PMBD3630	PMBD3640	PMBD7230
Connectable indoor units	Number of Indoor Unit		1~2 units	1~3 units	1~4 units	1~3 units
	Capacity	kW	2.1/2.6/3.5/5.3/7.0			5.3/7.0
		Btu/h	7k/9k/12k/18k/24k			18k/24k/30k/36k

Y-Branch (accessory)

Y Branch		Type
Connectible number of BD units	1	Not required
	2	PMBL3620 / PMBL5620
	3	PMBL1203F0

MULTI F DX (3 phase)

Outdoor Units Selection

In general, outdoor unit may be selected as follows though the location of the unit, and usage of the room, etc. should be considered. The combination of indoor and outdoor unit was to be decided that the sum of indoor unit capacity index should be smaller than the max. combination capacity of outdoor unit. Up to 6 ~ 9 indoor units can be connected to one outdoor unit. It is recommended to choose a larger outdoor unit if the installation space is large enough.

Model name		Heat Pump			
		A6UW368FA0 [FM37AH UE0]	A7UW428FA3 [FM41AH U33]	A8UW488FA3 [FM49AH U33]	A9UW548FA3 [FM57AH U33]
Rated capacity (kW)		Cooling: 9.7 Heating: 11.1	Cooling: 13.5 Heating: 14.1	Cooling: 15.5 Heating: 16.4	Cooling: 16.7 Heating: 17.9
Connectable indoor units	Number of indoor units	Max. 6 units	Max. 7 units	Max. 8 units	Max. 9 units
	Total capacity index(kW)	4.7~13.5	4.7~15.8	15.6~18.5	6.7~21.4

Indoor units selection

Look up the table on combination of indoor and outdoor unit', and determine the appropriate indoor unit capacity which satisfies the given thermal load.

For proper system operation, refer to the following:
1) At least 2 indoor units should be connected to outdoor unit.
2) Total capacity of indoor units connected should be minimum 40% of outdoor unit rated capacity.
3) Calculation method for the connectable total capacity of indoor unit sum up the capacity of indoor unit, but high static duct type indoor unit capacity weights 1.3 times.

Unit Capacity(kW)	2.1	2.6	3.5	5.3	7.0
Capacity Index	7	9	12	18	24

BD units selection (accessory)

BD Unit			PMBD3620	PMBD3630	PMBD3640	PMBD7230
Connectable indoor units	Number of Indoor Unit		1~2 units	1~3 units	1~4 units	1~3 units
	Capacity	kW	2.1/2.6/3.5/5.3/7.0			5.3/7.0
		Btu/h	7k/9k/12k/18k/24k			18k/24k/30k/36k

Y-Branch (accessory)

Y Branch		Type
Connectible number of BD units	1	Not required
	2	PMBL3620 / PMBL5620
	3	PMBL1203F0

7.2 Combination of indoor and outdoor unit

The total capacity index of indoor units is the sum of capacity index of each units and should be within the capacity index of the outdoor unit.

Indoor units					Outdoor units			
					A2UW146FA3 [FM15AH UL3] A2UW166FA0 [FM17AH UL0] A2UW166FA1 [FM17AH UL1]	A3UW186FA0 [FM19AH UE0] A3UW216FA3 [FM21AH UE3]	A4UW246FA3 [FM25AH UE3] A4UW276FA3 [FM27AH UE3]	A5UW306FA3 [FM30AH UE3] A5UW406FA3 [FM38AH UH3]
Model type		Capacity			No. of connectable indoor units			
		Index	Btu/h	kW	2	3	4	5
Wall mounted		7	7,000	2.1	O	O	O	O
		9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	-	O	O	O
		24	24,000	7.0	-	*O	O	O
ART COOL		9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
ART COOL Mirror		7	7,000	2.1	O	O	O	O
		9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	-	O	O	O
		24	24,000	7.0	-	*O	O	O
Ceiling cassette	1-way	9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
	4-way	9	9,000	2.6	-	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	-	O	O	O
		24	24,000	7.0	-	*O	O	O
Ceiling & Floor		9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	-	O	O	O
		24	24,000	7.0	-	*O	O	O
Ceiling Concealed Duct	High static pressure	18	18,000	5.3	-	O	O	O
		24	24,000	7.0	-	*O	O	O
	Low static pressure	9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	-	O	O	O
	Built in	9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O

Note

* : Not connectable for A3UW186FA0 [FM19AH UE0]

Indoor units					Outdoor units		
					A7UW406FA3 [FM40AH UH3]	A8UW486FA3 [FM48AH U33]	A9UW566FA3 [FM56AH U33]
Model type		Capacity			No. of connectable indoor units		
		Index	Btu/h	kW	7	8	9
Wall mounted		7	7,000	2.1	O	O	O
		9	9,000	2.6	O	O	O
		12	12,000	3.5	O	O	O
		18	18,000	5.3	O	O	O
		24	24,000	7.0	O	O	O
ART COOL		9	9,000	2.6	O	O	O
		12	12,000	3.5	O	O	O
ART COOL Mirror		7	7,000	2.1	O	O	O
		9	9,000	2.6	O	O	O
		12	12,000	3.5	O	O	O
		18	18,000	5.3	O	O	O
		24	24,000	7.0	O	O	O
Ceiling Cassette	1-way	9	9,000	2.6	O	O	O
		12	12,000	3.5	O	O	O
	4-way	9	9,000	2.6	O	O	O
		12	12,000	3.5	O	O	O
		18	18,000	5.3	O	O	O
		24	24,000	7.0	O	O	O
Ceiling & Floor		9	9,000	2.6	O	O	O
		12	12,000	3.5	O	O	O
		18	18,000	5.3	O	O	O
		24	24,000	7.0	O	O	O
Ceiling Concealed Duct	High static pressure	18	18,000	5.3	O	O	O
		24	24,000	7.0	O	O	O
	Low static pressure	9	9,000	2.6	O	O	O
		12	12,000	3.5	O	O	O
		18	18,000	5.3	O	O	O
	Built in	9	9,000	2.6	O	O	O
		12	12,000	3.5	O	O	O

Indoor units					Outdoor units			
					A6UW368FA0 [FM37AH UE0]	A7UW428FA3 [FM41AH U33]	A8UW488FA3 [FM49AH U33]	A9UW548FA3 [FM57AH U33]
Model type		Capacity			No. of connectable indoor units			
		Index	Btu/h	kW	6	7	8	9
Wall mounted		7	7,000	2.1	O	O	O	O
		9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	O	O	O	O
		24	24,000	7.0	O	O	O	O
ART COOL		9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
ART COOL Mirror		7	7,000	2.1	O	O	O	O
		9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	O	O	O	O
		24	24,000	7.0	O	O	O	O
Ceiling Cassette	1-way	9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
	4-way	9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	O	O	O	O
		24	24,000	7.0	O	O	O	O
Ceiling & Floor		9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	O	O	O	O
		24	24,000	7.0	O	O	O	O
Ceiling Concealed Duct	High static pressure	18	18,000	5.3	O	O	O	O
		24	24,000	7.0	O	O	O	O
	Low static pressure	9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O
		18	18,000	5.3	O	O	O	O
	Built in	9	9,000	2.6	O	O	O	O
		12	12,000	3.5	O	O	O	O

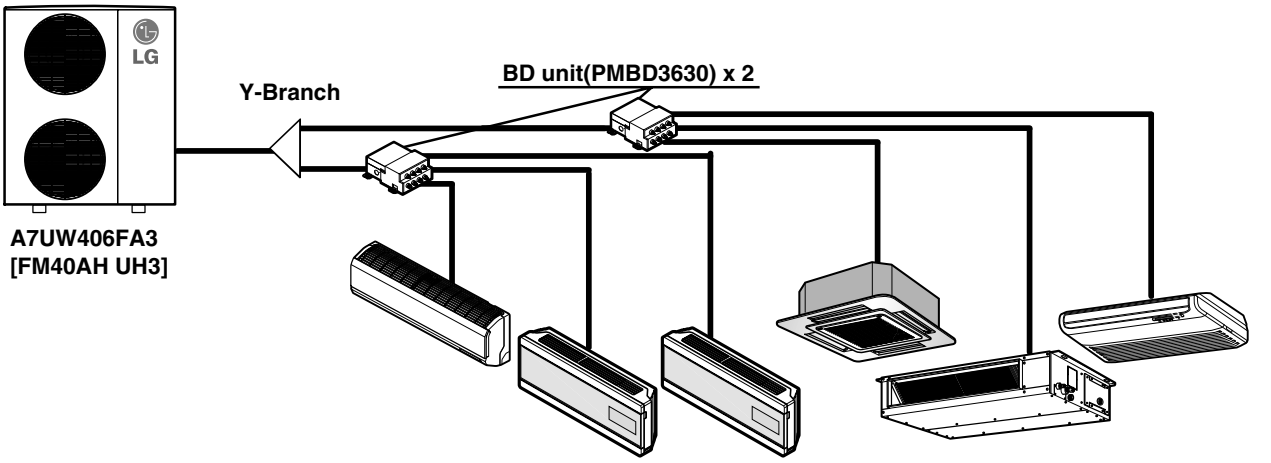
7.3 The representative combination example





■ System of 1 outdoor unit, 6 indoor units

• The representative combination example(A7UW406FA3 [FM40AH UH3])



NOTE

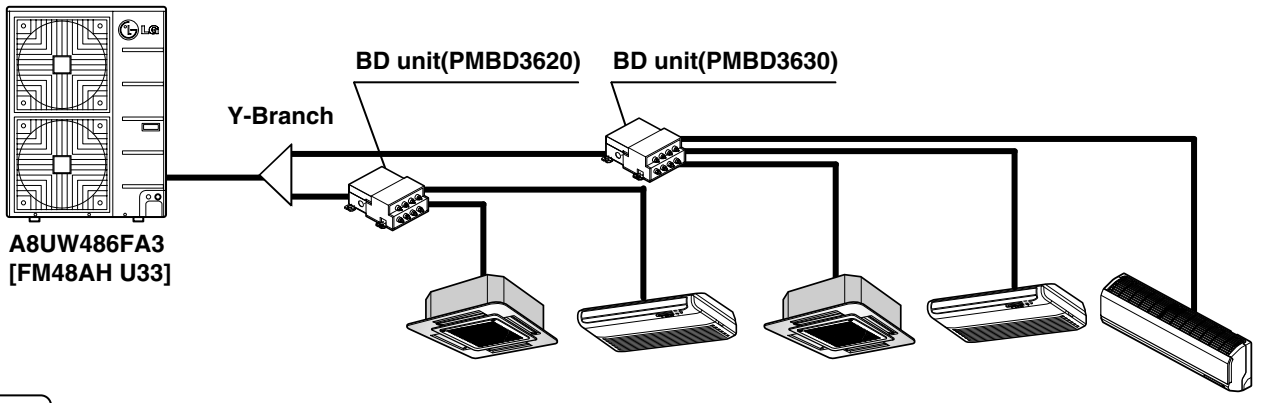
The rated capacity should be determined in accordance with the table on '7.2 combination of indoor and outdoor unit'. The indoor unit's can be connected max. 7~9 units according to outdoor unit. For the next step, make sure that the total rated capacity selected is within a max. combination capacity of outdoor unit.

Example)	AMNH07GD4L0 [MS07AH N40]		AMNH07GDZ*0 [MC07AH* NZ1]		AMNH07GDZ*0 [MC07AH* NZ1]		AMNH12GTEF0 [MT12AH NE1]		AMNH096BTG0 [MB09AH NT0]		AMNH096VEA0 [MV09AH NE0]	
	II		II		II		II		II		II	
Total rated capacity index:	7	+	7	+	7	+	12	+	9	+	9	= 51(14.9kW) ≤ 52(15.2kW)

40 x 130(%)

■ System of 1 outdoor unit, 5 indoor units

• The representative combination example (A8UW486FA3 [FM48AH U33])



NOTE

The rated capacity should be determined in accordance with the table on '7.2 combination of indoor and outdoor unit'.
The indoor unit's can be connected max. 7~9 units according to outdoor unit. For the next step, make sure that the total rated capacity selected is in a max combination capacity of outdoor unit.

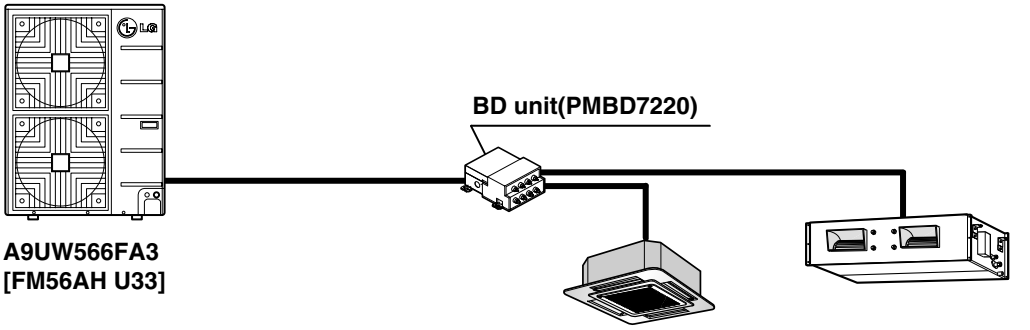
Example)

AMNH18GTEF0 [MT18AH NE1]	AMNH096VEA0 [MV09AH NE0]	AMNH18GTEF0 [MT18AH NE1]	AMNH096VEA0 [MV09AH NE0]	AMNH07GD4L0 [MS07AH N40]
II	II	II	II	II

Total rated capacity index: 18 + 9 + 18 + 9 + 7 = 61(17.9kW) ≤ 63(18.5kW)
(63 ↑ 48 x 130(%))

■ System of 1 outdoor unit, 2 indoor units

• The representative combination example (A9UW566FA3 [FM56AH U33])



NOTE

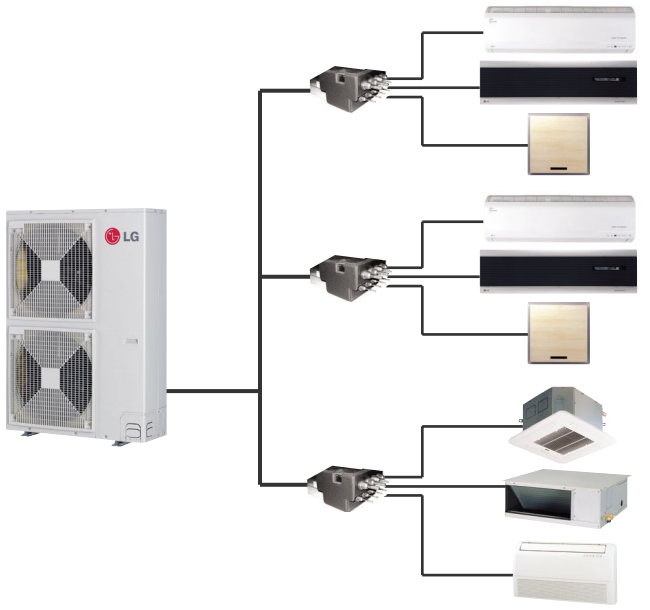
The rated capacity should be determined in accordance with the table on '7.2 combination of indoor and outdoor unit'.
The indoor unit's can be connected max. 7~9 units according to outdoor unit. For the next step, make sure that the total rated capacity selected is in a max combination capacity of outdoor unit.

Example)

AMNH24GTHF0 [MT24AH NH0]	AMNH246BHA0 [MB24AH NH0]
II	II

Total rated capacity Index: 24 + 24*1.3 = 55.2(16.2kW) ≤ 73(21.3kW)
(73 ↑ 56 x 130(%))

7.4 Applications







Ceiling Cassette type(1-way)



Ceiling Cassette type(4-way)



Ceiling Concealed Duct type
(High static pressure)



Ceiling Concealed Duct type
(Low static pressure)



Ceiling Concealed Duct type(Built-in)



Ceiling & Floor type

Part 2 Product data

1. Indoor units 60

1.1 Wall mounted 60

1.2 ART COOL.....78

1.3 ART COOL Mirror 93

1.4 Ceiling cassette 1-way 118

1.5 Ceiling cassette 4-way 128

1.6 Ceiling & floor.....144

1.7 Ceiling concealed duct - High static pressure.....158

1.8 Ceiling concealed duct - Low static pressure.....172

1.9 Ceiling concealed duct - built in 193

2. Outdoor units 206

2.1 Multi piping type MULTI F™ 206

2.2 Distributor type MULTI F DX™ (1 phase).....322

2.3 Distributor type MULTI F DX™ (3 phase).....370

1. Indoor units

1.1 Wall mounted

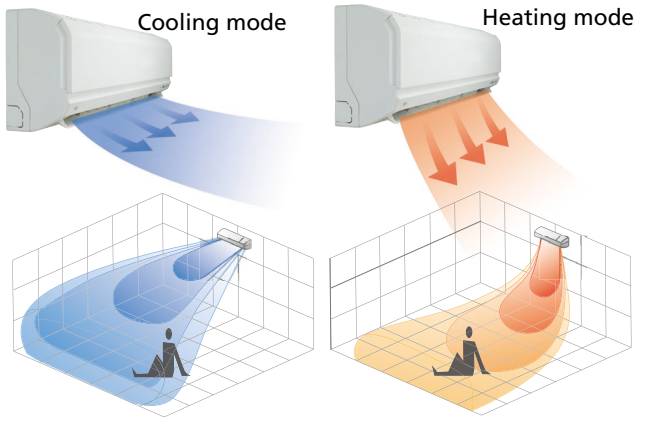
1.1.1 Features

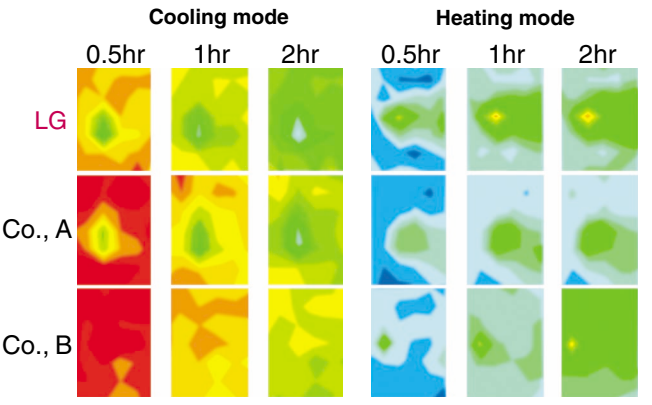
Models : AMNH07GD4L0 [MS07AH N40] / AMNH09GD4L0 [MS09AH N40]
AMNH12GD4L0 [MS12AH N40] / AMNH18GD5L0 [MS18AH N50]
AMNH24GD5L0 [MS24AH N50]



Optimized cooling & heating air flow

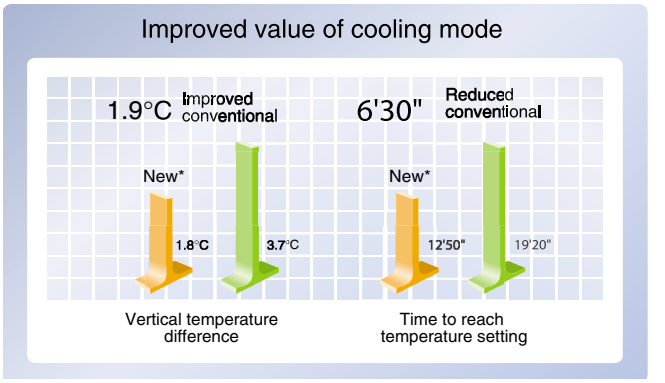
LG Electronics air conditioner, which adopts the twin air vanes, blows winds horizontally far away in the cooling mode to prevent direct window blowing. And, in the heating mode, the air conditioner pushes winds downwards to provide warm air evenly, thus offering pleasant air.

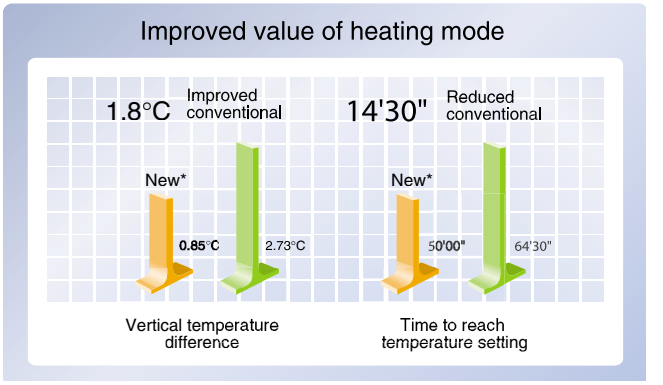




Even & fast air flow

LG Electronics' air conditioner improves the difference between high and low indoor temperatures.
It allows you to reach your desired temperatures even faster.

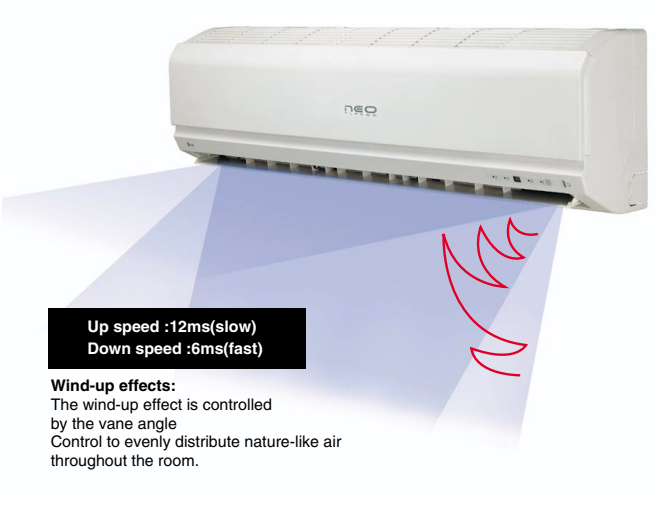




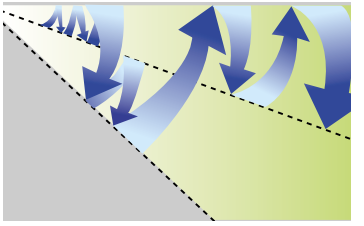
New chaos swing

The most comfortable airflow for the human body can be found in nature. After countless analysis, LG has applied the scientific chaos theory to its air conditioning range, which effectively produces a natural, fresh breeze.

The chaos theory is a technology that recreates the flow of natural air by controlling the angle speed of the movement of the air vane. Chaos swing technology also minimizes the temperature difference between high and low places in the room, creating a more comfortable and cooler environment.



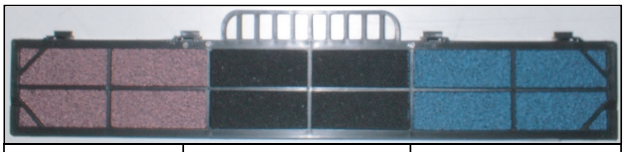
It swings at an angle twice wider than that of the existing chaos swing, thus minimizing the difference in indoor temperatures and allowing air in every corner of the room.





Triple deodorizing filter

Composition of triple deodorizing filter



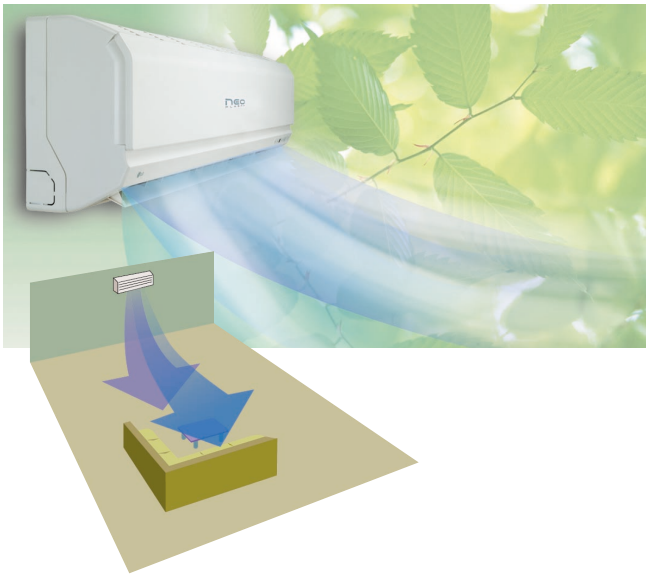
Nasty smell deodorizing	Formaldehyde deodorizing	V.O.C. deodorizing

- Triple deodorizing filter is adopted for absorbing VOC indredient, structural material ingredient, common odor.
- Deodorizing efficency
  10% up compared to normal deodorization filter.

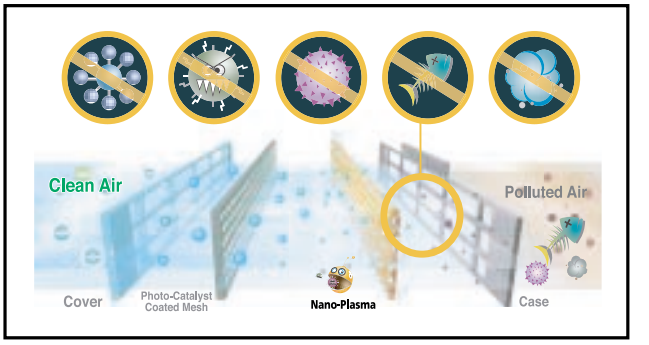
Jet Cool™

The jet cool function allows quick cooling.

In this mode, strong, cool air is blown at high speed for 30 minutes, until the room temperature reaches 18°C



NANOplasma Air purifying system



It not only removes microscopic contaminants & dust, but it also removes house mites, pollen, and pet fur to help prevent allergic diseases like asthma. It provides odor free, dust free and allergy free air.

1.1.2 List of functions

Category	Function	AMNH07GD4L0 [MS07AH N40]	AMNH09GD4L0 [MS09AH N40]
Air flow	Air supply outlet	1	1
	Airflow direction control (left & right)	Auto	Auto
	Airflow direction control (up & down)	Auto	Auto
	Auto swing (left & right)	O	O
	Auto swing (up & down)	O	O
	Airflow steps(Fan / Cool / Heat)	3 / 4 / 3	3 / 4 / 3
	CHAOS swing	O	O
	CHAOS wind (Auto wind)	X	X
	Jet cool (Power wind)	O	O
	Swirl wind	X	X
Air purifying	Deodorizing filter	O	O
	Plasma air purifier	Neo / option	Neo / option
	Prefilter(Washable / Anti-fungus)	O	O
Installation	Drain pump	-	-
	E.S.P. control	-	-
	Electric heater (Operation)	-	-
	High ceiling operation	-	-
Reliability	Hot start	O	O
	Self diagnosis	O	O
	Soft dry operation	O	O
Convenience	Auto changeover	X	X
	Auto cleaning	O	O
	Auto operation(Artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	-	-
	Forced operation	O	O
	Group control	-	-
	Sleep mode	O	O
	Timer (On/Off)	O	O
	Timer (weekly)	-	-
	Two thermistor control	-	-
Individual Control	Standard wired remote controller	-	-
	Deluxe wired remote controller	-	-
	Simple wired remote controller	-	-
	Wired remote controller(for hotel use)	-	-
	Wireless remote controller(simple)	-	-
	Wireless LCD remote controller	O	O
CAC Network Function	General central control(Non LGAP)	X	X
	Dry contact	PQDSB	PQDSB
	Simple central control(LGAP)	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X
	Zone control	X	X
Others	Thermistor	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category	Function	AMNH12GD4L0 [MS12AH N40]	AMNH18GD5L0 [MS18AH N50]	AMNH24GD5L0 [MS24AH N50]
Air flow	Air supply outlet	1	1	1
	Airflow direction control (left & right)	Auto	Auto	Auto
	Airflow direction control (up & down)	Auto	Auto	Auto
	Auto swing (left & right)	O	O	O
	Auto swing (up & down)	O	O	O
	Airflow steps(Fan / Cool / Heat)	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3
	CHAOS swing	O	O	O
	CHAOS wind (Auto wind)	X	X	X
	Jet cool (Power wind)	O	O	O
	Swirl wind	X	X	X
Air purifying	Deodorizing filter	O	O	O
	Plasma air purifier	Neo / option	Neo / option	Neo / option
	Prefilter(Washable / Anti-fungus)	O	O	O
Installation	Drain pump	-	-	-
	E.S.P. control	-	-	-
	Electric heater (Operation)	-	-	-
	High ceiling operation	-	-	-
Reliability	Hot start	O	O	O
	Self diagnosis	O	O	O
	Soft dry operation	O	O	O
Convenience	Auto changeover	X	X	X
	Auto cleaning	O	O	O
	Auto operation(Artificial intelligence)	O	O	O
	Auto restart operation	O	O	O
	Child lock	-	-	-
	Forced operation	O	O	O
	Group control	-	-	-
	Sleep mode	O	O	O
	Timer (On/Off)	O	O	O
	Timer (weekly)	-	-	-
	Two thermistor control	-	-	-
Individual Control	Standard wired remote controller	-	-	-
	Deluxe wired remote controller	-	-	-
	Simple wired remote controller	-	-	-
	Wired remote controller(for hotel use)	-	-	-
	Wireless remote controller(simple)	-	-	-
	Wireless LCD remote controller	PQWRHSF0	PQWRHSF0	PQWRHSF0
CAC Network Function	General central control(Non LGAP)	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB
	Simple central control(LGAP)	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00)
	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0)
Special Function Kit	CTIE	X	X	X
	Zone control	X	X	X
Others	Thermistor	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.1.3 Specifications

Indoor unit type			Wall mounted		
Model			AMNH07GD4L0 [MS07AH N40]	AMNH09GD4L0 [MS09AH N40]	AMNH12GD4L0 [MS12AH N40]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	2.05	2.64	3.52
		Btu/h	7,000	9,000	12,000
Heating capacity		kW	2.34	2.93	3.87
		Btu/h	8000	10,000	13,200
Current	Nominal running current	A	0.10	0.15	0.15
Fan	Motor type		BLDC	BLDC	BLDC
	Fan type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		8.4 x 1	14.4 x 1	14.4 x 1
	Air flow rate	cmm	5.6/5.0/4.6	7.0/6.5/6.0	9.5/9.0/8.5
	(H/M/L)	cfm	198/177/163	247/230/212	336/318/300
	Capacitor	μF/Vac	-	-	-
	Drive		Direct Drive	Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2R x 15C x 20	2R x 15C x 20	2R x 15C x 20
Dimensions (WxHxD)	Body	mm(inch)	840*270*153(33.1*10.6*6.0)	840*270*153(33.1*10.6*6.0)	840*270*153(33.1*10.6*6.0)
Weight	Body	kg(lbs)	7(15.4)	7(15.4)	7(15.4)
Air filter			Long Life Filter	Long Life Filter	Long Life Filter
Sound level (SH/H/M/L)		dB(A)+3	40 / 29 / 25 / 20	40 / 33 / 29 / 22	40 / 36 / 32 / 29
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
Dehumidification rate		l/h	0.9	1.1	1.2
Safety devices			Fuse, Thermal Protector for Fan Motor		
Temperature sensor			Thermistor	Thermistor	Thermistor
Referigerant			R410A	R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula	
kW	= Btu/h × 0.0002931
CFM	= CMM × 35.3

Indoor unit type			Wall mounted	
Model			AMNH18GD5L0 [MS18AH N50]	AMNH24GD5L0 [MS24AH N50]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	5.28	6.74
		Btu/h	18,000	23,000
Heating capacity		kW	5.80	7.47
		Btu/h	19,800	25,500
Current	Nominal running current	A	0.28	0.28
Fan	Motor type		BLDC	BLDC
	Fan type		Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		27 x 1	28 x 1
	Air flow rate	cmm	12.0/10.5/9.0	14.0/13.0/11.0
	(H/M/L)	cfm	424/371/318	495/460/389
	Capacitor	μF/Vac	-	-
	Drive		Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2R x 15C x 20	2R x 15C x 20
Dimensions (WxHxD)	Body	mm(inch)	1090*300*180(42.9*11.8*7.1)	1090*300*180(42.9*11.8*7.1)
Weight	Body	kg(lbs)	13(28.7)	13(28.7)
Air filter			Long Life Filter	Long Life Filter
Sound level (SH/H/M/L)		dB(A)+3	43 / 37 / 34 / 31	43 / 41 / 39 / 34
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	12.7 (1/2)	12.7 (1/2)
Dehumidification rate		l/h	2.3	3.0
Safety devices			Fuse, Thermal Protector for Fan Motor	
Temperature sensor			Thermistor	Thermistor
Referigerant			R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
kcal/h = Btu/h × 0.252
CFM = CMM × 35.3

1.1.4 Dimensions

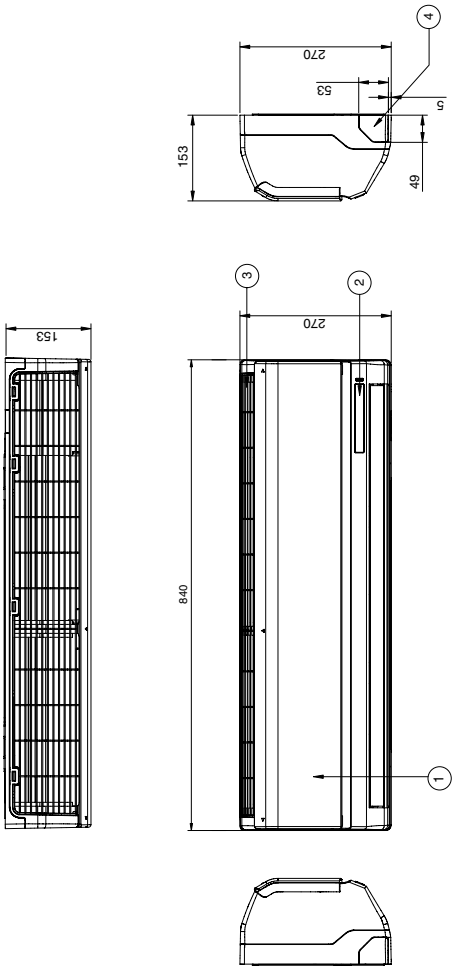
WALL MOUNTED

AMNH07GD4L0 [MS07AH N40]

No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

			Ø/V/Hz	1/ 220~240 / 50
Power supply				
Cooling Capacity			kW	2.05
			Btu/h	7,000
Heating Capacity			kW	2.34
			Btu/h	8,000
Piping Connections		Liquid(Ø)	mm(inch)	6.35(1/4)
		Gas(Ø)	mm(inch)	9.52(3/8)



▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

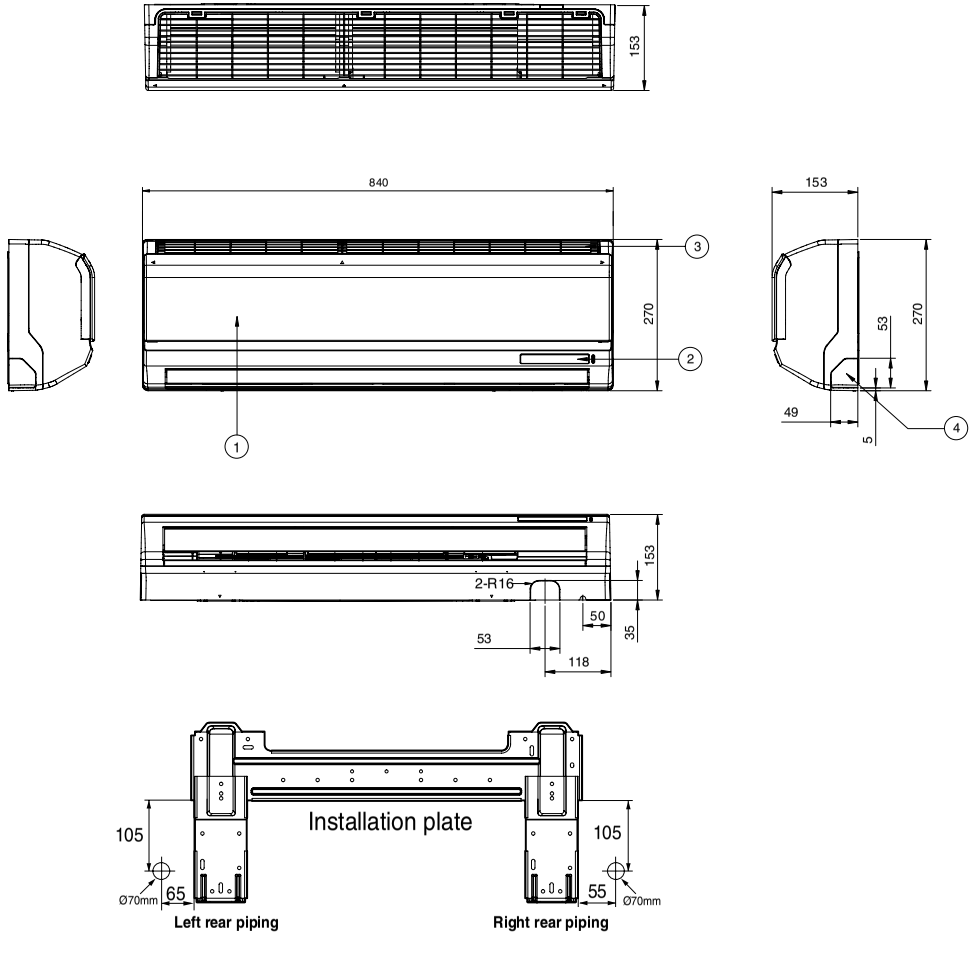
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www.lge.com/airconditioner

CHASSIS CODE: S4

WALL MOUNTED

AMNH09GD4L0 [MS09AH N40]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

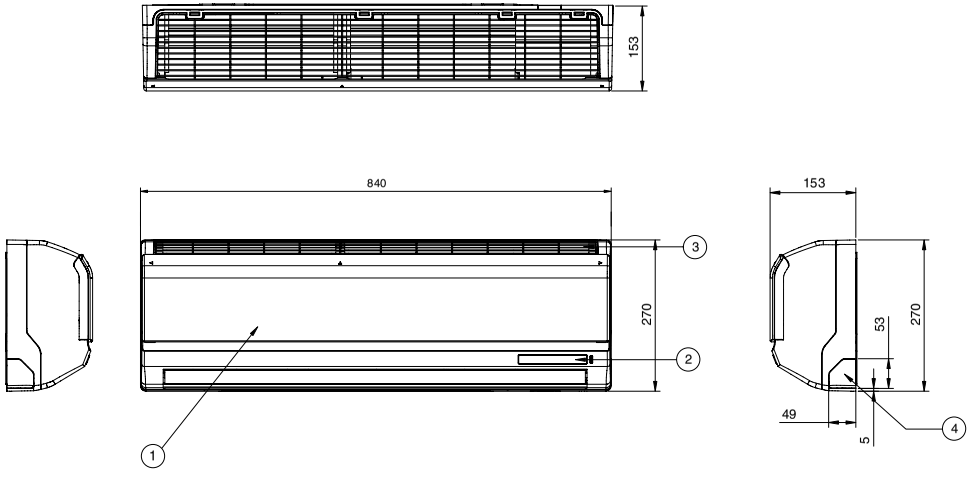
Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

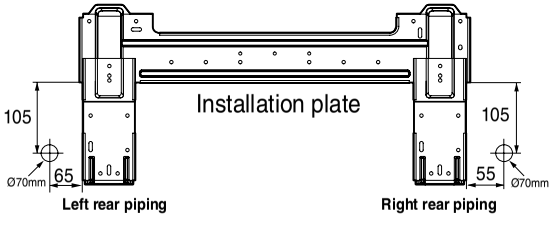
▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

WALL MOUNTED

AMNH12GD4L0 [MS12AH N40]





No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

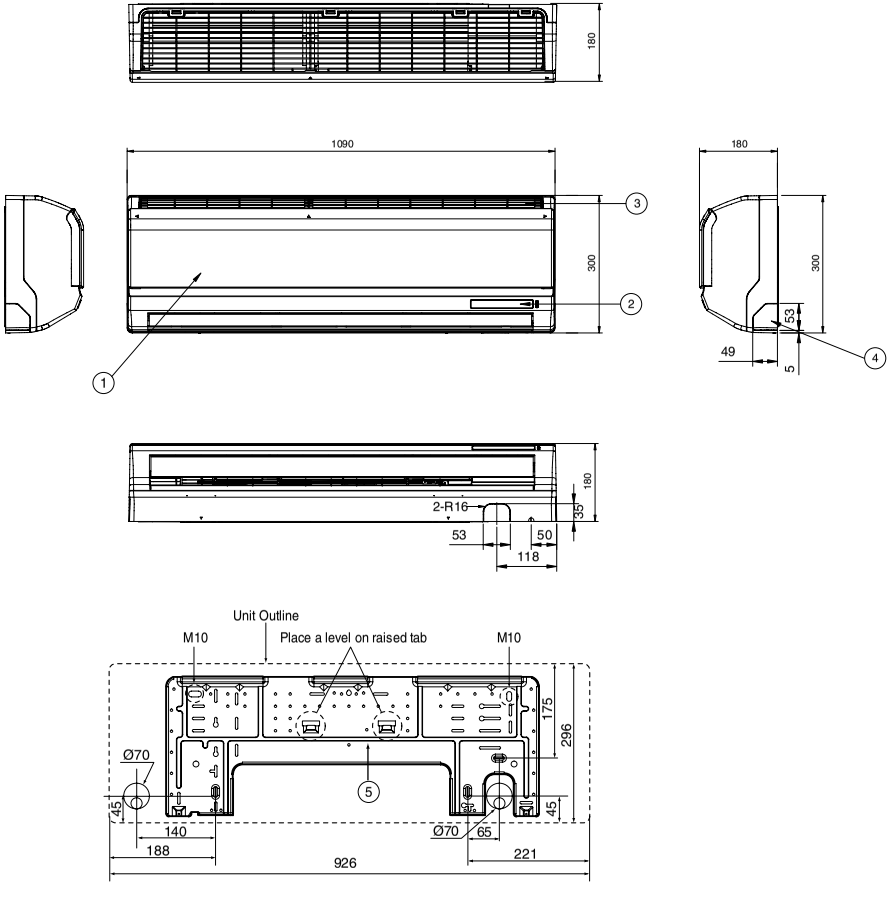
Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,200
Piping Connections	Liquid	mm(inch)	6.35(1/4)
	Gas	mm(inch)	9.52(3/8)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

WALL MOUNTED

AMNH18GD5L0 [MS18AH N50]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	5.28
		Btu/h	18,000
Heating Capacity		kW	5.80
		Btu/h	19,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)

▣ Note

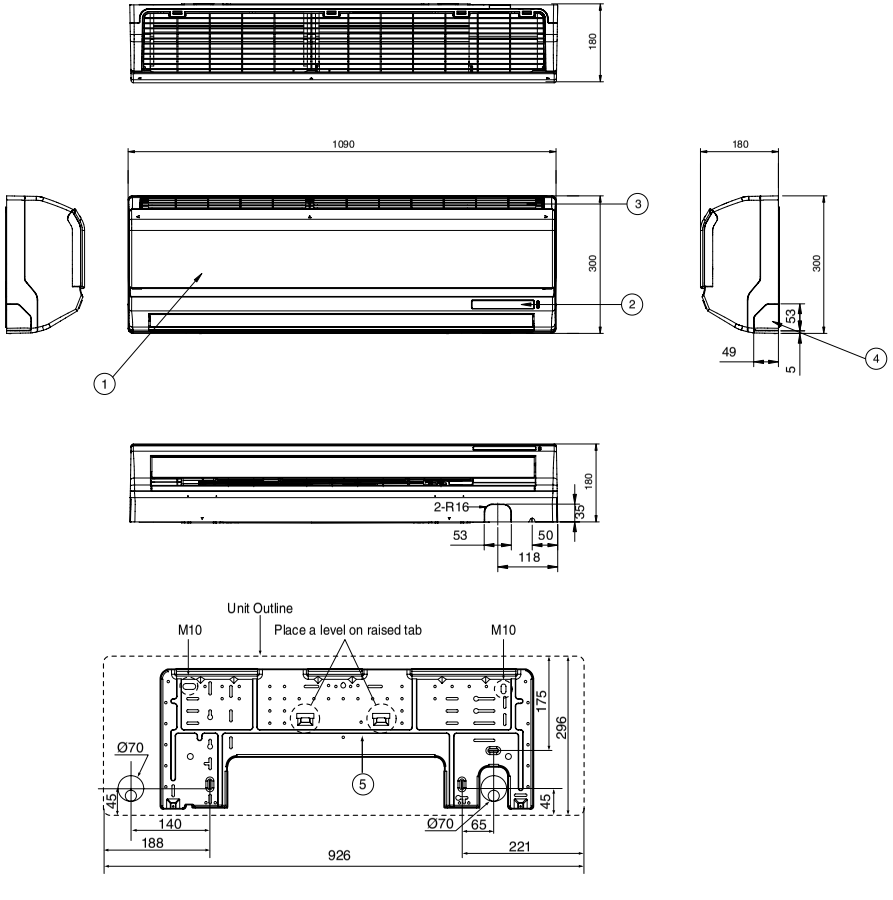
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: S5

WALL MOUNTED

AMNH24GD5L0 [MS24AH N50]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	6.74
		Btu/h	24,000
Heating Capacity		kW	7.47
		Btu/h	25,500
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)

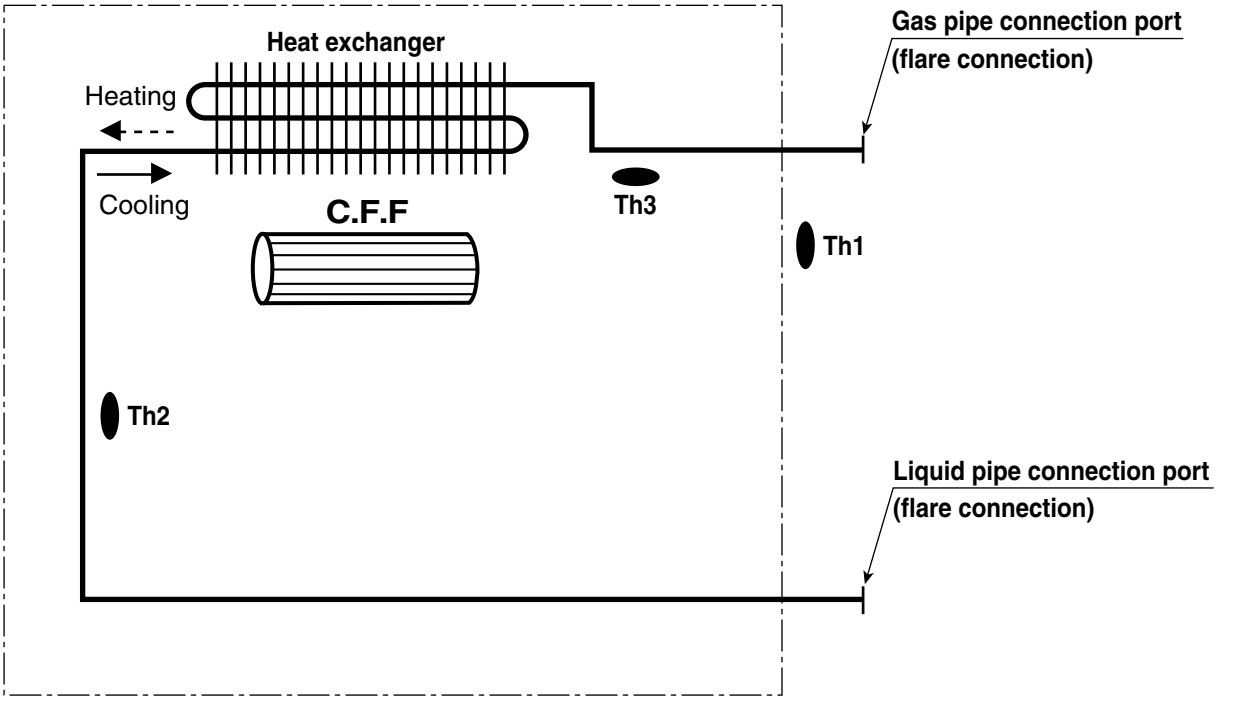
▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: S5

1.1.5 Piping diagrams



Th1 : Thermistor for suction air temp.
Th2 : Thermistor for liquid line temp.
Th3 : Thermistor for gas line temp.

■ Refrigerant pipe connection port diameters

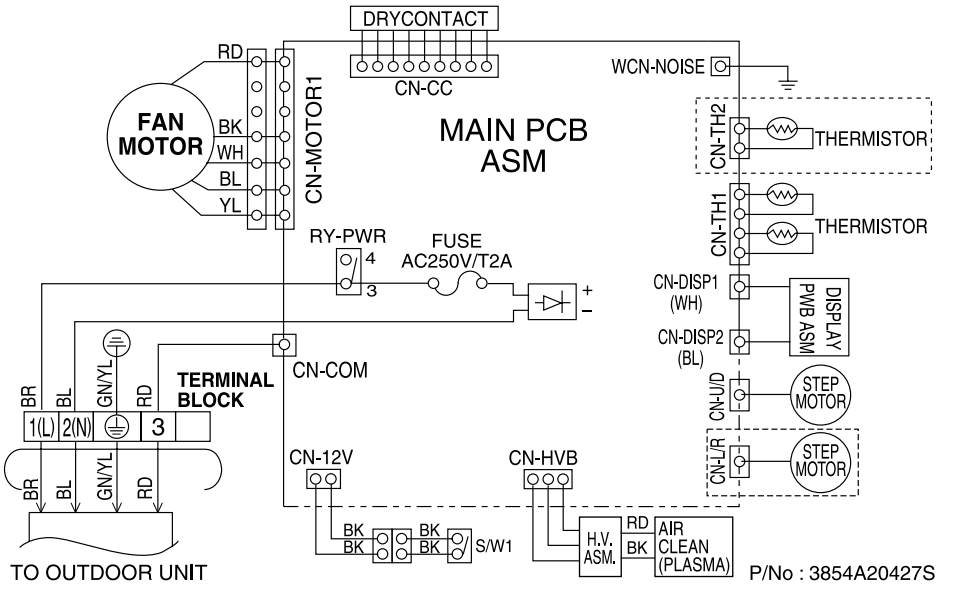
(mm)

Model	Gas	Liquid
AMNH07GD4L0 [MS07AH N40] AMNH09GD4L0 [MS09AH N40] AMNH12GD4L0 [MS12AH N40]	Ø9.52	Ø6.35
AMNH18GD5L0 [MS18AH N50] AMNH24GD5L0 [MS24AH N50]	Ø12.7	Ø6.35

1.1.6 Wiring diagrams

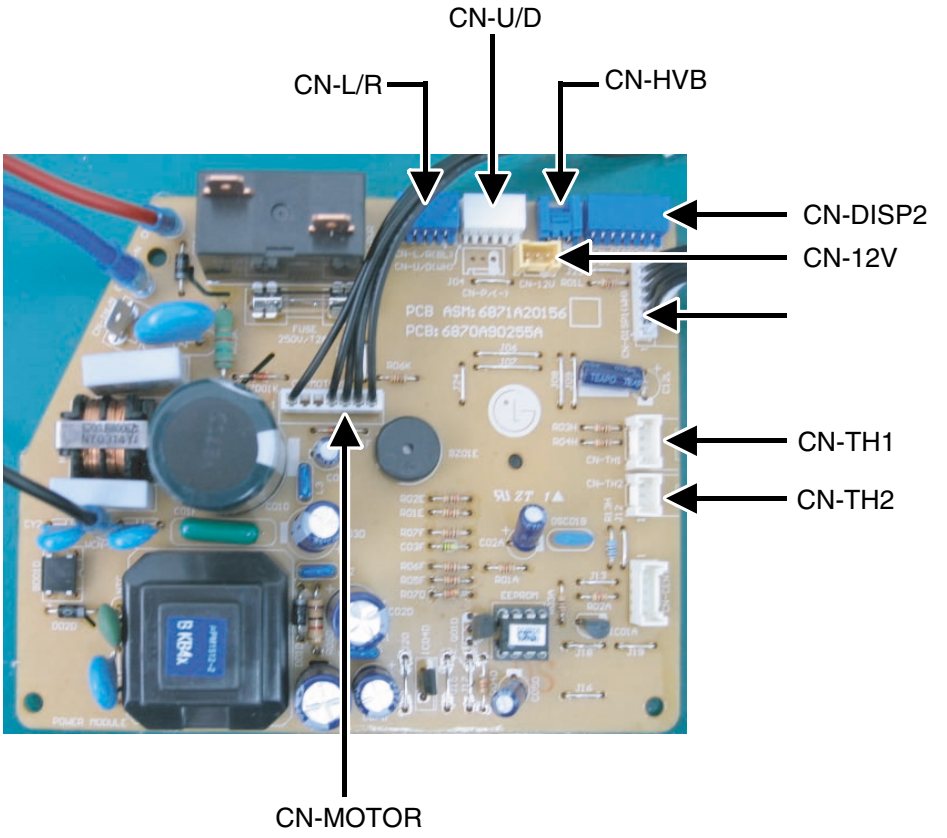
1) Wiring diagrams

Models: AMNH-S4/S5 model[MS-4/5]



Connector Number	Location
CN-POWER	AC power supply
CN-MOTOR	DC fan motor output
CN-AC/DC	AC/DC connector
CN-DISP	Display
CN-U/D	Step motor
CN-L/R	Step motor
CN-TH1	Room/pipe sensor
CN-TH2	Discharge pipe sensor

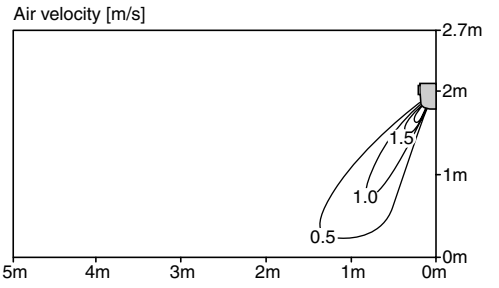
2) PCB

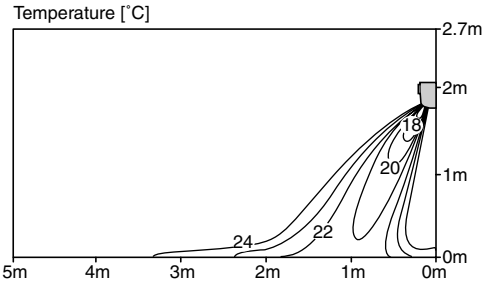


1.1.7. Air flow and temperature distributions (reference data)

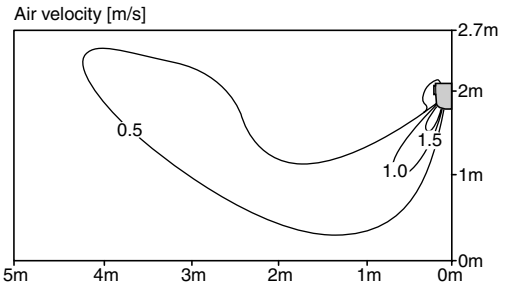
Model : 7k Btu/h

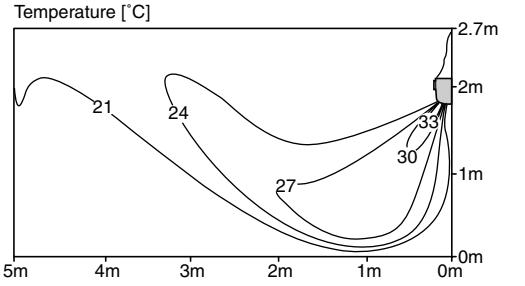
Cooling





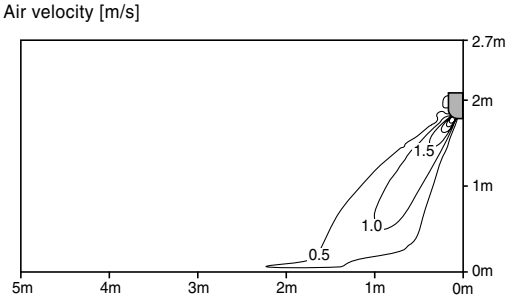
Heating

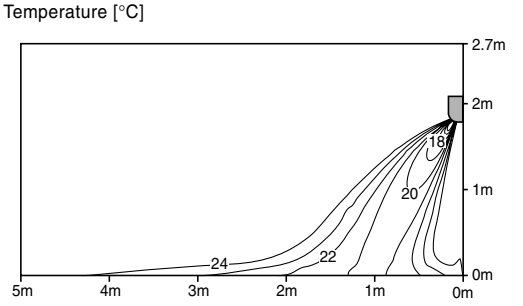




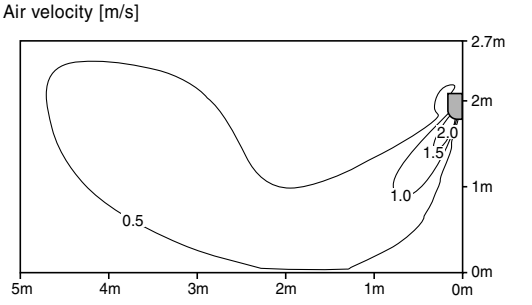
Model : 9k Btu/h

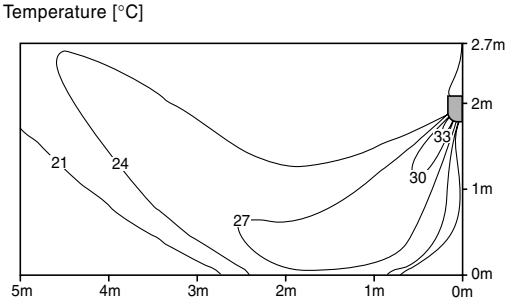
Cooling





Heating

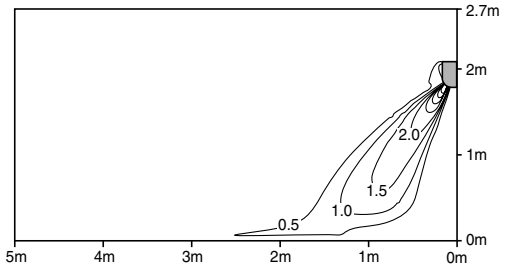




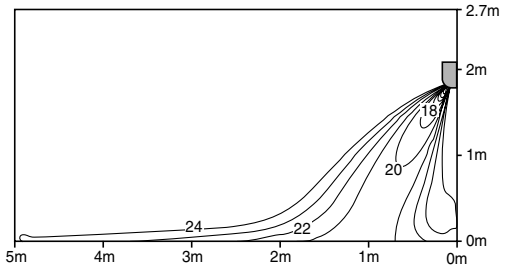
Model : 12k Btu/h

Cooling

Air velocity [m/s]

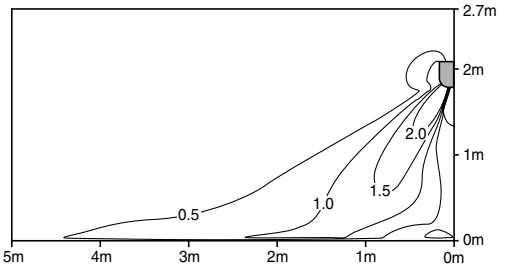


Temperature [°C]

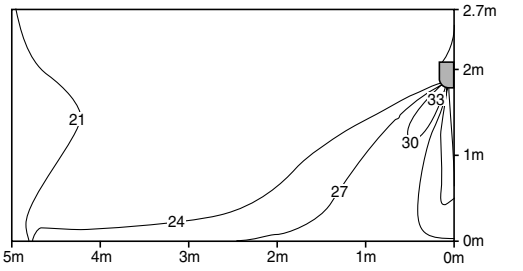


Heating

Air velocity [m/s]



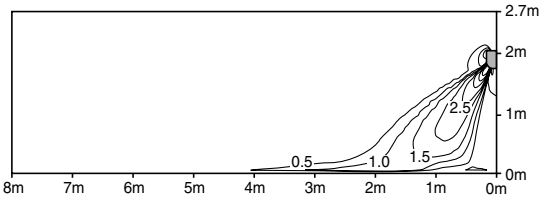
Temperature [°C]



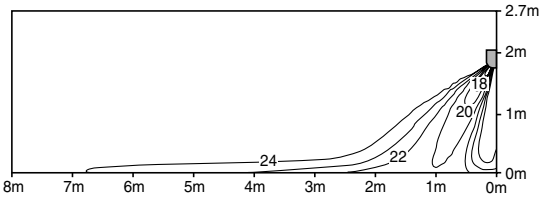
Model : 18k Btu/h

Cooling

Air velocity [m/s]

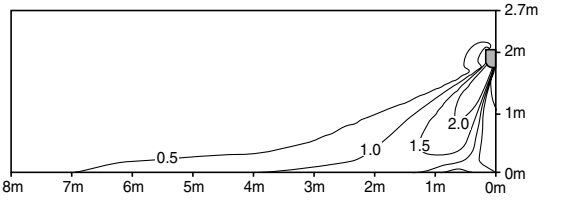


Temperature [°C]

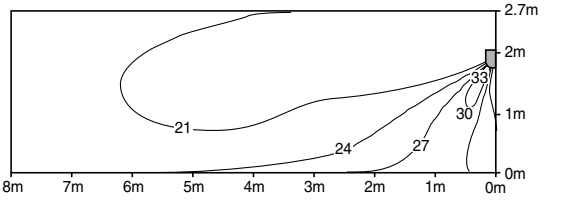


Heating

Air velocity [m/s]

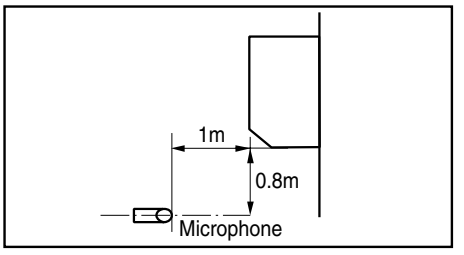


Temperature [°C]



1.1.8. Sound levels

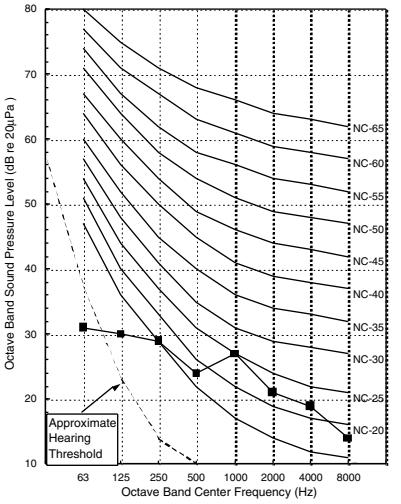
Overall



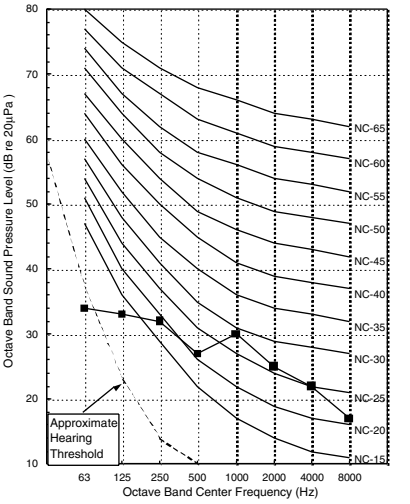
Notes:
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference accoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

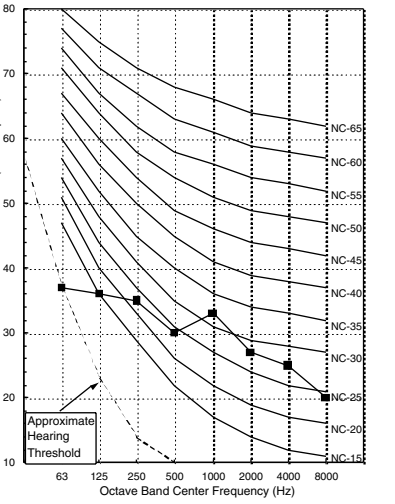
AMNH07GD4L0 [MS07AH N40]



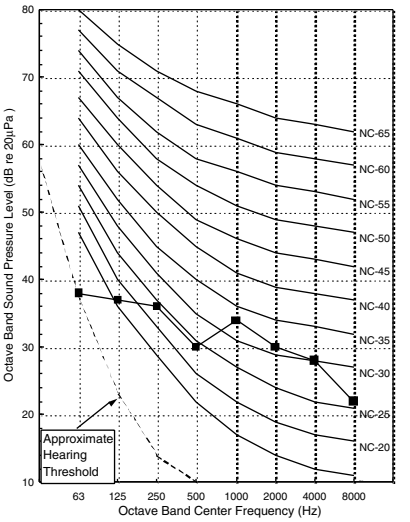
AMNH09GD4L0 [MS09AH N40]



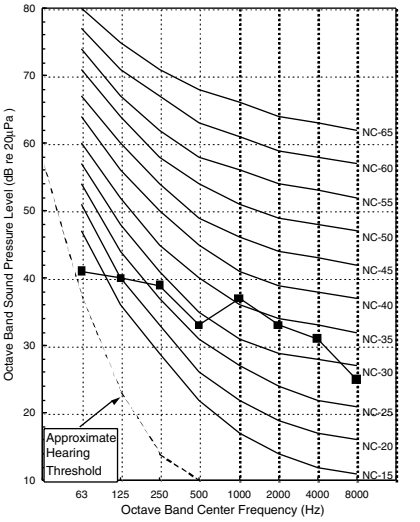
AMNH12GD4L0 [MS12AH N40]



AMNH18GD5L0 [MS18AH N50]



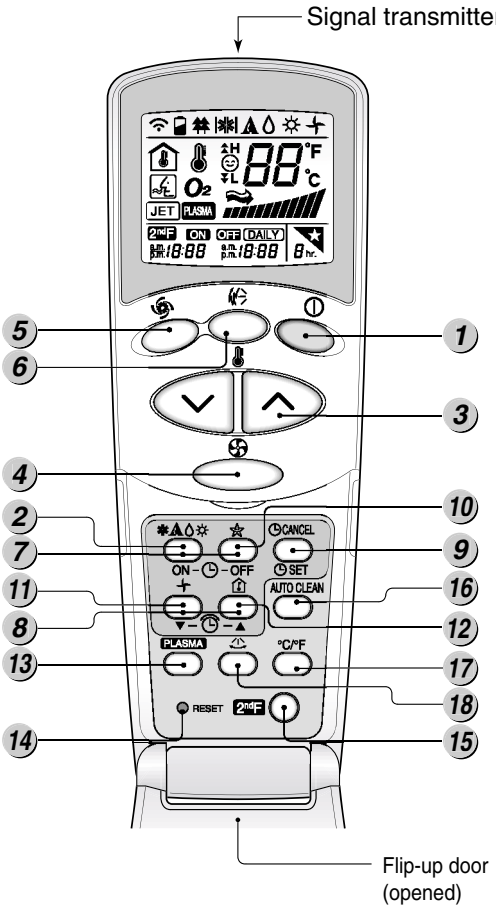
AMNH24GD5L0 [MS24AH N50]



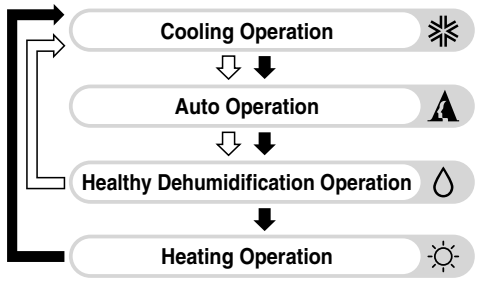
1.1.9. Controller

Wireless remote control

The Remote Controller transmits the signals to the system.



Operation Mode



• Cooling Model(⇩), Heat Pump Model(⬇)

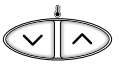
1 **START/STOP BUTTON**
Operation starts when this button is pressed and stops when the button is pressed again.



2 **OPERATION MODE SELECTION BUTTON**
Used to select the operation mode.



3 **ROOM TEMPERATURE SETTING BUTTONS**
Used to select the room temperature.



4 **INDOOR FAN SPEED SELECTOR**
Used to select fan speed in four steps low, medium, high and CHAOS.



5 **JET COOL**
Used to start or stop the speed cooling/heating. (Speed cooling/heating operates super high fan speed.)



6 **CHAOS SWING BUTTON**
Used to stop or start louver movement and set the desired up/down airflow direction.



7 **ON/OFF TIMER BUTTONS**
Used to set the time of starting and stopping operation.

8 **TIME SETTING BUTTONS**
Used to adjust the time.

9 **TIMER SET/CANCEL BUTTON**
Used to set the timer when the desired time is obtained and to cancel the Timer operation.

10 **SLEEP MODE AUTO BUTTON**
Used to set Sleep Mode Auto operation.

11 **AIR CIRCULATION BUTTON**
Used to circulate the room air without cooling or heating.

12 **ROOM TEMPERATURE CHECKING BUTTON**
Used to check the room temperature.

13 **PLASMA(OPTIONAL)**
Used to start or stop the plasma-purification function.

14 **RESET BUTTON**
Initialize remote controller.

15 **2nd F Button**
Used prior to using modes printed in blue at the bottom of buttons.

16 **AUTO CLEAN**
Used to set Auto Clean mode.

17 **˚C TO ˚F SWITCHING BUTTON**
Used to switch temperature reading from Centigrade to Fahrenheit.

18 **HORIZONTAL AIRFLOW DIRECTION CONTROL BUTTON (NOT ON ALL MODELS)**
Used to set the desired horizontal airflow direction.

1.2 ART COOL
1.2.1 Features

Models : AMNH096AP*1 [MA09AH* NP1] / AMNH126AP*1 [MA12AH* NP1]



• New concept interior airconditioner

ART COOL - Innovation of new concept
[3 dimensional cooling of bedroom]

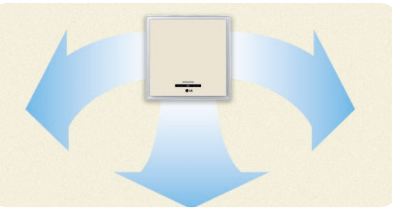
Golden ratio of bedroom! New shape interior!

Alternation from general air-conditioner
To grace image of room air-conditioner.
Bring you to new interior bedroom.



• Various color

Choose your favorite color
Metal/ Blue/ Wood / White Wood
Decorate high class image!



• 3-dimensional cooling system

New cube 3-dimensional cooling system of ART COOL has indirect cooling mode for sleep operation.

Being in sleep operation, cool air is discharged only right and left side!

Indirect cooling ensures you nice sleep.

• Digital air flow control

You feel more comfortable and convenient by controlling air flow.



Normal
Fast & even widely



Jet cool
Speedy & powerful



Sleep mode
Indirectly & softly

• Ultra thin

Technology mixed with sense of ar result in the super slim design which is 129mm depth.

The slimmest in the world!!!



129mm

Models : AMNH09GAF*1[MA09AH* NF1] / AMNH12GAF*1[MA12AH* NF1]



Good Design Mark

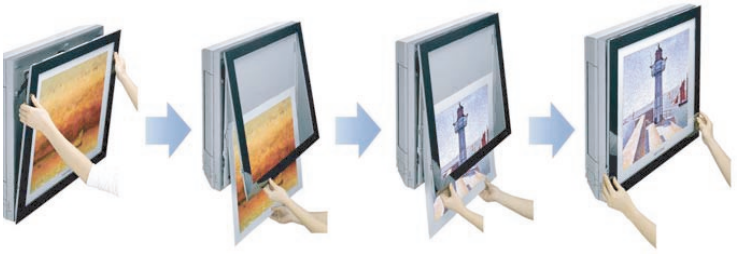


MA09AH* / MA12AH*



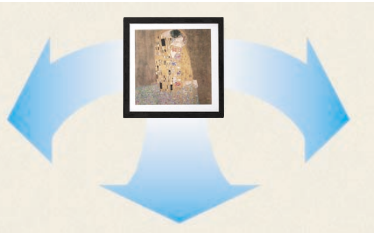
• Photo Changeable

You no longer have to be told what your air conditioner should look like. With LG's revolutionary ARTCOOL Photo Changeable, you can simply change the look of your air conditioner to what you want, when you want to.



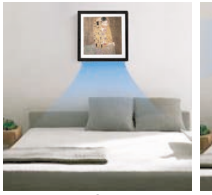
• 3 - Dimensional Air Flow

Designed like a work of art, and the new concept of 3 dimensional air flow. It gives even cooling as well as quick cooling from front and bothsides making the space evenly cool.

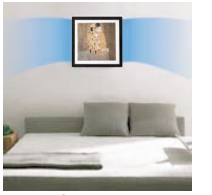


• Digital Air Flow Control

The air flow can be controlled to ensure that maximum comfort and convenience is realized. You can even have the option of turning off the bottom louver to ensure your utmost comfort.



Jet Cool
Speedy & Powerful



Sleep Mode
Indirectly & Softly

1.2.2 List of functions

Category	Function	AMNH096AP*1 [MA09AH* NP1]	AMNH126AP*1 [MA12AH* NP1]	AMNH09GAF*1 [MA09AH* NF1]	AMNH12GAF*1 [MA12AH* NF1]
Air flow	Air supply outlet	3	3	3	3
	Airflow direction control (left & right)	-	-	-	-
	Airflow direction control (up & down)	Auto	Auto	Auto	Auto
	Auto swing (left & right)	X	X	-	-
	Auto swing (up & down)	O	O	O	O
	Airflow steps(Fan / Cool / Heat)	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3
	CHAOS swing	O	O	O	O
	CHAOS wind (Auto wind)	X	X	X	X
	Jet cool (Power wind)	O	O	O	O
	Swirl wind	X	X	X	X
Air purifying	Deodorizing filter	O	O	O	O
	Plasma air purifier	O	O	O	O
	Prefilter(Washable / Anti-fungus)	O	O	O	O
Installation	Drain pump	-	-	-	-
	E.S.P. control	-	-	-	-
	Electric heater (Operation)			-	-
	High ceiling operation	-	-	-	-
Reliability	Hot start	O	O	O	O
	Self diagnosis	O	O	O	O
	Soft dry operation	O	O	O	O
Convenience	Auto changeover	X	X	X	X
	Auto cleaning	X	X	O	O
	Auto elevation Grille	-	-	-	-
	Auto operation(Artificial intelligence)	O	O	O	O
	Auto restart operation	O	O	O	O
	Child lock	-	-	-	-
	Energy-Saving Cooling Mode	X	X	O	O
	Forced operation	O	O	O	O
	Group control	-	-	X	X
	Sleep mode	O	O	O	O
	Timer (On/Off)	O	O	O	O
	Timer (weekly)	-	-	-	-
	Two thermistor control	-	-	-	-
Individual Control	Standard wired remote controller	-	-	-	-
	Deluxe wired remote controller	-	-	-	-
	Simple wired remote controller	-	-	-	-
	Wired remote controller(for hotel use)	-	-	-	-
	Wireless remote controller(simple)	-	-	-	-
	Wireless LCD remote control	O	O	O	O
CAC Network Function	General central control(Non LGAP)	X	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB	PQDSB
	Central control(LGAP)	O	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X	X	X
	Zone control	X	X	X	X
Others	Thermistor	-	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.2.3 Specification

Indoor unit type			ART COOL			
Model			AMNH096AP*1 [MA09AH* NP1]	AMNH126AP*1 [MA12AH* NP1]	AMNH09GAF*1 [MA09AH* NF1]	AMNH12GAF*1 [MA12AH* NF1]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50	1/220_240/50	1/220_240/50
Cooling capacity		kW	2.64	3.52	2.64	3.52
		Btu/h	9,000	12,000	9,000	12,000
Heating capacity		kW	2.93	3.87	2.93	3.87
		Btu/h	10,000	13,200	10,000	13,200
Current	Nominal running current	A	0.08	0.08	0.08	0.08
Fan	Motor type		BLDC	BLDC	BLDC	BLDC
	Fan type		Turbo Fan	Turbo Fan	Turbo fan	Turbo fan
	Motor output x Number of unit		24 x 1	24 x 1	24 x 1	24 x 1
	Air flow rate	cmm	7/6.5/6	8.7/8.1/7.5	7.7/5.9/4.4	8.9/7.3/5.6
	(H/M/L)	cfm	247/230/212	307/286/265	272/208/155	314/258/198
	Capacitor	µF/Vac	-	-	-	-
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2R x 20C x 20	2R x 20C x 20	2 x 20 x 21	2 x 20 x 21
Dimensions (WxHxD)	Body	mm(inch)	570*568*129 (22.4*22.4*5.1)	570*568*129 (22.4*22.4*5.1)	600*600*146(23.6*23.6*5.7)	600* 600*146(23.6*23.6*5.7)
Weight	Body	kg(lbs)	11.5(25.4)	11.5(25.4)	15(33.1)	15(33.1)
Air filter			Long Life Filter	Long Life Filter	Plasma Filter	Plasma Filter
Sound level (H/M/L)		dB(A)+3	37 / 31 / 27	43 / 39 / 31	38 / 32 / 27	44 / 38 / 32
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35(1/4)	6.35(1/4)
connections	Gas	mm(inch)	9.52 (3/8)	9.52 (3/8)	9.52(3/8)	9.52(3/8)
Dehumidification rate		l/h	1.1	1.4	1.2	1.4
Safety devices			Fuse, Thermal Protector for Fan Motor		Fuse, thermal protector for fan motorr	
Temperature sensor			Thermistor	Thermistor	Thermistor	Thermistor
Referigerant			R410A	R410A	R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)	EEV(in Outdoor Unit or BD)	EEV(in Outdoor Unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series	Multi F/F DX series	Multi F/F DX series
Power and transmission interunit cable		No.x mm²	4*0.75	4*0.75	4* 0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

1.2.4 Dimensions

ART COOL

AMNH096AP*1 [MA09AH*NP1]

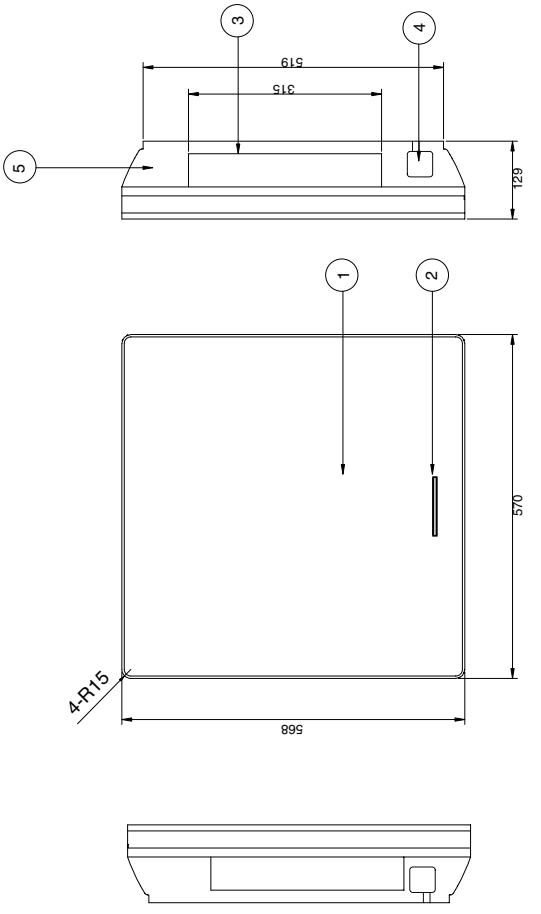
No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

			Ø/V/Hz	1/ 220~240 / 50
Power supply				
Cooling Capacity			kW	2.64
			Btu/h	9,000
Heating Capacity			kW	2.93
			Btu/h	10,000
Piping Connections		Liquid(Ø)	mm(inch)	6.35(1/4)
		Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.



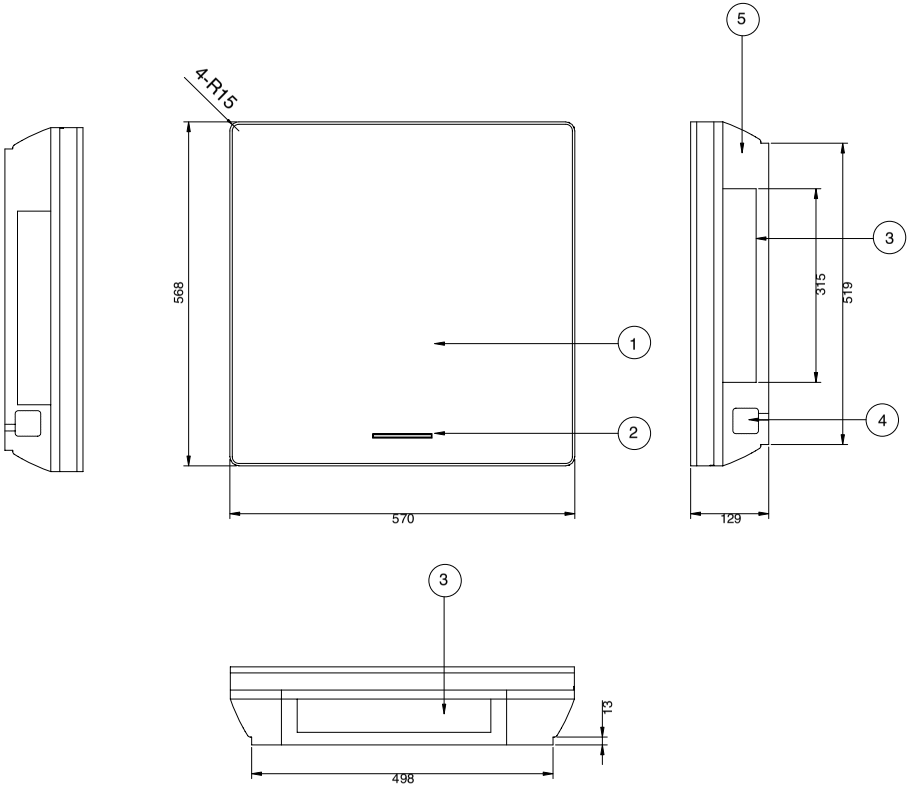
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam, 641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: SP1

ART COOL

AMNH126AP*1 [MA12AH*NP1]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

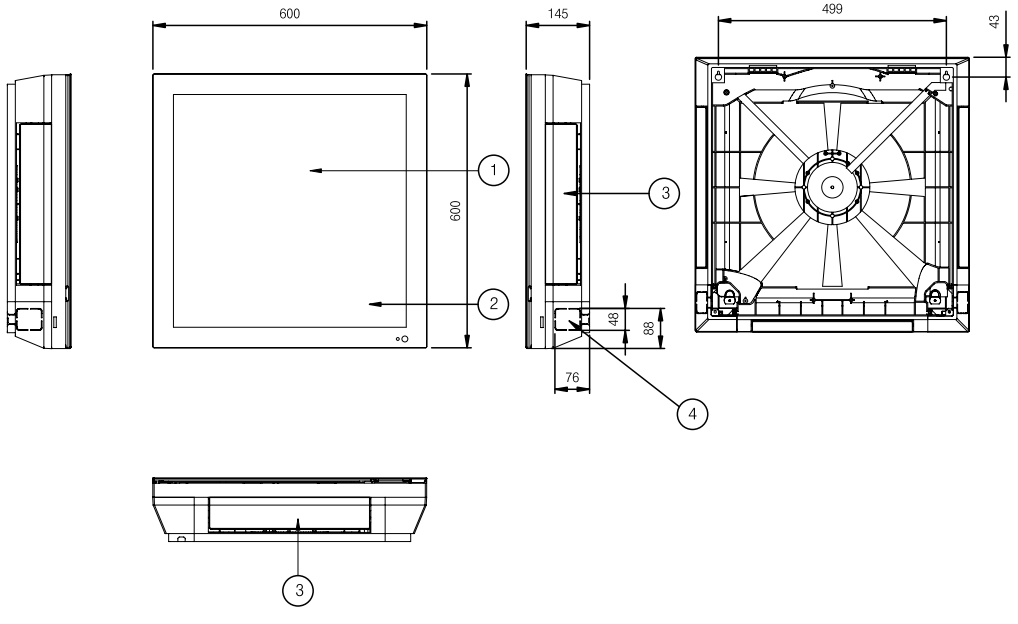
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

LG Electronics
76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: SP1

ART COOL

AMNH09GAF*1[MA09AH* NF1]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	

■ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

■ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

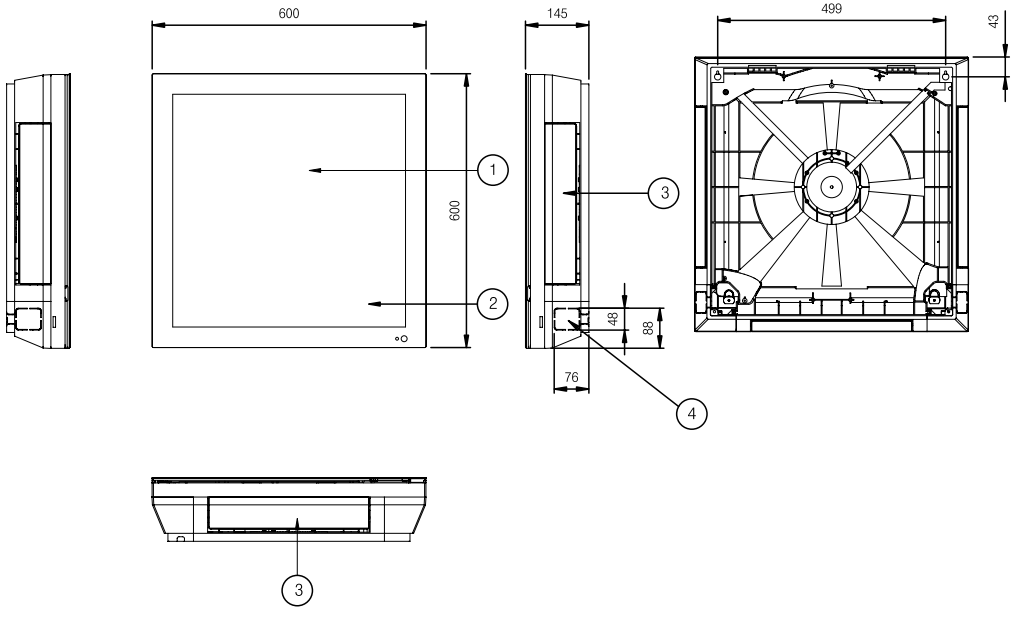
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: SF

ART COOL

AMNH12GAF*1[MA12AH* NF1]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

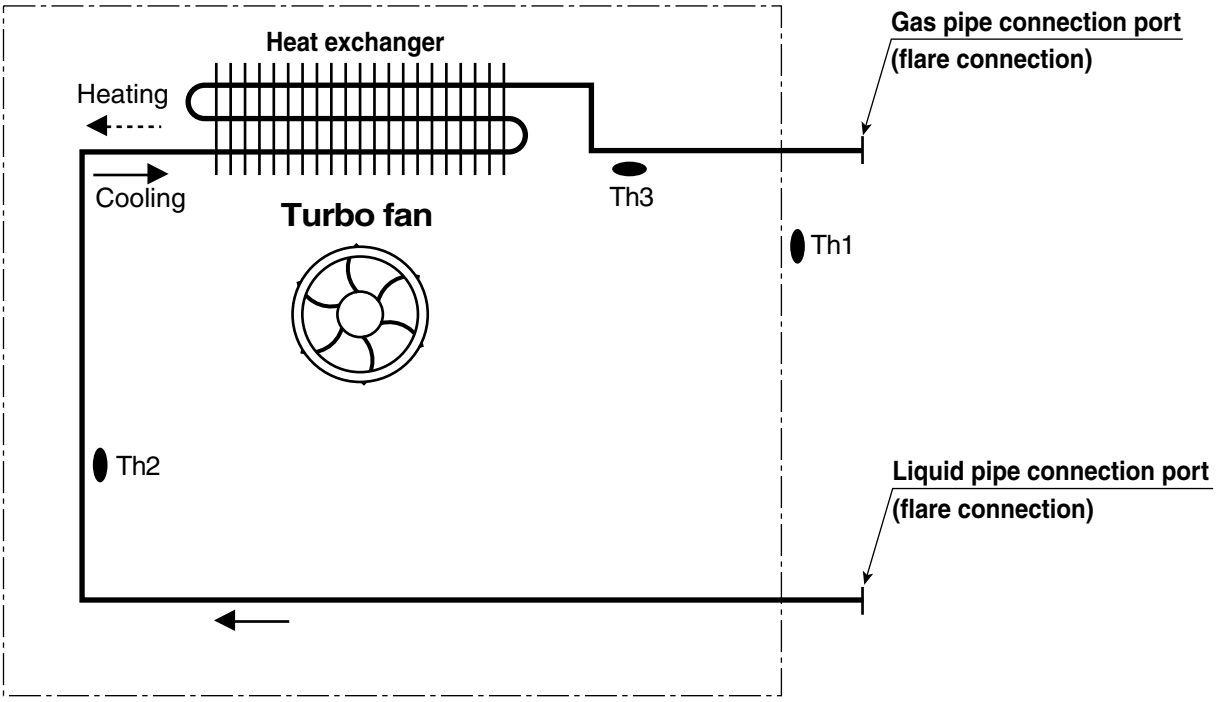
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: SF

1.2.5 Piping diagrams



LOC.	Description	PCB Connector
Th1	Thermistor for sunction air temperature	CN-TH1(Indoor)
Th2	Thermistor for evaporator inlet temperature	
Th3	Thermistor for evaporator outlet temperature	CN-TH2(Indoor)

■ Refrigerant pipe connection port diameters

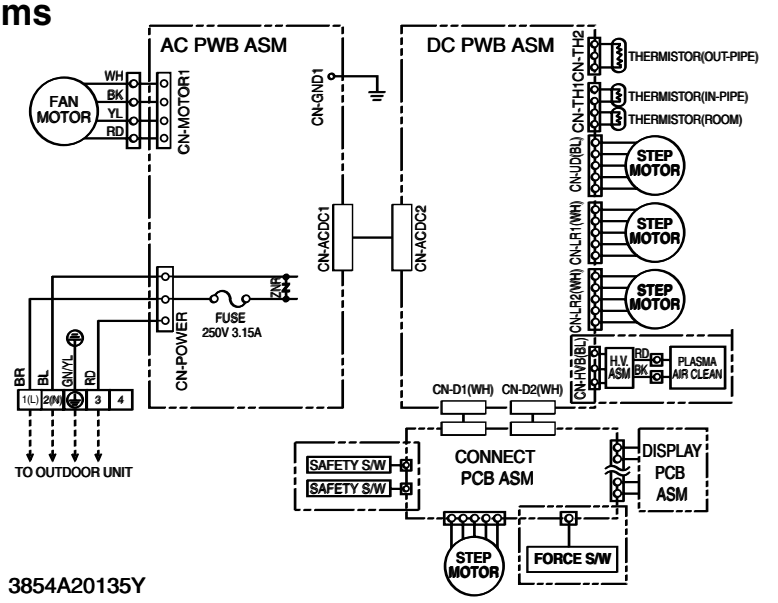
(mm)

Model	Gas	Liquid
AMNH096AP*1 [MA09AH* NP1] AMNH126AP*1 [MA12AH* NP1] AMNH09GAF*1[MA09AH* NF1] AMNH12GAF*1[MA12AH* NF1]	Ø9.52	Ø6.35

1.2.6 Wiring diagrams

Models : AMNH096AP*1 [MA09AH* NP1] / AMNH126AP*1 [MA12AH* NP1]

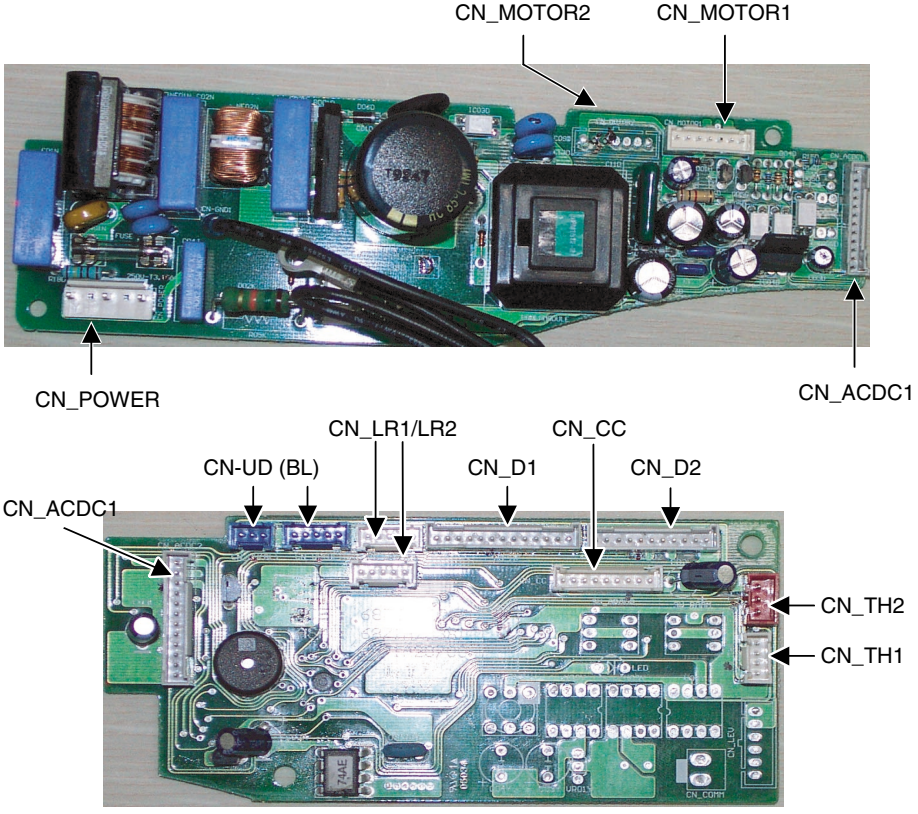
1) Wiring diagrams



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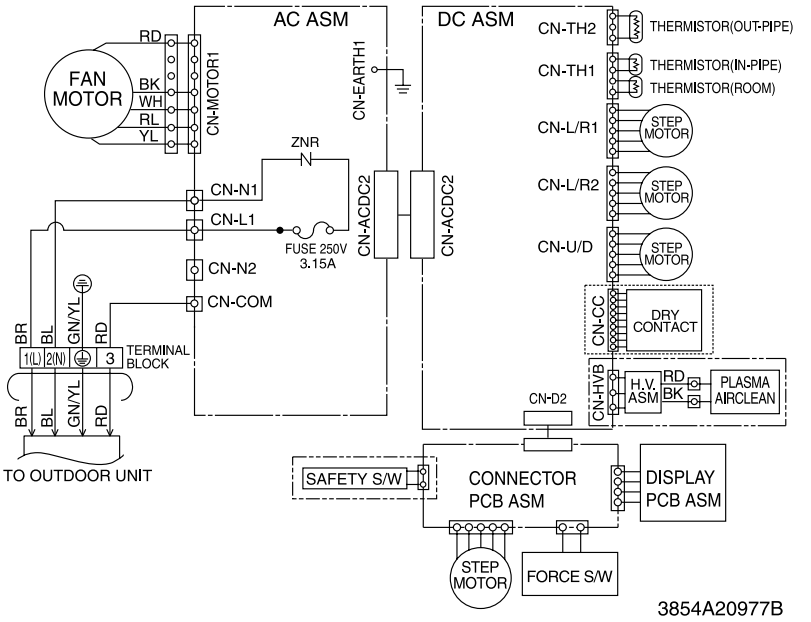
Connector Number	Location	Connector Number	Location
CN-POWER	AC power supply	CN-LR2	Step motor
CN-MOTOR1	BLDC fan motor output	CN-UD	Step motor
CN-D1	Display	CN-TH1	Room/In pipe sensor
CN-D2	Display	CN-TH2	Discharge pipe sensor
CN-LR1	Step motor	CN-GND1	Ground

2) PCB

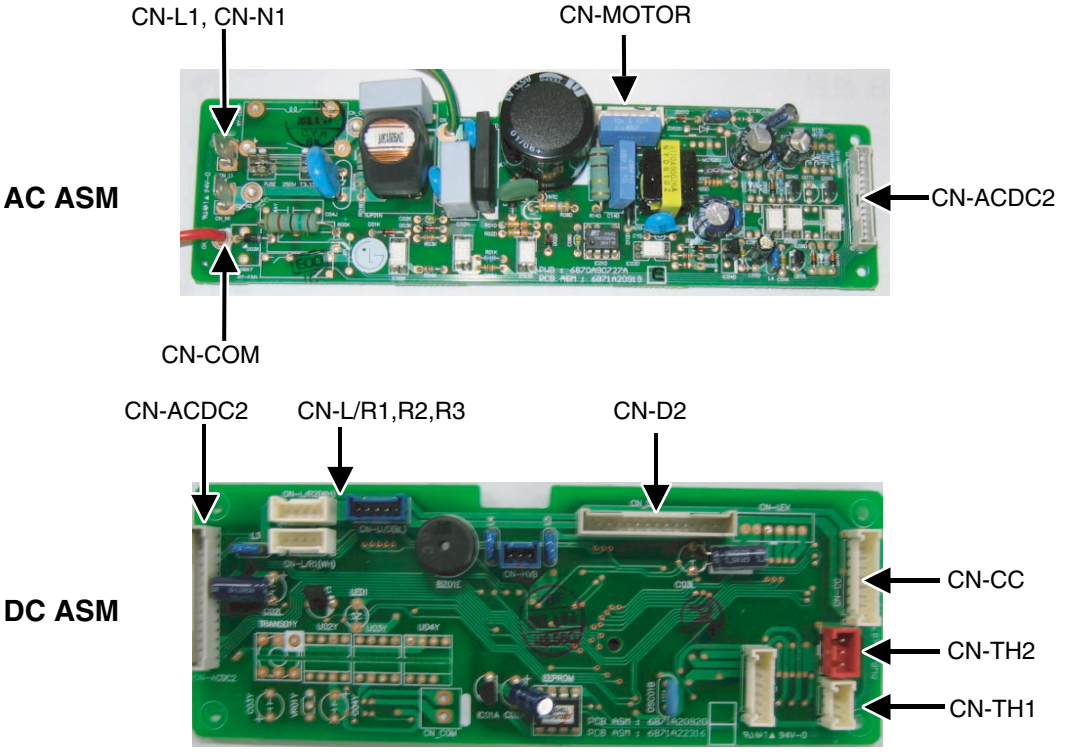


Models : AMNH09GAF*1[MA09AH* NF1] / AMNH12GAF*1[MA12AH* NF1]

1) Wiring diagrams



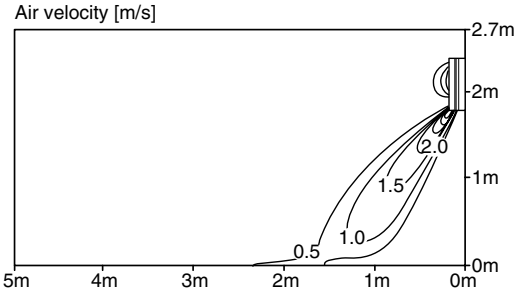
2) PCB

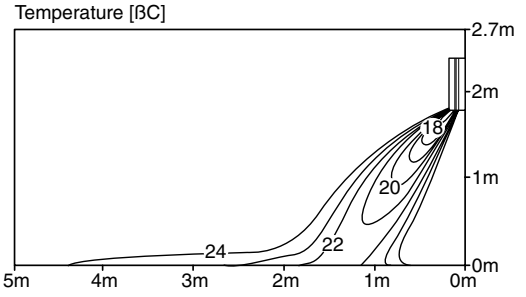


1.2.7 Air flow and temperature distributions (reference data)

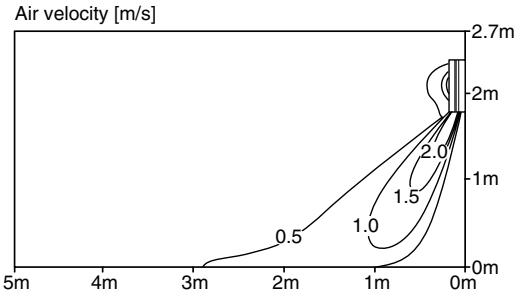
Models : 12k Btu/h

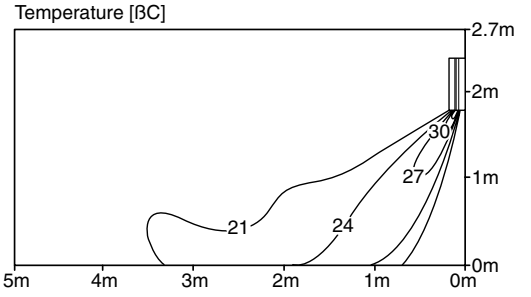
Cooling





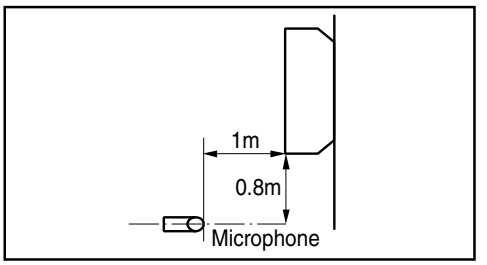
Heating





1.2.8 Sound levels

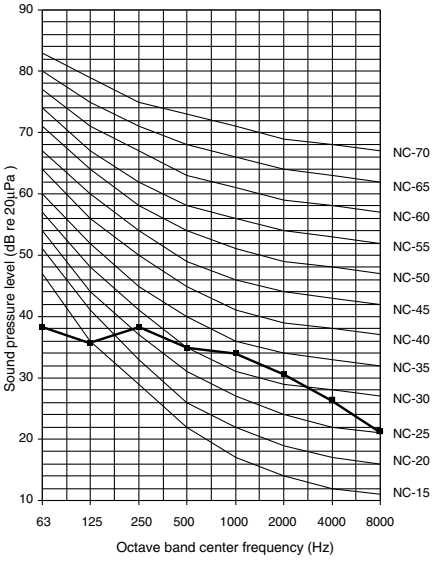
Overall



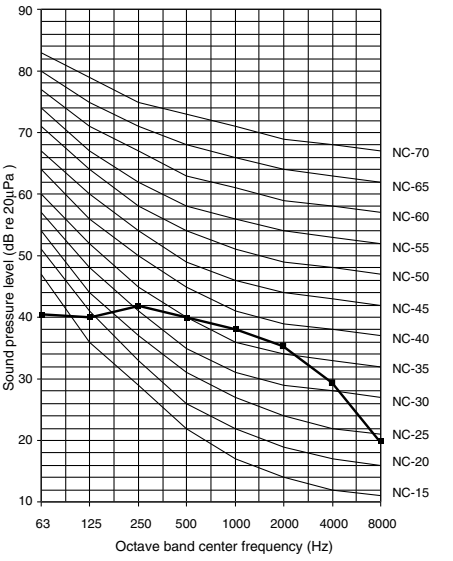
Notes:
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference accoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

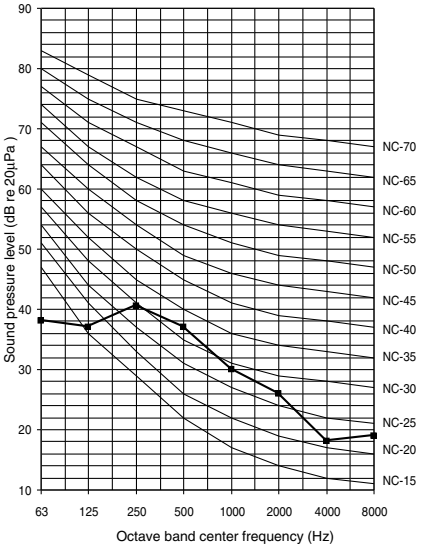
AMNH096AP*1 [MA09AH* NP1]



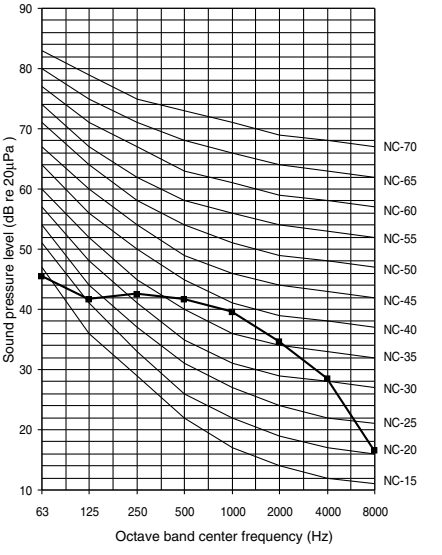
AMNH126AP*1 [MA12AH* NP1]



AMNH09GAF*1[MA09AH* NF1]



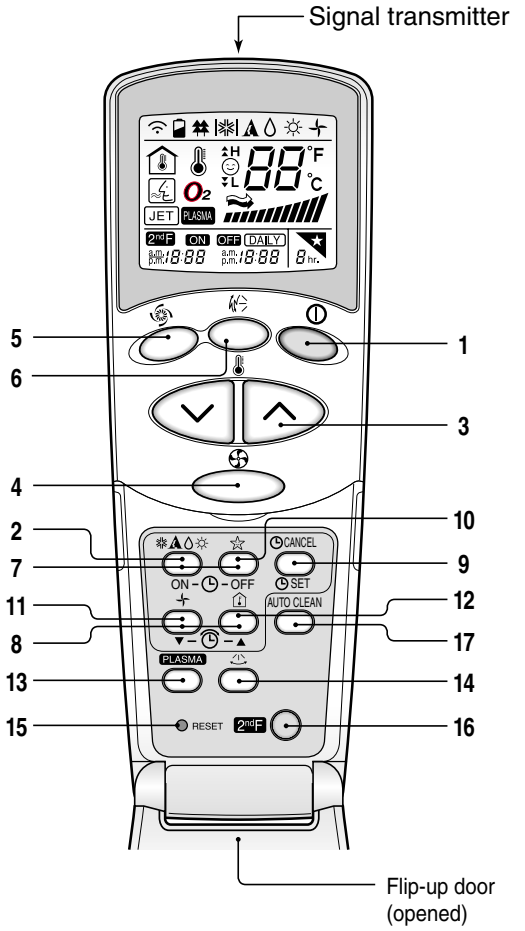
AMNH12GAF*1[MA12AH* NF1]



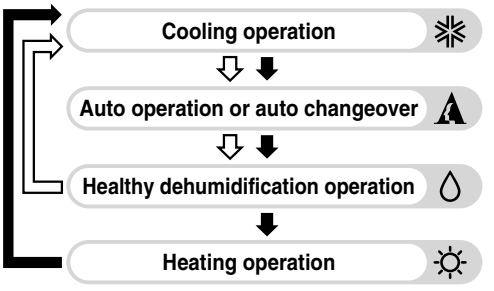
1.2.9 Controller

Wireless remote control(AMNH-SP1 models)

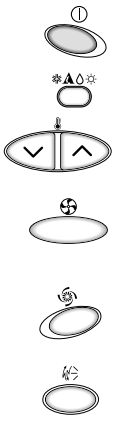
The remote control transmits the signals to the system.



Operation mode



• Cooling model(⇩), Heat pump model(⬇)



1. Start/Stop button
Operation starts when this button is pressed and stops when the button is pressed again.

2. Operation mode selection button
Used to select the operation mode.

3. Room temperature setting buttons
Used to select the room temperature.

4. Indoor fan speed selector
Used to select fan speed in four steps low, medium, high and CHAOS.

5. Jet cool
Used to start or stop the speed cooling. (Speed cooling operates super high fan speed in cooling mode.)

6. Chaos swing button
Used to stop or start louver movement and set the desired up/down airflow direction.

7. On/Off timer buttons
Used to set the time of starting and stopping operation.

8. Time setting buttons
Used to adjust the time.

9. Timer set/Cancel button
Used to set the timer when the desired time is obtained and to cancel the Timer operation.

10. Sleep mode auto button
Used to set Sleep mode auto operation.

11. Air circulation button
Used to circulate the room air without cooling or heating.

12. Room temperature checking button
Used to check the room temperature.

13. PLASMA
Used to start or stop the plasma-purification function.

14. Horizontal airflow direction control button (Not on all models)
Used to set the desired horizontal airflow direction.

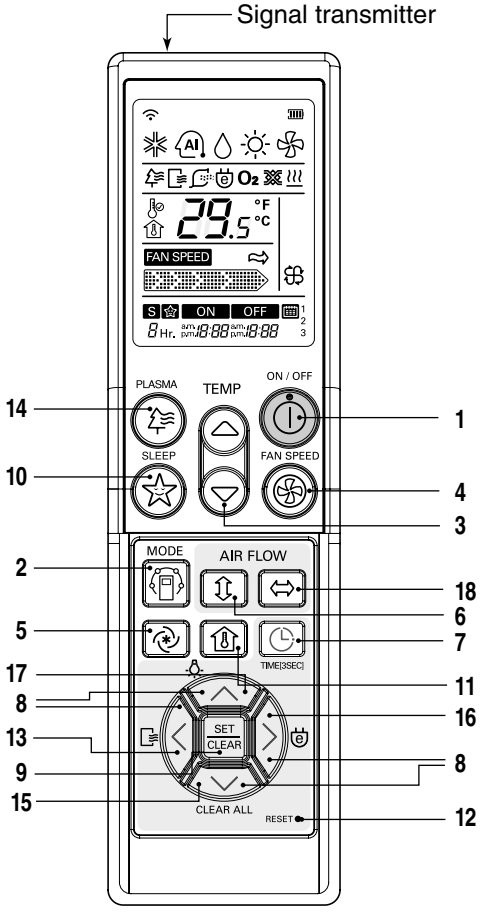
15. Reset button
Used prior to resetting time or after replacing batteries.

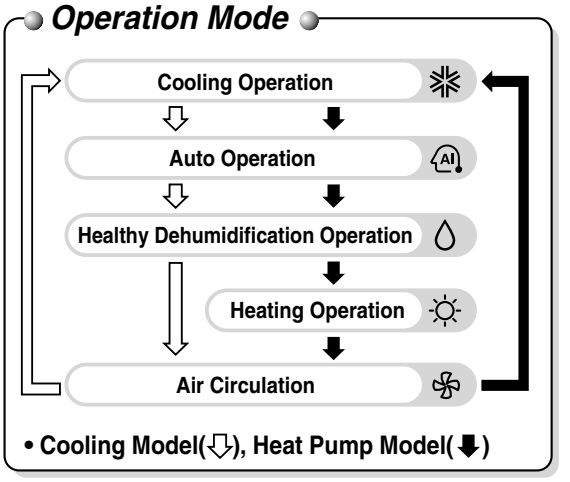
16. 2nd F button
Used prior to using modes printed in blue at the bottom of buttons.

17. AUTO CLEAN
Used to set Auto Clean mode.

Wireless remote control(AMNH-SF models)

The controls will look like the following.





1. ON/OFF BUTTON
Used to turn off/on the unit.

2. OPERATION MODE SELECTION BUTTON
Used to select the operation mode.

3. ROOM TEMPERATURE SETTING BUTTONS
Used to select the room temperature.

4. INDOOR FAN SPEED SELECTOR BUTTON
Used to select fan speed in four steps
low, medium, high and CHAOS.

5. JET COOL BUTTON
Used to start or stop the speed cooling.
(It operates fan in super high speed in cooling mode)

6. CHAOS SWING BUTTON
Used to stop or start louver movement and set the desired up/down airflow direction.

7. TIMER AND TIME SETTING BUTTON
Used to set the time of starting and stopping operation.

8. TIME SETTING BUTTONS
Used to adjust the time.

9. TIMER SET / CLEAR BUTTON
Used to set and to cancel the timer operation.

10. SLEEP MODE AUTO BUTTON
Used to set sleep mode auto operation.

11. ROOM TEMPERATURE CHECKING BUTTON
Used to check the room temperature.

12. RESET BUTTON
Used prior to resetting time.

13. AUTO CLEAN BUTTON
Used to set auto clean mode.

14. PLASMA BUTTON
Used to start or stop the plasma-purification function.

15. CLEAR ALL BUTTON
Used to cancel all timer setting.

16. ENERGY SAVING COOLING BUTTON(OPTIONAL)
Used to save Energy.

17. LCD LUMINOSITY BUTTON(OPTIONAL)
Used to adjust LCD luminosity.

18. HORIZONTAL AIRFLOW DIRECTION CONTROL BUTTON (OPTIONAL)
Used to set the desired horizontal airflow direction.

1.3 ART COOL Mirror

1.3.1. Features

Models : AMNH07GDZ*0 [MC07AH* NZ1] / AMNH09GDU*0 [MC09AH* NU1] / AMNH12GDU*0 [MC12AH* NU1] / AMNH18GD3*0 [MC18AN* N31] / AMNH24GD3*0 [MC24AH* N31] / AMNH07GDE*1 [MC07AH* NE1] / AMNH09GDE*1 [MC09AH* NE1] / AMNH12GDE*1 [MC12AH* NE1] / AMNH18GD8*1 [MC18AH* N81] / AMNH24GD8*1 [MC24AH* N81]



International Forum Design reddot design award

• New concept interior airconditioner

ART COOL - Innovation of new concept
Golden ratio of bedroom! New shape interior!

Alternation from general air-conditioner
To grace image of room air-conditioner.
Bring you to new interior bedroom.

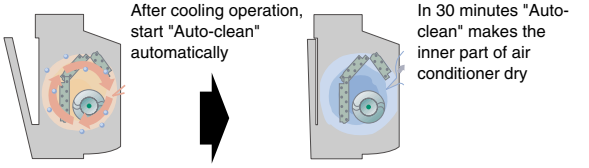


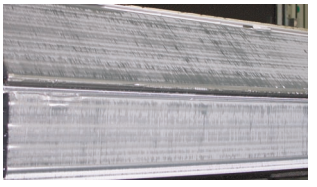
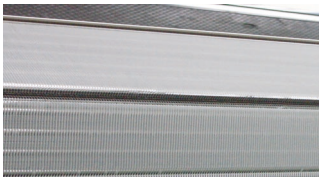
• Various color

Choose your favorite color
Metal/ Blue/ Wood/ White Wood
Decorate high class image!

• Auto clean system

- Auto Clean helps to remove odor and save clean-up time. After using air-conditioner, "Auto Clean" makes the inner part of air conditioner dry for 30 min. It removes moisture and mould so you can enjoy odor-free air and save time to clean up.



Before	After	Effect
		**Remove odor !** **Restrain mildew !** **Keep performance ! (durability)** **Save time to clean up.**

• Wide discharge(ART COOL Mirror)

Powerful stream of air reachs the farthest corners of the room to bring fast cooling in minute

1.3.2 List of functions

Category	Function	AMNH07GDZ*0 [MC07AH* NZ1]	AMNH09GDU*0 [MC09AH* NU1]	AMNH12GDU*0 [MC12AH* NU1]	AMNH18GD3*0 [MC18AH* N31]
Air flow	Air supply outlet	1	1	1	1
	Airflow direction control (left & right)	Manual	Auto	Auto	Auto
	Airflow direction control (up & down)	Auto	Auto	Auto	Auto
	Auto swing (left & right)	X	O	O	O
	Auto swing (up & down)	O	O	O	O
	Airflow steps(Fan / Cool / Heat)	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3
	CHAOS swing	O	O	O	O
	CHAOS wind (Auto wind)	X	X	X	X
	Jet cool (Power wind)	O	O	O	O
	Swirl wind	X	X	X	X
Air purifying	Deodorizing filter	O	O	O	O
	Plasma air purifier	O	O	O	O
	Prefilter(Washable / Anti-fungus)	O	O	O	O
Installation	Drain pump	-	-	-	-
	E.S.P. control	-	-	-	-
	Electric heater (Operation)	-	-	-	-
	High ceiling operation	-	-	-	-
Reliability	Hot start	O	O	O	O
	Self diagnosis	O	O	O	O
	Soft dry operation	O	O	O	O
Convenience	Auto changeover	X	X	X	X
	Auto cleaning	O	O	O	O
	Auto elevation Grille	-	-	-	-
	Auto operation(Artificial intelligence)	O	O	O	O
	Auto restart operation	O	O	O	O
	Child lock	-	-	-	-
	Forced operation	O	O	O	O
	Group control	-	-	-	-
	Sleep mode	O	O	O	O
	Timer (On/Off)	O	O	O	O
	Timer (weekly)	-	-	-	-
	Two thermistor control	-	-	-	-
Individual Control	Standard wired remote controller	-	-	-	-
	Deluxe wired remote controller	-	-	-	-
	Simple wired remote controller	-	-	-	-
	Wired remote controller(for hotel use)	-	-	-	-
	Wireless remote controller(simple)	-	-	-	-
	Wireless LCD remote control	O	O	O	O
CAC Network Function	General central control(Non LGAP)	X	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB	PQDSB
	Central control(LGAP)	O	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X	X	X
	Zone control	X	X	X	X
Others	Thermistor	-	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category	Function	AMNH24GD3*0 [MC24AH* N31]	AMNH07GDE*1 [MC07AH* NE1]	AMNH09GDE*1 [MC09AH* NE1]	AMNH12GDE*1 [MC12AH* NE1]
Air flow	Air supply outlet	1	1	1	1
	Airflow direction control (left & right)	Auto	Auto	Auto	Auto
	Airflow direction control (up & down)	Auto	Auto	Auto	Auto
	Auto swing (left & right)	O	O	O	O
	Auto swing (up & down)	O	O	O	O
	Airflow steps(Fan / Cool / Heat)	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3
	CHAOS swing	O	O	O	O
	CHAOS wind (Auto wind)	X	X	X	X
	Jet cool (Power wind)	O	O	O	O
	Swirl wind	X	X	X	X
Air purifying	Deodorizing filter	O	O	O	O
	Plasma air purifier	O	O	O	O
	Prefilter(Washable / Anti-fungus)	O	O	O	O
Installation	Drain pump	-	-	-	-
	E.S.P. control	-	-	-	-
	Electric heater (Operation)	-	-	-	-
	High ceiling operation	-	-	-	-
Reliability	Hot start	O	O	O	O
	Self diagnosis	O	O	O	O
	Soft dry operation	O	O	O	O
Convenience	Auto changeover	X	X	X	X
	Auto cleaning	O	O	O	O
	Auto elevation Grille	-	-	-	-
	Auto operation(Artificial intelligence)	O	O	O	O
	Auto restart operation	O	O	O	O
	Child lock	-	-	-	-
	Energy-Saving Cooling Mode	X	O	O	O
	Forced operation	O	O	O	O
	Group control	-	-	-	-
	Sleep mode	O	O	O	O
	Timer (On/Off)	O	O	O	O
	Timer (weekly)	-	-	-	-
	Two thermistor control	-	-	-	-
Individual Control	Standard wired remote controller	-	-	-	-
	Deluxe wired remote controller	-	-	-	-
	Simple wired remote controller	-	-	-	-
	Wired remote controller(for hotel use)	-	-	-	-
	Wireless remote controller(simple)	-	-	-	-
	Wireless LCD remote control	O	O	O	O
CAC Network Function	General central control(Non LGAP)	X	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB	PQDSB
	Central control(LGAP)	O	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X	X	X
	Zone control	X	X	X	X
Others	Thermistor	-	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category	Function	AMNH18GD8*1 [MC18AH* N81]	AMNH24GD8*1 [MC24AH* N81]
Air flow	Air supply outlet	3	3
	Airflow direction control (left & right)	Auto	Auto
	Airflow direction control (up & down)	Auto	Auto
	Auto swing (left & right)	O	O
	Auto swing (up & down)	O	O
	Airflow steps(Fan / Cool / Heat)	3 / 4 / 3	3 / 4 / 3
	CHAOS swing	X	X
	CHAOS wind (Auto wind)	O	O
	Jet cool (Power wind)	O	O
	Swirl wind	X	X
Air purifying	Deodorizing filter	O	O
	Plasma air purifier	O	O
	Prefilter(Washable / Anti-fungus)	O	O
Installation	Drain pump	-	-
	E.S.P. control	-	-
	Electric heater (Operation)	-	-
	High ceiling operation	-	-
Reliability	Hot start	O	O
	Self diagnosis	O	O
	Soft dry operation	O	O
Convenience	Auto changeover	X	X
	Auto cleaning	O	O
	Auto elevation Grille	-	-
	Auto operation(Artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	-	-
	Energy-Saving Cooling Mode	O	O
	Forced operation	O	O
	Group control	X	X
	Sleep mode	O	O
	Timer (On/Off)	O	O
	Timer (weekly)	-	-
	Two thermistor control	-	-
Individual Control	Standard wired remote controller	-	-
	Deluxe wired remote controller	-	-
	Simple wired remote controller	-	-
	Wired remote controller(for hotel use)	-	-
	Wireless remote controller(simple)	-	-
	Wireless LCD remote control	O	O
CAC Network Function	General central control(Non LGAP)	X	X
	Dry contact	PQDSB	PQDSB
	Central control(LGAP)	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X
	Zone control	X	X
Others	Thermistor	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.3.3 Specifications

Indoor unit type			ART COOL Mirror		
Model			AMNH07GDZ*0 [MC07AH*NZ1]	AMNH09GDU*0 [MC09AH*NU1]	AMNH12GDU*0 [MC12AH*NU1]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	2.05	2.64	3.52
		Btu/h	7,000	9,000	12,000
Heating capacity		kW	2.34	2.93	3.87
		Btu/h	8,000	10,000	13,200
Current	Nominal running current	A	0.10	0.15	0.15
Fan	Motor type		BLDC	BLDC	BLDC
	Fan type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		4.7 X 1	7.8 X 1	7.8 X 1
	Air flow rate	cmm	7/6/4	8/7/5	10/8/6
	(H/M/L)	cfm	247/212/141	282/247/177	353/283/212
	Capacitor	µF/Vac	-	-	-
	Drive		Direct Drive	Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2R x 12C x 19	2R x 12C x 19	2R x 12C x 19
Dimensions (WxHxD)	Body	mm(inch)	900*272*143 (35.4*10.7*5.6)	1030*290*153(40.6*11.4*6.0)	1030*290*153 (40.6*11.4*6.0)
Weight	Body	kg(lbs)	8.1(17.9)	9.5(20.9)	9.5(20.9)
Air filter			Long Life Filter	Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	31/29/27	33/31/29	35/31/29
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
Dehumidification rate		l/h	1.0	1.2	1.5
Safety devices			Fuse, Thermal Protector for Fan Motor		
Temperature sensor			Thermistor	Thermistor	Thermistor
Referigerant			R410A	R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula	
kW	= Btu/h × 0.0002931
CFM	= CMM × 35.3

Indoor unit type			ART COOL Mirror	
Model			AMNH18GD3*0 [MC18AH*N31]	AMNH24GD3*0 [MC24AH*N31]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	5.28	6.74
		Btu/h	18,000	23,000
Heating capacity		kW	5.80	7.47
		Btu/h	19,800	25,500
Current	Nominal running current	A	0.28	0.28
Fan	Motor type		BLDC	BLDC
	Fan type		Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		25.6 X 1	25.6 X 1
	Air flow rate	cmm	12.6/11.5/10	15/14/13
	(H/M/L)	cfm	445/406/353	530/494/459
	Capacitor	μF/Vac	-	-
	Drive		Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2R x 13C x 20	2R x 13C x 20
Dimensions (WxHxD)	Body	mm(inch)	1170*315*173 (46.1*24.4*6.8)	1170*315*173 (46.1*24.4*6.8)
Weight	Body	kg(lbs)	13(28.7)	13(28.7)
Air filter			Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	39/37/35	43/41/38
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	12.7 (1/2)	12.7 (1/2)
Dehumidification rate		l/h	2.0	2.5
Safety devices			Fuse, Thermal Protector for Fan Motor	
Temperature sensor			Thermistor	Thermistor
Referigerant			R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Indoor unit type			ART COOL Mirror		
Model			AMNH07GDE*1 [MC07AH* NE1]	AMNH09GDE*1 [MC09AH* NE1]	AMNH12GDE*1 [MC12AH* NE1]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	2.05	2.64	3.52
		Btu/h	7,000	9,000	12,000
Heating capacity		kW	2.34	2.93	3.87
		Btu/h	8,000	10,000	13,200
Current	Nominal running current	A	0.10	0.15	0.15
Fan	Motor type		BLDC	BLDC	BLDC
	Fan type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		4.7 X 1	7.8 X 1	7.8 X 1
	Air flow rate	cmm	7/6/4	8/7/5	10/8/6
	(H/M/L)	cfm	247/212/141	282/247/177	353/283/212
	Capacitor	µF/Vac	-	-	-
	Drive		Direct Drive	Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2R x 15C x 18	2R x 15C x 18	2R x 15C x 18
Dimensions (WxHxD)	Body	mm(inch)	915x282x165 (36.0*11.1*6.5)	915x282x165 (36.0*11.1*6.5)	915x282x165 (36.0*11.1*6.5)
Weight	Body	kg(lbs)	8.1(17.9)	9.5(20.9)	9.5(20.9)
Air filter			Long Life Filter	Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	30/25/21	31/26/22	35/28/24
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
Dehumidification rate		l/h	1.0	1.2	1.5
Safety devices			Fuse, Thermal Protector for Fan Motor		
Temperature sensor			Thermistor	Thermistor	Thermistor
Referigerant			R410A	R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Indoor unit type			ART COOL Mirror	
Model			AMNH18GD8*1 [MC18AH* N81]	AMNH24GD8*1 [MC24AH* N81]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	5.28	6.74
		Btu/h	18,000	23,000
Heating capacity		kW	5.80	7.47
		Btu/h	19,800	25,500
Current	Nominal running current	A	0.28	0.28
Fan	Motor type		BLDC	BLDC
	Fan type		Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		25.6*1	25.6*1
	Air flow rate	cmm	12.6/11.5/10	15/14/13
	(H/M/L)	cfm	445/406/353	530/494/459
	Capacitor	μF/Vac	-	-
	Drive		Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2Rx15Cx20	2Rx15Cx20
Dimensions (WxHxD)	Body	mm(inch)	1107*299*200(43.6*11.8*7.9)	1107*299*200(43.6*11.8*7.9)
Weight	Body	kg(lbs)	14.1(31.09)	14.1(31.09)
Air filter			Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	39/37/35	43/41/38
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	12.7 (1/2)	12.7 (1/2)
Dehumidification rate		l/h	2.0	2.5
Safety devices			Fuse, Thermal Protector for Fan Motor	
Temperature sensor			Thermistor	Thermistor
Referigerant			R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75 (Including Earth)	4*0.75(Including Earth)

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

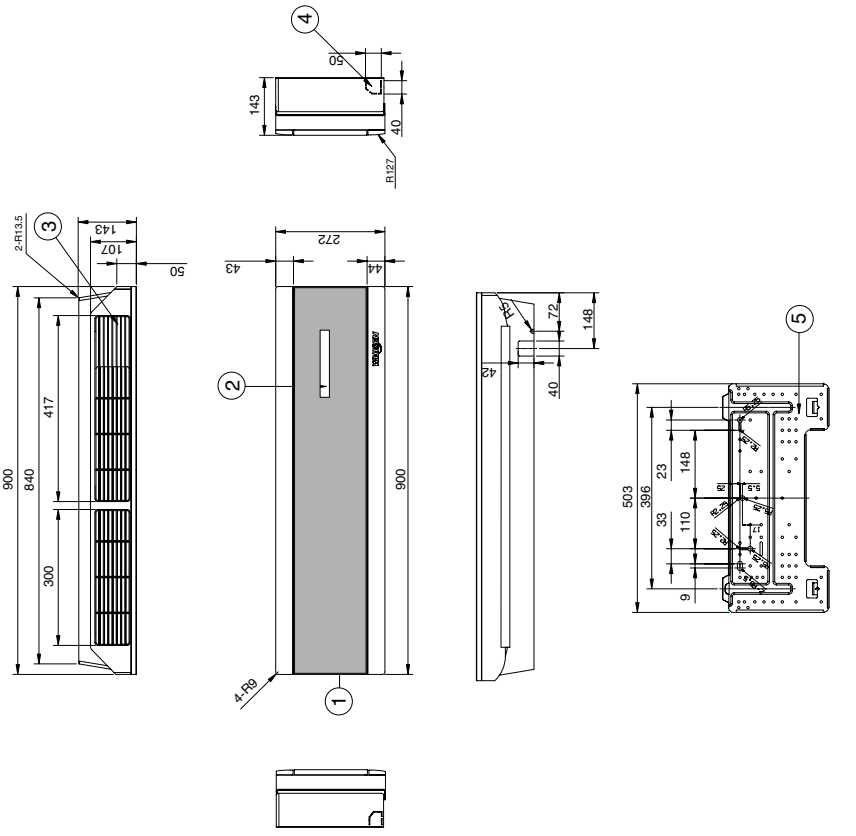
Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

1.3.4 Dimensions

ART COOL Mirror

AMNH07GDZ*0 [MC07AH*NZ1]

No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	



■ Technical Specification

		Ø /V/Hz	1/220~240 / 50
Power supply			
Cooling Capacity		kW	2.05
		Btu/h	7,000
Heating Capacity		kW	2.34
		Btu/h	8,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

■ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

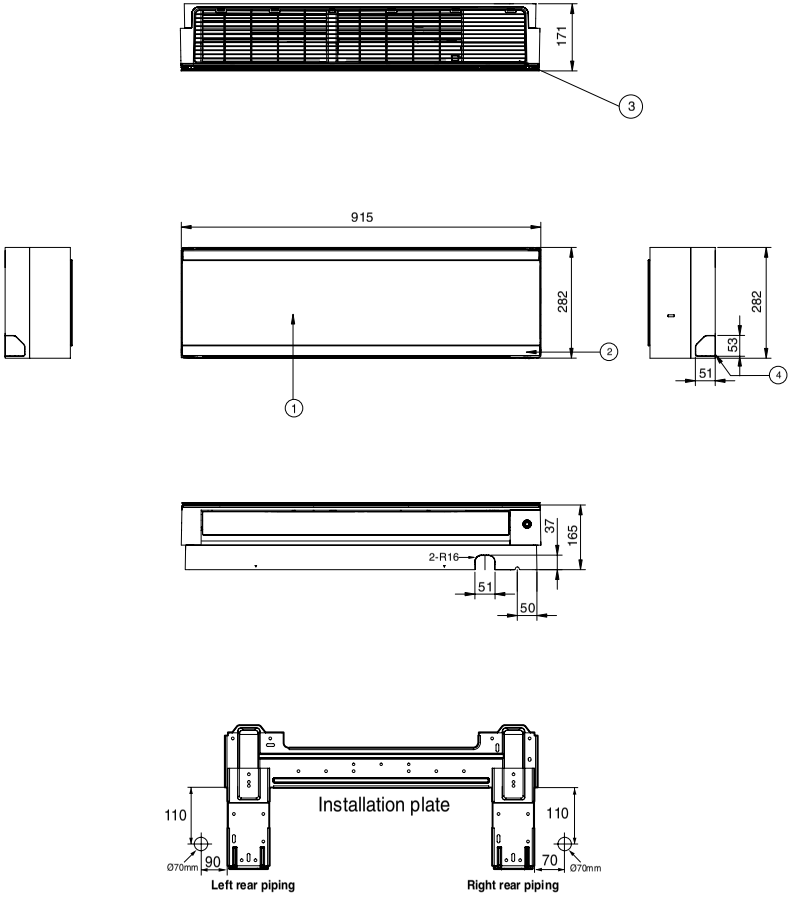
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CHASSIS CODE: SZ

ART COOL Mirror

AMNH07GDE*1[MC07AH* NE1]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	2.05
		Btu/h	7,000
Heating Capacity		kW	2.34
		Btu/h	8,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

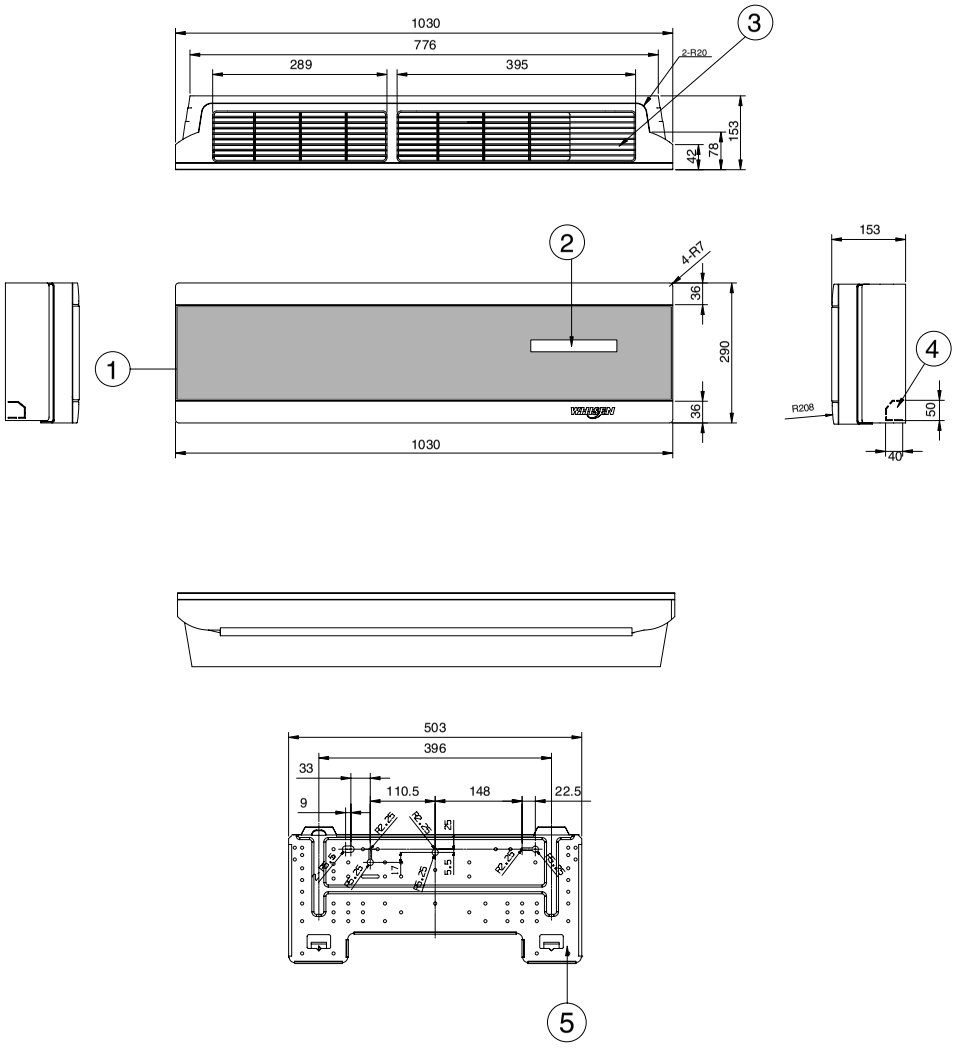
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CHASSIS CODE: SE

ART COOL Mirror

AMNH09GDU*0 [MC09AH*NU1]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

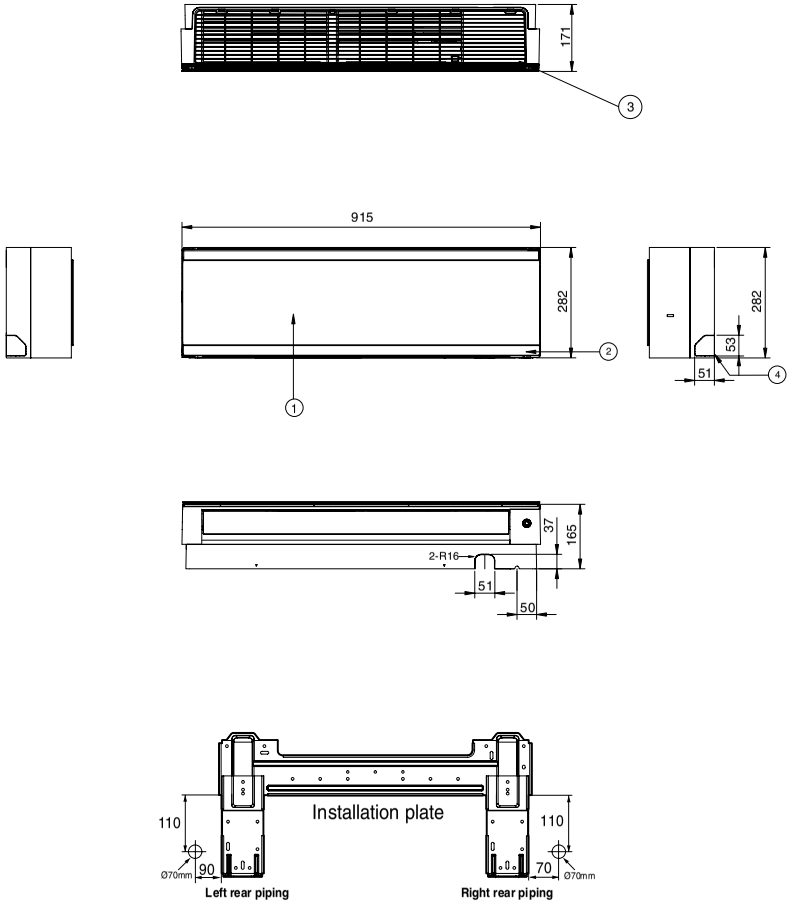
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: SU

ART COOL Mirror

AMNH09GDE*1[MC09AH* NE1]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

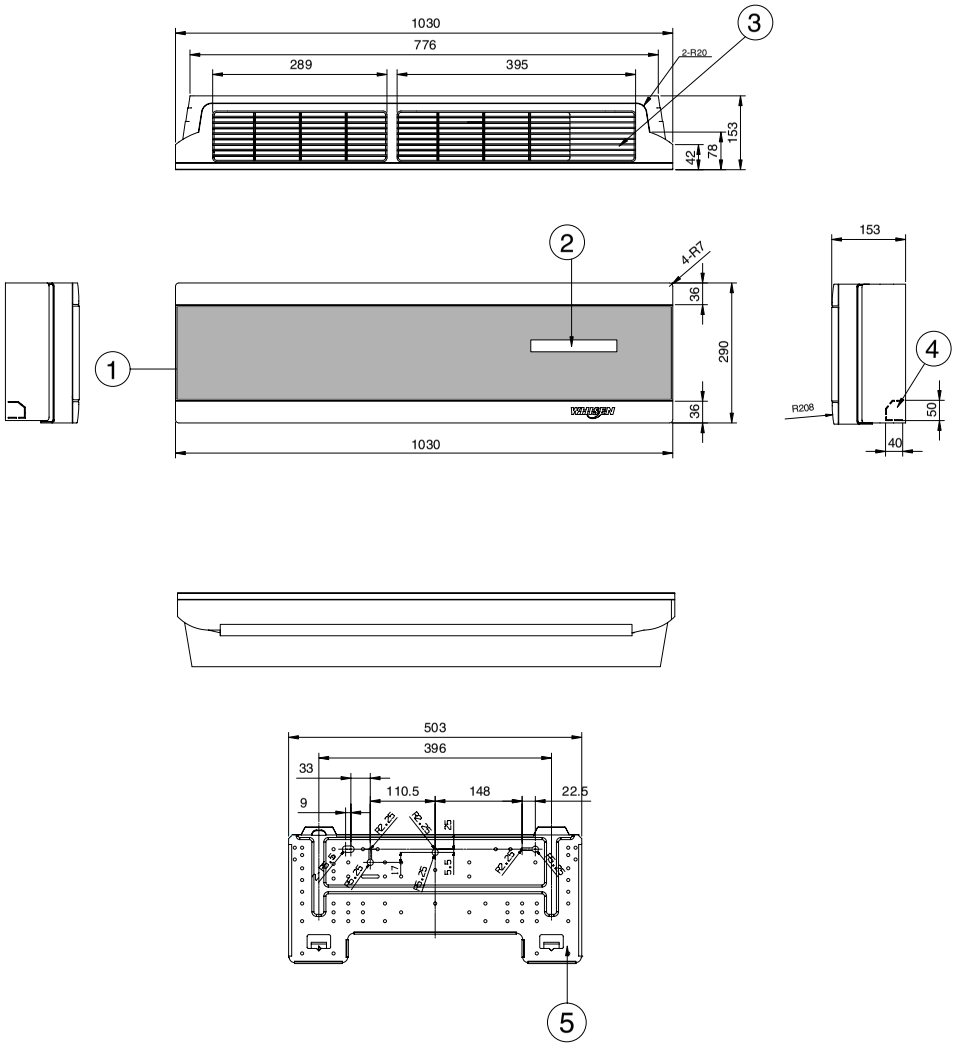
Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid	mm(inch)	6.35(1/4)
	Gas	mm(inch)	9.52(3/8)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

ART COOL Mirror

AMNH12GDU*0 [MC12AH*NU1]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

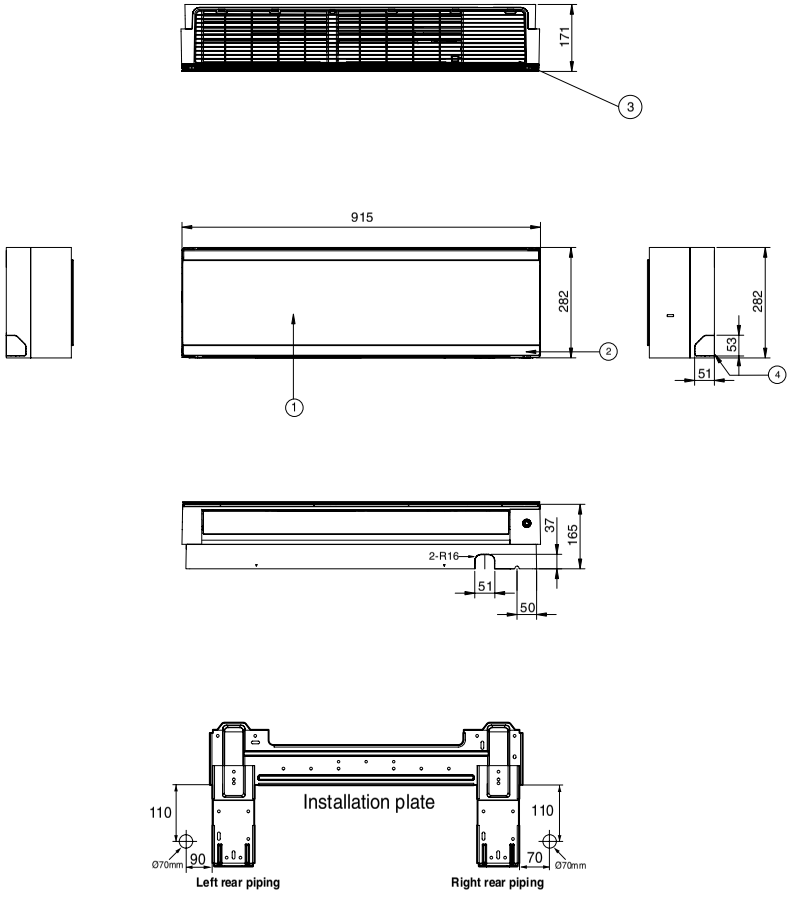
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: SU

ART COOL Mirror

AMNH12GDE*1[MC12AH* NE1]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

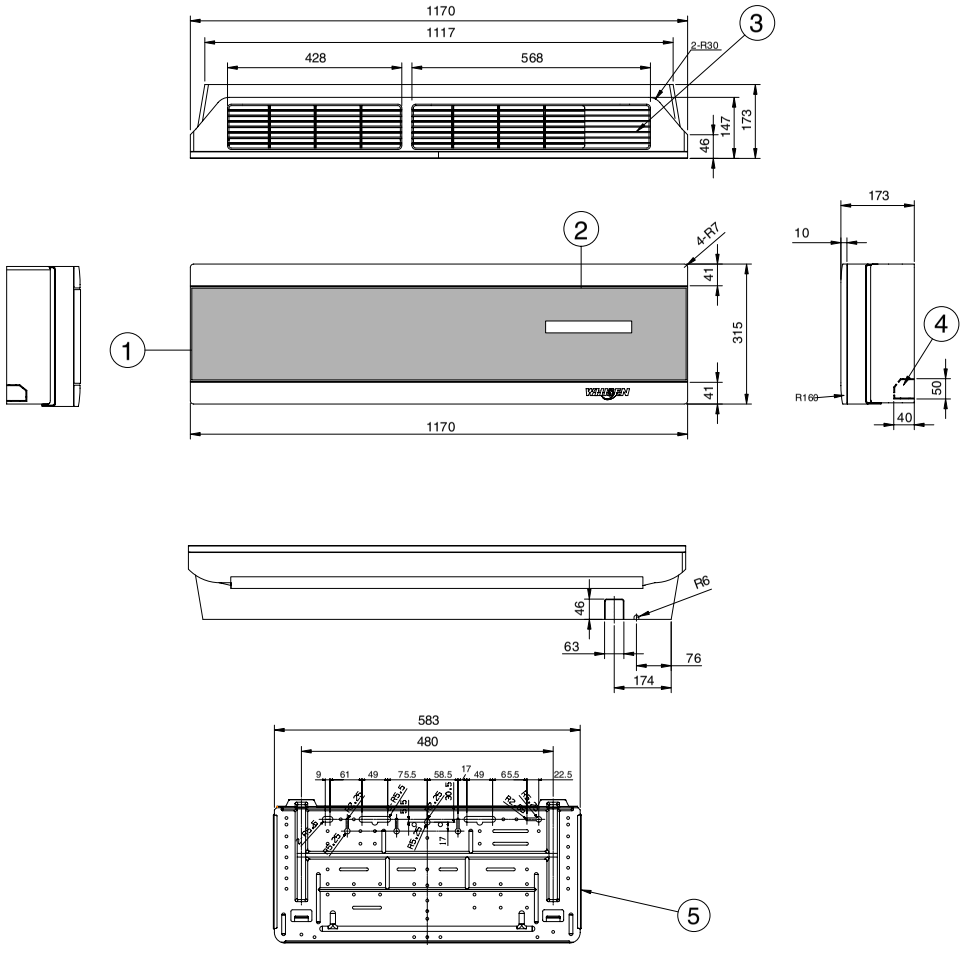
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: SE

ART COOL Mirror

AMNH18GD3*0 [MC18AH*N31]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	5.28
		Btu/h	18,000
Heating Capacity		kW	5.80
		Btu/h	19,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)

▣ Note

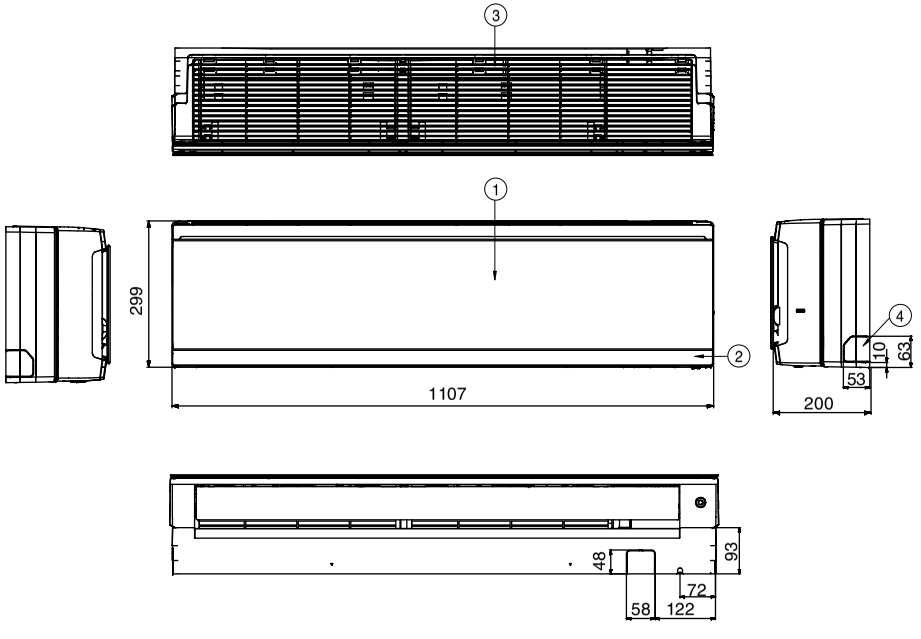
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

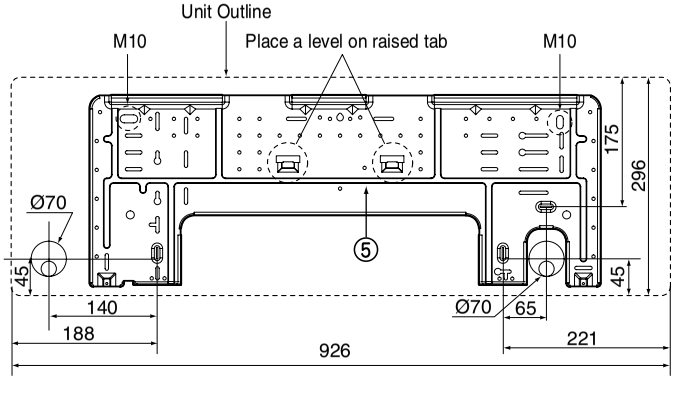
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CHASSIS CODE: S3

ART COOL Mirror

AMNH18GD8*1 [MC18AH* N81]





No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	5.28
		Btu/h	18,000
Heating Capacity		kW	5.80
		Btu/h	19,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

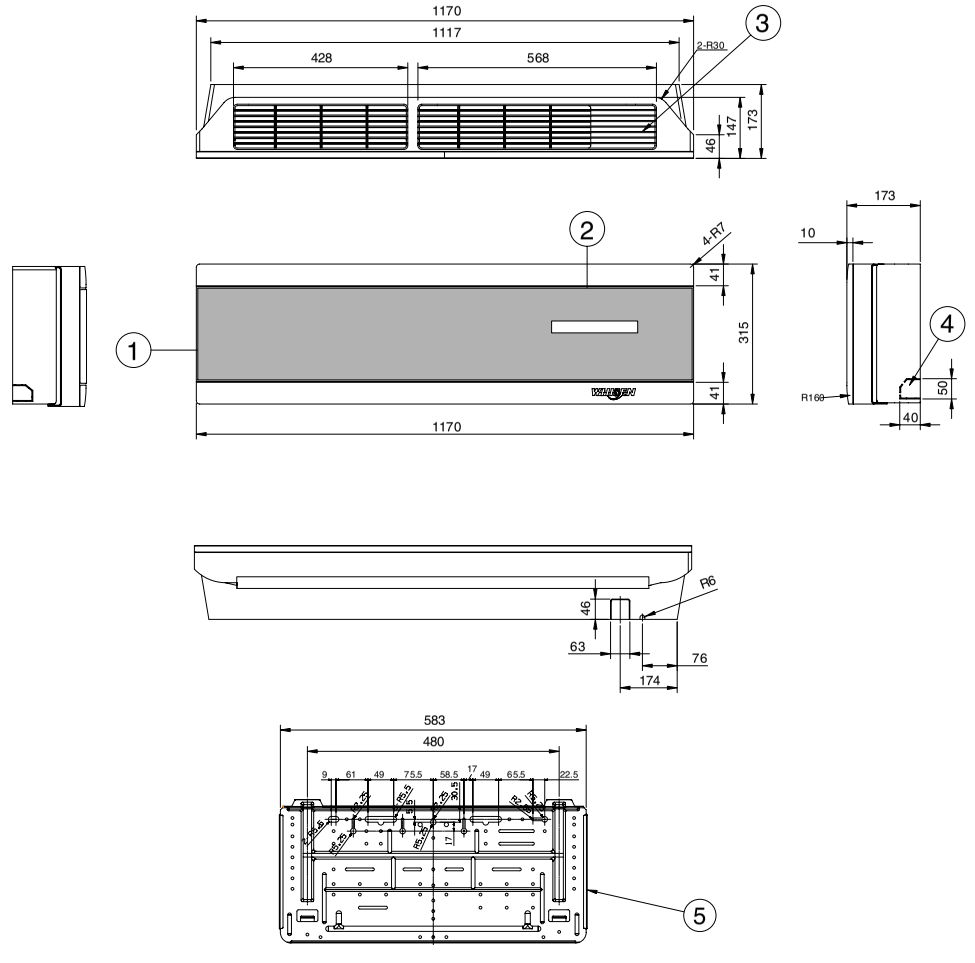
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CHASSIS CODE: S8

ART COOL Mirror

AMNH24GD3*0[MC24AH* N31]



No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	6.74
		Btu/h	23,000
Heating Capacity		kW	7.47
		Btu/h	25,500
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)

▣ Note

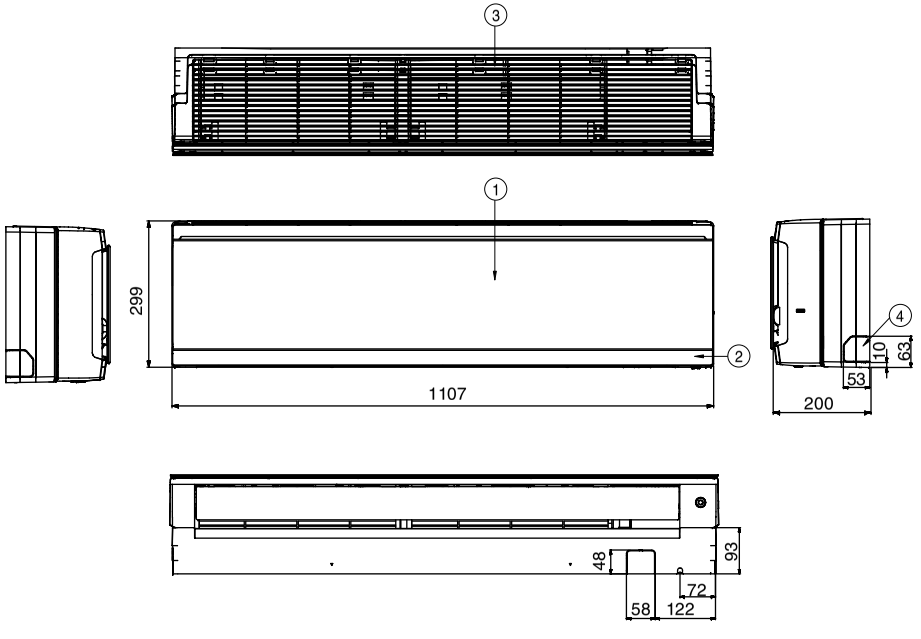
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

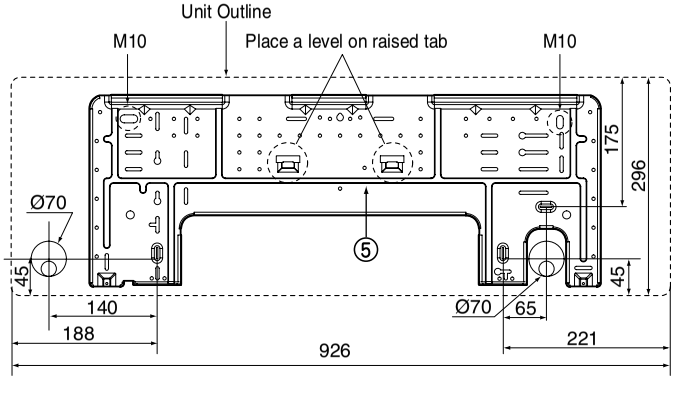
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CHASSIS CODE: S3

ART COOL Mirror

AMNH24GD8*1 [MC24AH* N81]





No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	
5	Installation plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	6.74
		Btu/h	23,000
Heating Capacity		kW	7.47
		Btu/h	25,500
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)

▣ Note

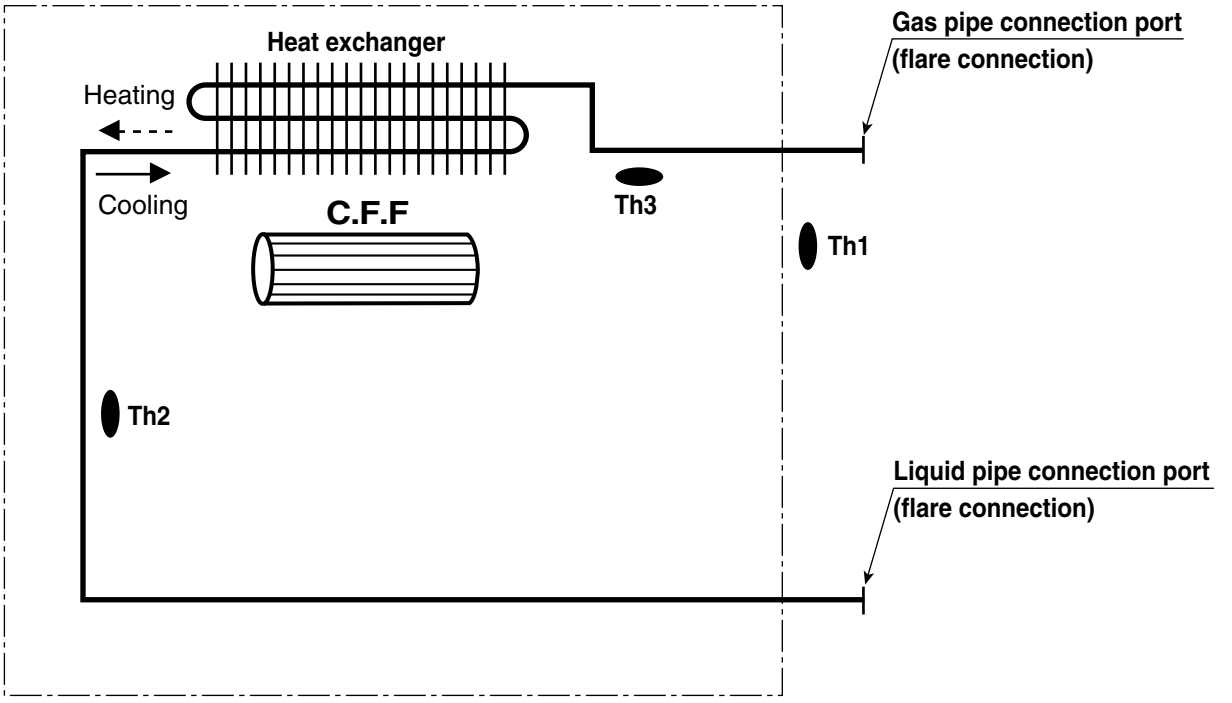
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: S8

1.3.5 Piping diagrams



Th1 : Thermistor for suction air temp.
Th2 : Thermistor for liquid line temp.
Th3 : Thermistor for gas line temp.

■ Refrigerant pipe connection port diameters

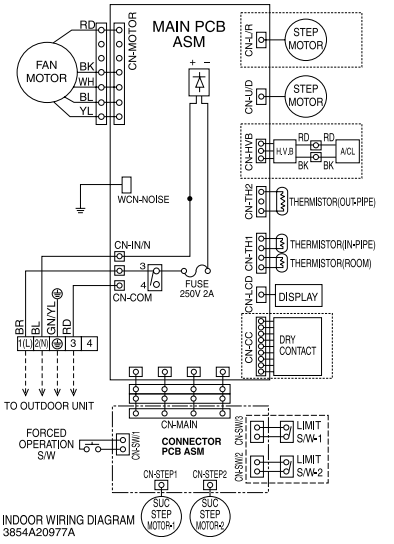
(mm)

Model	Gas	Liquid
AMNH07GDE*1 [MC07AH* NE1] AMNH07GDZ*0 [MC07AH* NZ1] AMNH09GDE*1 [MC09AH* NE1] AMNH09GDU*0 [MC09AH* NU1] AMNH12GDE*1 [MC12AH* NE1] AMNH12GDU*0 [MC12AH* NU1]	Ø9.52	Ø6.35
AMNH18GD3*0 [MC18AN* N31] AMNH18GD8*1 [MC18AH* N81] AMNH24GD3*0 [MC24AH* N31] AMNH24GD8*1 [MC24AH* N81]	Ø12.7	Ø6.35

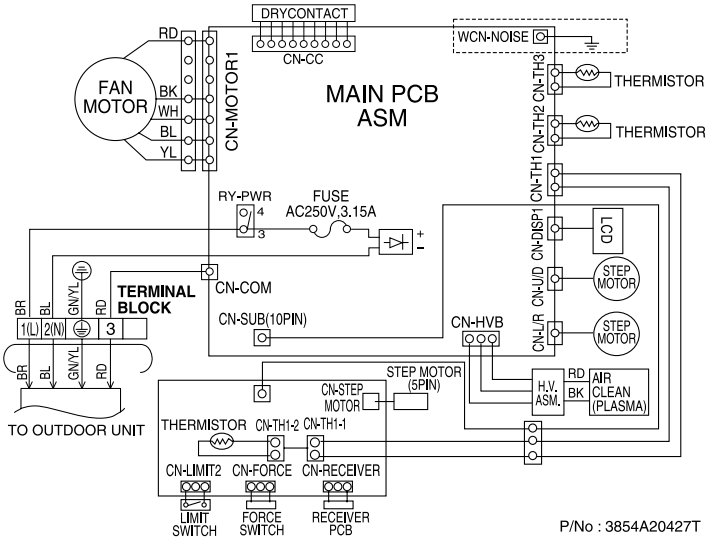
1.3.6 Wiring diagrams

1) Wiring diagrams

Models: AMNH07GDZ*0[MC07AH* NZ1]/AMNH09GDU*0[MC09AH* NU1]/AMNH12GDU*0[MC12AH* NU1]/ AMNH18GD3*0[MC18AH* N31]/AMNH24GD3*0[MC24AH* N31]

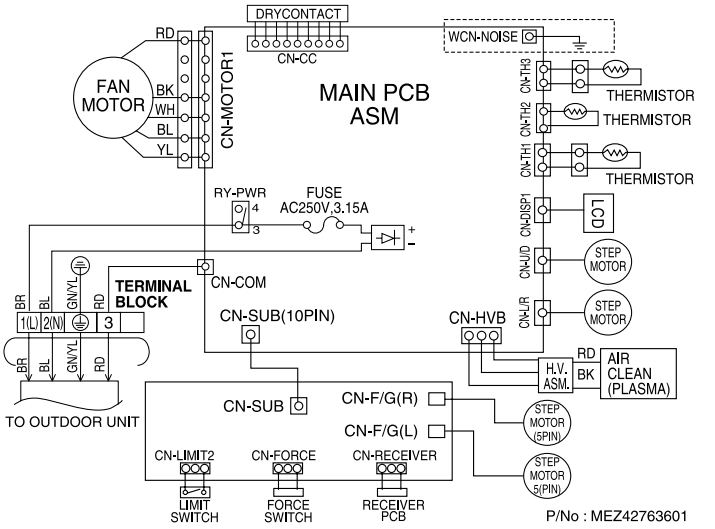


Models: AMNH-SE model[MC-E]



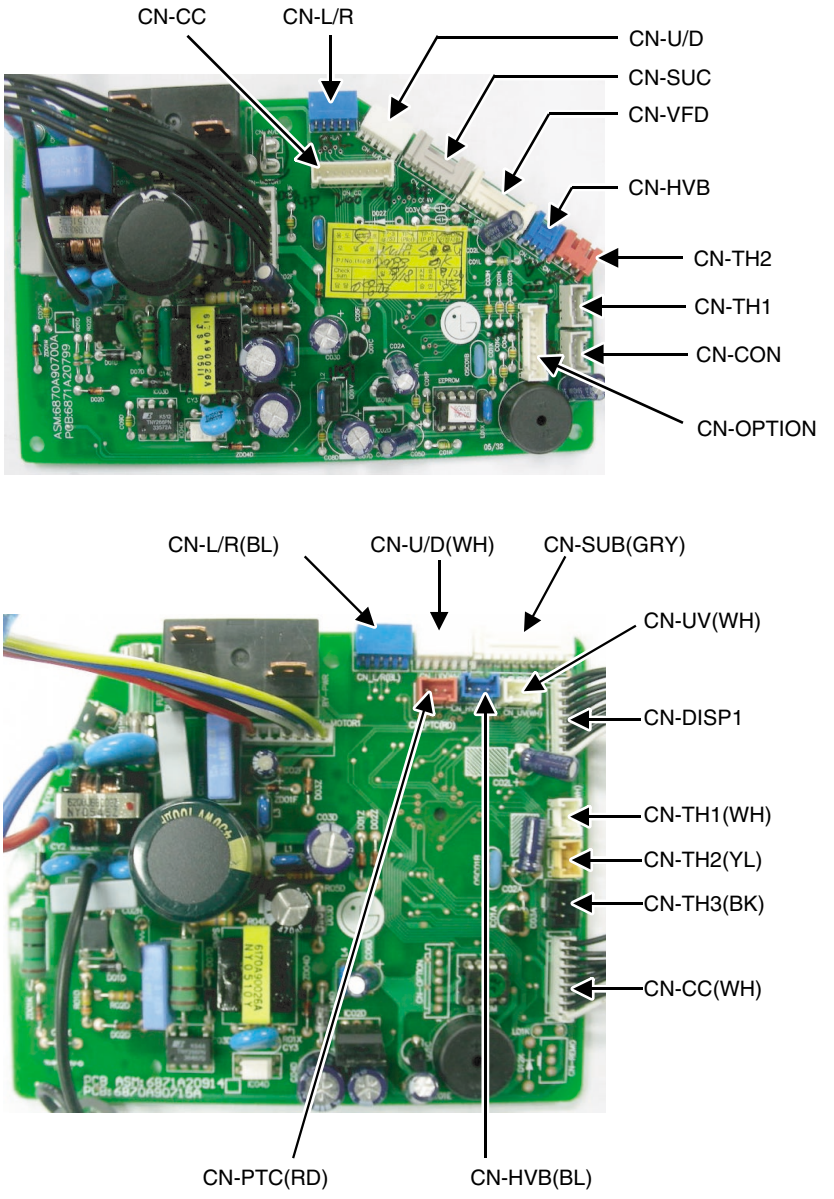
Connector Number	Location	Connector Number	Location
CN-POWER	AC power supply	CN-U/D	Step motor
CN-MOTOR	Fan motor outpup	CN-TH1	Room/In pipe sensor
CN-MAIN	Communication	CN-TH2	Discharge pipe sensor
CN-SW/1	Forced operation	CN-HVB	Air purifier
CN-SW/2	Limit switch 1	CN-VFD	Display
CN-SW/3	Limit switch 2	CN-STEP1	Step motor 1
CN-L/R	Step motor	CN-STEP2	Step motor 2

Models: AMNH-S8 model[MC-8]



Connector Number	Location	Connector Number	Location
CN-POWER	AC power supply	CN-U/D	Step motor
CN-MOTOR	Fan motor outpup	CN-TH1	Room/In pipe sensor
CN-MAIN	Communication	CN-TH2	Discharge pipe sensor
CN-SW/1	Forced operation	CN-HVB	Air purifier
CN-SW/2	Limit switch 1	CN-VFD	Display
CN-SW/3	Limit switch 2	CN-STEP1	Step motor 1
CN-L/R	Step motor	CN-STEP2	Step motor 2

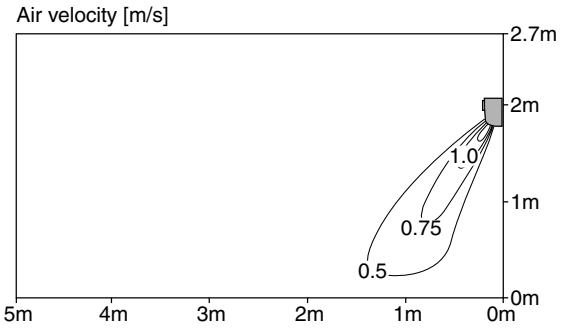
2) PCB

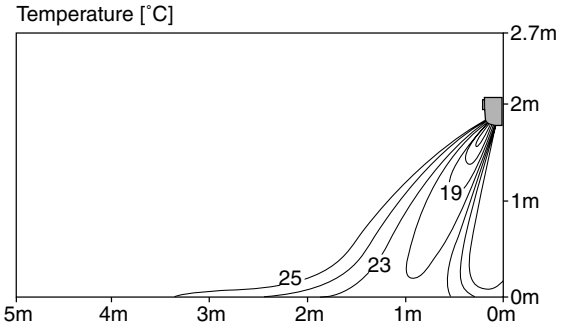

CN-CC
CN-L/R
CN-U/D
CN-SUC
CN-VFD
CN-HVB
CN-TH2
CN-TH1
CN-CON
CN-OPTION
CN-L/R(BL)
CN-U/D(WH)
CN-SUB(GRY)
CN-UV(WH)
CN-DISP1
CN-TH1(WH)
CN-TH2(YL)
CN-TH3(BK)
CN-CC(WH)
CN-PTC(RD)
CN-HVB(BL)

1.3.7 Air flow and temperature distributions (reference data)

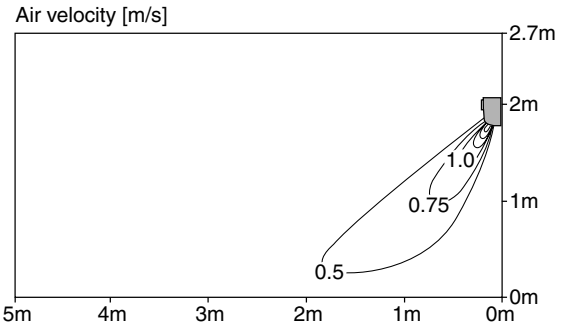
Model : 7k Btu/h

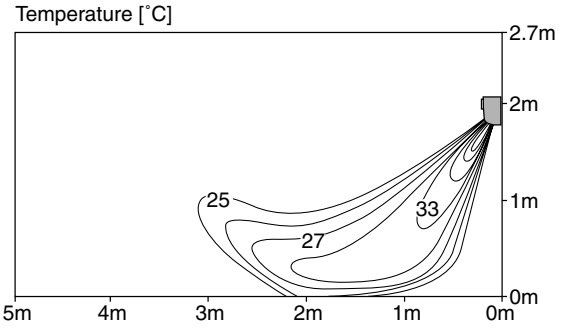
Cooling





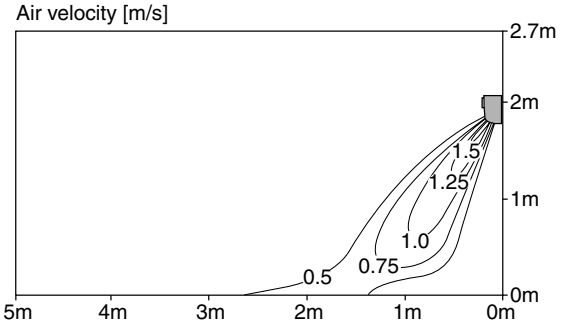
Heating

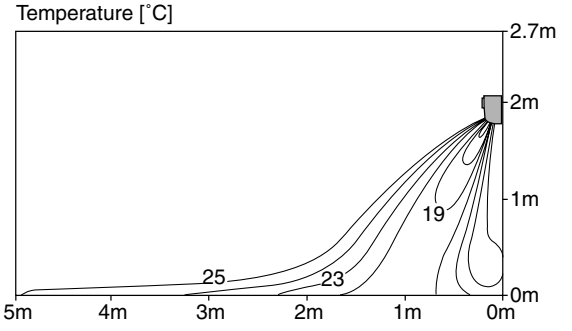




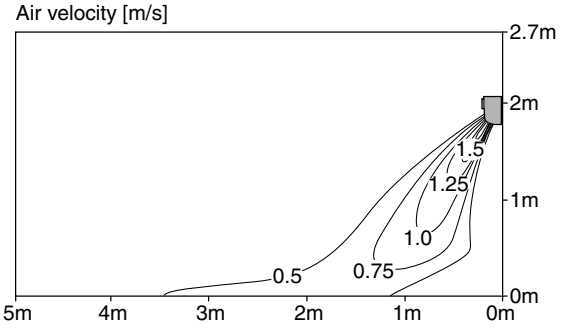
Model : 12k Btu/h

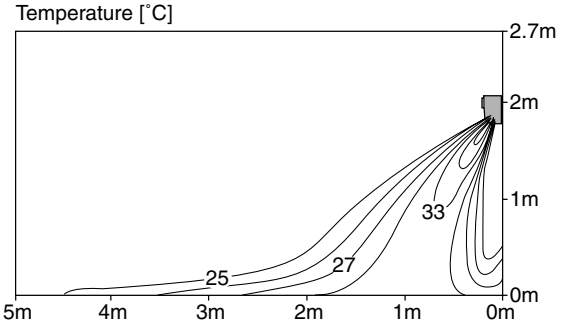
Cooling





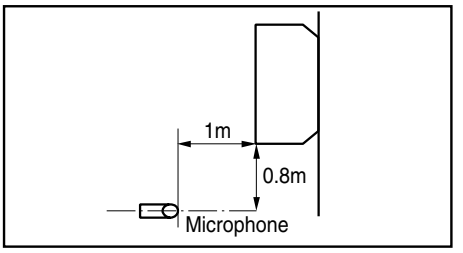
Heating





1.3.8 Sound levels

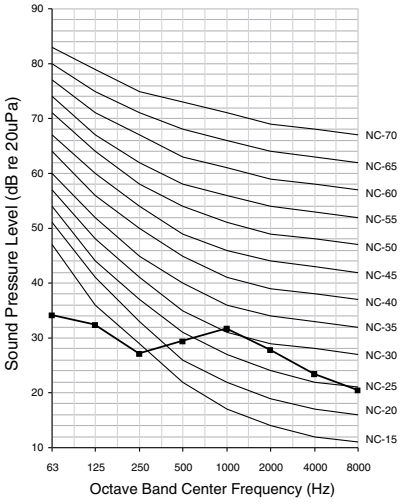
Overall



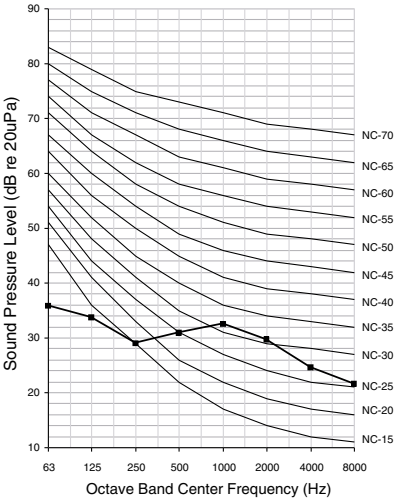
Notes:
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference accoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

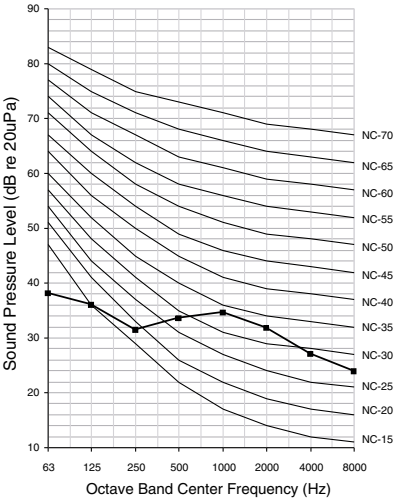
AMNH07GDZ*0[MC07AH* NZ1]



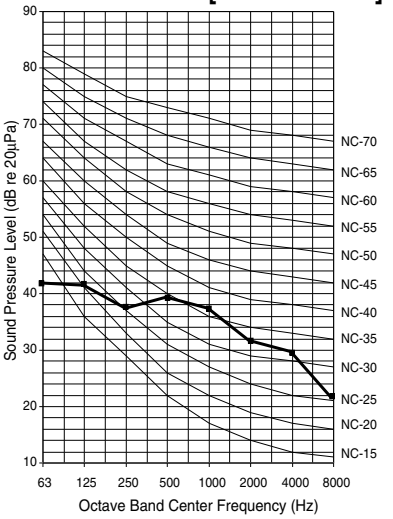
AMNH09GDU*0[MC09AH* NU1]



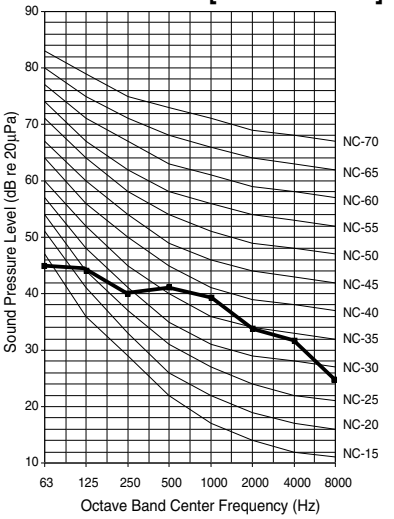
AMNH12GDU*0[MC12AH* NU1]



AMNH18GD3*0[MC18AH* N31]
AMNH18GD8*1[MC18AH* N81]



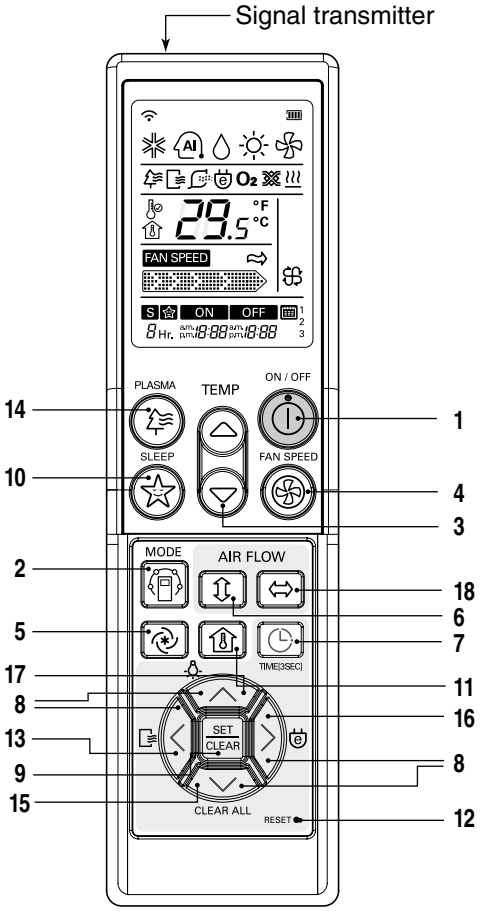
AMNH24GD3*0[MC24AH* N31]
AMNH24GD8*1[MC24AH* N81]

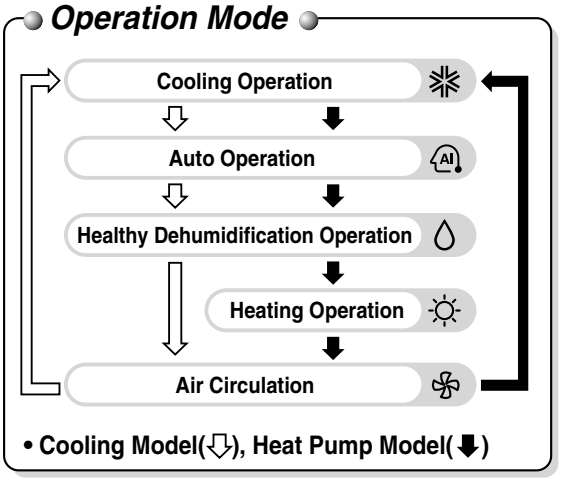


1.3.9 Controller

Wireless remote control

The controls will look like the following.





1. ON/OFF BUTTON
Used to turn off/on the unit.

2. OPERATION MODE SELECTION BUTTON
Used to select the operation mode.

3. ROOM TEMPERATURE SETTING BUTTONS
Used to select the room temperature.

4. INDOOR FAN SPEED SELECTOR BUTTON
Used to select fan speed in four steps
low, medium, high and CHAOS.

5. JET COOL BUTTON
Used to start or stop the speed cooling.
(It operates fan in super high speed in cooling mode)

6. CHAOS SWING BUTTON
Used to stop or start louver movement and set the desired up/down airflow direction.

7. TIMER AND TIME SETTING BUTTON
Used to set the time of starting and stopping operation.

8. TIME SETTING BUTTONS
Used to adjust the time.

9. TIMER SET / CLEAR BUTTON
Used to set and to cancel the timer operation.

10. SLEEP MODE AUTO BUTTON
Used to set sleep mode auto operation.

11. ROOM TEMPERATURE CHECKING BUTTON
Used to check the room temperature.

12. RESET BUTTON
Used prior to resetting time.

13. AUTO CLEAN BUTTON
Used to set auto clean mode.

14. PLASMA BUTTON
Used to start or stop the plasma-purification function.

15. CLEAR ALL BUTTON
Used to cancel all timer setting.

16. ENERGY SAVING COOLING BUTTON(OPTIONAL)
Used to save Energy.

17. LCD LUMINOSITY BUTTON(OPTIONAL)
Used to adjust LCD luminosity.

18. HORIZONTAL AIRFLOW DIRECTION CONTROL BUTTON (OPTIONAL)
Used to set the desired horizontal airflow direction.

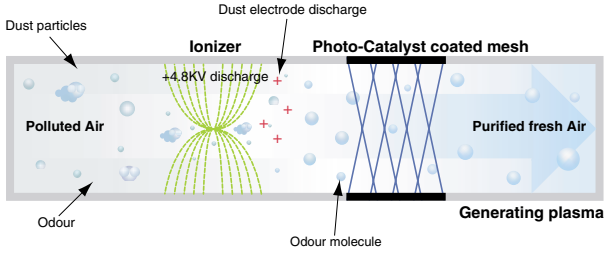
1.4 Ceiling cassette 1-way
1.4.1. Features

Models : AMNH09GTCC0 [MT09AH NC1] / AMNH12GTCC0 [MT11AH NC1]



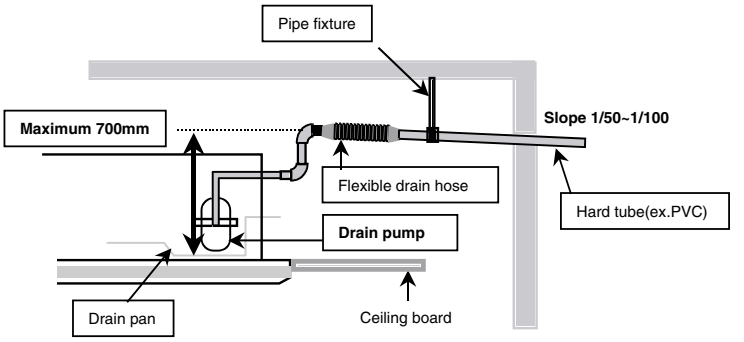
- **Compact design and easy installation**
- **Low noise**
- **Hygienic and Easy-to-Clean filter**
- **2-thermistor; unit body and remote control**
- **Jet cool**
- **Plasma air purifying system**

The PLASMA Air Purifying Function not only removes microscopic contaminants and dust, but also removes house mites, pollen, and pet fur helps to prevent allergic diseases like asthma.



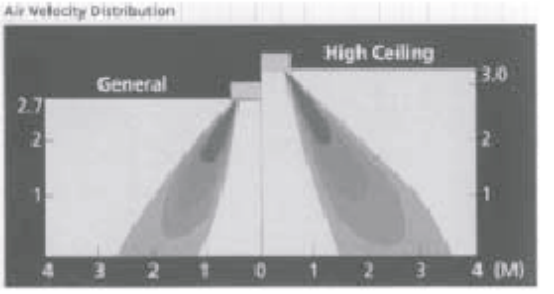
- **High head drain pump(700mm)**

Built-in Drain Pump drains out water automatically.
A standard drain-head height of up to 700 mm is possible, creating the ideal solution for perfect water drainage.



- **High-ceiling corresponding operation**

According to the height of the installation, it provides variability of indoor fan motor rpm. If the height of installation is low then you can adjust low rpm of indoor fan motor. On the other hand if the height of the installation is high you can adjust high rpm of indoor fan motor. Selection of speed can be done by slide switch at the back of the LCD wired remote controller.



- **LCD wired remote controller**
- **Wireless remote controller (accessory:LCD / simple)**

1.4.2 List of functions

Category	Function	AMNH09GTCC0 [MT09AH NC1]	AMNH12GTCC0 [MT11AH NC1]
Air flow	Air supply outlet	1	1
	Airflow direction control (left & right)	X	X
	Airflow direction control (up & down)	Auto	Auto
	Auto swing (left & right)	X	X
	Auto swing (up & down)	O	O
	Airflow steps(Fan / Cool / Heat)	4 / 5 / 4	4 / 5 / 4
	CHAOS swing	X	X
	CHAOS wind (Auto wind)	O	O
	Jet cool (Power wind)	O	O
	Swirl wind	X	X
Air purifying	Deodorizing filter	X	X
	Plasma air purifier	Option	Option
	Prefilter(Washable / Anti-fungus)	O	O
Installation	Drain pump	O	O
	E.S.P. control	-	-
	Electric heater (Operation)	-	-
	High ceiling operation	O	O
Reliability	Hot start	O	O
	Self diagnosis	O	O
	Soft dry operation	O	O
Convenience	Auto changeover	X	X
	Auto cleaning	X	X
	Auto elevation grille	X	X
	Auto operation(Artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	O	O
	Forced operation	O	O
	Group control	O	O
	Sleep mode	-	-
	Timer (On/Off)	O	O
	Timer (weekly)	O	O
	Two thermistor control	O	O
Individual Control	Standard wired remote controller	O	O
	Deluxe wired remote controller	PQRCUDS0	PQRCUDS0
	Simple wired remote controller	PQRCUCA0	PQRCUCA0
	Wired remote controller(for hotel use)	PQRCFCS0	PQRCFCS0
	Wireless remote controller(simple)	-	-
	Wireless LCD remote control	PQWRHSF0	PQWRHSF0
CAC Network Function	General central control(Non LGAP)	X	X
	Dry contact	PQDSB	PQDSB
	Central control(LGAP)	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X
	Zone control	X	X
Others	Thermistor	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.4.3 Specifications

Indoor unit type			Ceilling Cassette - 1way	
Model			AMNH09GTCC0 [MT09AH NC1]	AMNH12GTCC0 [MT11AH NC1]
Decoration Panel Name			PT-HCA	PT-HCA
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	2.64	3.52
		Btu/h	9,000	12,000
Heating capacity		kW	2.93	3.87
		Btu/h	10,000	13,200
Current	Nominal running current	A	0.56	0.56
Fan	Motor type		BLDC	BLDC
	Fan type		Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		14 x 1	14 x 1
	Air flow rate	cmm	8.5/7.5/6.5	9.5/8/7
	(H/M/L)	cfm	300/265/230	336/283/247
	Capacitor	µF/Vac	-	-
	Drive		Direct Drive	Direct Drive
Coil	Row x Column x FPI	mm	2R x 11C x 18	2R x 11C x 19
Dimensions	Body	mm(inch)	860*180*390 (33.8*7.1*15.3)	860*180*390 (33.8*7.1*15.3)
(WxHxD)	Decorative panel	mm	1050*30*480 (41.3*1.2*18.9)	1050*30*480 (41.3*1.2*18.9)
Weight	Body	kg(lbs)	22(48.5)	22(48.5)
	Decorative panel	kg(lbs)	4(8.8)	4(8.8)
Air filter			Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	35 /32 / 28	37 / 33 / 29
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	9.52 (3/8)	9.52 (3/8)
Drain	OD/ID	mm	32/25	32/25
Dehumidification rate		l/h	1.1	1.3
Safety devices			Fuse, Thermal Protector for Fan Motor	
Temperature sensor			Thermistor	Thermistor
Referigerant			R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula	
kW	= Btu/h × 0.0002931
CFM	= CMM × 35.3

1.4.4 Dimensions

Ceiling Cassette 1-way + Decoration Panel

AMNH09GTCC0[MT09AH NC1] + PT-HCA (NORMAL)
AMNH09GTCC0[MT09AH NC1] + PT-HCA (PLASMA)

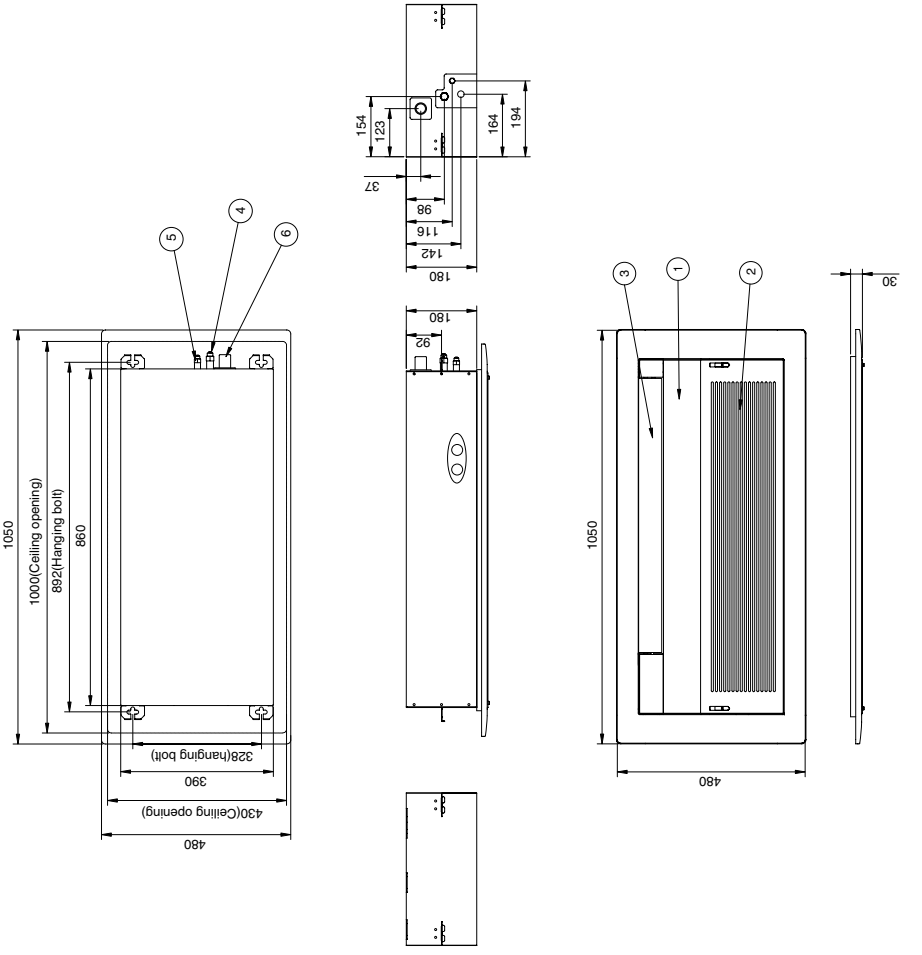
No.	Part Name	Remark
1	Decoration panel	
2	Air suction grille	
3	Air discharge grille	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	

▣ Technical Specification

		Ø/V/Hz	1/220~240/50
Power supply			
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain(OD/ID)		mm	32/25

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.



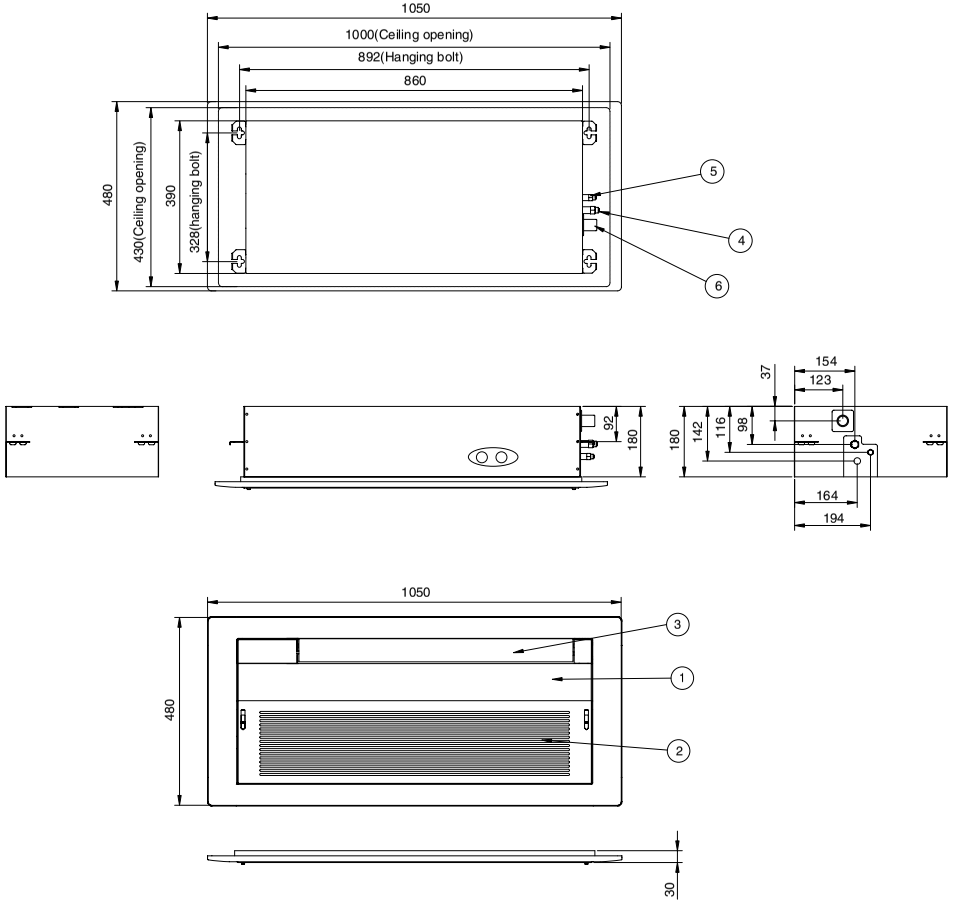
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: TC1

Ceiling Cassette 1-way + Decoration Panel

AMNH12GTCC0[MT11AH NC1] + PT-HCA (NORMAL)
AMNH12GTCC0[MT11AH NC1] + PT-HCA (PLASMA)



No.	Part Name	Remark
1	Decoration panel	
2	Air suction grille	
3	Air discharge grille	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	

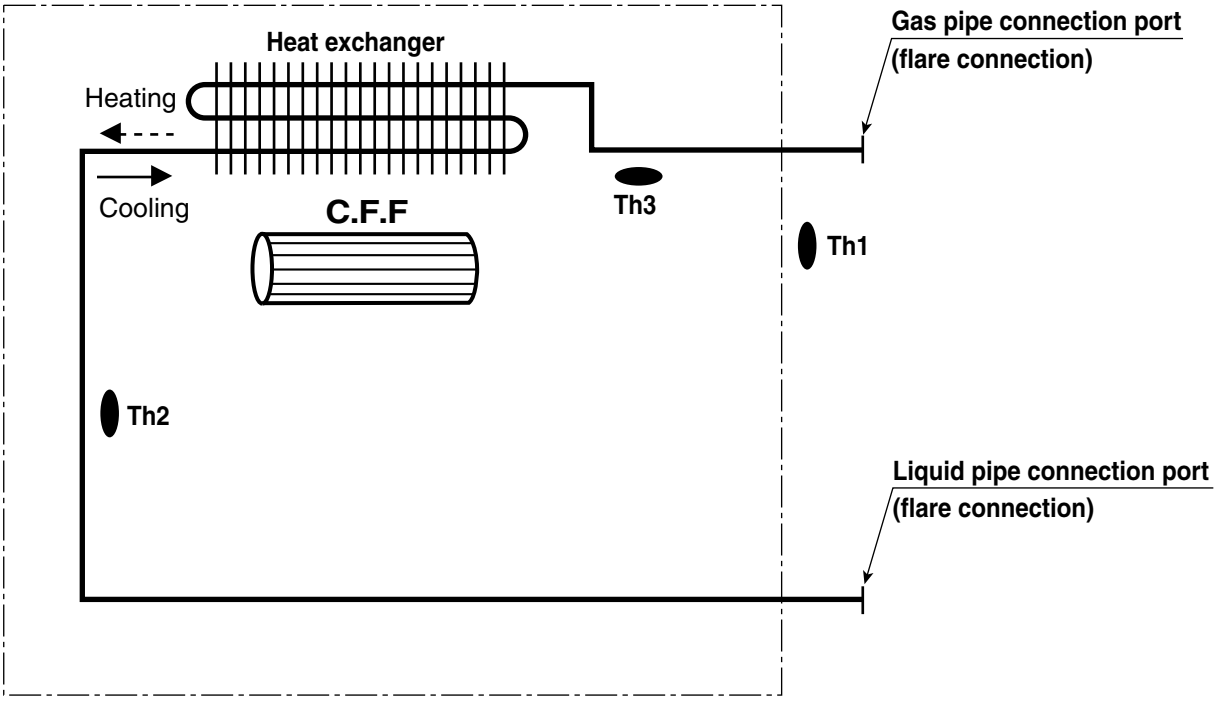
▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain(OD/ID)		mm	32/25

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

1.4.5 Piping diagrams



Th1 : Thermistor for suction air temp.
Th2 : Thermistor for liquid line temp.
Th3 : Thermistor for gas line temp.

■ Refrigerant pipe connection port diameters

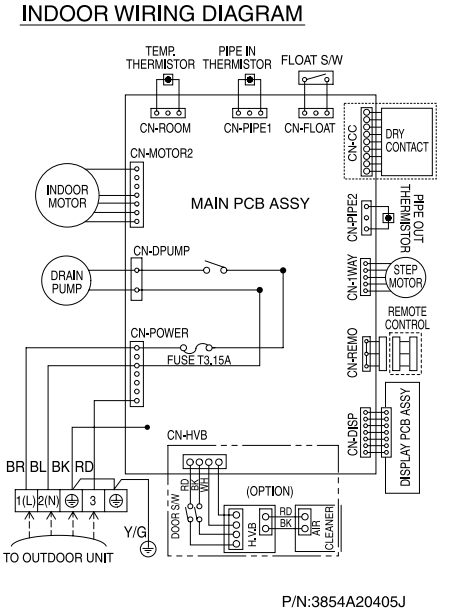
(mm)

Model	Gas	Liquid
AMNH09GTCC0 [MT09AH NC1] AMNH12GTCC0 [MT11AH NC1]	Ø9.52	Ø6.35

1.4.6 Wiring diagrams

1) Wiring diagrams

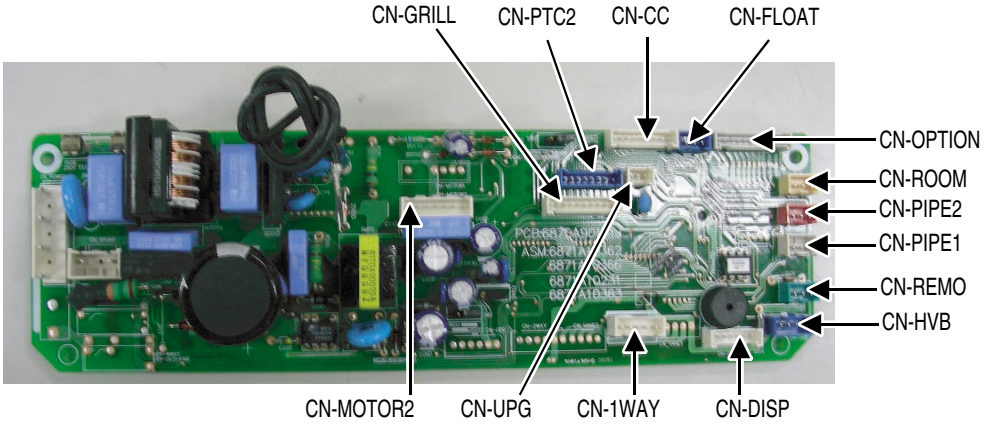
Models: AMNH-TC1 model[MT-C1]



P/N:3854A20405J

Connector Number	Location
CN-POWER	AC power supply
CN-MOTOR	BLDC fan motor output
CN-D/PUMP	Drain pump output
CN-DISP	Display
CN-REMO	Remote control
CN-STEP/M	Step motor
CN-PIPE	Pipe sensor
CN-ROOM	Room sensor

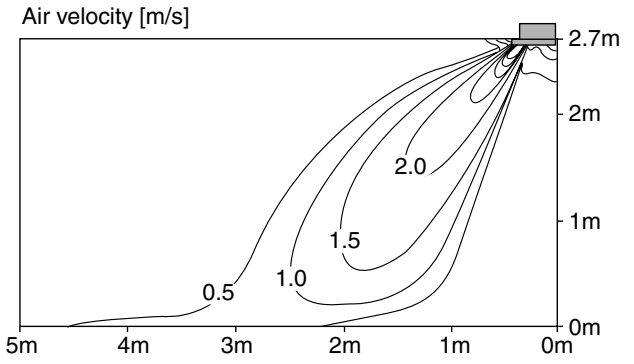
2) PCB

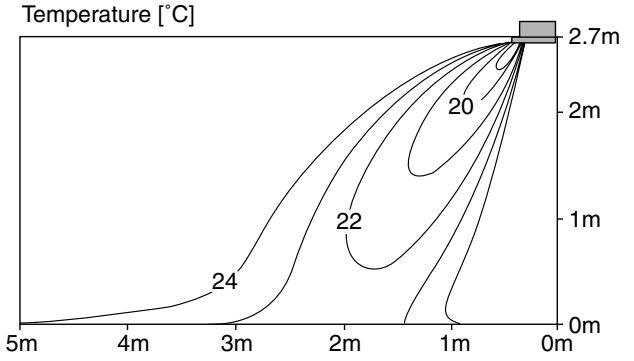


1.4.7 Air flow and temperature distributions (reference data)

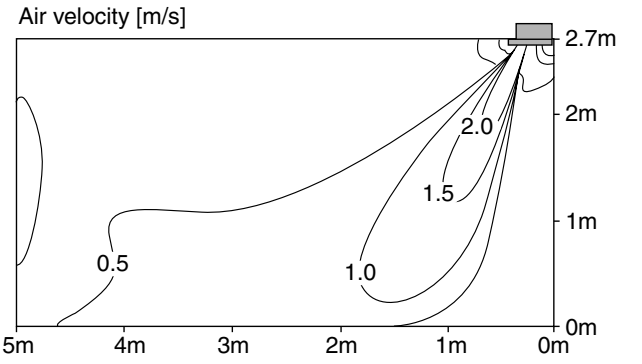
Model : 12k Btu/h

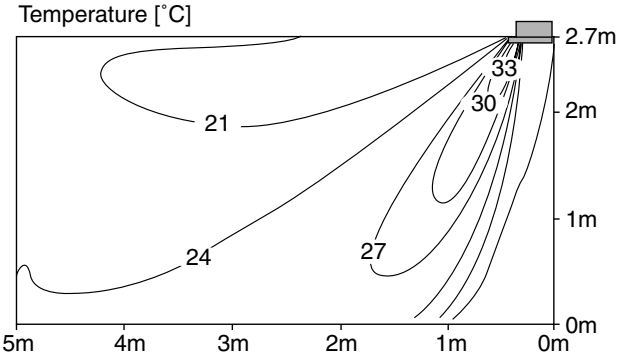
Cooling





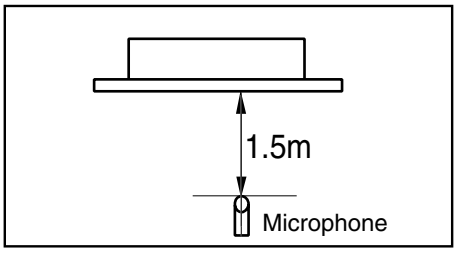
Heating





1.4.8 Sound levels

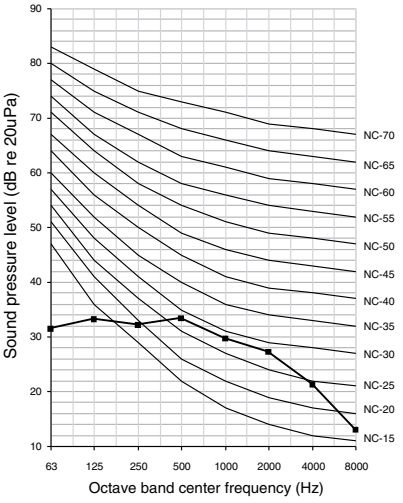
Overall



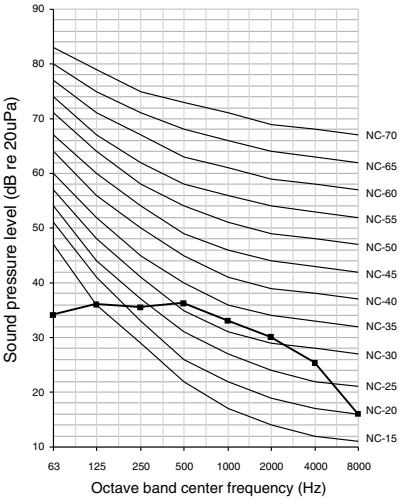
Notes:
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference accoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound Pressure Level

AMNH09GTCC0[MT09AH NC1]

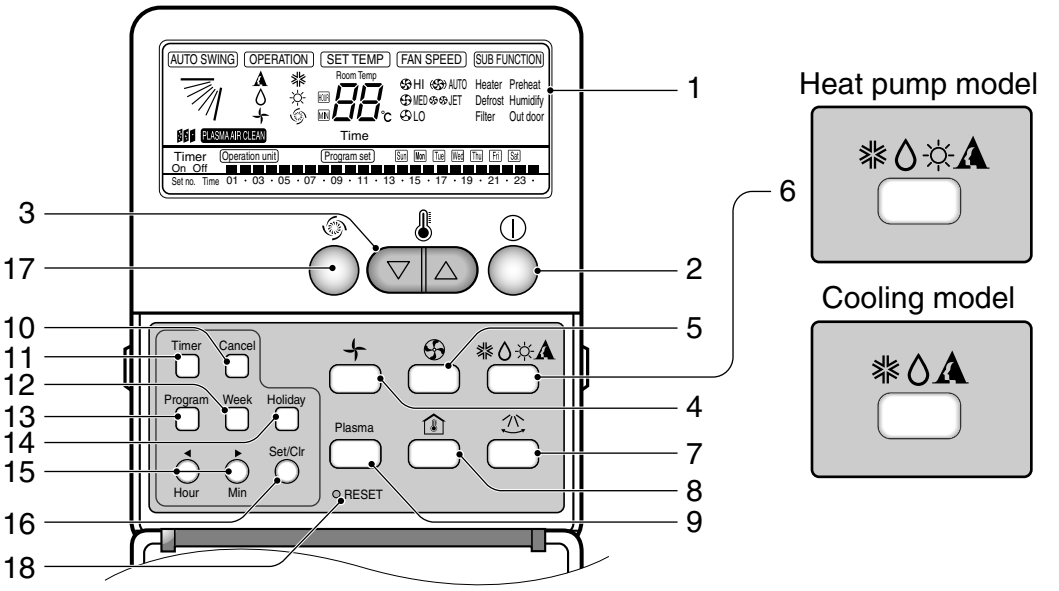


AMNH12GTCC0[MT11AH NC1]



1.4.9 Controller

Wired remote control



1. Operation display
Displays the operation conditions.

2. On/Off button
Operation starts when this button is pressed, and stops when the button is pressed again.

3. Set temperature button
Used to set the temperature when the desired temperature is obtained.

4. Fan operation button
Used to circulate room air without cooling or heating.

5. Fan speed button
Used to set the desired fan speed.

6. Operation mode selection button
Used to select the operation mode.
- Auto operation mode
- Cooling operation mode
- Soft dry operation mode
- Heating operation mode(except cooling model)

7. Auto swing button
Used to swing up and down.

8. Room temperature checking button
Used to check the room temperature.

9. Plasma air clean button (optional)

10. Timer cancel button
Used to cancel the timer.

11. Timer set button
Used to set the timer when the desired time is obtained.

12. Week button
Used to set the day of the week.

13. Program button
Used to set the weekly timer.

14. Holiday button
Used to set the holiday of the week.

15. Time set button
Used to set the time of the day and change the time in the weekly timer Function.

16. Set and clear button
Used to set and clear the weekly timer.

17. Jet cool button
Used to select jet cool mode.

18. Reset button
Used to set the current time and clear the setting time.

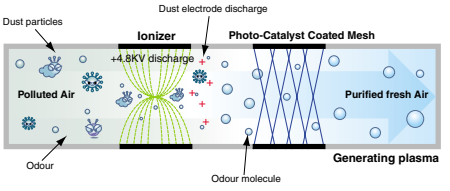
1.5 Ceiling cassette 4-way
1.5.1 Features

**Models : AMNH09GTEF0 [MT10AH NE1] / AMNH12GTEF0 [MT12AH NE1] /
AMNH18GTEF0 [MT18AH NE1] / AMNH24GTHF0 [MT24AH NH0]**



• PLASMA air purifying system

The PLASMA air purifying system developed uniquely by LG not only removes microscopic contaminants and dust, but also removes house mites, pollen, and pet fur to help prevent allergic diseases like asthma. With a filter that can be used over and over again by simply washing with water, you can enjoy clean fresh air.





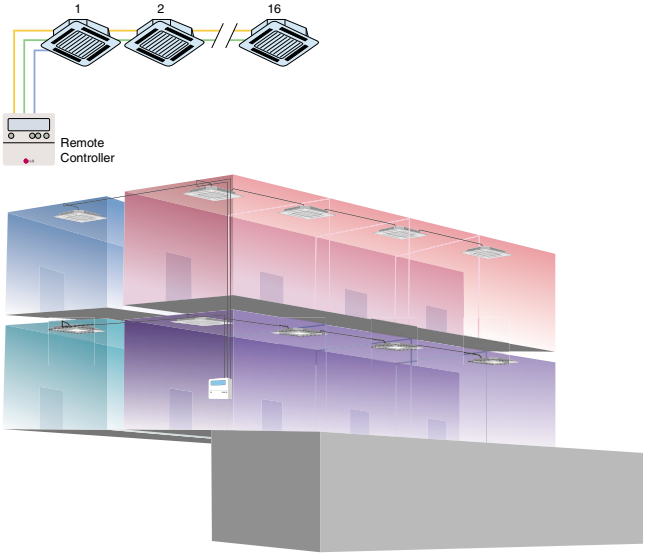
• Group control

1) Operation summary

- Where several products are linked, one specific control device can control a specific number of products.

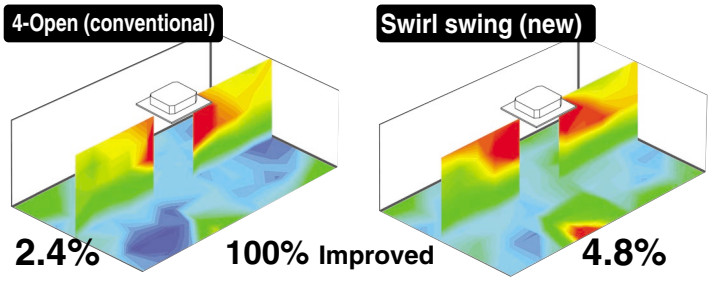
2) Specific operation

- Connecting line is linked to each of the indoor equipments for communication. A specific control device is connected to each of them and this control device can control the same function.
- Group control function is enabled by cutting an optional jump wire in the wired remote control. At this time, the main system will not respond in order to prevent data collision.
- While executing group control command, use the random data(0-3minutes) in the main body of indoor equipment for limiting starting current.
- Control device can control up to 16 indoor equipments.

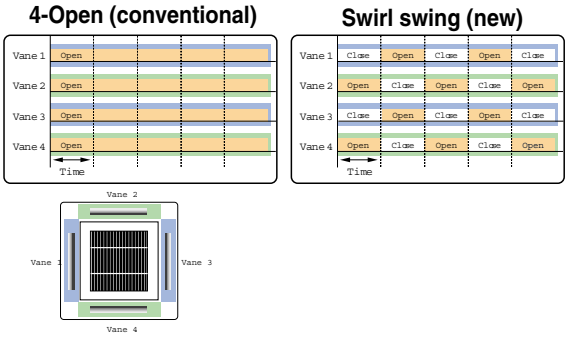


• Swirl swing

Comparison of floor temperature Distribution (20°C)



• Comparison of air flow types



Zero power consumption use in standby mode by adopting SMPS (Switching mode power supply)

• Power waste due to standby power

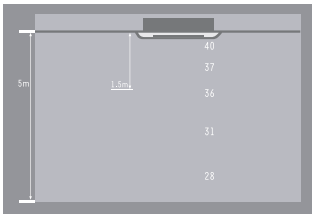
- Power is wasted if a plug is connected to an outlet even though the appliance is turned off.

• Development of super power-saving SMPS (Switching Mode Power Supply)

- Zero standby power by reducing 90% of standby power.
- No need to pull out every plug when system is not in use.

Low noise with 3-dimensional turbo fan

The most advanced low-noise design.The adoption of turbo-fan and round type give the most quiet operation.





Noise output measured in anechoic test room

Built-in drain pump

A standard drain-head height of up to 700mm is possible, creating the ideal solution for perfect water drainage.

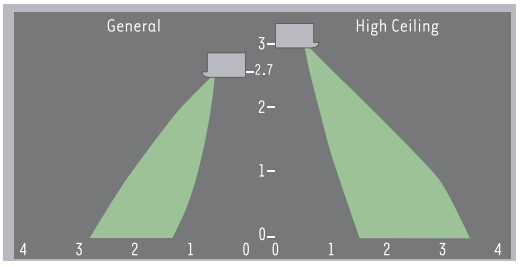


• High ceiling operation

According to the height of the installation, it provides variability of indoor fan motor speed.

If the height of installation is low then you can adjust low rpm of indoor fan motor. On the other hand if the height of the installation is high you can adjust high speed of indoor fan motor. Selection of speed can be done by slide switch at the back of the LCD wired remote controller.

ex: Ceiling height mode of slide switch change of air volume remark more than 3.3m high ceiling increasing 2.7~3.3m standard -less than 2.7m low ceiling decreasing manufactured in standard mode

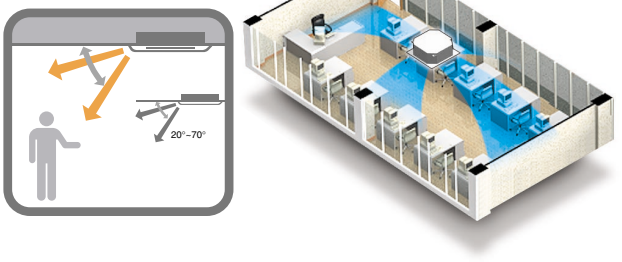


Air velocity distribution

• Space control

Vanes angle can be controlled by pair, considering its installation environment.

- For example direct drafts can be annoying, leading to discomfort and reduced productivity, vane control helps to eliminate this problem.
- Easily controlled by wired remote control.
- Air flow can be controlled easily regarding any space environment.



1.5.2 List of functions

Category	Function	AMNH09GTEF0 [MT10AH NE1]	AMNH12GTEF0 [MT12AH NE1]
Air flow	Air supply outlet	4	4
	Airflow direction control (left & right)	X	X
	Airflow direction control (up & down)	Auto	Auto
	Auto swing (left & right)	X	X
	Auto swing (up & down)	O	O
	Airflow steps(Fan / Cool / Heat)	4 / 5 / 4	4 / 5 / 4
	CHAOS swing	X	X
	CHAOS wind (Auto wind)	O	O
	Jet cool (Power wind)	O	O
	Swirl wind	O	O
Air purifying	Deodorizing filter	X	X
	Plasma air purifier	O	O
	Prefilter(Washable / Anti-fungus)	O	O
Installation	Drain pump	O	O
	E.S.P. control	-	-
	Electric heater (Operation)	-	-
	High ceiling operation	O	O
Reliability	Hot start	O	O
	Self diagnosis	O	O
	Soft dry operation	O	O
Convenience	Auto changeover	X	X
	Auto cleaning	X	X
	Auto operation(Artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	O	O
	Forced operation	O	O
	Group control	O	O
	Sleep mode	-	-
	Timer (On/Off)	O	O
	Timer (weekly)	O	O
	Two thermistor control	O	O
Individual Control	Standard wired remote controller	O	O
	Deluxe wired remote controller	PQRCUDS0	PQRCUDS0
	Simple wired remote controller	PQRCUCA0	PQRCUCA0
	Wired remote controller(for hotel use)	PQRCFCS0	PQRCFCS0
	Wireless remote controller(simple)	-	-
	Wireless LCD remote control	PQWRHSF0	PQWRHSF0
CAC Network Function	General central control(Non LGAP)	X	X
	Dry contact	PQDSB	PQDSB
	Central control(LGAP)	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X
	Zone control	X	X
Others	Thermistor	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category	Function	AMNH18GTEF0 [MT18AH NE1]	AMNH24GTHF0 [MT24 NH0]
Air flow	Air supply outlet	4	4
	Airflow direction control (left & right)	X	X
	Airflow direction control (up & down)	Auto	Auto
	Auto swing (left & right)	X	X
	Auto swing (up & down)	O	O
	Airflow steps(Fan / Cool / Heat)	4 / 5 / 4	4 / 5 / 4
	CHAOS swing	X	X
	CHAOS wind (Auto wind)	O	O
	Jet cool (Power wind)	O	O
	Swirl wind	O	O
Air purifying	Deodorizing filter	X	X
	Plasma air purifier	O	O
	Prefilter(Washable / Anti-fungus)	O	O
Installation	Drain pump	O	O
	E.S.P. control	-	-
	Electric heater (Operation)	-	-
	High ceiling operation	O	O
Reliability	Hot start	O	O
	Self diagnosis	O	O
	Soft dry operation	O	O
Convenience	Auto changeover	X	X
	Auto cleaning	X	X
	Auto operation(Artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	O	O
	Forced operation	O	O
	Group control	O	O
	Sleep mode	-	-
	Timer (On/Off)	O	O
	Timer (weekly)	O	O
	Two thermistor control	O	O
Individual Control	Standard wired remote controller	O	O
	Deluxe wired remote controller	PQRCUDS0	PQRCUDS0
	Simple wired remote controller	PQRCUCA0	PQRCUCA0
	Wired remote controller(for hotel use)	PQRCFCS0	PQRCFCS0
	Wireless remote controller(simple)	-	-
	Wireless LCD remote control	PQWRHSF0	PQWRHSF0
CAC Network Function	General central control(Non LGAP)	X	X
	Dry contact	PQDSB	PQDSB
	Central control(LGAP)	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X
	Zone control	X	X
Others	Thermistor	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.5.3 Specifications

Indoor unit type			Ceilling Cassette - 4way		
Model			AMNH09GTEF0 [MT10AH NE1]	AMNH12GTEF0 [MT12AH NE1]	AMNH18GTEF0 [MT18AH NE1]
Decoration Panel Name			PT-HEC1	PT-HEC1	PT-HEC1
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	2.64	3.52	5.28
		Btu/h	9,000	12,000	18,000
Heating capacity		kW	2.93	3.87	5.80
		Btu/h	10,000	13,200	19,800
Current	Nominal running current	A	0.35	0.35	0.75
Fan	Motor type		BLDC	BLDC	BLDC
	Fan type		Turbo Fan	Turbo Fan	Turbo Fan
	Motor output x Number of unit		18.4 X 1	18.4 X 1	22.4 X 1
	Air flow rate(H/M/L)	cmm	8.5/7.5/6.5	9.5/8/6.5	12/10/9
		cfm	300/265/230	336/283/230	424/353/318
	Capacitor	µF/Vac	-	-	-
	Drive		Direct Drive	Direct Drive	Direct Drive
Coil	Row x Column x FPI	mm	2R x 11C x 18	2R x 11C x 18	2R x 11C x 18
Dimensions	Body	mm(inch)	570*265*570(22.4*10.5*22.4)	570*265*570(22.4*10.5*22.4)	570*265*570(22.4*10.5*22.4)
(WxHxD)	Decorative panel	mm	670*30*670(26.4*1.2 *26.4)	670*30*670(26.4*1.2 *26.4)	670*30*670(26.4*1.2 *26.4)
Weight	Body	kg(lbs)	19(41.9)	19(41.9)	19(41.9)
	Decorative panel	kg(lbs)	3(6.6)	3(6.6)	3(6.6)
Air filter			Long Life Filter	Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	33/29/24	36/34/27	41/35/30
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	9.52 (3/8)	9.52 (3/8)	12.7(1/2)
Drain	OD/ID	mm	32/25	32/25	32/25
Dehumidification rate		l/h	1.1	1.2	2.4
Safety devices			Fuse, Thermal Protector for Fan Motor		
Temperature sensor			Thermistor	Thermistor	Thermistor
Referigerant			R410A	R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula	
kW	= Btu/h × 0.0002931
CFM	= CMM × 35.3

Indoor unit type			Ceilling Cassette - 4way
Model			AMNH24GTHF0 [MT24AH NHO]
Decoration Panel Name			PT-HDC1
Power supply		Ø/V/Hz	1/ 220~240/ 50
Cooling capacity		kW	7.03
		Btu/h	24,000
Heating capacity		kW	7.74
		Btu/h	26,400
Current	Nominal running current	A	0.8
Fan	Motor type		BLDC
	Fan type		Turbo Fan
	Motor output x Number of unit		40.3 X 1
	Air flow rate(H/M/L)	cmm	17/15/13
		cfm	600/530/459
	Capacitor	µF/Vac	-
	Drive		Direct Drive
Coil	Row x Column x FPI	mm	2R x 9C x 18
Dimensions	Body	mm(inch)	840*840*225 (33.1*33.1*8.8)
(WxHxD)	Decorative panel	mm	950*950*30 (37.4*37.4*1.2)
Weight	Body	kg(lbs)	26(126.5)
	Decorative panel	kg(lbs)	5(11)
Air filter			Long Life Filter
Sound level (H/M/L)		dB(A)+3	32/29/26
Piping	Liquid	mm(inch)	6.35 (1/4)
connections	Gas	mm(inch)	12.7(1/2)
Drain	OD/ID	mm	32/25
Dehumidification rate		l/h	3.0
Safety devices			Fuse, Thermal Protector for Fan Motor
Temperature sensor			Thermistor
Referigerant			R411A
Referigerant control			EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

1.5.4 Dimensions

Ceiling Cassette 4-way + Decoration Panel

AMNH09GTEF0[MT10AH NE1] + PT-HEC1 (PLASMA)

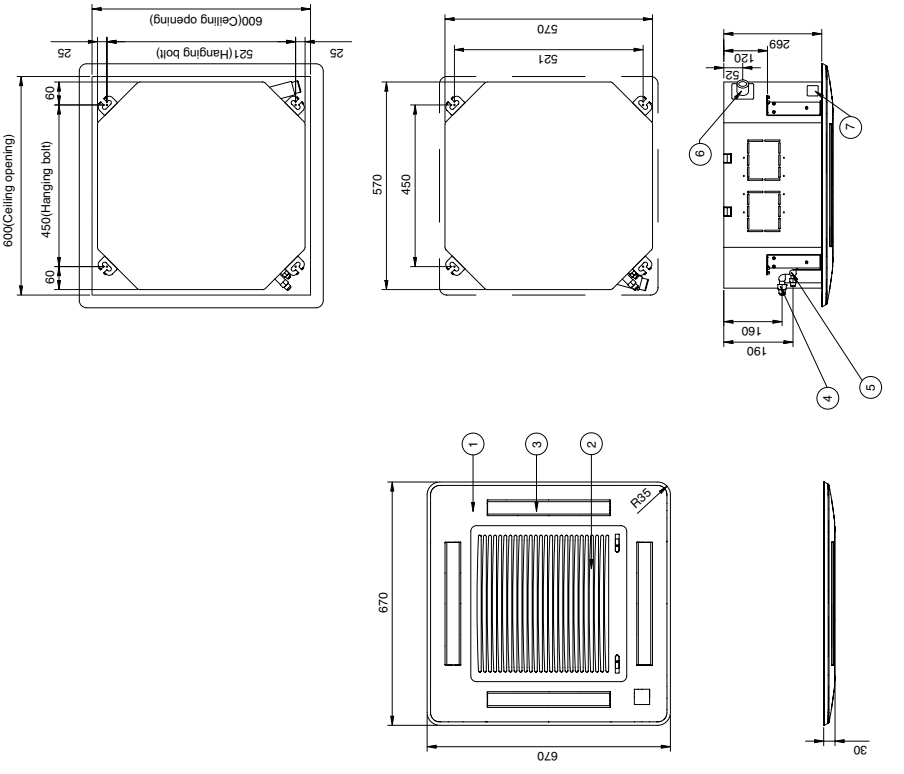
No.	Part Name	Remark
1	Decoration panel	
2	Air suction grille	
3	Air discharge grille	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	
7	Power supply connection	

▣ Technical Specification

		Ø/V/Hz	1/ 220~240 / 50
Power supply			
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain(OD/ID)		mm	32/25

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.



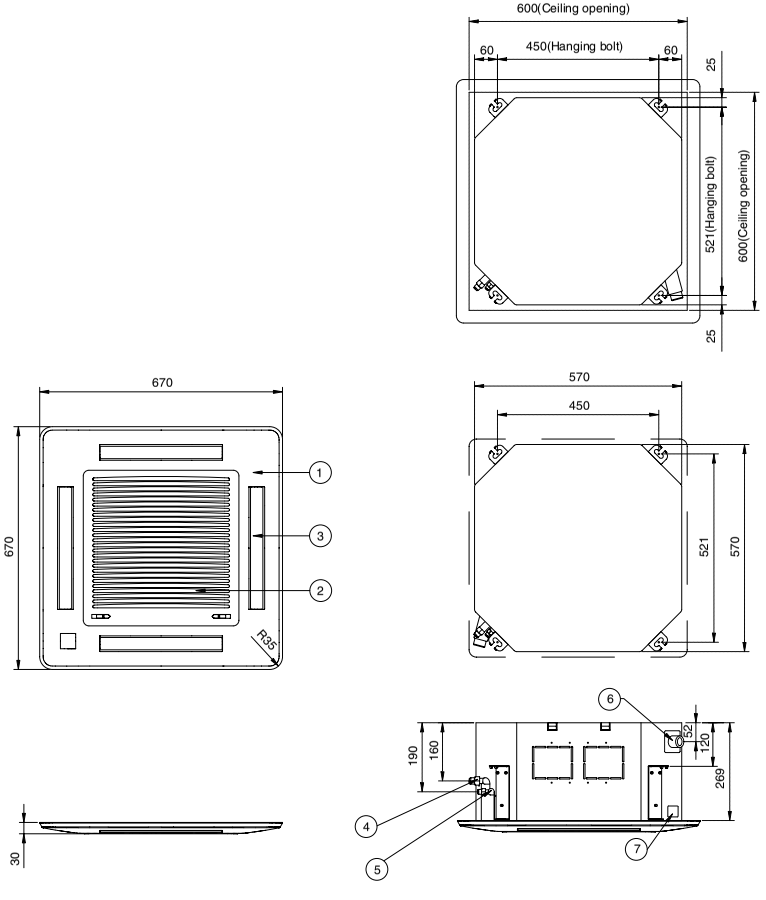
LG Electronics

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www.lge.com/airconditioner

CHASSIS CODE: TE1

Ceiling Cassette 4-way + Decoration Panel

AMNH12GTEF0[MT12AH NE1] + PT-HEC1 (PLASMA)



No.	Part Name	Remark
1	Decoration panel	
2	Air suction grille	
3	Air discharge grille	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	
7	Power supply connection	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain(OD/ID)		mm	32/25

▣ Note

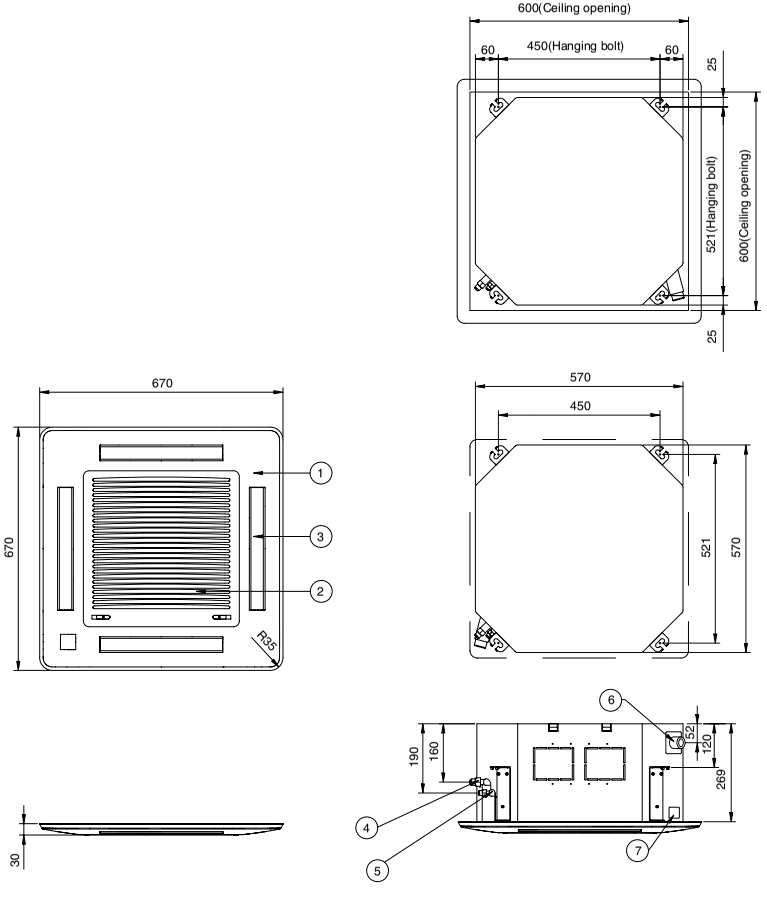
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: TE1

Ceiling Cassette 4-way + Decoration Panel

AMNH18GTEF0[MT18AH NE1] + PT-HEC1 (PLASMA)



No.	Part Name	Remark
1	Decoration panel	
2	Air suction grille	
3	Air discharge grille	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	
7	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	5.28
		Btu/h	18,000
Heating Capacity		kW	5.80
		Btu/h	19,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)
Drain(OD/ID)		mm	32/25

▣ Note

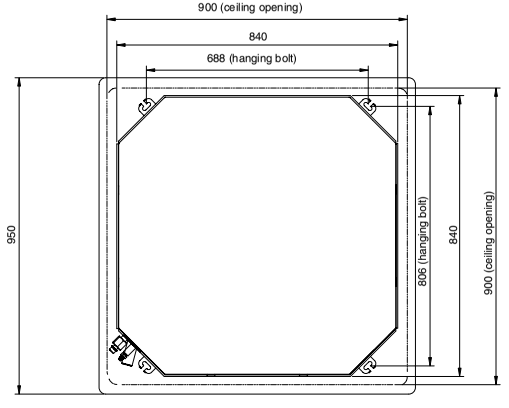
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

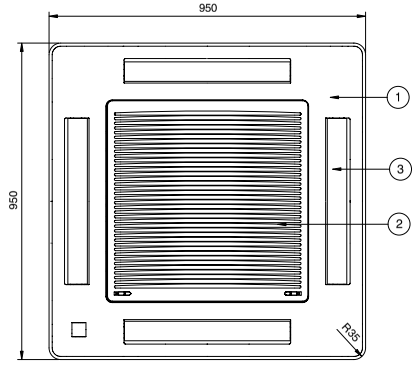
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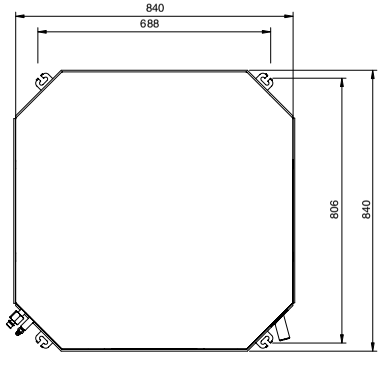
CHASSIS CODE: TE1

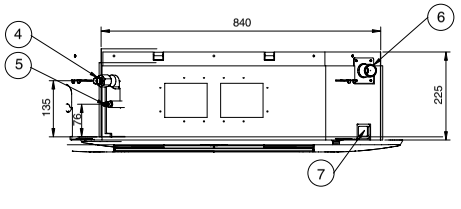
Ceiling Cassette 4-way + Decoration Panel

AMNH24GTHF0[MT24AH NH0] + PT-HDC1 (PLASMA)











No.	Part Name	Remark
1	Decoration panel	
2	Air suction grille	
3	Air discharge grille	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	
7	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	7.03
		Btu/h	24,000
Heating Capacity		kW	7.74
		Btu/h	26,400
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)
Drain(OD/ID)		mm	32/25

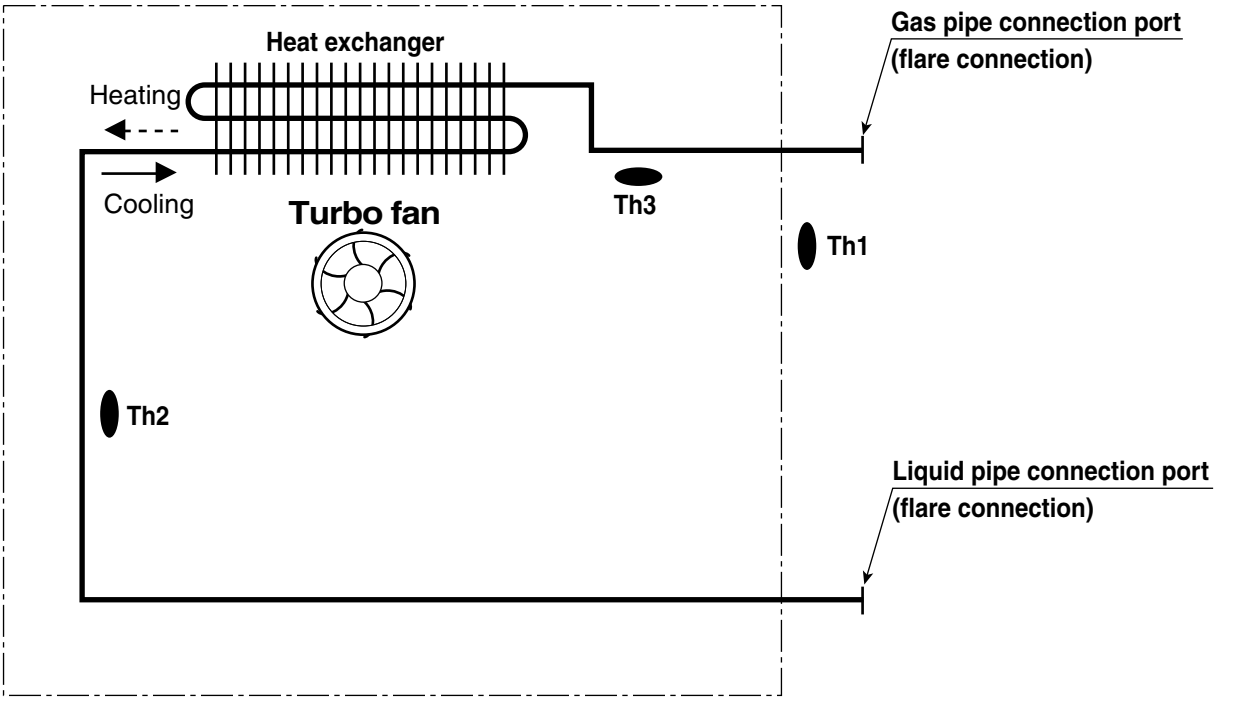
▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: TH

1.5.5 Piping diagrams



Th1 : Thermistor for suction air temp.
Th2 : Thermistor for liquid line temp.
Th3 : Thermistor for gas line temp.

■ Refrigerant pipe connection port diameters

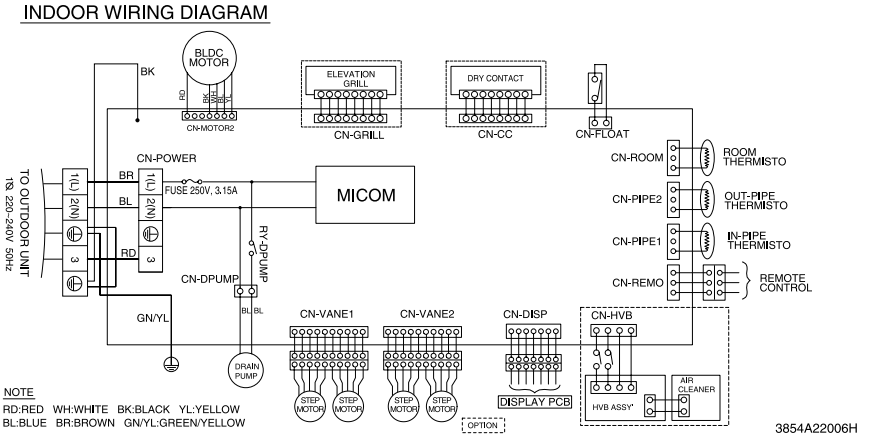
(mm)

Model	Gas	Liquid
AMNH09GTEF0 [MT10AH NE1] AMNH12GTEF0 [MT12AH NE1]	Ø9.52	Ø6.35
AMNH18GTEF0 [MT18AH NE1] AMNH24GTHF0 [MT24AH NH0]	Ø12.7	Ø6.35

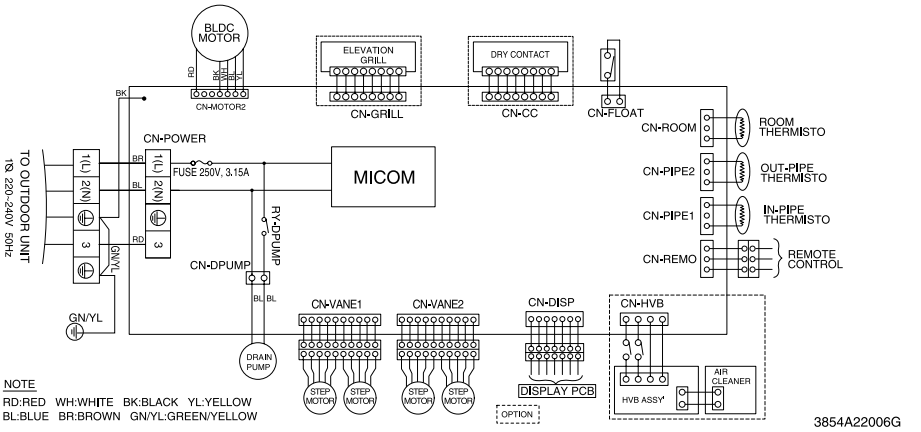
1.5.6 Wiring diagrams

1) Wiring diagrams

Models: AMNH-TE1 model[MT-E1]

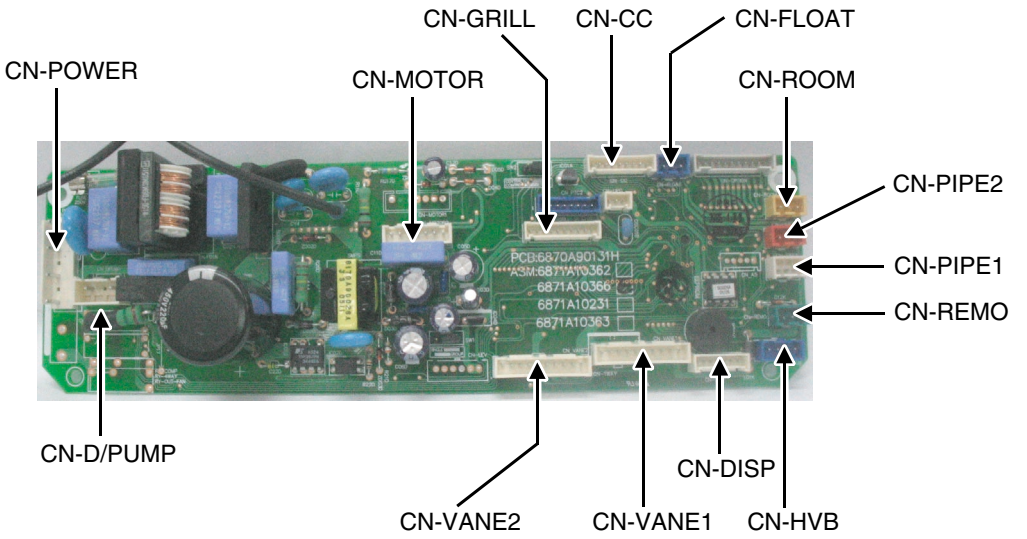


Models: AMNH-TH model[MT-H]



Connector Number	Location
CN-POWER	AC power supply
CN-MOTOR	BLDC fan motor output
CN-D/PUMP	Drain pump output
CN-DISP	Display
CN-FLOAT	Float switch input
CN-REMO	Remote control
CN-GRILL	Grill control
CN-CC	Central control
CN-PIPE2	Discharge pipe sensor
CN-ROOM	Room sensor
CN-PIPE1	Pipe sensor
CN-HVB	Air cleaner
CN-UD1	Step motor
CN-UD2	Step motor
CN-LR1	Step motor
CN-LR2	Step motor
CN-VANE1	Step motor
CN-VANE2	Step motor

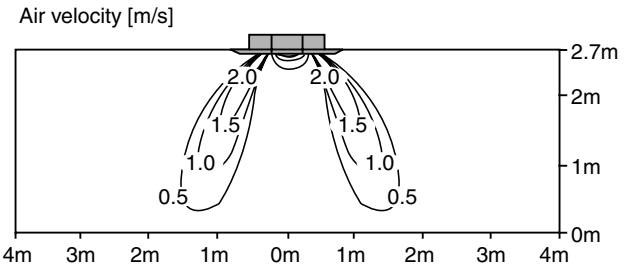
2) PCB

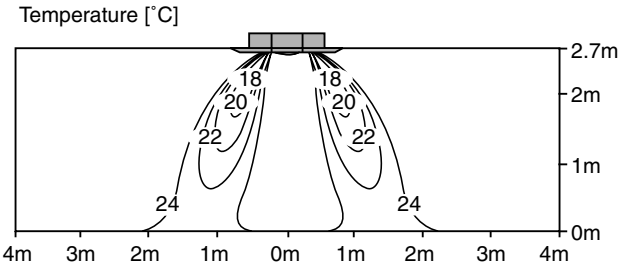

CN-GRILL
CN-CC
CN-FLOAT
CN-POWER
CN-MOTOR
CN-ROOM
CN-PIPE2
CN-PIPE1
CN-REMO
CN-D/PUMP
CN-DISP
CN-VANE2
CN-VANE1
CN-HVB

1.5.7 Air flow and temperature distributions (reference data)

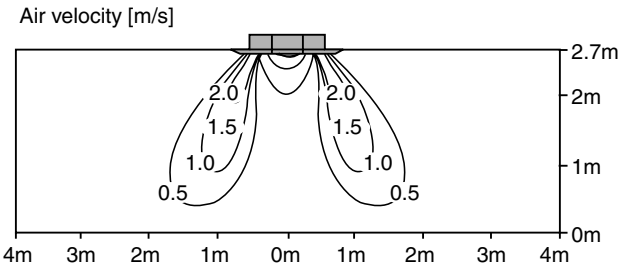
Model : 18k Btu/h

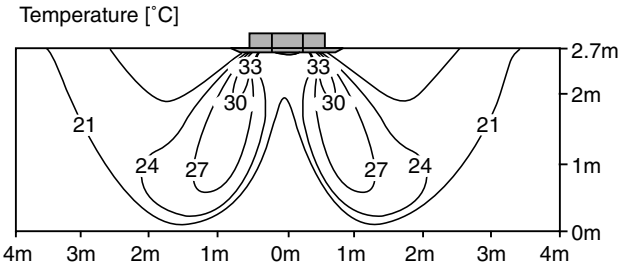
Cooling





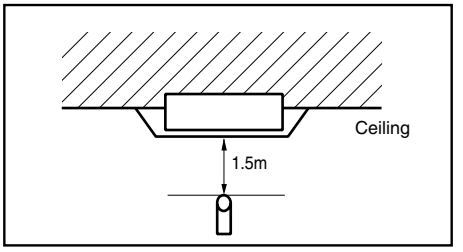
Heating





1.5.8 Sound levels

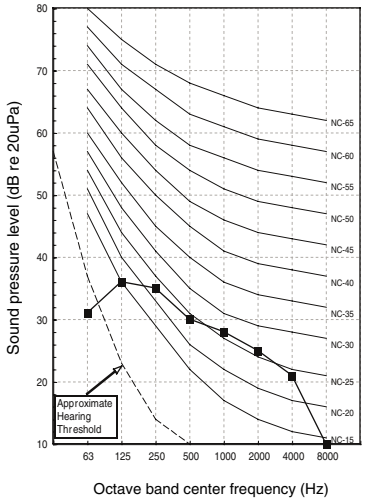
Overall



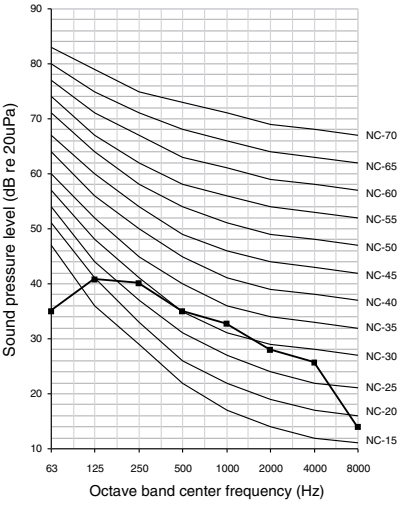
Notes:
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference accoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

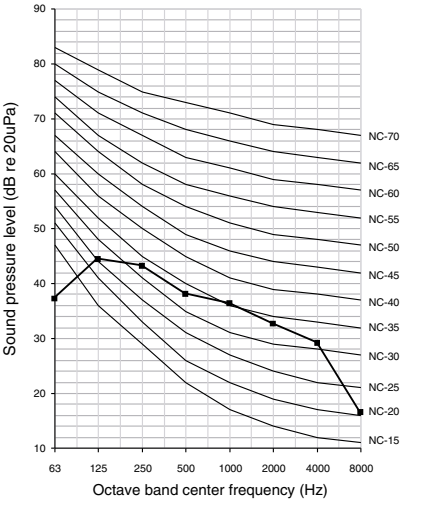
ATNH09GTEF0[MT10AH NE1]



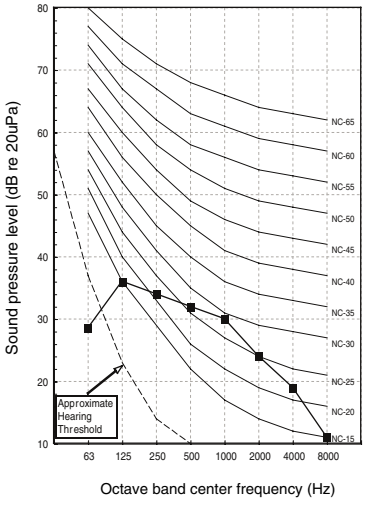
ATNH12GTEF0[MT12AH NE1]



ATNH18GTEF0[MT18AH NE1]

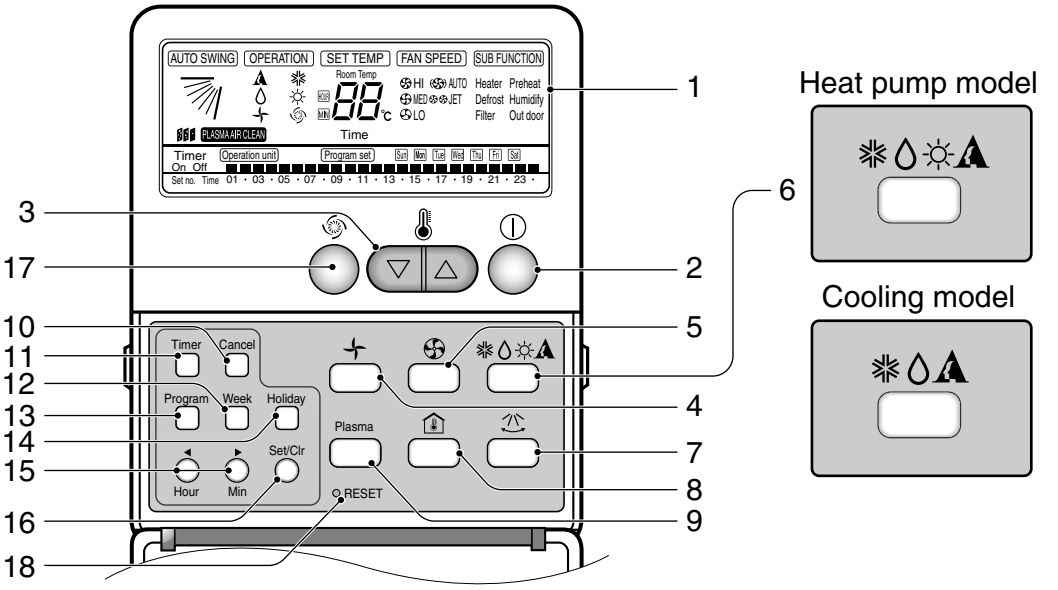


AMNH24GTHF0[MT24AH NH0]



1.5.9 Controller

Wired remote controller



1. Operation display
Displays the operation conditions.

2. On/Off button
Operation starts when this button is pressed, and stops when the button is pressed again.

3. Set temperature button
Used to set the temperature when the desired temperature is obtained.

4. Fan operation button
Used to circulate room air without cooling or heating.

5. Fan speed button
Used to set the desired fan speed.

6. Operation mode selection button
Used to select the operation mode.
- Auto operation mode
- Cooling operation mode
- Soft dry operation mode
- Heating operation mode(except cooling model)

7. Auto swing button
Used to swing up and down.

8. Room temperature checking button
Used to check the room temperature.

9. Plasma air clean button (optional)

10. Timer cancel button
Used to cancel the timer.

11. Timer set button
Used to set the timer when the desired time is obtained.

12. Week button
Used to set the day of the week.

13. Program button
Used to set the weekly timer.

14. Holiday button
Used to set the holiday of the week.

15. Time set button
Used to set the time of the day and change the time in the weekly timer Function.

16. Set and clear button
Used to set and clear the weekly timer.

17. Jet cool button
Used to select jet cool mode.

18. Reset button
Used to set the current time and clear the setting time.

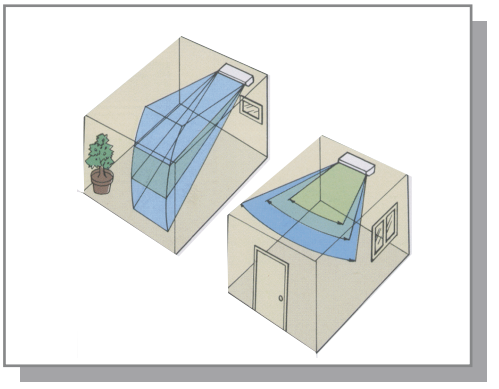
1.6 Ceiling and floor
1.6.1 Features

Models : AMNH096VEA0 [MV09AH NE0] / AMNH126VEA0 [MV12AH NE0]
AMNH186VBA0 [MV18AH NB0] / AMNH246VBA0 [MV24AH NB0]

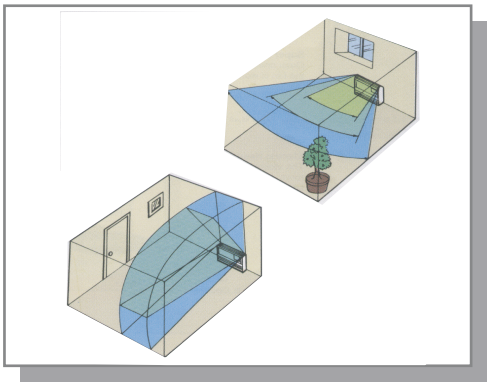


• Flexible installation

It can be installed on the floor or ceiling according to your need.



<Ceiling installation>

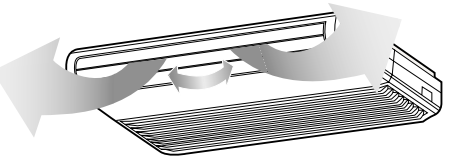


<Floor installation>

• Low noise

• Airflow direction control

- Horizontal airflow direction control.
  manual control Adjust the horizontal airflow direction by manually moving the horizontal airflow direction louver by hand.
- Vertical airflow direction control.
  The airflow direction can be adjusted as desired by using the remote controller. This is effective when you want to cool yourself directly.



• LCD wireless remote control

• Luxurious front panel(molding)

1.6.2. List of functions

Category	Function	AMNH096VEA0 [MV09AH NE0]	AMNH126VEA0 [MV12AH NE0]	AMNH186VBA0 [MV18AH NB0]	AMNH246VBA0 [MV24AH NB0]
Air flow	Air supply outlet	1	1	1	1
	Airflow direction control (left & right)	Manual	Manual	Manual	Manual
	Airflow direction control (up & down)	Auto	Auto	Auto	Auto
	Auto swing (left & right)	X	X	X	X
	Auto swing (up & down)	O	O	O	O
	Airflow steps(Fan / Cool / Heat)	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3	3 / 4 / 3
	CHAOS swing	X	X	X	X
	CHAOS wind (Auto wind)	O	O	O	O
	Jet cool (Power wind)	O	O	O	O
	Swirl wind	X	X	X	X
Air purifying	Deodorizing filter	X	X	X	X
	Plasma air purifier	Option	Option	-	-
	Prefilter(Washable / Anti-fungus)	O	O	O	O
Installation	Drain pump	-	-	-	-
	E.S.P. control	-	-	-	-
	Electric heater (Operation)	-	-	-	-
	High ceiling operation	X	X	X	X
Reliability	Hot start	O	O	O	O
	Self diagnosis	O	O	O	O
	Soft dry operation	O	O	O	O
Convenience	Auto changeover	X	X	X	X
	Auto cleaning	X	X	X	X
	Auto elevation grille	-	-	-	-
	Auto operation(Artificial intelligence)	O	O	O	O
	Auto restart operation	O	O	O	O
	Child lock	-	-	-	-
	Forced operation	X	X	X	X
	Group control	-	-	-	-
	Sleep mode	O	O	O	O
	Timer (On/Off)	O	O	O	O
	Timer (weekly)	X	X	X	X
	Two thermistor control	X	X	X	X
Individual Control	Standard wired remote controller	X	X	X	X
	Deluxe wired remote controller	X	X	X	X
	Simple wired remote controller	X	X	X	X
	Wired remote controller(for hotel use)	-	-	-	-
	Wireless remote controller(simple)	-	-	-	-
	Wireless LCD remote control	O	O	O	O
CAC Network Function	General central control(Non LGAP)	X	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB	PQDSB
	Central control(LGAP)	O	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X	X	X
	Zone control	X	X	X	X
Others	Thermistor	-	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.6.3. Specifications

Indoor unit type			Ceilling & Floor	
Model			AMNH096VEA0 [MV09AH NE0]	AMNH126VEA0 [MV12AH NE0]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	2.64	3.52
		Btu/h	9,000	12,000
Heating capacity		kW	2.93	3.87
		Btu/h	10,000	13,200
Current	Nominal running current	A	0.56	0.56
Fan	Motor type		Induction	Induction
	Fan type		Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		14.5 x 1	17.5 x 1
	Air flow rate(H/M/L)	cmm	7.8/6.4/5.0	10.0/8.3/6.5
		cfm	276/226/177	353/293/230
	Capacitor	µF/Vac	1.5/370	1.5/370
	Drive		Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2R x 12C x 20	2R x 12C x 20
Dimensions (WxHxD)	Body	mm(inch)	900*200*490(35.4*7.9*19.3)	900*200*490(35.4*7.9*19.3)
Weight	Body	kg(lbs)	12(26.5)	12(26.5)
Air filter			Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	36/32/28	40/36/31
Piping connections	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
	Gas	mm(inch)	9.52(3/8)	9.52(3/8)
Dehumidification rate		l/h	1.0	1.2
Safety devices			Fuse, Thermal Protector for Fan Motor	
Temperature sensor			Thermistor	Thermistor
Referigerant			R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Indoor unit type			Ceilling & Floor	
Model			AMNH186VBA0 [MV18AH NB0]	AMNH246VBA0 [MV24AH NB0]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	5.27	7.03
		Btu/h	18,000	24,000
Heating capacity		kW	5.80	7.38
		Btu/h	19,800	25,200
Current	Nominal running current	A	0.67	0.67
Fan	Motor type		Induction	Induction
	Fan type		Cross Flow Fan	Cross Flow Fan
	Motor output x Number of unit		30 x 1	35 x 1
	Air flow rate(H/M/L)	cmm	13.5/12/11	15/13.5/12
		cfm	477/424/388	530/477/424
	Capacitor	µF/Vac	1.5/370	1.5/370
	Drive		Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	2R x 12C x 18	2R x 14C x 20
Dimensions (WxHxD)	Body	mm(inch)	1,200*205*615(47.2*8.1*24.2)	1,200*205*615(47.2*8.1*24.2)
Weight	Body	kg(lbs)	30(66.1)	30(66.1)
Air filter			Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	43 / 40 / 37	45 / 42 / 39
Piping connections	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
	Gas	mm(inch)	12.7(1/2)	12.7(1/2)
Dehumidification rate		l/h	2.0	3.0
Safety devices			Fuse, Thermal Protector for Fan Motor	
Temperature sensor			Thermistor	Thermistor
Referigerant			R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

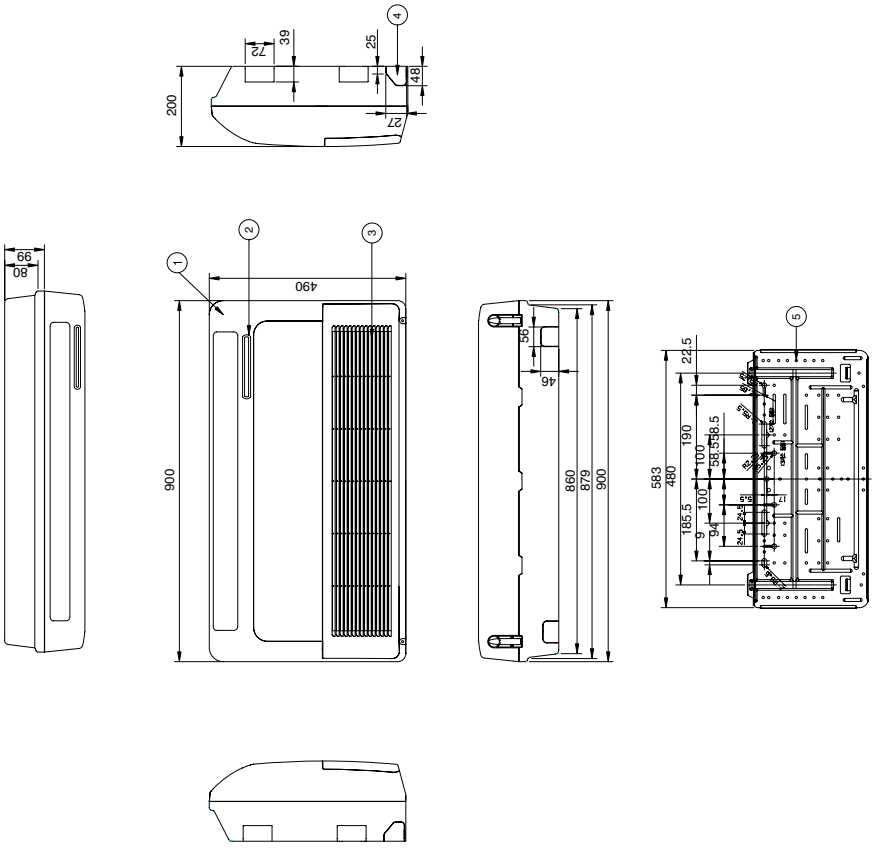
Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

1.6.4 Dimensions

CEILING & FLOOR

AMNH096VEA0 [MV09AH NE0]

No.	Part Name	Remark
1	Front air discharge grille	
2	Display & Signal Receiver	
3	Air Suction Grille	
4	Knockout hole	
5	Installation Plate	



▣ Technical Specification

		Ø/V/Hz	1/220~240/50
Power supply			
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

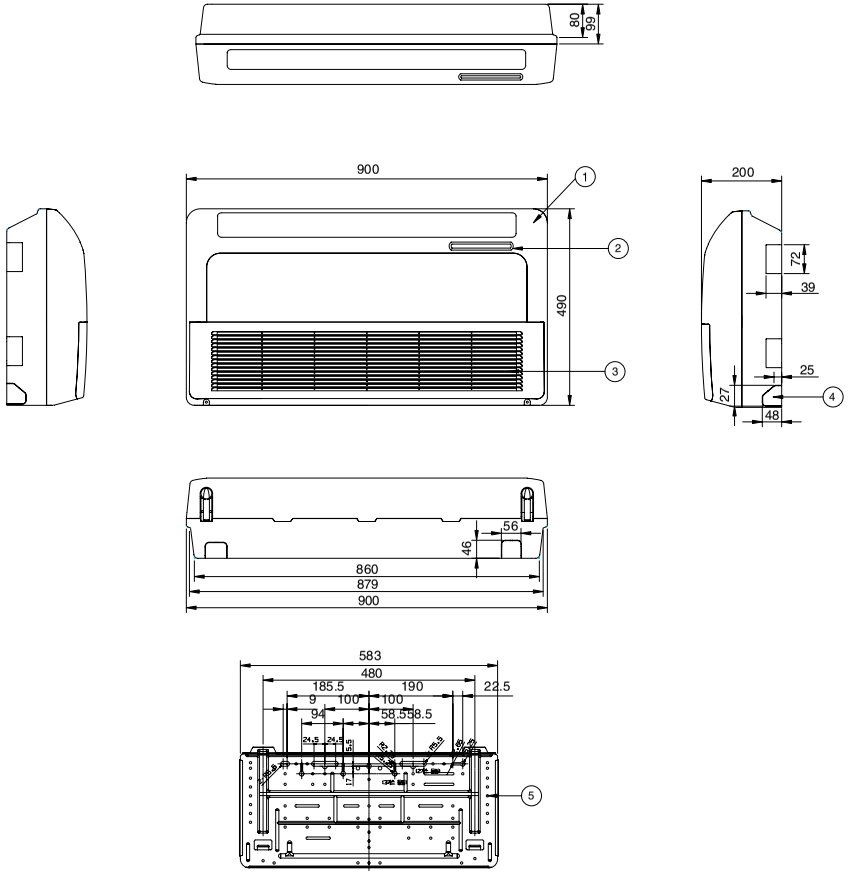
LG Electronics

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www.lge.com/airconditioner

CHASSIS CODE: VE

CEILING & FLOOR

AMNH126VEA0 [MV12AH NE0]



No.	Part Name	Remark
1	Front air discharge grille	
2	Display & Signal Receiver	
3	Air Suction Grille	
4	Knockout hole	
5	Installation Plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

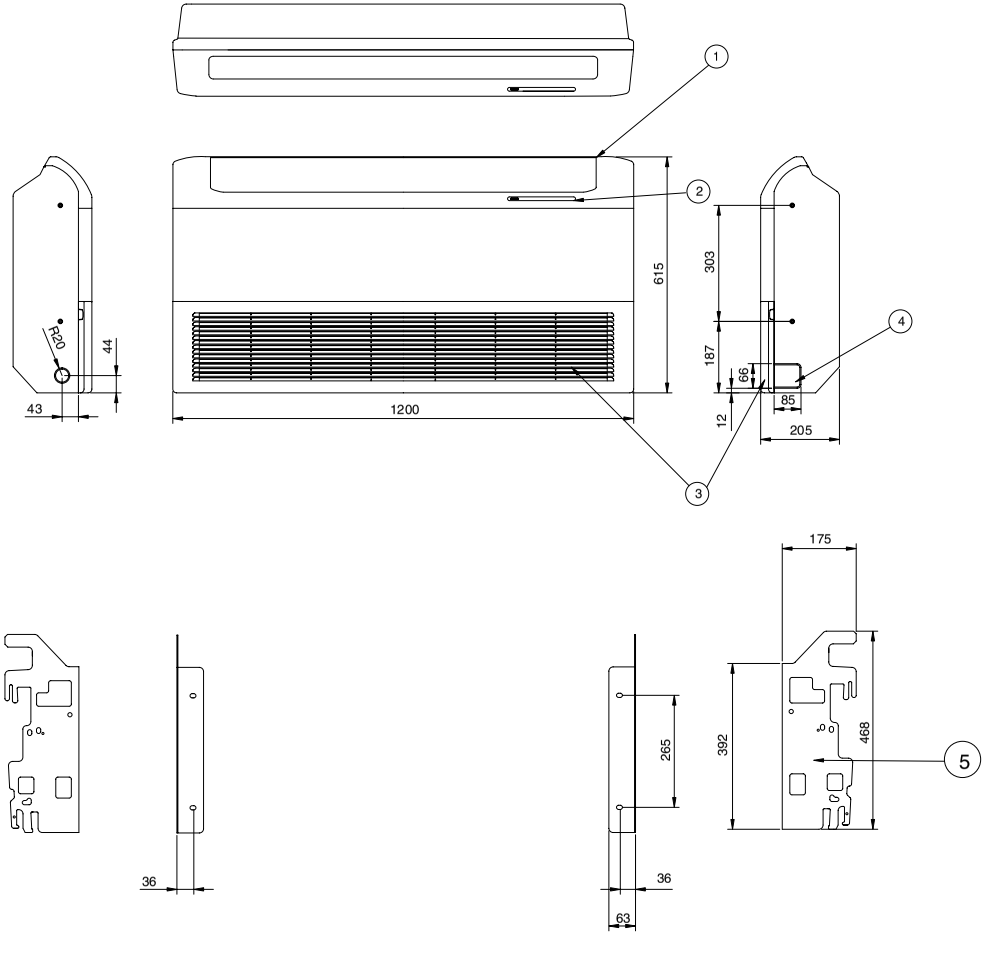
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CHASSIS CODE: VE

CEILING & FLOOR

AMNH186VBA0[MV18AH NB0]



No.	Part Name	Remark
1	Front air discharge grille	
2	Display & Signal Receiver	
3	Air Suction Grille	
4	Knockout hole	
5	Installation Plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	5.27
		Btu/h	18,000
Heating Capacity		kW	5.80
		Btu/h	19,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)

▣ Note

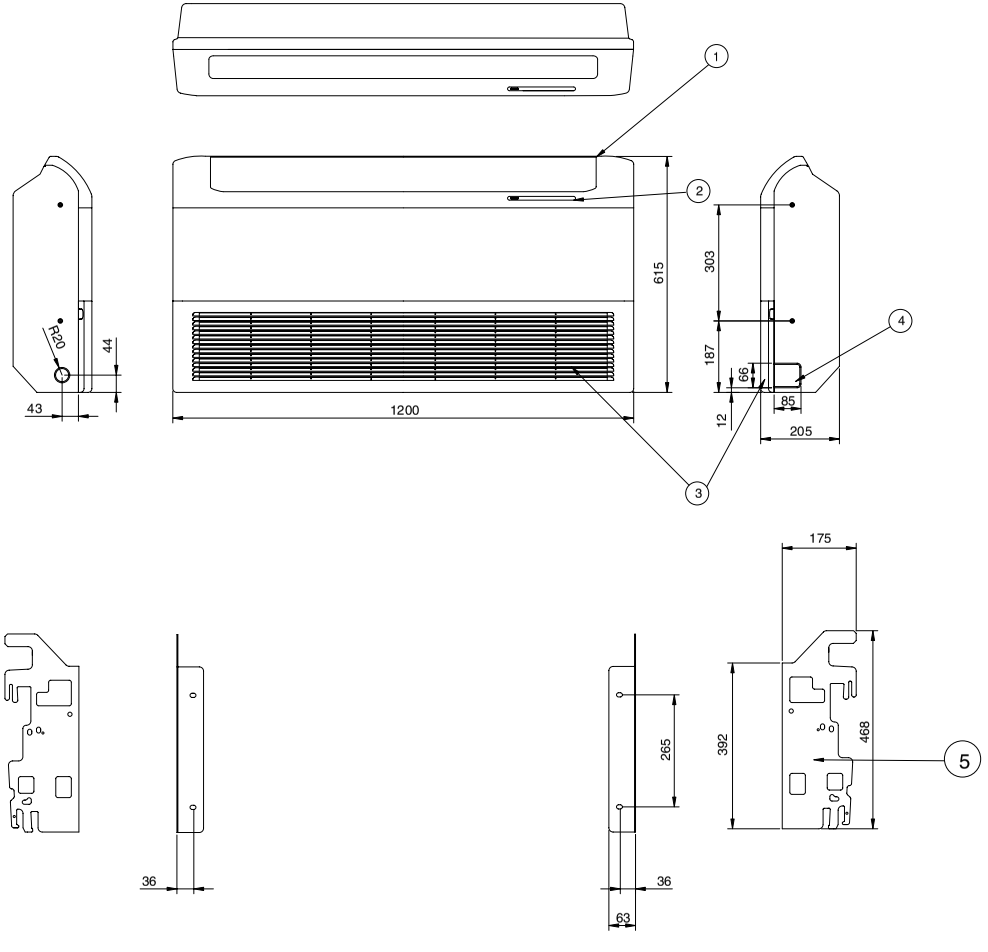
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: VB

CEILING & FLOOR

AMNH246VBA0[MV24AH NB0]



No.	Part Name	Remark
1	Front air discharge grille	
2	Display & Signal Receiver	
3	Air Suction Grille	
4	Knockout hole	
5	Installation Plate	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	7.03
		Btu/h	24,000
Heating Capacity		kW	7.38
		Btu/h	25,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)

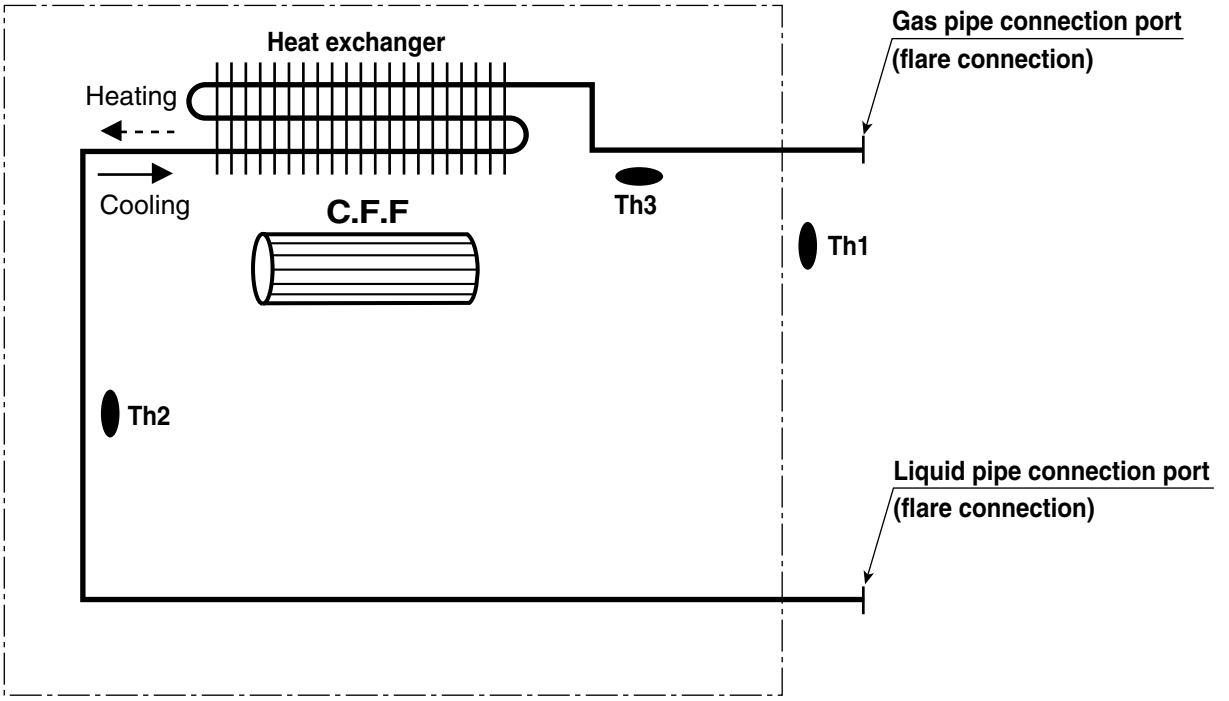
▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: VB

1.6.5 Piping diagrams



Th1 : Thermistor for suction air temp.
Th2 : Thermistor for liquid line temp.
Th3 : Thermistor for gas line temp.

■ Refrigerant pipe connection port diameters

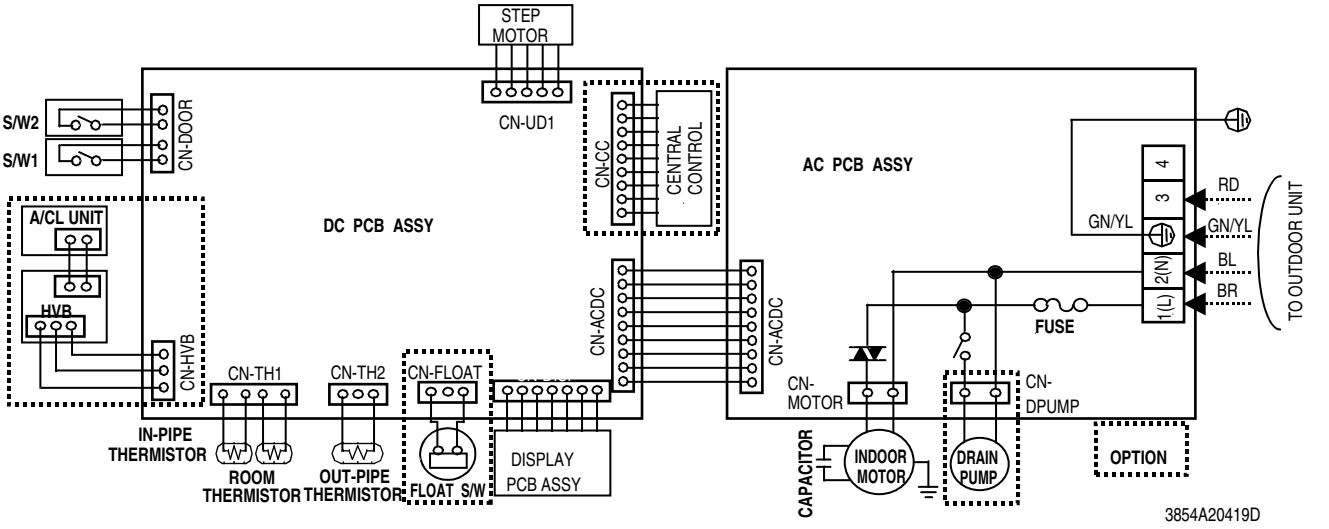
(mm)

Model	Gas	Liquid
AMNH096VEA0 [MV09AH NE0] AMNH126VEA0 [MV12AH NE0]	ø9.52	ø6.35
AMNH186VBA0 [MV18AH NB0] AMNH246VBA0 [MV24AH NB0]	ø12.7	ø6.35

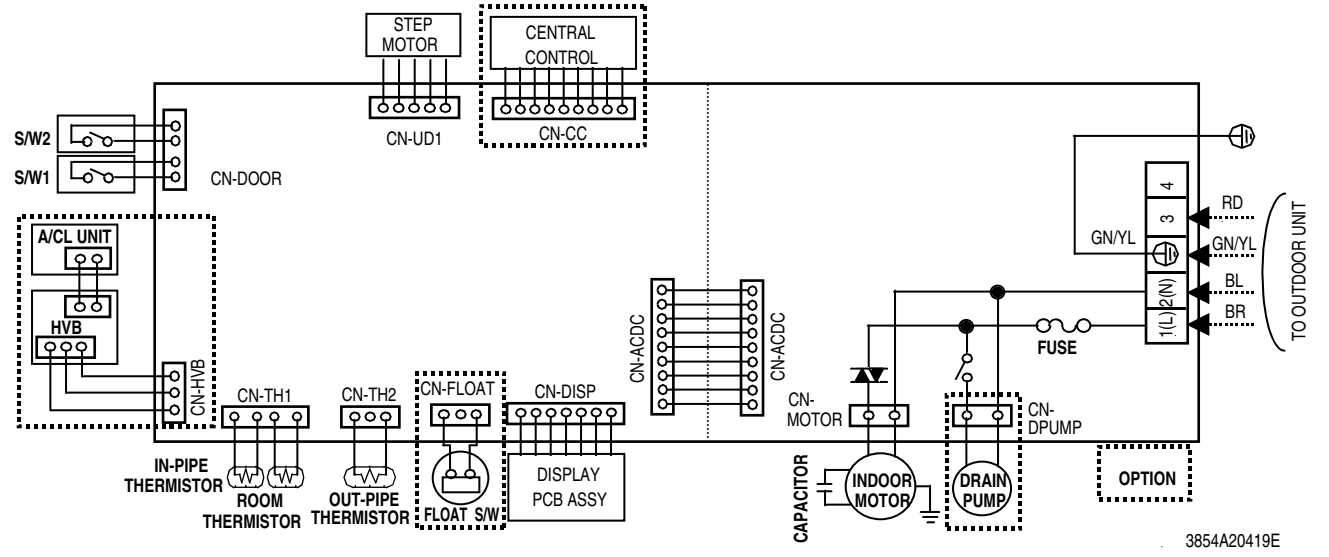
1.6.6 Wiring diagrams

1) Wiring diagrams

Models : AMNH-VE[MT-E]

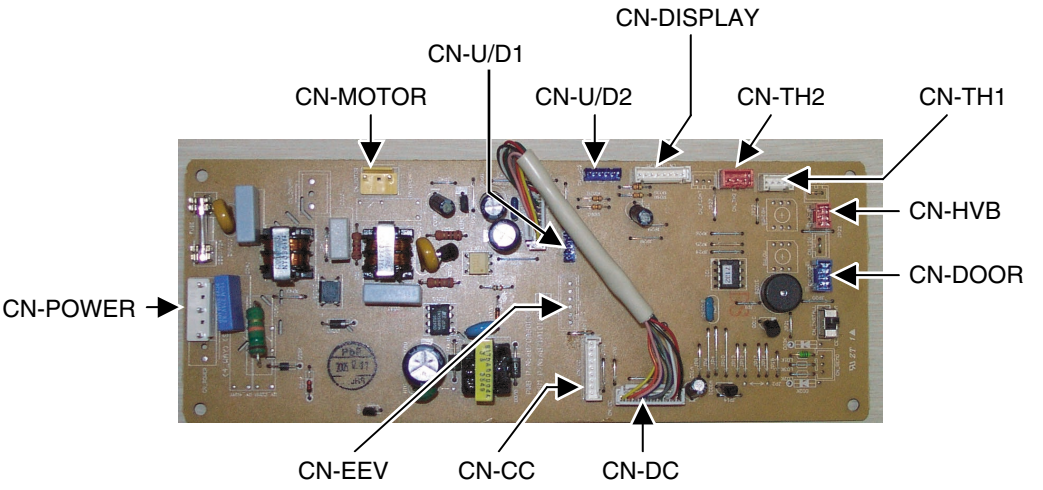


Models : AMNH-VB[MT-B]



Connector Number	Location	Connector Number	Location
CN-POWER	AC power supply	CN-TH2	Discharge pipe sensor
CN-MOTOR	BLDC fan motor output	CN-TH1	Pipe and room sensor
CN-DPUMP	Drain pump output	CN-HVB	Air cleaner
CN-AC/DC	AC/DC connector	CN-DOOR	Step motor
CN-DISPLAY	Display	CN-UD1	Step motor
CN-FLOAT	Float switch input	CN-CC	Central control

2) PCB

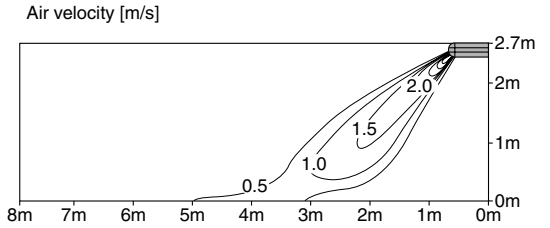

CN-DISPLAY
CN-U/D1
CN-MOTOR
CN-U/D2
CN-TH2
CN-TH1
CN-HVB
CN-DOOR
CN-POWER
CN-EEV
CN-CC
CN-DC

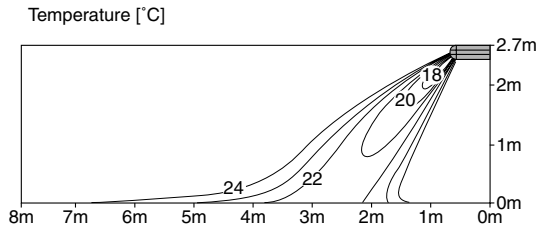
1.6.7 Air flow and temperature distributions (reference data)

Models : 18k Btu/h - installation on ceilling

Cooling

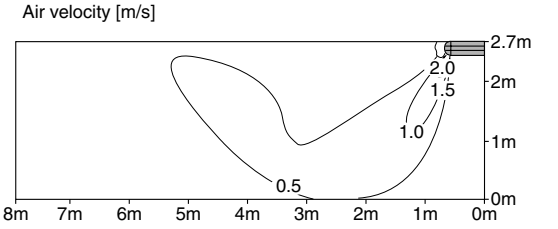
Discharge angle:45°

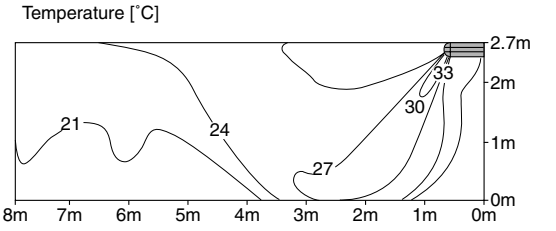




Heating

Discharge angle:50°

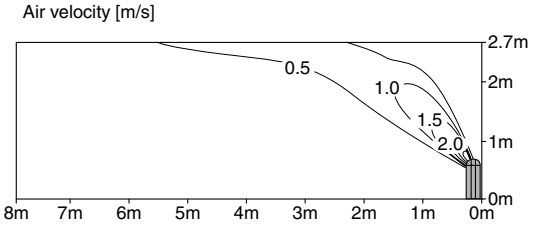


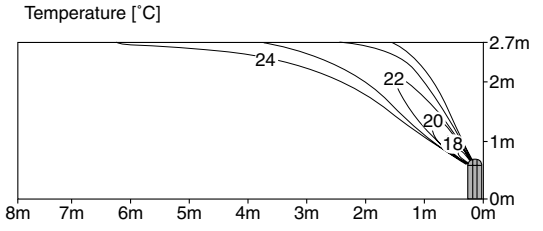


Models : 18k Btu/h - installation on floor or wall

Cooling

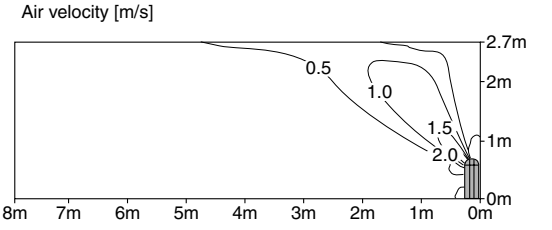
Discharge angle:45°

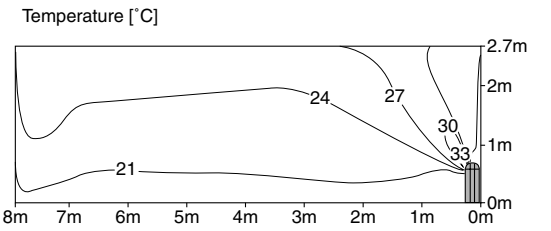




Heating

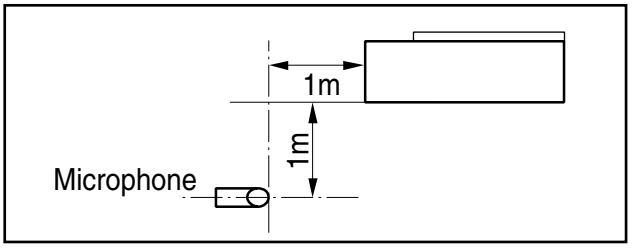
Discharge angle:50°





1.6.8 Sound levels

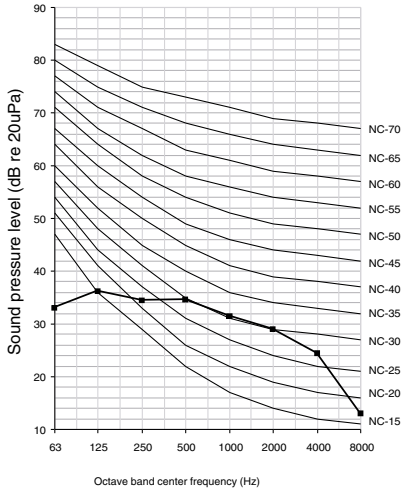
Overall



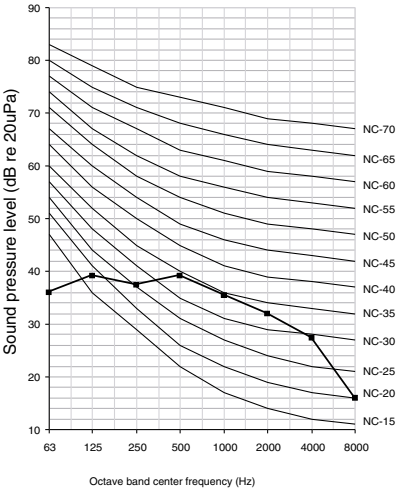
Notes:
- Data is valid at nominal operation condition
- Reference accoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound Pressure Level

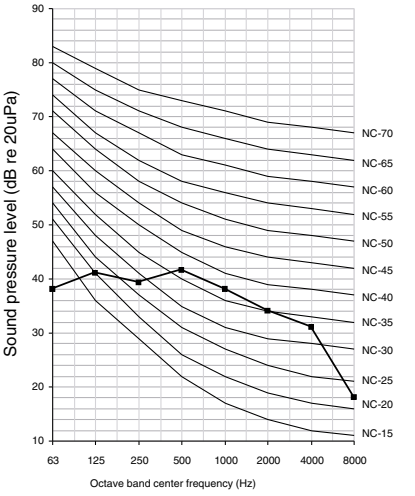
AMNH096VEA0 [MV09AH NE0]



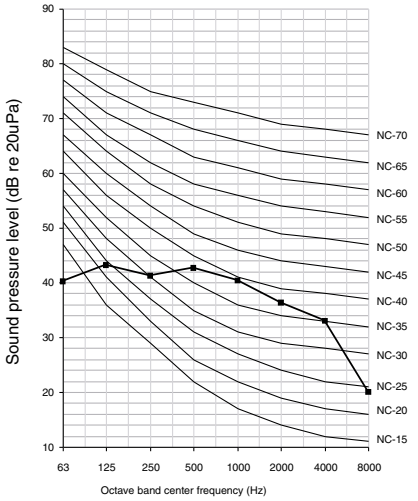
AMNH126VEA0 [MV12AH NE0]



AMNH186VBA0 [MV18AH NB0]



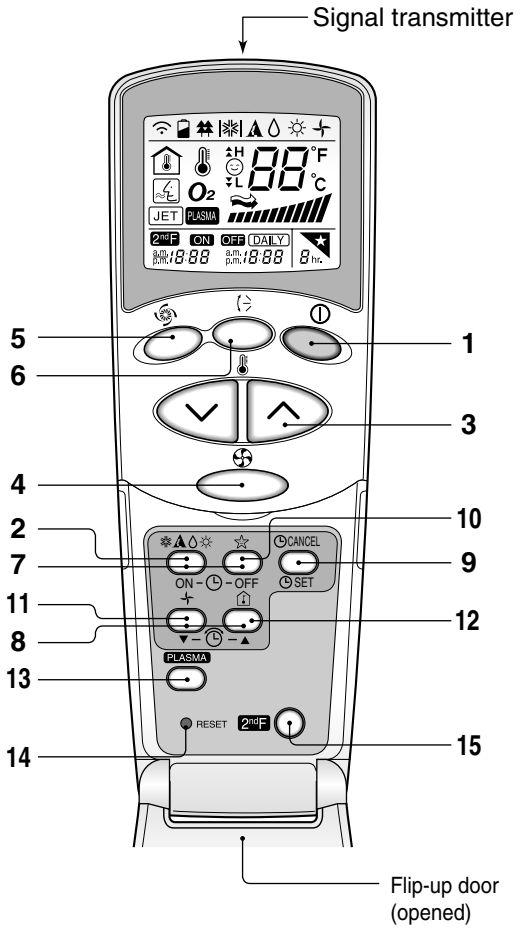
AMNH246VBA0 [MV24AH NB0]



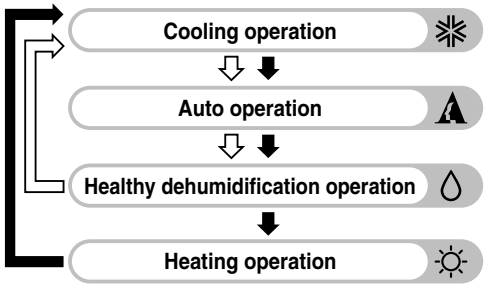
1.6.9 Controller

Wireless remote controller

The remote controller transmits the signals to the system.



Operation mode



• **Cooling model(⇩), Heat pump model(⬇)**

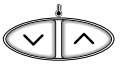
1. Start/Stop btton
Operation starts when this button is pressed and stops when the button is pressed again.



2. Operation mode selection button
Used to select the operation mode.



3. Room temperature setting buttons
Used to select the room temperature.



4. Indoor fanspeed selector
Used to select fan speed in four steps low, medium, high and CHAOS.



5. Jet cool
Used to start or stop the speed cooling/heating. (Speed cooling/heating operates super high fan speed.)



6. Chaos swing button
Used to stop or start louver movement and set the desired up/down airflow direction.



7. On/Off timer buttons
Used to set the time of starting and stopping operation.

8. Time setting buttons
Used to adjust the time.

9. Timer set/Cancel button
Used to set the timer when the desired time is obtained and to cancel the Timer operation.

10. Sleep mode auto button
Used to set sleep mode auto operation.

11. Air circulation button
Used to circulate the room air without cooling or heating.

12. Room temperature checking button
Used to check the room temperature.

13. PLASMA(optional)
Used to start or stop the plasma-purification function.

14. Reset button
Initialize remote controller.

15. 2nd F button
Used prior to using modes printed in blue at the bottom of buttons.

1.7 Ceiling concealed duct - high static pressure

1.7.1. Features

Models : AMNH186BHA0 [MB18AH NH0] / AMNH246BHA0 [MB24AH NH0]



EZTuning * E.S.P.: External Static Pressure

Air flow rate and sound can be maintained constant irrespective of E.S.P. of the duct system.

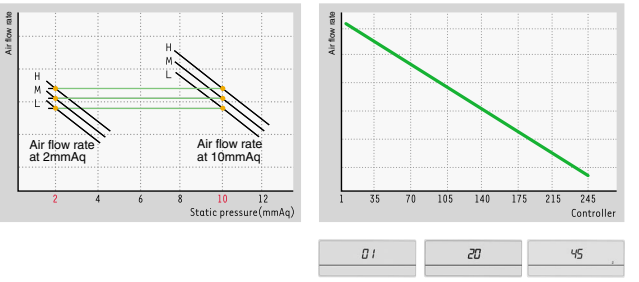
Using this technology, you can optimize duct installation
- keep capacity & sound level as per design conditions

This technology gives benefit of installation flexibility.

Desired air flow rate is obtained by controlling the phase of fan motor (changing fan rpm) while installing the product and this makes your duct system more flexible.

E.S.P. can be controlled linearly from 0~10mmAq. (the adjustable maximum E.S.P. is different for each model)





* E.S.P. is easily controlled by remote controller.

Group control

1) Operation summary

Multi indoor units (up to 16) can be interconnected as a group & whole group can be controlled by single wired remote controller.

2) Specific operation

- Connecting wires are linked to each of the indoor unit for communication and only one wired remote controller connected to the first indoor unit can control all indoor units uniformly.

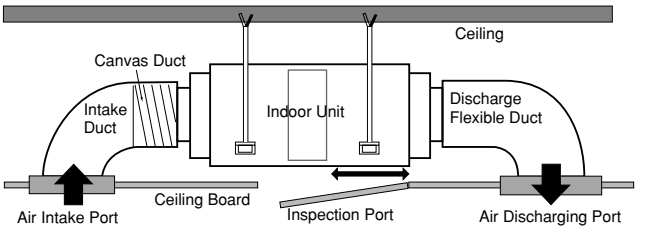
Group control function is possible by taking an optional jump wire from first to second indoor unit and so on.

Group control function performs sequential starting of indoor units and hence eliminates high starting current of indoor units.

Maximum 16 indoor units can be connected in one group.

• Compact & light design and easy installation

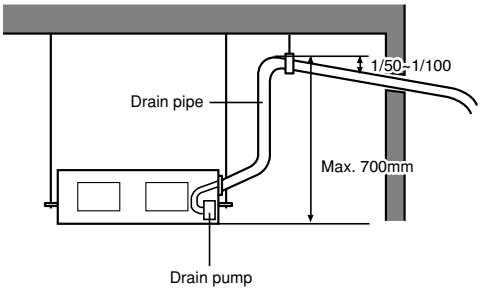
Flexible duct is easy to install. Regardless of room size or heater position, it can be installed even in a limited space and saves construction cost as the unit has slim thickness



• EZtuning (Linear E.S.P. control)

LG's high technology provides easy and low cost design of duct work. E.S.P. settings through LCD wired remote controller gives required combination of E.S.P. and airflow rate.

- High head drain pump(700mm, accessory) In some places natural drainage is not possible. For such conditions LG's high head drain pump is very useful to removes condensed water from the unit.



• Low noise design

• 2-thermistor control (main body & remote controller)

• Zero stand-by power consumption

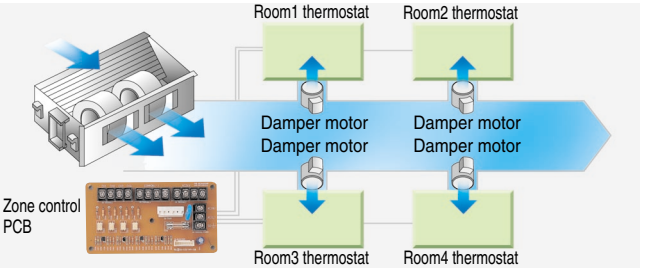
• LCD wired remote controller

• Group control

• Zone controller (accessory)

It controls temperature of each zone.

By sensing the temperature of each zone, opening or closing of the damper is controlled automatically as per the air flow requirement.



• Simple central controller (accessory)

• Weekly program

• Plasma air purifying system (accessory)

The PLASMA air purifying function not only removes microscopic contaminants and dust, but also removes house mites, pollen and pet fur and hence its helps to prevent allergic diseases like asthma.



• Hygienic and easy to clean filter

1.7.2 List of functions

Category	Function	AMNH186BHA0 [MB18AH NH0]	AMNH246BHA0 [MB24AH NH0]
Air flow	Air supply outlet	2	2
	Airflow direction control (left & right)	-	-
	Airflow direction control (up & down)	-	-
	Auto swing (left & right)	-	-
	Auto swing (up & down)	-	-
	Airflow steps(Fan / Cool / Heat)	3 / 3 / 3	3 / 3 / 3
	CHAOS swing	X	X
	CHAOS wind (Auto wind)	O	O
	Jet cool (Power wind)	X	X
	Swirl wind	X	X
Air purifying	Deodorizing filter	X	X
	Plasma air purifier	ABPAHH	ABPAHH
	Prefilter(Washable / Anti-fungus)	O	O
Installation	Drain pump	ABDPG	ABDPG
	E.S.P. control	O	O
	Electric heater (Operation)	-	-
	High ceiling operation	-	-
Reliability	Hot start	O	O
	Self diagnosis	O	O
	Soft dry operation	O	O
Convenience	Auto changeover	X	X
	Auto cleaning	X	X
	Auto elevation grille	-	-
	Auto operation(Artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	O	O
	Forced operation	X	X
	Group control	O	O
	Sleep mode	-	-
	Timer (On/Off)	O	O
	Timer (weekly)	O	O
	Two thermistor control	O	O
Individual Control	Standard wired remote controller	O	O
	Deluxe wired remote controller	PQRCUDS0	PQRCUDS0
	Simple wired remote controller	PQRCUCA0	PQRCUCA0
	Wired remote controller(for hotel use)	PQRCFCS0	PQRCFCS0
	Wireless remote controller(simple)	-	-
	Wireless LCD remote control	PQWRHSF0	PQWRHSF0
CAC Network Function	General central control(Non LGAP)	X	X
	Dry contact	PQDSB	PQDSB
	Central control(LGAP)	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X
	Zone control	ABZCA	ABZCA
Others	Thermistor	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.7.3 Specifications

Indoor unit type			Ceilling Concealed Duct - High Static	
Model			AMNH186BHA0 [MB18AH NH0]	AMNH246BHA0 [MB24AH NH0]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	5.28	7.03
		Btu/h	18,000	24,000
Heating capacity		kW	5.80	7.74
		Btu/h	19,800	26,400
Current	Nominal running current	Cooling	0.75	0.75
Fan	Motor type		Induction	Induction
	Fan type		Sirocco Fan	Sirocco Fan
	Motor output x Number of unit		118 x 1	118 x 1
	Air flow rate(H/M/L)	cmm	16.5/14.5/13	18/16.5/14
		cfm	583/512/459	636/583/494
	External static pressure	mmAq	8	8
	Capacitor	μF/Vac	6/370	6/370
	Drive		Direct Drive	Direct Drive
Coil	Row x Columns x FPI	mm	3R x 10C x 21	3R x 10C x 21
Dimensions(WxHxD)	Body	mm(inch)	880*260*450(34.6*10.2*17.7)	880*260*450(34.6*10.2*17.7)
Weight	Body	kg(lbs)	35(77.2)	35(77.2)
Air filter			Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	36 / 34 / 32	38/36/34
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	12.7(1/2)	12.7(1/2)
Drain	OD/ID	mm	32/25	32/25
Dehumidification rate		l/h	2.0	2.5
Safety devices			Fuse, Thermal Protector for Fan Motor	
Temperature sensor			Thermistor	Thermistor
Referigerant			R410A	R410A
Referigerant control			EEV(in BD or Outdoor unit)	EEV(in BD or Outdoor unit)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula	
kW	= Btu/h × 0.0002931
CFM	= CMM × 35.3

1.7.4 Dimensions

CEILING CONCEALED DUCT

AMN186BHA0 [MB18AH NH0]

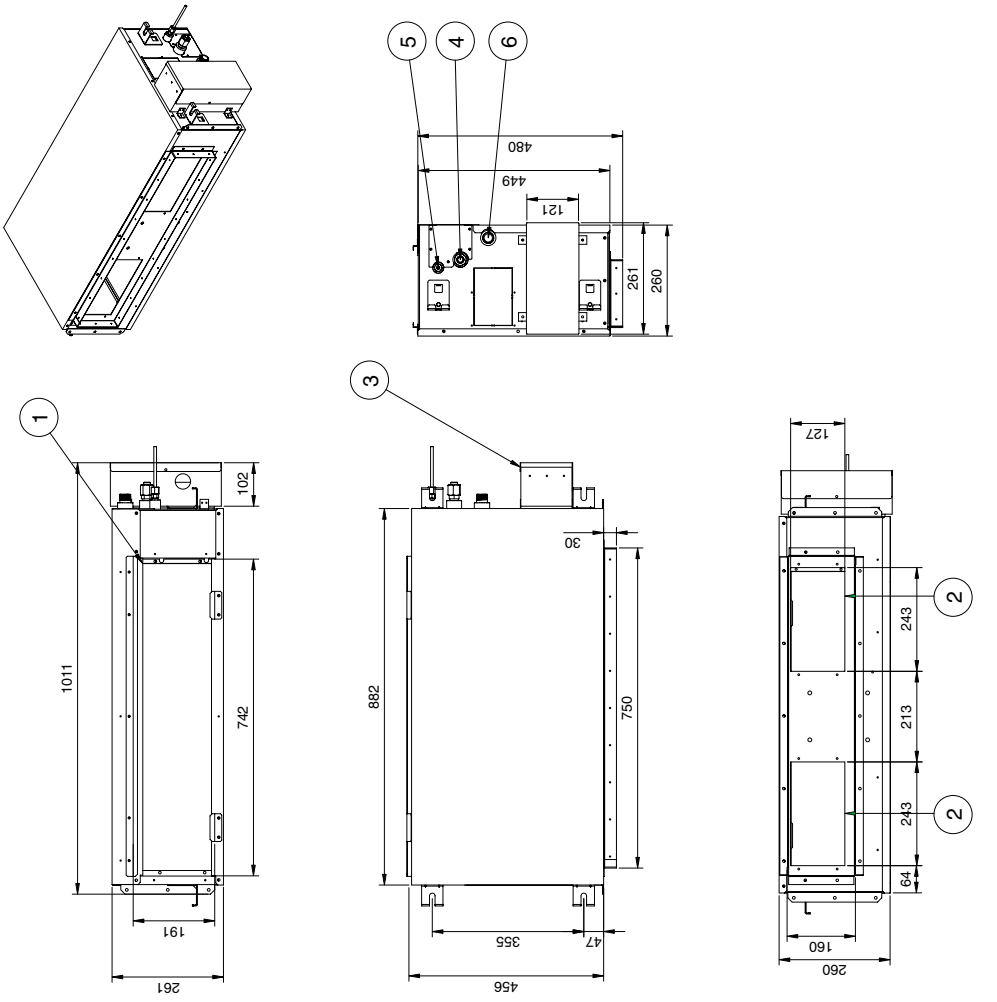
No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Control box	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	

▣ Technical Specification

		Ø/V/Hz	1/ 220~240 / 50
Power supply			
Cooling Capacity		kW	5.28
		Btu/h	18,000
Heating Capacity		kW	5.80
		Btu/h	19,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)
Drain(OD/ID)		mm	32/25

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.



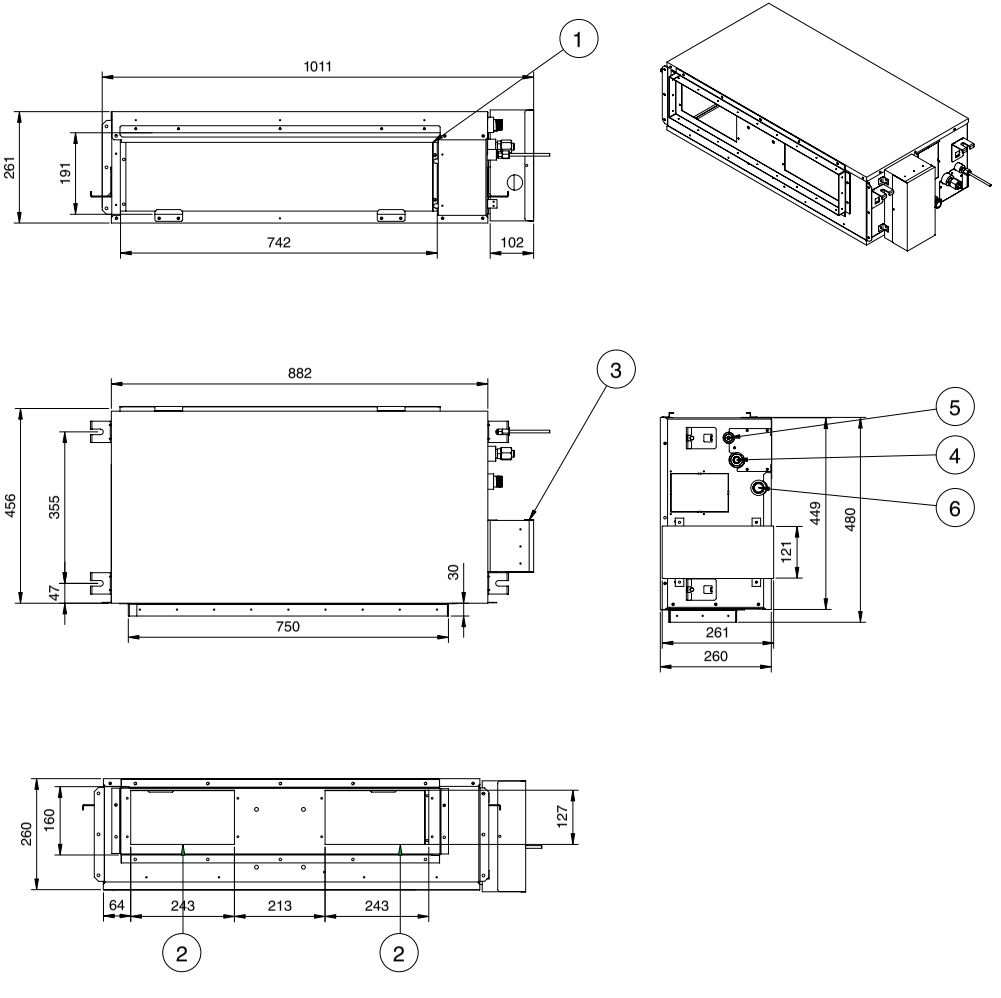
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam, 641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: BH

CEILING CONCEALED DUCT

AMN246BHA0 [MB24AH NH0]



No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Control box	
4	Gas pipe connection	
5	Liquid pipe connection	
6	Drain pipe connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	7.03
		Btu/h	24,000
Heating Capacity		kW	7.74
		Btu/h	26,400
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)
Drain(OD/ID)		mm	32/25

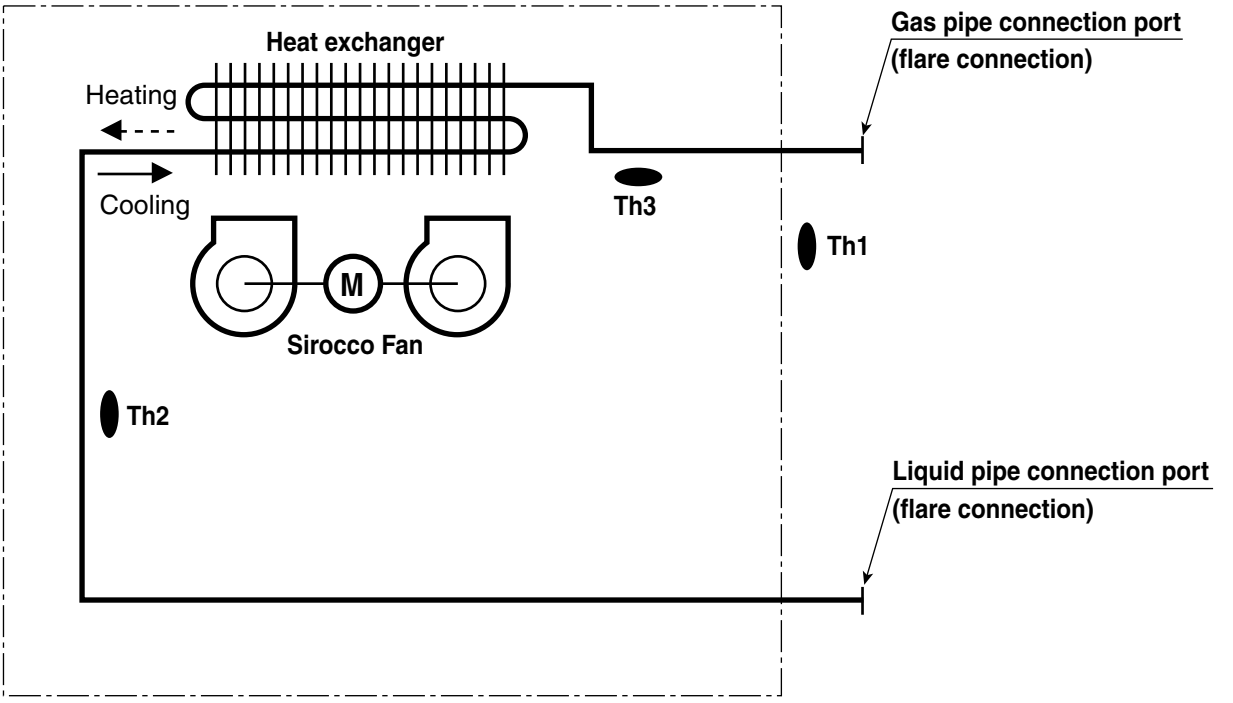
▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

LG Electronics
76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: BH

1.7.5 Piping diagrams



Th1 : Thermistor for suction air temp.
Th2 : Thermistor for liquid line temp.
Th3 : Thermistor for gas line temp.

■ Refrigerant pipe connection port diameters

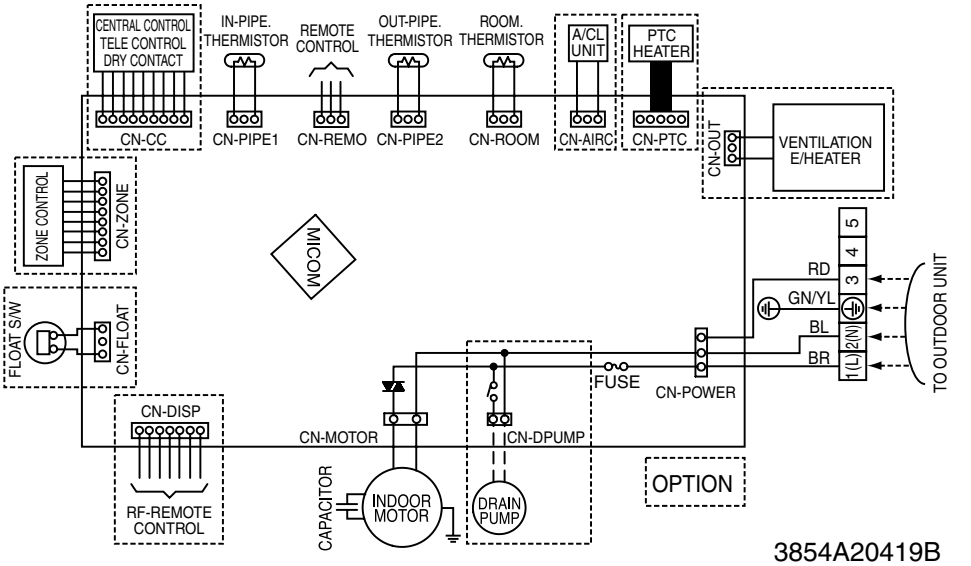
(mm)

Model	Gas	Liquid
AMNH186BHA0 [MB18AH NH0] AMNH246BHA0 [MB24AH NH0]	ø12.7	ø6.35

1.7.6 Wiring diagrams

1) Wiring diagrams

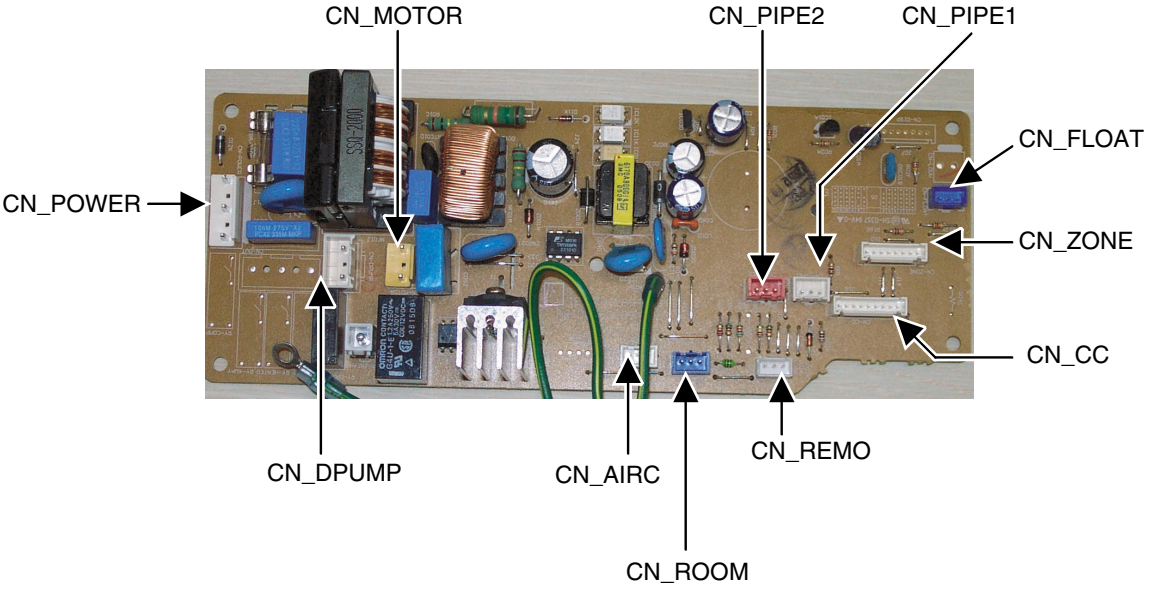
Models : AMNH-BH model[MB-H]



3854A20419B

Connector Number	Location	Connector Number	Location
CN-POWER	AC power supply	CN-PIPE1	Pipe sensor
CN-MOTOR	BLDC fan motor outpup	CN-PIPE2	Dischage pipe sensor
CN-D/PUMP	Drain pump output	CN-REMO	Remote control
CN-DISP	RF-remote control	CN-ROOM	Room sensor
CN-FLOAT	Float switch input	CN-AIRC	Air clean
CN-ZONE	Zone control output	CN-PTC	PTC heater
CN-CC	Central control ouput	CN-OUT	Ventilation/Electric heater

2) PCB



1.7.7 External pressure setting for EZ Tuning

EZ Tuning (E.S.P. Control) provide required constant air volume irrespective of E.S.P. charge.

(1) Open the rear cover of the wired remote-controller to set the mode.

(2) Select one of three selectable modes as follows.

■ Without zone system

1. Position V-H, F-H:
   • This position sets the maximum E.S.P. as a default set.
2. Position V-L:
   • This position sets the minimum E.S.P. as a default set.

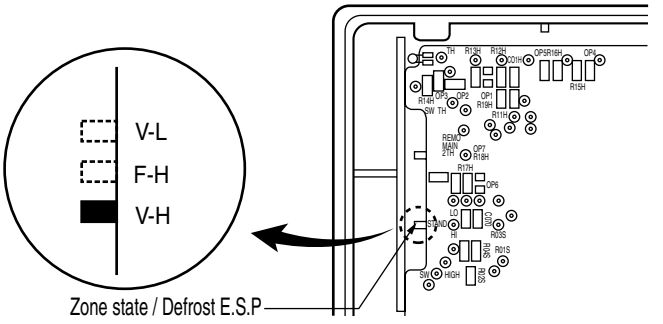
■ With zone system

1. Position V-H:
   • Maximum E.S.P. setting & Fan speed is varied according to the state of dampers by micom.
2. Position F-H:
   • Maximum E.S.P. setting & Fan speed doesn't vary according to the opening & closing of dampers.
3. Position V-L:
   • Minimum E.S.P. setting & Fan speed is varied according to the state of dampers by micom.

*Maximum: 18/24k - 8mmAq

Minimum: All-0mmAq

(3) Move the slide switch to set position.



(4) Close the rear cover and check if it works normally.

⚠CAUTION

• Select the position after checking duct work and E.S.P. of the unit.
• Maunfactured in the position F-H.

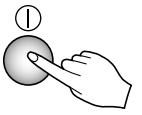
How to Set E.S.P. on the remote controller?

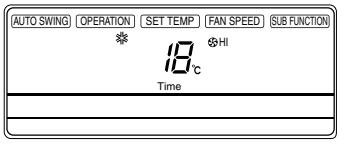
Procedure of RPM change:

Ex) External static pressure is 4mmAq for model name "AMNH246BHA0".

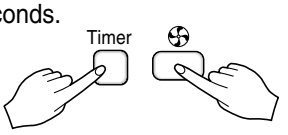
• To protect the unit, compressor is designed to be off during E.S.P. setting.

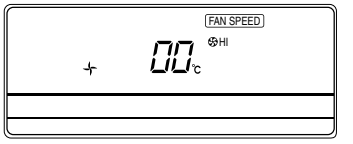
1 Push the "On/Off" button.
The unit will start.



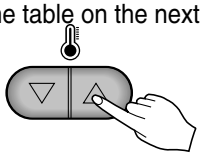


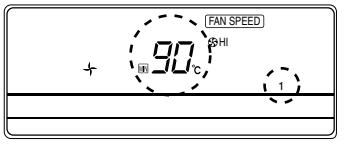
2 Push the "Timer" and "Wind" button simultaneously for more than 3 seconds.





3 Push the "Up" of "Down" button for E.S.P. adjustment.
And, adjust the number which you want.(In this example, the number is "190".
Refer to the table on the next page.)



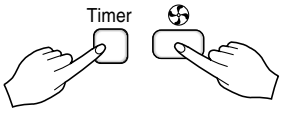


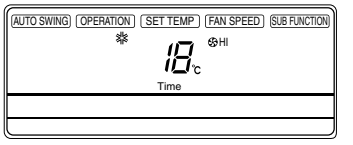
Note: The range of selection is from 1~254. Since, the display is two digit only.
If the range selection is above 100 then the third digit will appear in the screen as shown.(setting value : 190)

4 Shift the fan speed mode by pressing the fan speed button.
And then, adjust numbers of next steps by repeating the stage 3.
(In this example, the numbers are "220" and "235" respectively.



5 Push the "Timer" and "Wind" button simultaneously for more than 3 seconds.
Then, wind data is memorized by the EEPROM of the main PCB.





E.S.P. setting value

Static pressure(mmAq)			0	2	4	6	8
Model name	Step	CMM(CFM)	Setting value				
AMNH186BHA0 [MB18AH NH0]	High	16.5 (583)	235	230	225	215	180
	Med	14.5 (512)	245	238	235	230	215
	Low	13.0 (459)	254	252	248	245	240
AMNH246BHA0 [MB24AH NH0]	High	18.0 (636)	220	205	190	50	1
	Med	16.5 (583)	235	230	220	200	100
	Low	14.0 (494)	250	240	235	230	210

[Notes]

1. To get the desired Airflow & E.S.P. combination from the table set the matching value from the table. Value other than that in table will not give the combinations of airflow & E.S.P. which are mentioned in the table.
2. Table data is based at 230V. According to the fluctuation of voltage, air flow rate varies.

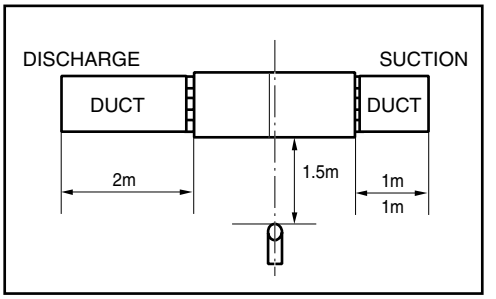
Static pressure(mmAq)		Setting value	0	2	4	6	8
Model name	Step		CMM(CFM)	CMM(CFM)	CMM(CFM)	CMM(CFM)	CMM(CFM)
AMNH186BHA0 [MB18AH NH0]	High	180	22 (777)	21.0 (742)	19.8 (699)	18.3 (646)	16.5 (583)
	Med	215	18.5 (653)	17.8 (629)	17.1 (604)	16.2 (572)	14.5 (512)
	Low	240	16.1 (569)	15.6 (551)	15.1 (533)	14.2 (501)	13.0 (459)
AMNH246BHA0 [MB24AH NH0]	High	1	24.0 (848)	22.5 (795)	20.8 (735)	19.0 (671)	18.0 (636)
	Med	100	21.3 (752)	19.9 (703)	18.7 (660)	17.2 (607)	16.5 (583)
	Low	210	17.0 (600)	16.1 (569)	15.36 (551)	14.7 (519)	14.0 (494)

[Notes]

1. The above table shows the correlation of external static pressure & air flow.
2. Duct work must be desined within the shaded range of on installing the table.
3. If duct work is designed under external static pressure adjust the external static pressure applying air damper.

1.7.8 Sound levels

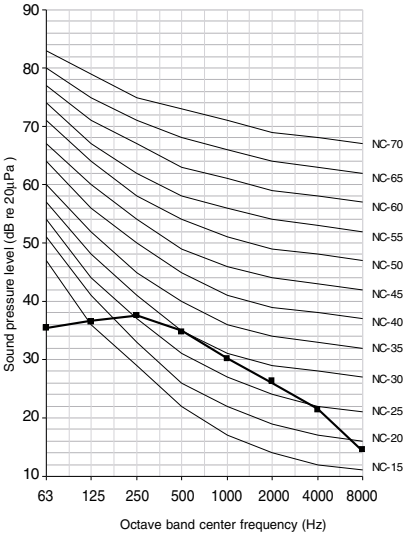
Overall



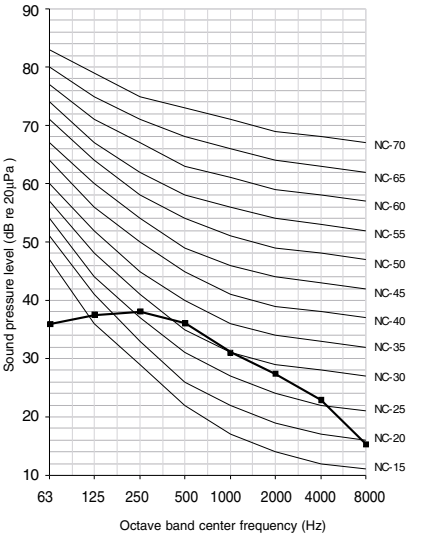
Notes:
- Data is valid at nominal operation condition
- Reference accoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

AMNH186BHA0[MB18AH NH0]

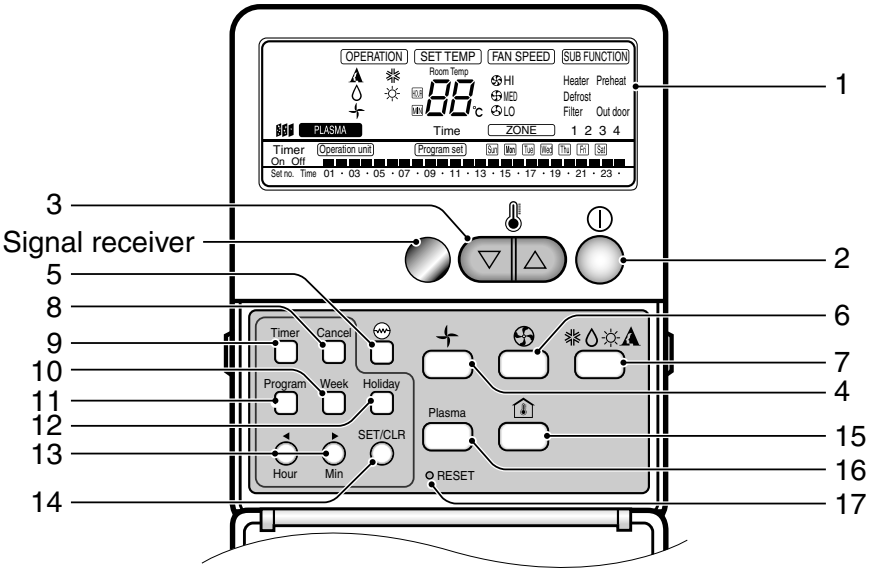


AMNH246BHA0[MB24AH NH0]



1.7.9 Controller

1) Wired remote controller



1. Operation display
Displays the operation conditions.

2. On/Off button
Operation starts when this button is pressed, and stops when the button is pressed again.

3. Set temperature button
Used to set the temperature when the desired temperature is obtained.

4. FAN operation button
Used to circulate room air without cooling or heating.

5. Electric heater button(optional)
Used to set the electric heater.

6. Fan speed button
Used to set desired fan speed.

7. Operation mode selection button
Used to select the operation mode.
- Auto operation mode.
- Cooling operation mode.
- Soft dry operation mode.
- Heating operation mode.(except cooling model)

8. Timer cancel button
Used to cancel the timer.

9. Timer set button
Used to set the timer when the desired time is obtained.

10. Week button
Used to set a day of the week.

11. Program button
Used to set the weekly timer.

12. Holiday button
Used to set a holiday of the week.

13. Time set button
Used to set the time of the day and change the time in the weekly timer Function.

14. Set and clear button
Used to set and clear the weekly timer.

15. Room temperature checking button
Used to check the room temperature.

16. Plasma air clean button(Accessory)

17. Reset button
Used to set the current time and clear the setting time.

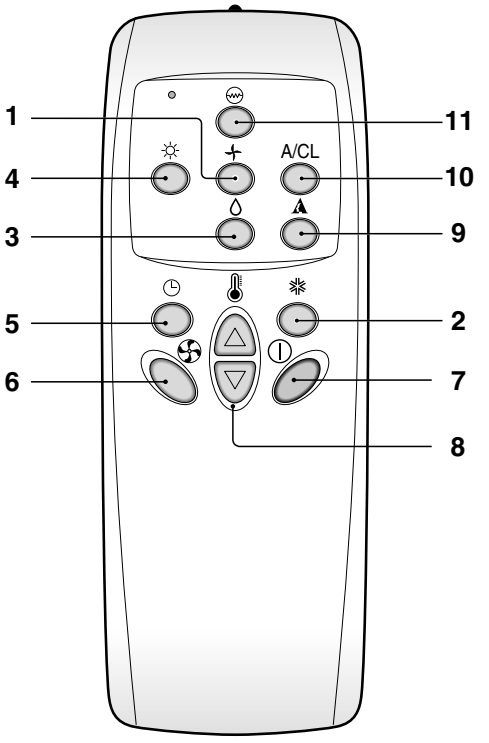
❊ Display temperature can be different from actual room temperature if the remote controller is installed at the place where sun-rays are falling directly or the place nearby heat source.

2) Wireless remote controller(accessory)

This air-conditioner is equipped with wired remote controller basically. But if you want to have the wireless remote controller, you pay for it.

Signal transmitter

Transmits the signals to the signal receiver.



1. **Fan operation button**
   Used to circulate room air without cooling or heating.
2. **Cooling operation button**
3. **Soft dry operation button**
   Used to dehumidify without overcooling.
4. **Heating operation button**
   (Heat pump model only)
5. **Timer set button**
   Used to set the timer when the desired time is obtained. Then the wired remote controller is set up to 24 hours by an hour but the wireless remote controller is set up to 7 hours by an hour. Therefore, if you want to set over 7 hours, use the wired remote controller.
6. **Fan speed button**
   Used to set the desired fan speed.
7. **On/Off button**
   Operation starts when this button is pressed, and stops when the button is pressed again.
8. **Set temperature button**
   Used to set the temperature when the desired temperature is obtained
9. **Auto operation button**
10. **Plasma air clean button(Accessory)**
11. **Electric heater button(optional)**
    Used to set the electric heater.

⚠CAUTION

for handling the remote controller

- Aim at the signal receiver on the wired remote controller so as to operate.
- The remote control signal can be received at a distance of up to about 7m.
- Be sure that there are no obstructions between the remote controller and the signal receiver.
- Do not drop or throw the remote controller.
- Do not place the remote controller in a location exposed to direct sunlight, or near the heating unit, or any other heat source.
- Block a strong light over the signal receptor with a curtain or etc. so as to prevent the abnormal operation. (ex:electronic quick start, ELBA, inverter type fluorescent lamp)

1.8 Ceiling concealed duct - low static pressure

1.8.1 Features

Models : AMNH096BTG0 [MB09AHL NT0] / AMNH126BTG0 [MB12AHL NT0] / AMNH186BTG0 [MB18AHL NT0]
AMNH09GB1A0 [MB09AHL N10] / AMNH12GB1A0 [MB12AHL N10] / AMNH18GB2A0 [MB18AHL N20] / AMNH24GB2A0 [MB24AHL N20]
AMNH09GB1A1[MB09AHL N11] / AMNH12GB1A1[MB12AHL N11] / AMNH18GB2A1[MB18AHL N21] / AMNH24GB2A1[MB24AHL N21]



• Compact & light design and easy installation

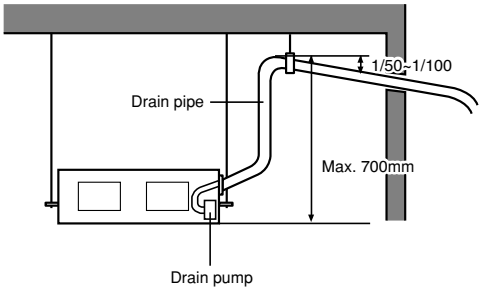
Flexible duct is easy to install, regardless of room size or heater position. It can be installed even in a limited space and saves construction cost with slim thickness

• EZtuning (Linear E.S.P. Control)

LG's high technology provide easy and low cost design of duct work. Desired E.S.P. can also be set through LCD wired remote control. Setting of the desired E.S.P.. gives required combination of E.S.P. and airflow.

• High head drain pump(700mm, accessory)

In some of the places natural drainage is not possible. For such places drain pump is very useful. It removes condensed water from the unit.



• Low noise design
• 2-thermistor control(main body & remote controller)
• LCD wired remote controller
• Wireless remote controller(accessory)
• Group controller
• Simple central controller(accessory)
• Weekly progam
• Hygienic and easy to clean filter

1.8.2 List of functions

Category	Function	AMNH096BTG0 [MB09AHL NT0]	AMNH126BTG0 [MB12AHL NT0]	AMNH186BTG0 [MB18AHL NT0]
Air flow	Air supply outlet	1	1	1
	Airflow direction control (left & right)	-	-	-
	Airflow direction control (up & down)	-	-	-
	Auto swing (left & right)	-	-	-
	Auto swing (up & down)	-	-	-
	Airflow steps(Fan / Cool / Heat)	3 / 3 / 3	3 / 3 / 3	3 / 3 / 3
	CHAOS swing	X	X	X
	CHAOS wind (Auto wind)	O	O	O
	Jet cool (Power wind)	X	X	X
	Swirl wind	X	X	X
Air purifying	Deodorizing filter	X	X	X
	Plasma air purifier	-	-	-
	Prefilter(Washable / Anti-fungus)	O	O	O
Installation	Drain pump	ABDPT	ABDPT	ABDPT
	E.S.P. control	O	O	O
	Electric heater (Operation)	-	-	-
	High ceiling operation	-	-	-
Reliability	Hot start	O	O	O
	Self diagnosis	O	O	O
	Soft dry operation	O	O	O
Convenience	Auto changeover	X	X	X
	Auto cleaning	X	X	X
	Auto elevation grille	-	-	-
	Auto operation(Artificial intelligence)	O	O	O
	Auto restart operation	O	O	O
	Child lock	O	O	O
	Forced operation	X	X	X
	Group control	O	O	O
	Sleep mode	-	-	-
	Timer (On/Off)	O	O	O
	Timer (weekly)	O	O	O
	Two thermistor control	O	O	O
Individual Control	Standard wired remote controller	O	O	O
	Deluxe wired remote controller	PQRCUDS0	PQRCUDS0	PQRCUDS0
	Simple wired remote controller	PQRCUCA0	PQRCUCA0	PQRCUCA0
	Wired remote controller(for hotel use)	PQRCFCS0	PQRCFCS0	PQRCFCS0
	Wireless remote controller(simple)	-	-	-
	Wireless LCD remote control	PQWRHSF0	PQWRHSF0	PQWRHSF0
CAC Network Function	General central control(Non LGAP)	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB
	Central control(LGAP)	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X	X
	Zone control	ABZCA	ABZCA	ABZCA
Others	Thermistor	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

Category	Function	AMNH09GB1A0/1 [MB09AHL N10/1]	AMNH12GB1A0/1 [MB12AHL N10/1]	AMNH18GB2A0/1 [MB18AHL N20/1]	AMNH24GB2A0/1 [MB24AHL N20/1]
Air flow	Air supply outlet	1	1	1	1
	Airflow direction control (left & right)	-	-	-	-
	Airflow direction control (up & down)	-	-	-	-
	Auto swing (left & right)	-	-	-	-
	Auto swing (up & down)	-	-	-	-
	Airflow steps(Fan / Cool / Heat)	3 / 3 / 3	3 / 3 / 3	3 / 3 / 3	3 / 3 / 3
	CHAOS swing	X	X	X	X
	CHAOS wind (Auto wind)	O	O	O	O
	Jet cool (Power wind)	X	X	X	X
	Swirl wind	X	X	X	X
Air purifying	Deodorizing filter	X	X	X	X
	Plasma air purifier	-	-	-	-
	Prefilter(Washable / Anti-fungus)	O	O	O	O
Installation	Drain pump	O	O	O	O
	E.S.P. control	O	O	O	O
	Electric heater (Operation)	-	-	-	-
	High ceiling operation	-	-	-	-
Reliability	Hot start	O	O	O	O
	Self diagnosis	O	O	O	O
	Soft dry operation	O	O	O	O
Convenience	Auto changeover	X	X	X	X
	Auto cleaning	X	X	X	X
	Auto elevation grille	-	-	-	-
	Auto operation(Artificial intelligence)	O	O	O	O
	Auto restart operation	O	O	O	O
	Child lock	O	O	O	O
	Forced operation	X	X	X	X
	Group control	O	O	O	O
	Sleep mode	-	-	-	-
	Timer (On/Off)	O	O	O	O
	Timer (weekly)	O	O	O	O
	Two thermistor control	O	O	O	O
Individual Control	Standard wired remote controller	O	O	O	O
	Deluxe wired remote controller	PQRCUDS0	PQRCUDS0	PQRCUDS0	PQRCUDS0
	Simple wired remote controller	PQRCUCA0	PQRCUCA0	PQRCUCA0	PQRCUCA0
	Wired remote controller(for hotel use)	PQRCFCS0	PQRCFCS0	PQRCFCS0	PQRCFCS0)"
	Wireless remote controller(simple)	-	-	-	-
	Wireless LCD remote control	PQWRHSF0	PQWRHSF0	PQWRHSF0	PQWRHSF0
CAC Network Function	General central control(Non LGAP)	X	X	X	X
	Dry contact	PQDSB	PQDSB	PQDSB	PQDSB
	Central control(LGAP)	O	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X	X	X
	Zone control	ABZCA	ABZCA	ABZCA	ABZCA
Others	Thermistor	-	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.8.3 Specifications

Indoor unit type			Ceiling Concealed Duct - Low Static		
Model			AMNH096BTG0 [MB09AH NT0]	AMNH126BTG0 [MB12AH NT0]	AMNH186BTG0 [MB18AH NT0]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	2.64	3.52	5.27
		Btu/h	9,000	12,000	18,000
Heating capacity		kW	2.93	3.87	5.80
		Btu/h	10,000	13,000	19,800
Current	Nominal running current	A	0.56	0.56	0.83
Fan	Motor type		Induction	Induction	Induction
	Fan type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor output x Number of unit		35 x 1	35 x 1	47 x 1
	Air flow rate(H/M/L)	cmm	8/7/6	10/9/8	13.5/12/10
		cfm	282/246/211	352/317/282	477/424/353
	External static pressure	mmAq	2	2	2
	Capacitor	μF/Vac	2.5/400	2.5/400	2.5/370
	Drive		Direct Drive	Direct Drive	Direct Drive
Coil	Row x Columns x FPI	mm	2R x 12C x 18	3R x 12C x 18	2R x 12C x 18
Dimensions(WxHxD)	Body	mm(inch)	650*230*535(25.6*9.0*21.1)	650*230*535(25.6*9.0*21.1)	1000*230*535(39.4*9.0*21.1)
Weight	Body	kg(lbs)	22(48.5)	22(48.5)	29(63.9)
Air filter			Long Life Filter	Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	34/32/30	37/34/31	38/36/34
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	9.52(3/8)	9.52(3/8)	12.7(1/2)
Drain	OD/ID	mm	32/25	32/25	32/25
Dehumidification rate		l/h	1.0	1.2	2.0
Safety devices			Fuse, Thermal Protector for Fan Motor		
Temperature sensor			Thermistor	Thermistor	Thermistor
Referigerant			R410A	R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Indoor unit type			Ceiling Concealed Duct - Low Static			
Model			AMNH09GB1A0/1 [MB09AHL N10/1]	AMNH12GB1A0/1 [MB12AHL N10/1]	AMNH18GB2A0/1 [MB18AHL N20/1]	AMNH24GB2A0/1 [MB24AHL N20/1]
Power supply		Ø/V/Hz	1 / 220~240 / 50	1 / 220~240 / 50	1 / 220~240 / 50	1 / 220~240 / 50
Cooling capacity		kW	2.64	3.52	5.27	7.03
		Btu/h	9,000	12,000	18,000	24,000
Heating capacity		kW	2.93	3.87	5.8	7.44
		Btu/h	10,000	13,200	19,800	26,400
Current	Nominal running current	A	1.02	1.02	1.6	1.6
Fan	Motor type		BLDC	BLDC	BLDC	BLDC
	Fan type		Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
	Motor output x Number of unit		5 x 1 , 19 x1	5 x 1 , 19 x 1	19 x 2	19 x 2
	Air flow rate(H/M/L)	cmm	8.5/7.5/6.5	9.5/8.5/7.5	15/13.5/11.5	17/15/13.5
		cfm	300/265/230	336/300/265	530/477/406	600/530/477
	External static pressure	mmAq	4	4	4	4
	Drive		Direct drive	Direct drive	Direct drive	Direct drive
Coil	Row x Columns x FPI	mm	2R x 12C x 21	2R x 12C x 21	2R x 11C x 21	3R x 10C x 18
Dimensions(WxHxD)	Body	mm(inch)	820 x 190 x 575(32.3 x 7.5 x 22.6)	820 x 190 x 575(32.3 x 7.5 x 22.6)	1,100 x 190 x 575(43.3 x 7.5 x 22.6)	1,100 x 190 x 575(43.3 x 7.5 x 22.6)
Weight	Body	kg(lbs)	20.5(45.2)	20.5(45.2)	26.5(58.4)	27(59.5)
Air filter			Long life filter	Long life filter	Long life filter	Long life filter
Sound level (H/M/L)		dB(A)+3	31/26/25	33/31/26	34/31/29	36/34/32
Piping connections	Liquid	mm(inch)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)
	Gas	mm(inch)	9.52(3/8)	9.52(3/8)	12.7(1/2)	12.7(1/2)
Drain	OD/ID	mm	32 / 25	32 / 25	32 / 25	32 / 25
Dehumidification rate		l/h	1	1.2	2	2.5
Safety devices			Fuse, thermal protector for fan motor			
Temperature sensor			Thermistor	Thermistor	Thermistor	Thermistor
Referigerant			R410A	R410A	R410A	R410A
Referigerant control			EEV(in Outdoor Unit or BD Unit)	EEV(in Outdoor Unit or BD Unit)	EEV(in Outdoor Unit or BD Unit)	EEV(in Outdoor Unit or BD Unit)
Connectable outdoor unit			Multi F/F Dx series	Multi F/F Dx series	Multi F/F Dx series	Multi F/F Dx series
Power and transmission interunit cable		No.x mm^2	4 x 0.75	4 x 0.75	4 x 0.75	4 x 0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

1.8.4 Dimensions

CEILING CONCEALED DUCT

AMNH096BTG0 [MB09AHL NT0]

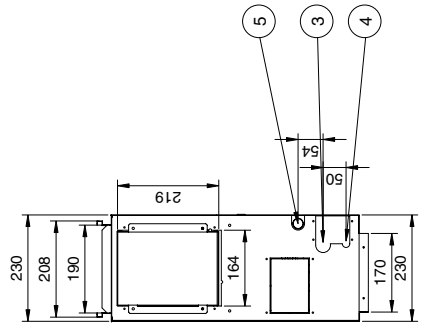
No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Gas pipe connection	
4	Liquid pipe connection	
5	Drain pipe connection	
6	Power supply connection	

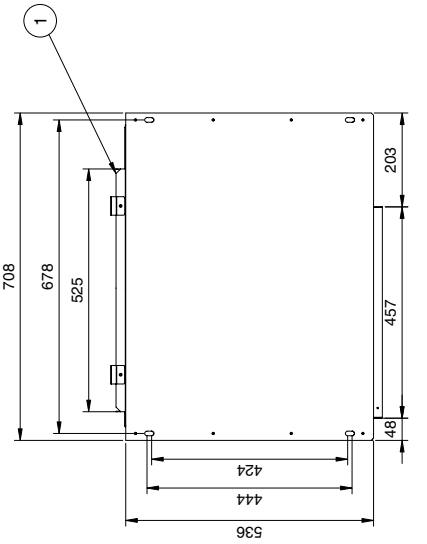
■ Technical Specification

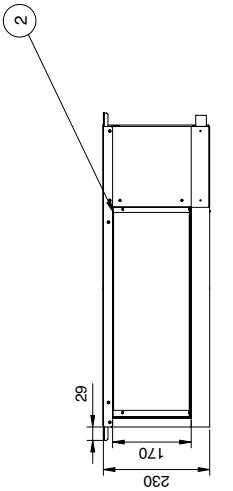
		Ø/V/Hz	1/220~240 / 50
Power supply			
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain (OD/ID)		mm	32/25

■ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.







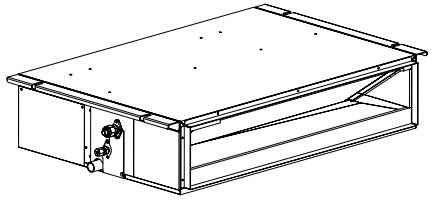
LG Electronics

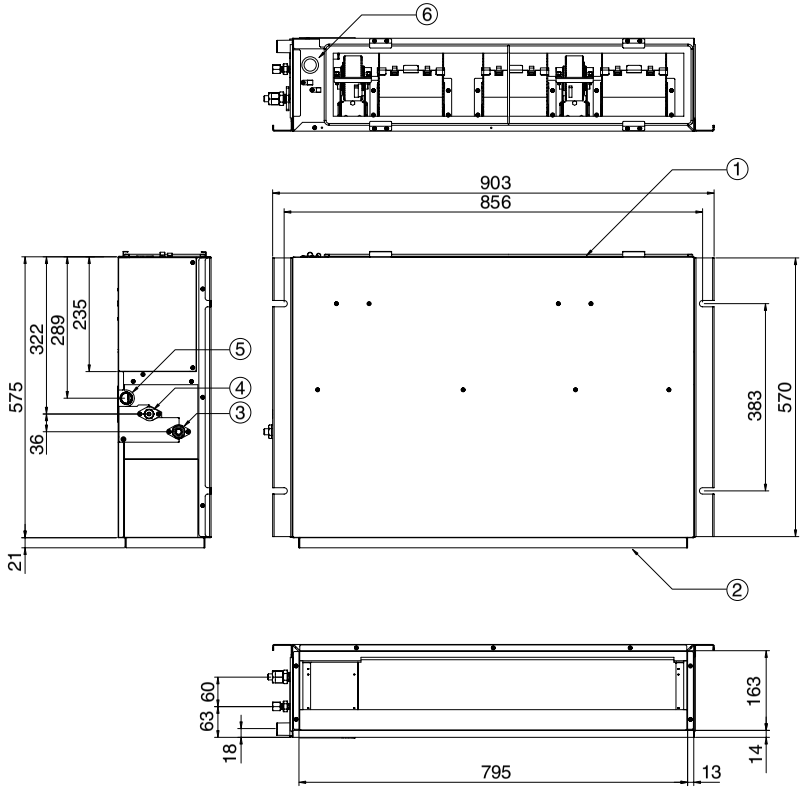
76, Seongsan-dong, Changwon City, Gyeongnam, 641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: BT

CEILING CONCEALED DUCT

AMNH09GB1A0/1 [MB09AHL N10/1]





No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Gas pipe connection	
4	Liquid pipe connection	
5	Drain pipe connection	
6	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	2.64
		Btu/h	9,000
Heating Capacity		kW	2.93
		Btu/h	10,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain(OD/ID)		mm	32/25

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

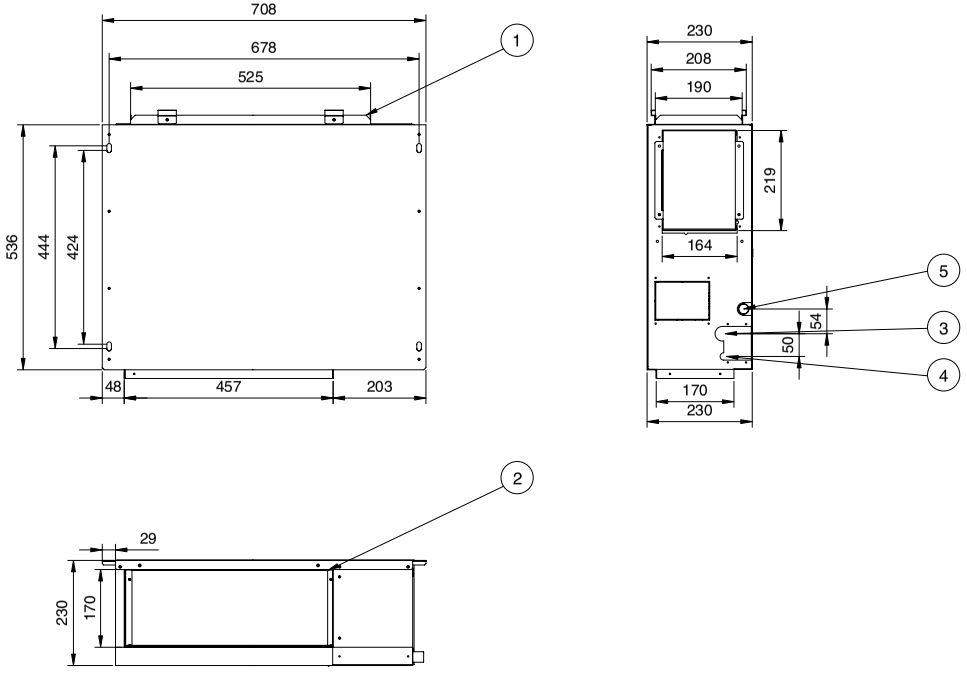
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CHASSIS CODE: B1

CEILING CONCEALED DUCT

AMNH126BTG0 [MB12AHL NT0]



No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Gas pipe connection	
4	Liquid pipe connection	
5	Drain pipe connection	
6	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain (OD/ID)		mm	32/25

▣ Note

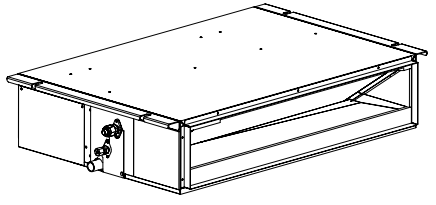
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

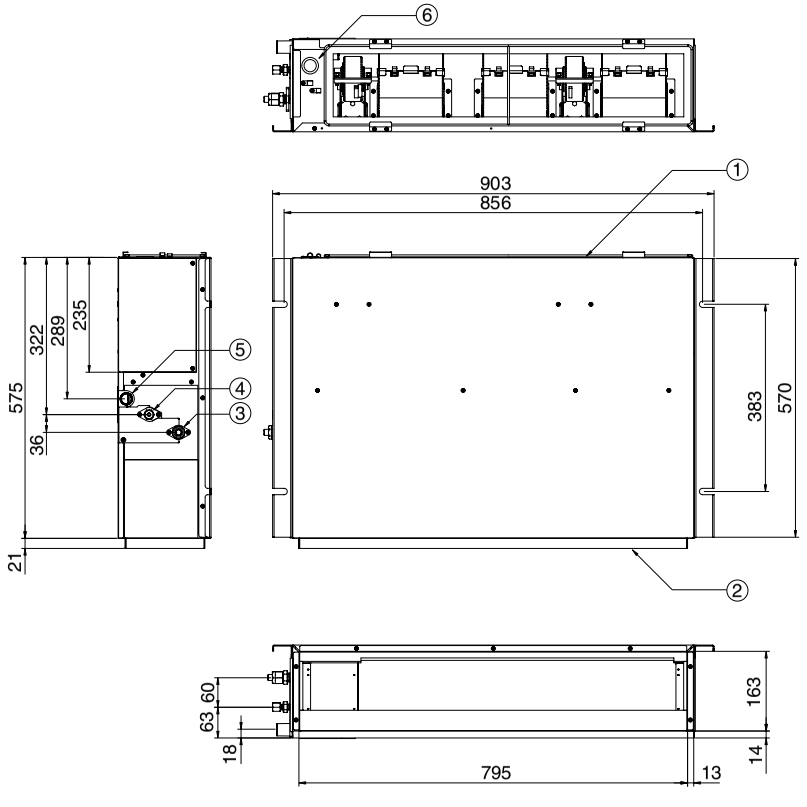
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CHASSIS CODE: BT

CEILING CONCEALED DUCT

AMNH12GB1A0/1 [MB12AHL N10/1]





No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Gas pipe connection	
4	Liquied pipe connection	
5	Drain pipe connection	
6	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.87
		Btu/h	13,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain(OD/ID)		mm	32/25

▣ Note

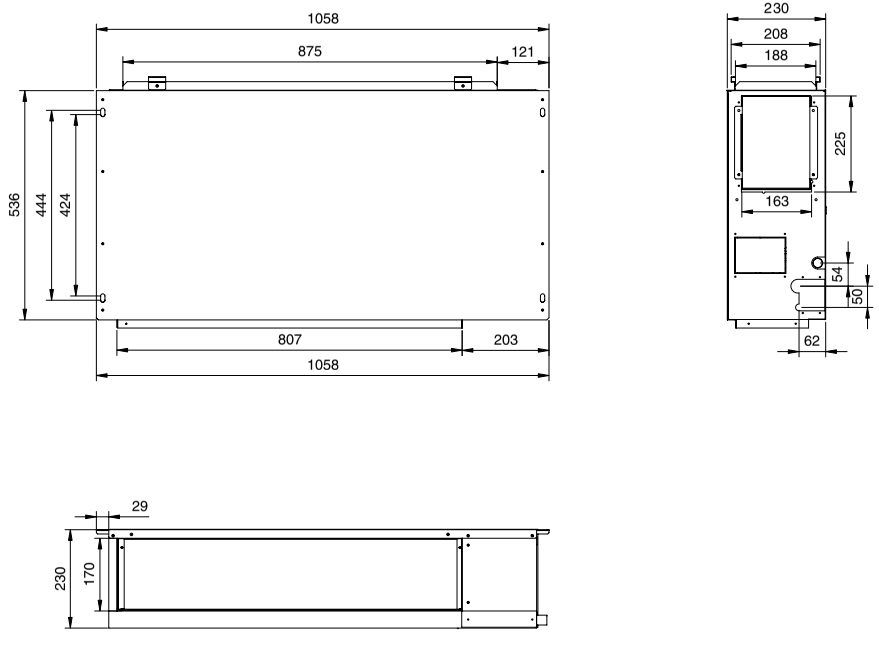
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: B1

CEILING CONCEALED DUCT

AMN186BTG0 [MB18AHL NT0]



No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Gas pipe connection	
4	Liquid pipe connection	
5	Drain pipe connection	
6	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	5.27
		Btu/h	18,000
Heating Capacity		kW	5.80
		Btu/h	19,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)
Drain (OD/ID)		mm	32/25

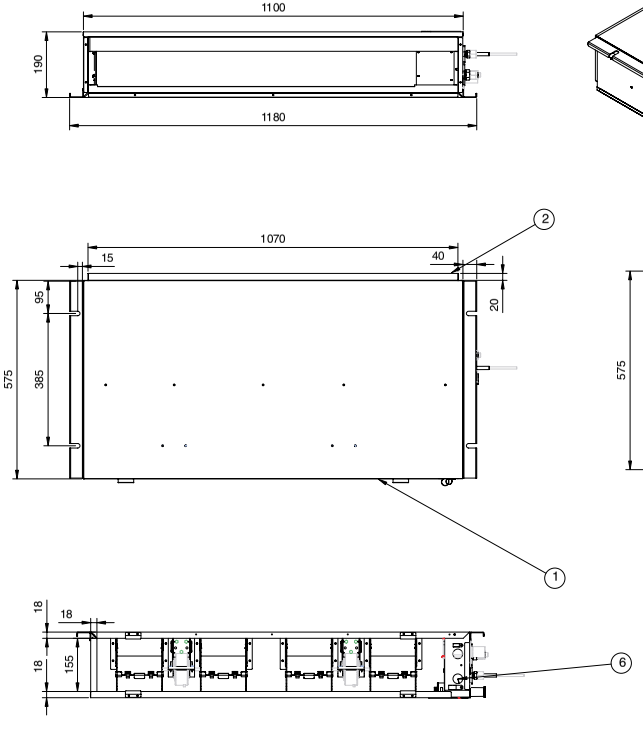
▣ Note

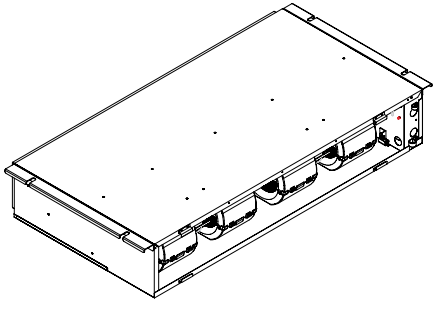
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CEILING CONCEALED DUCT

AMNH18GB2A0/1 [MB18AHL N20/1]





No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Gas pipe connection	
4	Liquied pipe connection	
5	Drain pipe connection	
6	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	5.27
		Btu/h	18,000
Heating Capacity		kW	5.80
		Btu/h	19,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)
Drain(OD/ID)		mm	32/25

▣ Note

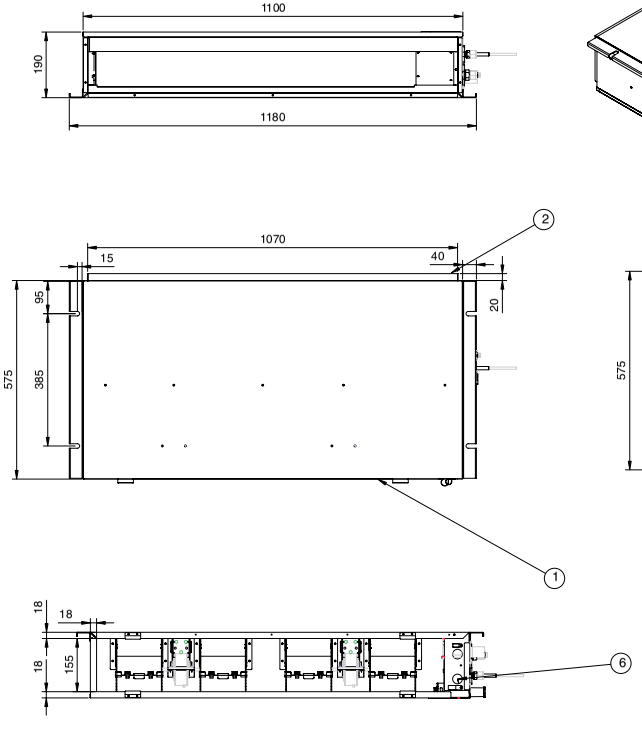
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

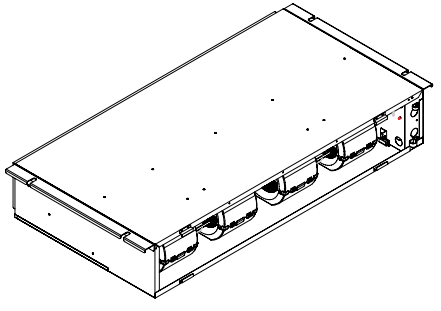
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CHASSIS CODE: B2

CEILING CONCEALED DUCT

AMNH24GB2A0/1 [MB24AHL N20/1]





No.	Part Name	Remark
1	Air suction flange	
2	Air discharge flange	
3	Gas pipe connection	
4	Liquied pipe connection	
5	Drain pipe connection	
6	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	7.03
		Btu/h	24,000
Heating Capacity		kW	7.74
		Btu/h	26,400
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	12.7(1/2)
Drain(OD/ID)		mm	32/25

▣ Note

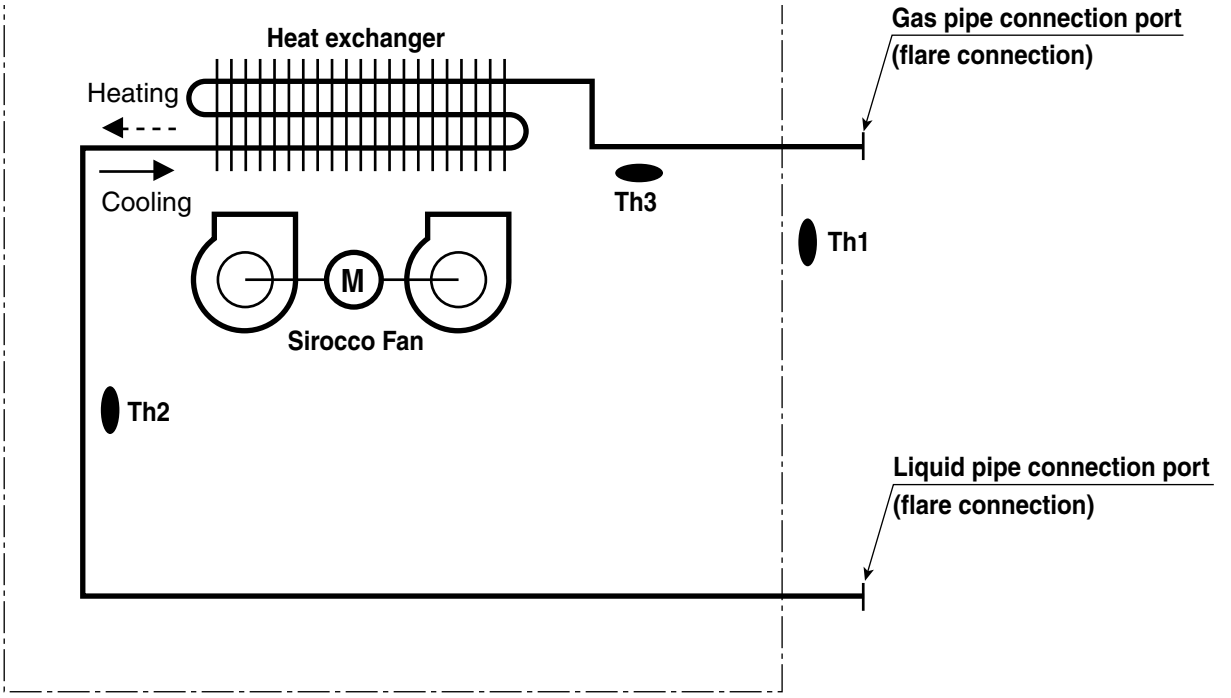
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

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CHASSIS CODE: B2

1.8.5 Piping diagrams



Th1 : Thermistor for suction air temp.
Th2 : Thermistor for liquid line temp.
Th3 : Thermistor for gas line temp.

■ Refrigerant pipe connection port diameters

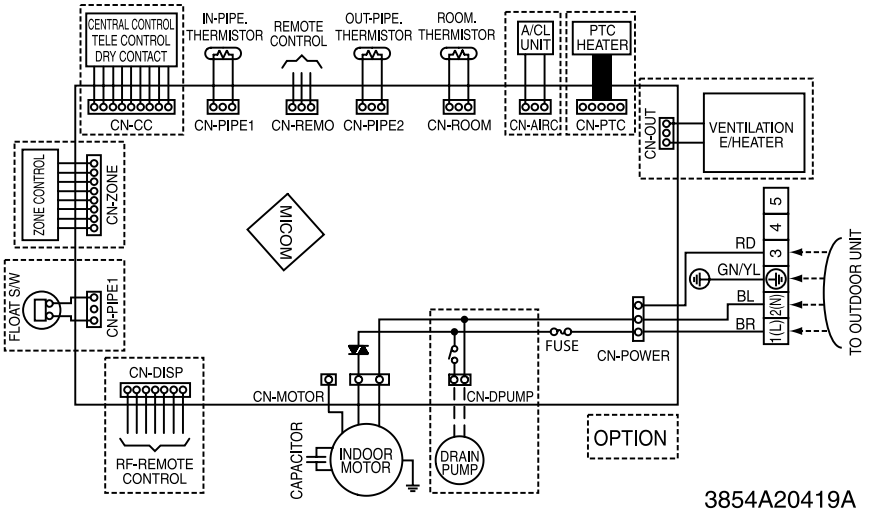
(mm)

Model	Gas	Liquid
AMNH096BTG0 [MB09AHL NT0] AMNH09GB1A0/1[MB09AHL N10/1] AMNH126BTG0 [MB12AHL NT0] AMNH12GB1A0/1[MB12AHL N10/1]	ø9.52	ø6.35
AMNH186BTG0 [MB18AHL NT0] AMNH18GB2A0/1[MB18AHL N20/1] AMNH24GB2A0/1[MB24AHL N20/1]	ø12.7	ø6.35

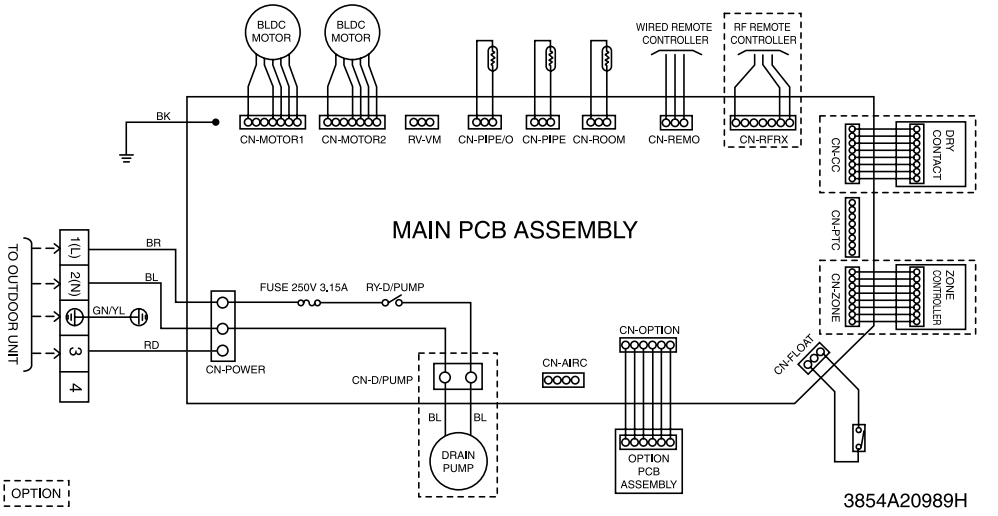
1.8.6 Wiring diagrams

1) Wiring diagrams

Models: AMNH-BT model[MB-T]



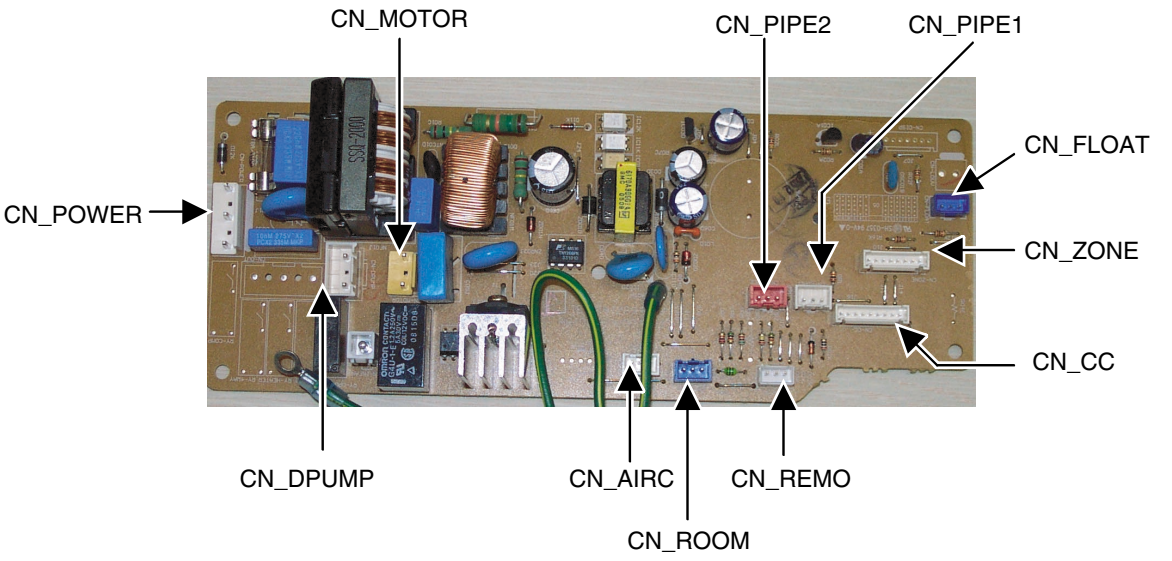
Models: AMNH-B1/B2 model[MB-1/2]



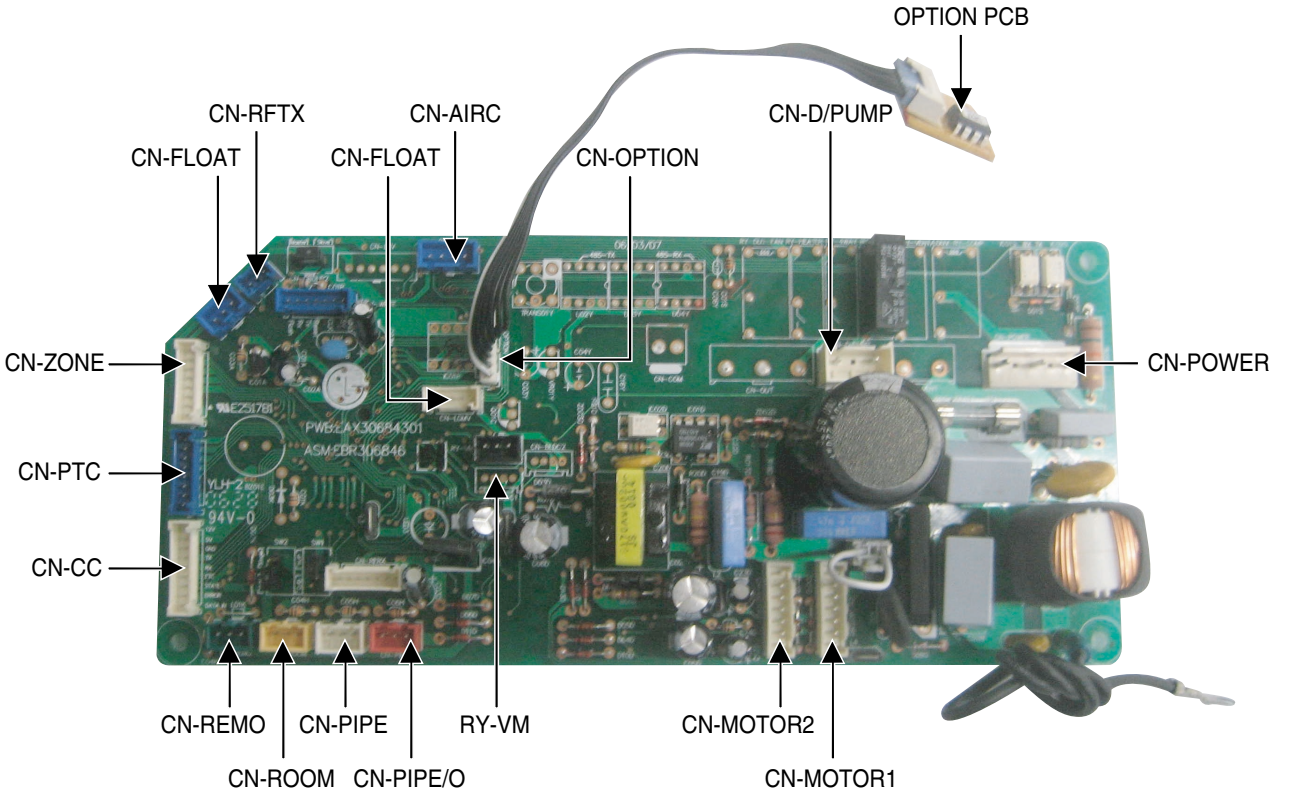
Connector Number	Location
CN-POWER	AC power supply
CN-MOTOR	BLDC fan motor output
CN-D/PUMP	Drain pump output
CN-DISP	RF-Remote control
CN-FLOAT	Float switch input
CN-ZONE	Zone control output
CN-CC	Central control output
CN-PIPE1	Pipe senser
CN-PIPE2	Discharge pipe sensor
CN-ROOM	Room sensor
CN-REMO	Remote control
CN-AIRC	Air clean
CN-PTC	PTC heater
CN-OUT	Ventilation/Electric heater

2) PCB

Models: AMNH-BT model[MB-T]



Models: AMNH-B1/B2 model[MB-1/2]



1.8.7 External pressure setting for EZ Tuning

EZ Tuning (E.S.P. Control) provide required constant air flow rate irrespective of E.S.P. charge.

(1) Open the rear cover of the wired remote-controller to set the mode.

(2) Select one of three selectable modes as follows.

■ Without zone system

1. Position V-H, F-H:
   • This position sets the maximum E.S.P. as a default set.
2. Position V-L:
   • This position sets the minimum E.S.P. as a default set.

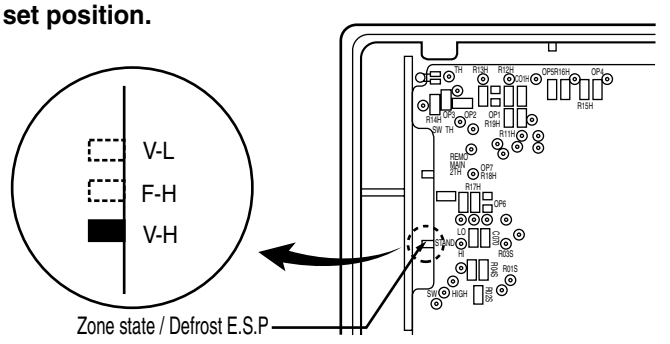
■ With zone system

1. Position V-H:
   • Maximum E.S.P. setting & Fan speed is varied according to the state of dampers by micom.
2. Position F-H:
   • Maximum E.S.P. setting & Fan speed doesn't vary according to the opening & closing of dampers.
3. Position V-L:
   • Minimum E.S.P. setting & Fan speed is varied according to the state of dampers by micom.

*Maximum: 18/24k - 2mmAq

Minimum: All-0mmAq

(3) Move the slide switch to set position.



(4) Close the rear cover and check if it works normally.

⚠CAUTION

- Select the position after checking duct work and E.S.P. of the unit.
- Maunfactured in the position F-H.

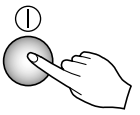
How to Set E.S.P. on the remote controller?

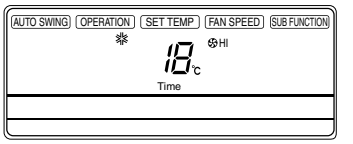
Procedure of RPM change:

Ex) External static pressure is 4mmAq for model name "AMNH246BHA0".

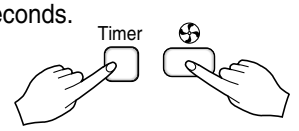
• To protect the unit, compressor is designed to be off during E.S.P. setting.

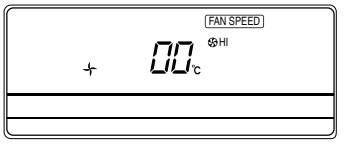
1 Push the "On/Off" button.
The unit will start.



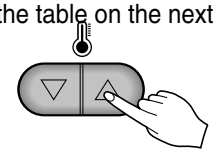


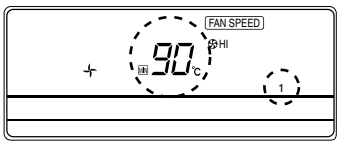
2 Push the "Timer" and "Wind" button simultaneously for more than 3 seconds.





3 Push the "Up" of "Down" button for E.S.P. adjustment.
And, adjust the number which you want.(In this example, the number is "190".
Refer to the table on the next page.)



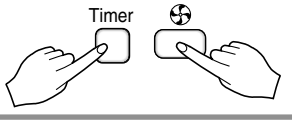


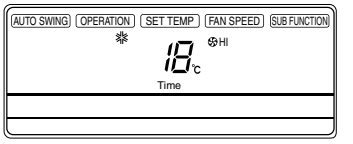
Note: The range of selection is from 1~254. Since, the display is two digit only.
If the range selection is above 100 then the third digit will appear in the screen as shown.(setting value : 190)

4 Shift the fan speed mode by pressing the fan speed button.
And then, adjust numbers of next steps by repeating the stage 3.
(In this example, the numbers are "220" and "235" respectively.



5 Push the "Timer" and "Wind" button simultaneously for more than 3 seconds.
Then, wind data is memorized by the EEPROM of the main PCB.





E.S.P. setting value (reference)

Static pressure(mmAq)		0	1	2
Model name	Step(Hi/Med/Lo)	Setting value		
AMNH096BTG0 [MB09AHL NT0]	8 CMM	220	215	210
	7 CMM	240	235	230
	6 CMM	255	250	245
AMNH126BTG0 [MB12AHL NT0]	10 CMM	210	85	150
	9 CMM	215	190	170
	8 CMM	220	200	175
AMNH186BTG0 [MB18AHL NT0]	14 CMM	170	150	130
	13 CMM	185	165	145
	12 CMM	200	180	160

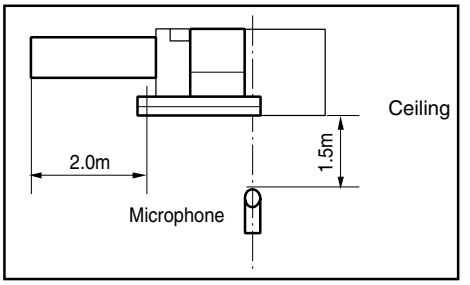
Static pressure(mmAq)		0	1	2	3	4
Model name	Step(Hi/Med/Lo)	Setting value				
AMNH09GB1A0/1 [MB09AHL N10/1]	8.5 CMM	75	84	94	104	114
	7.5 CMM	69	77	88	99	110
	6.5 CMM	62	71	83	95	106
AMNH12GB1A0/1 [MB12AHL N10/1]	9.5 CMM	82	90	99	109	118
	8.5 CMM	75	84	94	104	114
	7.5 CMM	69	77	88	99	110
AMNH18GB2A0/1 [MB18AHL N20/1]	15 CMM	90	97	105	114	122
	13.5 CMM	82	90	99	109	119
	11.5 CMM	75	84	93	103	114
AMNH24GB2A0/1 [MB24AHL N20/1]	17 CMM	110	117	125	129	-
	15 CMM	100	107	115	121	127
	13.5 CMM	90	97	105	114	122

[Notes]

1. To get the desired Airflow & E.S.P. combination from the table set the matching value from the table. Value other than that in table will not give the combinations of airflow & E.S.P. which are mentioned in the table.
2. Table data is based at 230V. According to the fluctuation of voltage, air flow rate varies.

1.8.8 Sound levels

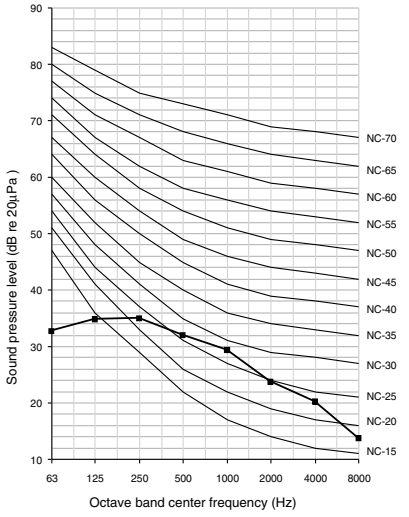
Overall



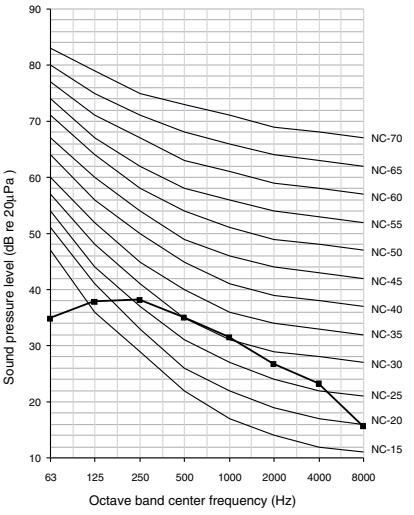
Notes:
- Data is valid at nominal operation condition
- Reference accoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

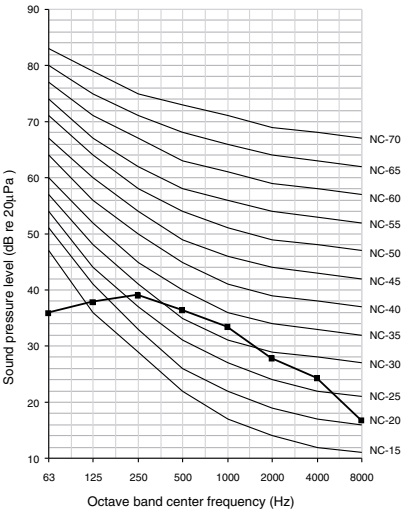
AMNH096BTG0 [MB09AHL NT0]



AMNH126BTG0 [MB12AHL NT0]

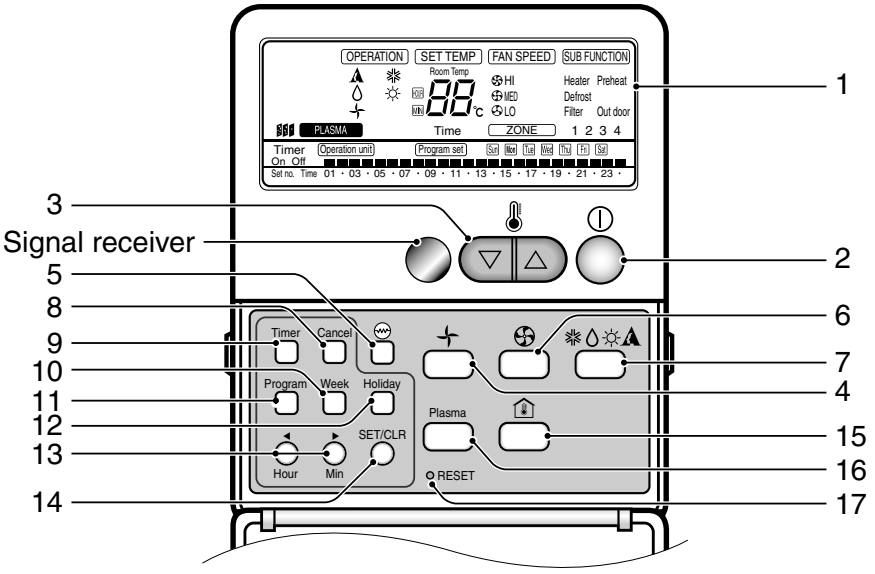


AMNH186BTG0 [MB18AHL NT0]



1.8.9 Controller

1) Wired remote controller



1. Operation display
Displays the operation conditions.

2. On/Off button
Operation starts when this button is pressed, and stops when the button is pressed again.

3. Set temperature button
Used to set the temperature when the desired temperature is obtained.

4. Fan operation button
Used to circulate room air without cooling or heating.

5. Electric heater button(Not available)
Used to set the electric heater.

6. Fan speed button
Used to set desired fan speed.

7. Operation mode selection button
Used to select the operation mode.
- Auto operation mode.
- Cooling operation mode.
- Soft dry operation mode.
- Heating operation mode.(except cooling model)

8. Timer cancel button
Used to cancel the timer.

9. Timer set button
Used to set the timer when the desired time is obtained.

10. Week button
Used to set a day of the week.

11. Program button
Used to set the weekly timer.

12. Holiday button
Used to set a holiday of the week.

13. Time set button
Used to set the time of the day and change the time in the weekly timer Function.

14. Set and clear button
Used to set and clear the weekly timer.

15. Room temperature checking button
Used to check the room temperature.

16. Plasma air clean button(Not available)

17. Reset button
Used to set the current time and clear the setting time.

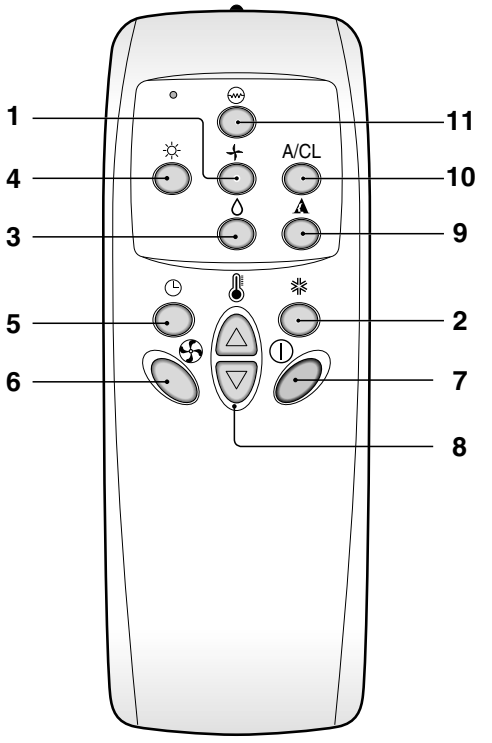
❊ Display temperature can be different from actual room temperature if the remote controller is installed at the place where sun-rays are falling directly or the place nearby heat source.

2) Wireless remote controller(accessory)

This air-conditioner is equipped with wired remote controller basically. But if you want to have the wireless remote controller, you pay for it.

Signal transmitter

Transmits the signals to the signal receiver.



1. Fan operation button
Used to circulate room air without cooling or heating.

2. Cooling operation button

3. Soft dry operation button
Used to dehumidify without overcooling.

4. Heating operation button
(Heat pump model only)

5. Timer set button
Used to set the timer when the desired time is obtained. Then the wired remote controller is set up to 24 hours by an hour but the wireless remote controller is set up to 7 hours by an hour. Therefore, if you want to set over 7 hours, use the wired remote controller.

6. Fan speed button
Used to set the desired fan speed.

7. On/Off button
Operation starts when this button is pressed, and stops when the button is pressed again.

8. Set temperature button
Used to set the temperature when the desired temperature is obtained

9. Auto operation button

10. Plasma air clean button(Not available)

11. Electric heater button(Not available)
Used to set the electric heater.

⚠CAUTION

for handling the remote controller
- Aim at the signal receiver on the wired remote controller so as to operate.
- The remote control signal can be received at a distance of up to about 7m.
- Be sure that there are no obstructions between the remote controller and the signal receiver.
- Do not drop or throw the remote controller.
- Do not place the remote controller in a location exposed to direct sunlight, or near the heating unit, or any other heat source.
- Block a strong light over the signal receiver with a curtain or etc. so as to prevent the abnormal operation. (ex:electronic quick start, ELBA, inverter type fluorescent lamp)

1.9 Ceiling concealed duct - buit in
1.9.1 Features

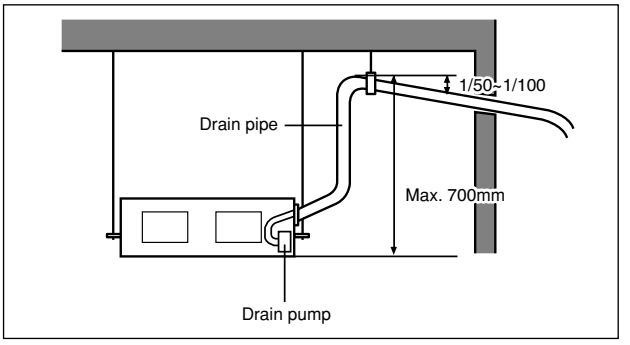
Models : AMNH096BPA0 [MB09AHB NP0] / AMNH126BPA0 [MB12AHB NP0]



- **Compact & light design and easy installation**
  Flexible duct is easy to install, regardless of room size or heater position. It can be installed even in a limited space and saves construction cost with slim thickness

- **EZTuning (Linear E.S.P. Control)**
  LG's high technology provide easy and low cost design of duct work. Desired E.S.P. can also be set through LCD wired remote control. Setting of the desired E.S.P. gives required combination of E.S.P. and airflow.

- **High head drain pump(700mm, accessory)**
  In some of the places natural drainage is not possible. For such places drain pump is very useful. It removes condensed water from the unit.



- **Low noise design**
- **2-thermistor control (main body & remote controller)**
- **LCD wired remote controller**
- **Wireless remote controller(accessory)**
- **Group controller**
- **Simple central controller(accessory)**
- **Weekly progam**
- **Hygienic and easy to clean filter**

1.9.2 List of functions

Category	Function	AMNH096BPA0 [MB09AHB NP0]	AMNH126BPA0 [MB12AHB NP0]
Air flow	Air supply outlet	1	1
	Airflow direction control (left & right)	-	-
	Airflow direction control (up & down)	-	-
	Auto swing (left & right)	-	-
	Auto swing (up & down)	-	-
	Airflow steps(Fan / Cool / Heat)	3 / 3 / 3	3 / 3 / 3
	CHAOS swing	X	X
	CHAOS wind (Auto wind)	O	O
	Jet cool (Power wind)	X	X
	Swirl wind	X	X
Air purifying	Deodorizing filter	X	X
	Plasma air purifier	-	-
	Prefilter(Washable / Anti-fungus)	O	O
Installation	Drain pump	ABDPG	ABDPG
	E.S.P. control	O	O
	Electric heater (Operation)	-	-
	High ceiling operation	-	-
Reliability	Hot start	O	O
	Self diagnosis	O	O
	Soft dry operation	O	O
Convenience	Auto changeover	X	X
	Auto cleaning	X	X
	Auto elevation grille	-	-
	Auto operation(Artificial intelligence)	O	O
	Auto restart operation	O	O
	Child lock	O	O
	Forced operation	X	X
	Group control	O	O
	Sleep mode	-	-
	Timer (On/Off)	O	O
	Timer (weekly)	O	O
	Two thermistor control	O	O
Individual Control	Standard wired remote controller	O	O
	Deluxe wired remote controller	PQRCUDS0	PQRCUDS0
	Simple wired remote controller	PQRCUCA0	PQRCUCA0
	Wired remote controller(for hotel use)	PQRCFCS0	PQRCFCS0
	Wireless remote controller(simple)	-	-
	Wireless LCD remote control	PQWRHSF0	PQWRHSF0
CAC Network Function	General central control(Non LGAP)	X	X
	Dry contact	PQDSB	PQDSB
	Central control(LGAP)	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00
	PI 485	PMNFP14A0	PMNFP14A0
Special Function Kit	CTIE	X	X
	Zone control	ABZCA	ABZCA
Others	Thermistor	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

1.9.3 Specifications

Indoor unit type			Ceiling Concealed Duct - Built in	
Model			AMNH096BPA0 [MB09AHB NP0]	AMNH126BPA0 [MB12AHB NP0]
Power supply		Ø/V/Hz	1/ 220~240/ 50	1/ 220~240/ 50
Cooling capacity		kW	2.64	3.52
		Btu/h	9,000	12,000
Heating capacity		kW	2.93	3.89
		Btu/h	10,000	13,200
Current	Nominal running current	A	0.56	0.56
Fan	Motor type		Induction	Induction
	Fan type		Sirocco Fan	Sirocco Fan
	Motor output x Number of unit		118 x 1	118 x 1
	Air flow rate(H/M/L)	cmm	11.5/10/8.5	11.5/10/8.5
		cfm	406/353/300	406/353/300
	External static pressure	mmAq	4	4
	Capacitor	μF/Vac	6/370	6/370
	Drive		Direct Drive	Direct Drive
Coil	Row x column x FPI	mm	3R x 14C x 18	3R x 14C x 18
Dimensions	Body	mm(inch)	750*300*580(29.5*11.8*22.8)	750*300*580(29.5*11.8*22.8)
(WxHxD)	Decorative panel	mm	695*57*396(27.4*2.22*15.6)	695*57*396(27.4*2.22*15.6)
Weight	Body	kg(lbs)	30(66.1)	30(66.1)
	Decorative panel	kg(lbs)	6(13.2)	6(13.2)
Air filter			Long Life Filter	Long Life Filter
Sound level (H/M/L)		dB(A)+3	34 / 32 / 30	35 / 33 / 31
Piping	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
connections	Gas	mm(inch)	9.52(3/8)	9.52(3/8)
Drain	OD/ID	mm	32/25	32/25
Dehumidification rate		l/h	1.0	1.2
Safety devices			Fuse, Thermal Protector for Fan Motor	
Temperature sensor			Thermistor	Thermistor
Referigerant			R410A	R410A
Referigerant control			EEV(in Outdoor unit or BD)	EEV(in Outdoor unit or BD)
Connectable outdoor unit			Multi F /F DX series	Multi F /F DX series
Power and transmission interunit cable		No.x mm^2	4*0.75	4*0.75

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Wiring cable size must comply with the applicable local and national code.

Conversion Formula	
kW	= Btu/h × 0.0002931
CFM	= CMM × 35.3

1.9.4 Dimensions

CEILING CONCEALED DUCT + Decoration Panel

AMNH096BPA0 [MB09AHB NP0] + PB-HPA

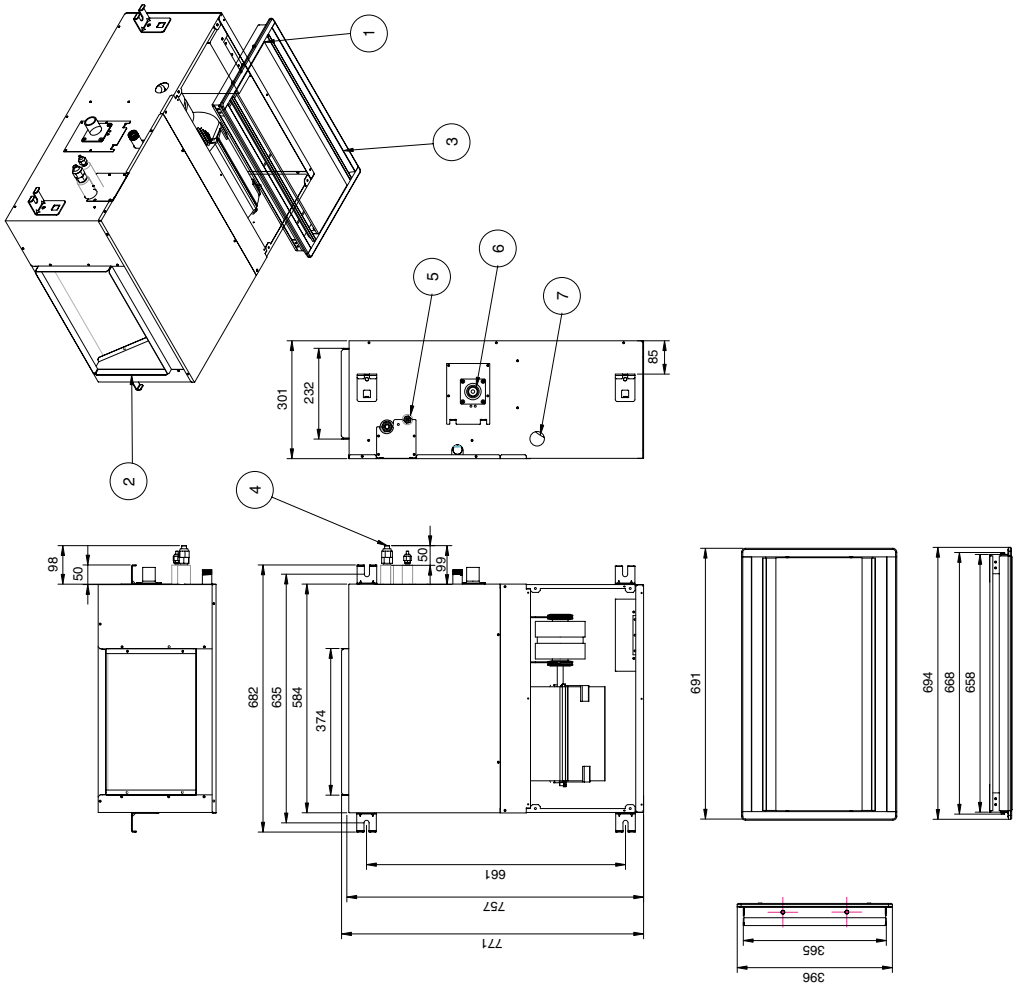
No.	Part Name	Remark
1	Decoration panel	
2	Air suction flange	
3	Air discharge grille	
4	Gas Pipe Connection	
5	Liquid Pipe Connection	
6	Drain Pipe Connection	
7	Power supply connection	

▣ Technical Specification

			Ø/V/Hz	1/ 220~240 / 50
Power supply				
Cooling Capacity			kW	2.64
			Btu/h	9,000
Heating Capacity			kW	2.93
			Btu/h	10,000
Piping Connections		Liquid(Ø)	mm(inch)	6.35(1/4)
		Gas(Ø)	mm(inch)	9.52(3/8)
Drain(OD/ID)			mm	32/25

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.



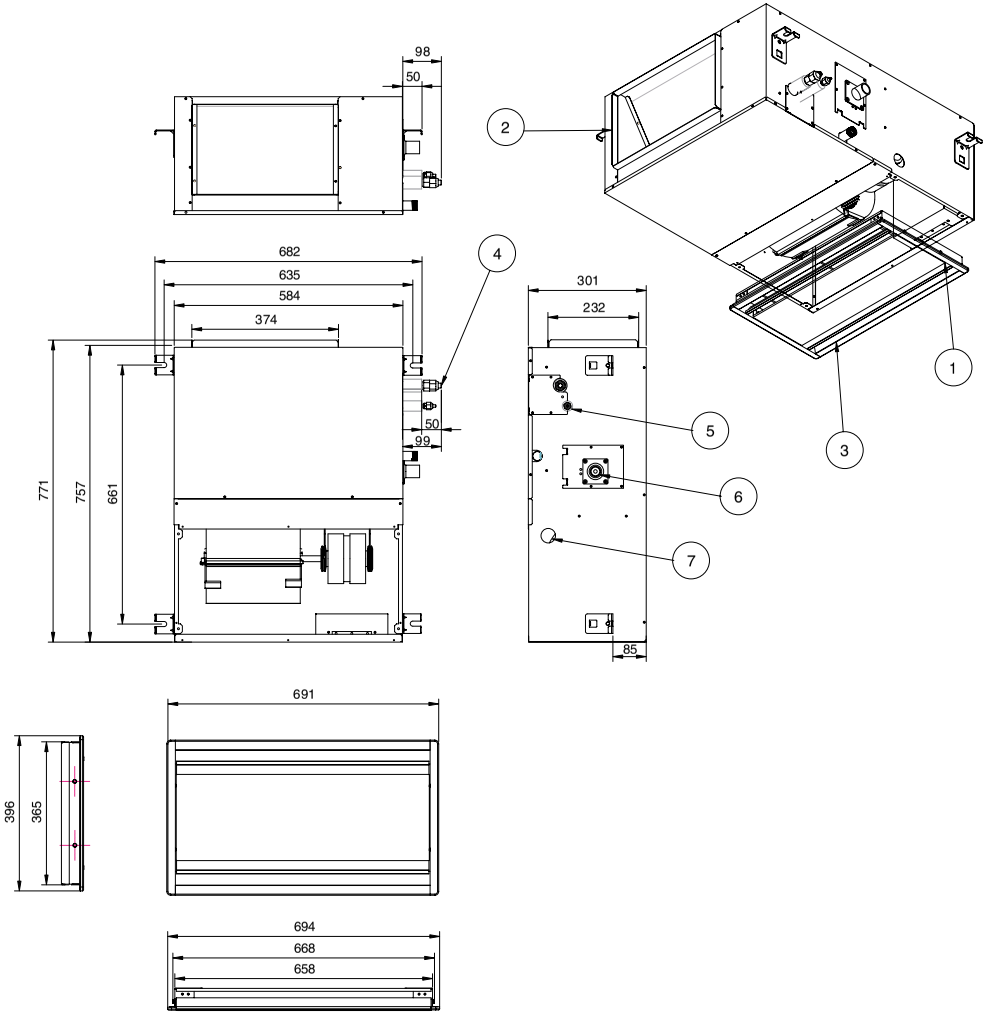
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam, 641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: BP

CEILING CONCEALED DUCT + Decoration Panel

AMNH126BPA0 [MB12AHB NP0] + PB-HPA



No.	Part Name	Remark
1	Decoration panel	
2	Air suction flange	
3	Air discharge grille	
4	Gas Pipe Connection	
5	Liquid Pipe Connection	
6	Drain Pipe Connection	
7	Power supply connection	

▣ Technical Specification

Power supply		Ø/V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	3.52
		Btu/h	12,000
Heating Capacity		kW	3.89
		Btu/h	13,200
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)
Drain(OD/ID)		mm	32/25

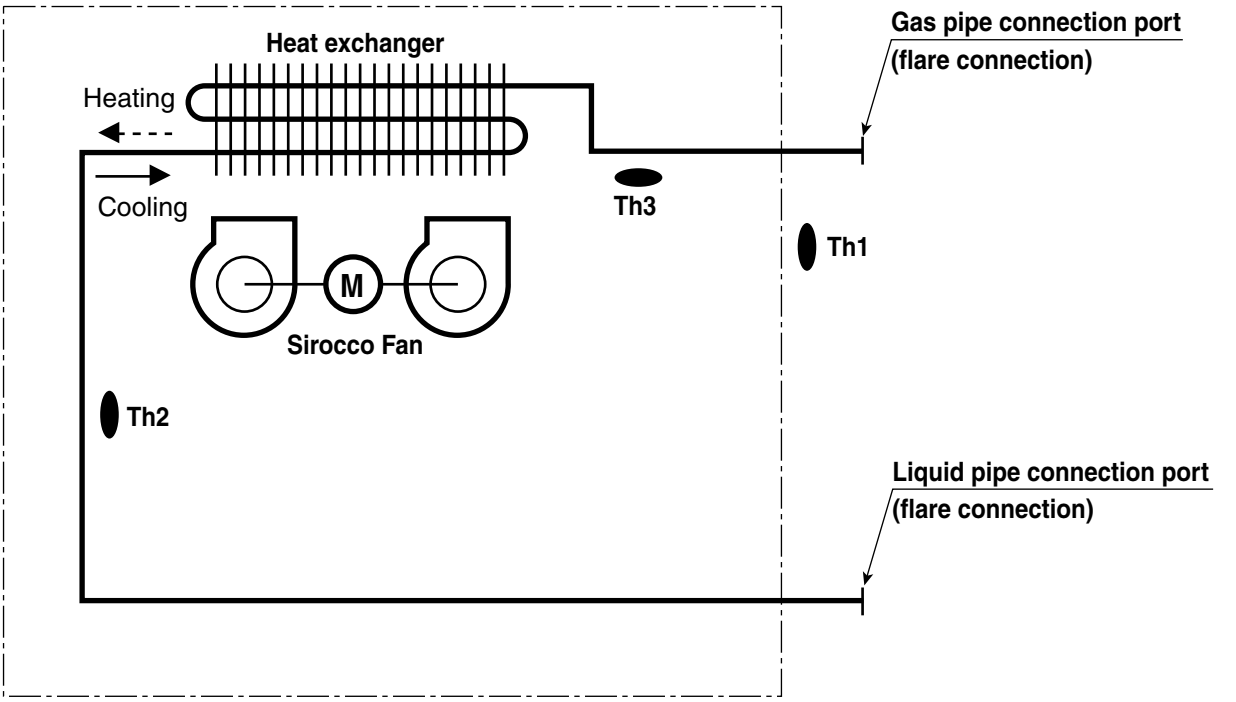
▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

LG Electronics
76, Seongsan-dong, Changwon City, Gyeongnam, 641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: BP

1.9.5 Piping diagrams



Th1 : Thermistor for suction air temp.
Th2 : Thermistor for liquid line temp.
Th3 : Thermistor for gas line temp.

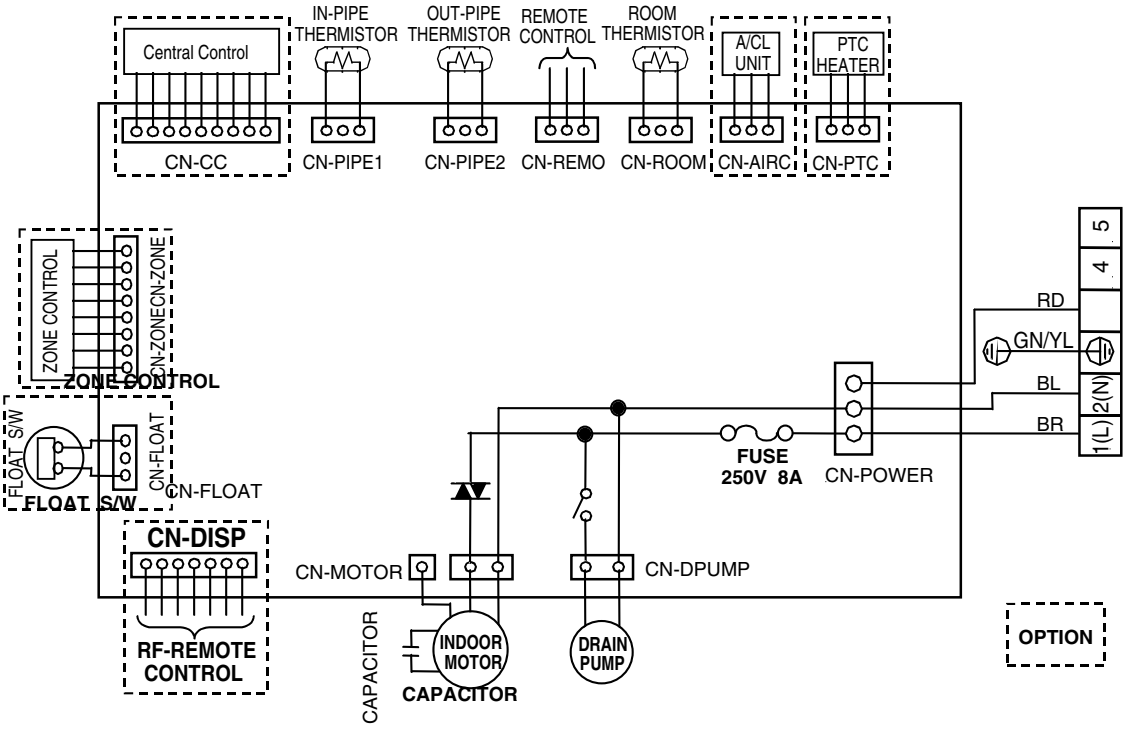
■ Refrigerant pipe connection port diameters

(mm)

Model	Gas	Liquid
AMNH096BPA0 [MB09AHB NP0] AMNH126BPA0 [MB12AHB NP0]	ø9.52	ø6.35

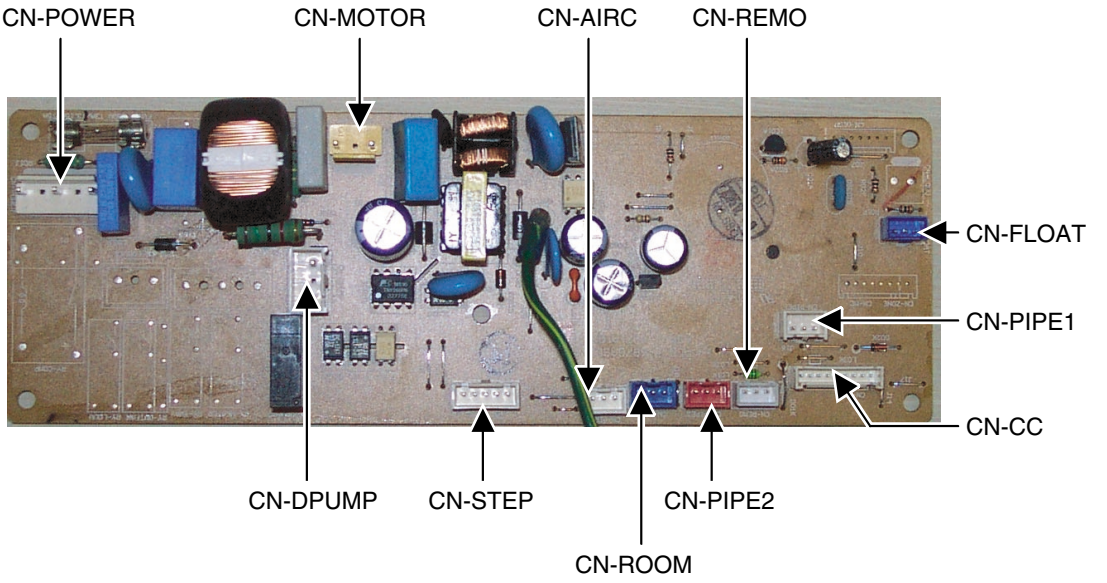
1.9.6 Wiring diagrams

1) Wiring diagrams



Connector Number	Location
CN-POWER	AC power supply
CN-MOTOR	BLDC fan motor output
CN-D/PUMP	Drain pump output
CN-DISP	RF-Remote control
CN-FLOAT	Float witch input
CN-ZONE	Zone control output
CN-CC	Central control output
CN-PIPE1	Pipe sensor
CN-PIPE2	Discharge pipe sensor
CN-REMO	Remote control
CN-ROOM	Room sensor
CN-AIRC	Air clean
CN-PTC	PTC heater

2) PCB


CN-POWER
CN-MOTOR
CN-AIRC
CN-REMO
CN-FLOAT
CN-PIPE1
CN-CC
CN-DPUMP
CN-STEP
CN-PIPE2
CN-ROOM

1.9.7 External static pressure setting for EZ Tuning

EZ Tuning (E.S.P. Control) provide required constant air flow rate irrespective of E.S.P. charge.

(1) Open the rear cover of the wired remote-controller to set the mode.

(2) Select one of three selectable modes as follows.

■ Without zone system

1. Position V-H, F-H:
   • This position sets the maximum E.S.P. as a default set.
2. Position V-L:
   • This position sets the minimum E.S.P. as a default set.

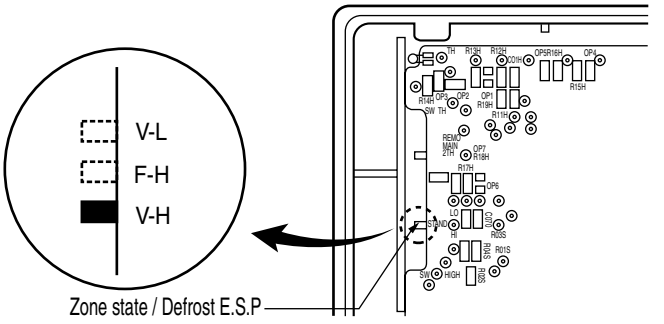
■ With zone system

1. Position V-H:
   • Maximum E.S.P. setting & Fan speed is varied according to the state of dampers by micom.
2. Position F-H:
   • Maximum E.S.P. setting & Fan speed doesn't vary according to the opening & closing of dampers.
3. Position V-L:
   • Minimum E.S.P. setting & Fan speed is varied according to the state of dampers by micom.

*Maximum: 4mmAq

Minimum: All-0mmAq

(3) Move the slide switch to set position.



(4) Close the rear cover and check if it works normally.

⚠CAUTION

- Select the position after checking duct work and E.S.P. of the unit.
- Maunfactured in the position F-H.

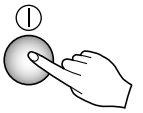
How to Set E.S.P. on the remote controller?

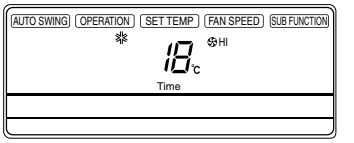
Procedure of RPM change:

Ex) External static pressure is 2mmAq for model name "AMNH096BPA0".

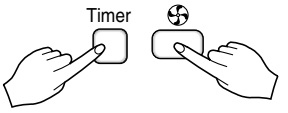
• To protect the unit, compressor is designed to be off during E.S.P. setting.

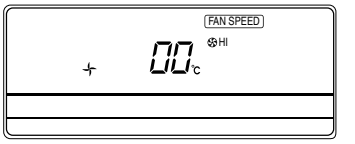
1 Push the "On/Off" button.
The unit will start.



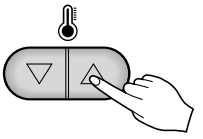


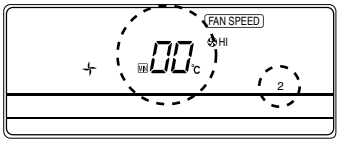
2 Push the "Timer" and "Wind" button simultaneously for more than 3 seconds.





3 Push the "Up" of "Down" button for E.S.P. adjustment.
And, adjust the number which you want.(In this example, the number is "200". Refer to the table)



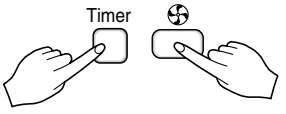


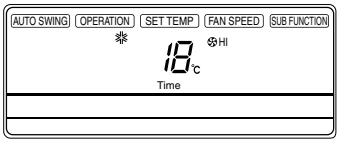
Note: The range of selection is from 1~254. Since, the display is two digit only.
If the range selection is above 100 then the third digit will appear in the screen as shown. (setting value : 200)

4 Shift the fan speed mode by pressing the fan speed button.
And then, adjust numbers of next steps by repeating the stage 3.



5 Push the "Timer" and "Wind" button simultaneously for more than 3 seconds.
Then, wind data is memorized by the EEPROM of the main PCB.





E.S.P. setting value

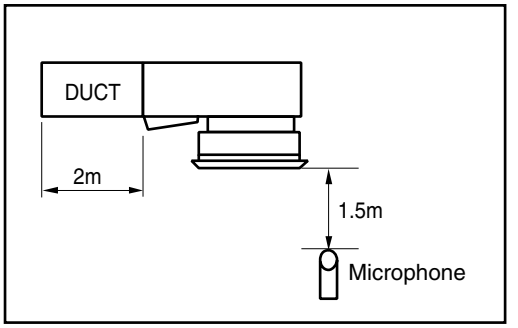
Static pressure(mmAq)		0	2	4
Model name	Step(Hi/Med/Lo)	Setting value		
AMNH096BPA0	10.5CMM	225	220	210
	9CMM	245	240	230
	8.5CMM	254	253	250
AMNH126BPA0	11.5CMM	210	200	100
	10CMM	235	230	220
	8.5CMM	254	251	245

[Notes]

1. To get the desired Airflow & E.S.P. combination from the table set the matching value from the table. Value other than that in table will not give the combinations of airflow & E.S.P. which are mentioned in the table.
2. Table data is based at 230V. According to the fluctuation of voltage, air flow rate varies.

1.9.8 Sound levels

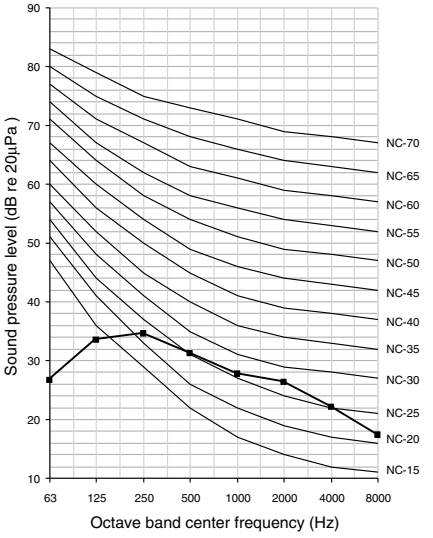
Overall



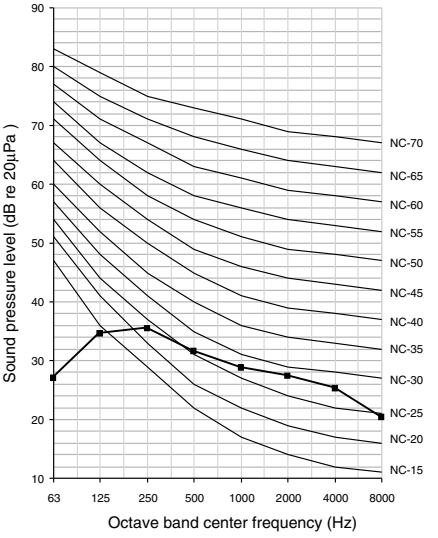
Notes:
- Sound measured at 1.5m away from the center of the unit.
- Data is valid at free field condition
- Data is valid at nominal operation condition
- Reference accoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

AMNH096BPA0 [MB09AHB NP0]

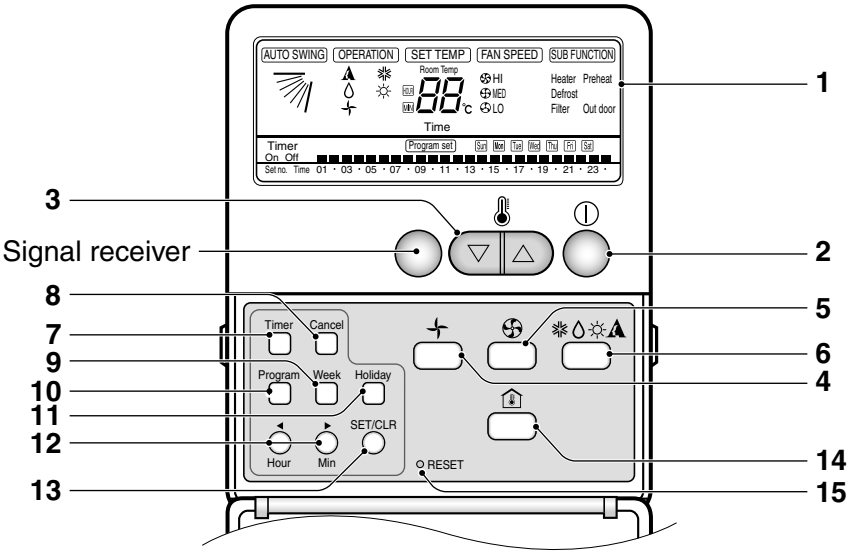


AMNH126BPA0 [MB12AHB NP0]



1.9.9 Controller

1) Wired remote controller



1. Operation display
Displays the operation conditions.

2. On/Off button
Operation starts when this button is pressed, and stops when the button is pressed again.

3. Set temperature button
Used to set the temperature when the desired temperature is obtained.

4. Fan operation button
Used to circulate room air without cooling or heating.

5. Fan speed button
Used to set desired fan speed.

6. Operation mode selection button
Used to select the operation mode.
- Auto operation mode.
- Cooling operation mode.
- Soft dry operation mode.
- Heating operation mode.(except cooling model)

7. Timer cancel button
Used to cancel the timer.

8. Timer set button
Used to set the timer when the desired time is obtained.

9. Week button
Used to set a day of the week.

10. Program button
Used to set the weekly timer.

11. Holiday button
Used to set a holiday of the week.

12. Time set button
Used to set the time of the day and change the time in the weekly timer Function.

13. Set and clear button
Used to set and clear the weekly timer.

14. Room temperature checking button
Used to check the room temperature.

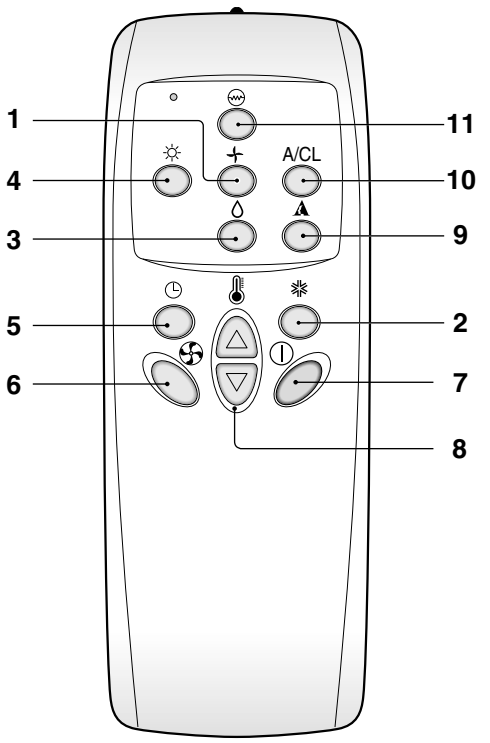
15. Reset button
Used to set the current time and clear the setting time.

2) Wireless remote control (accessory)

This air-conditioner is equipped with wired remote controller basically. But if you want to have the wireless remote controller, you pay for it.

Signal transmitter

Transmits the signals to the signal receiver.



1. **Fan operation button**
   Used to circulate room air without cooling or heating.
2. **Cooling operation button**
3. **Soft dry operation button**
   Used to dehumidify without overcooling.
4. **Heating operation button**
   (Heat pump model only)
5. **Timer set button**
   Used to set the timer when the desired time is obtained. Then the wired remote controller is set up to 24 hours by an hour but the wireless remote controller is set up to 7 hours by an hour. Therefore, if you want to set over 7 hours, use the wired remote controller.
6. **Fan speed button**
   Used to set the desired fan speed.
7. **On/Off button**
   Operation starts when this button is pressed, and stops when the button is pressed again.
8. **Set temperature button**
   Used to set the temperature when the desired temperature is obtained
9. **Auto operation button**
10. **Plasma air clean button(Not available)**
11. **Electric heater button (Not available)**
    Used to set the electric heater.

⚠CAUTION

For handling the remote controller
- Aim at the signal receiver on the wired remote controller so as to operate.
- The remote control signal can be received at a distance of up to about 7m.
- Be sure that there are no obstructions between the remote controller and the signal receiver.
- Do not drop or throw the remote controller.
- Do not place the remote controller in a location exposed to direct sunlight, or near the heating unit, or any other heat source.
- Block a strong light over the signal receiver with a curtain or etc. so as to prevent the abnormal operation. (ex:electronic quick start, ELBA, inverter type fluorescent lamp)

2. Outdoor units

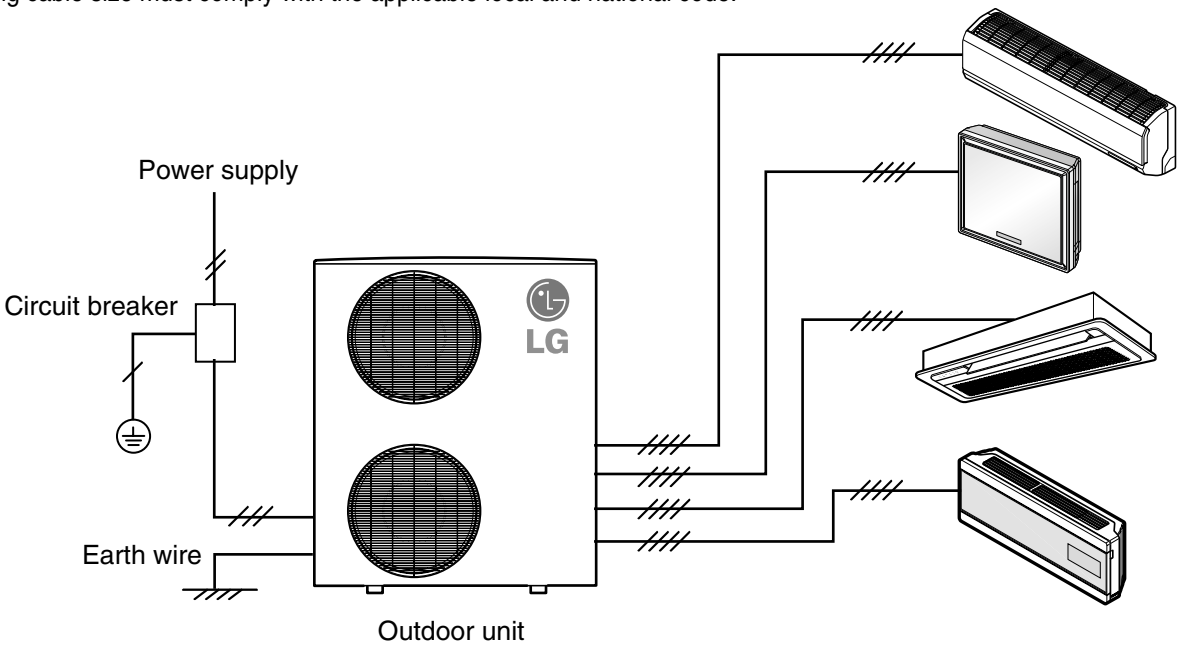
2.1 Multi piping type MULTI F

2.1.1 Power supply

Type	Outdoor unit	Capacity [kBtu/h(kW)]	Circuit breaker capacity	Power supply
Heat pump	A2UW146FA3[FM15AH UL3]	14(4.10)	15A	1ø, 220-240V, 50Hz
	A2UW166FA0[FM17AH UL0]	16(4.69)		
	A2UW166FA1[FM17AH UL1]	16(4.69)		
	A3UW186FA0[FM19AH UE0]	18(5.30)		
	A3UW216FA3[FM21AH UE3]	21(6.15)	20A	
	A4UW246FA3[FM25AH UE3]	24(7.03)	25A	
	A4UW276FA3[FM27AH UE3]	27(7.91)		
	A5UW306FA3[FM30AH UE3]	30(8.79)		
	A5UW406FA3[FM38AH UH3]	40(11.73)		

External wiring procedure

- The power supply work is needed only to the outdoor unit. The power supply to the indoor unit is conducted through the transmission wiring. Therefore, the power supply work can be carried out at just one place of the outdoor unit. It will contribute to simplify the work procedure and to save cost.
- Wiring cable size must comply with the applicable local and national code.



2.1.2 List of functions

Category	Function	A2UW146FA3 [FM15AH UL3]	A2UW166FA0 [FM17AH UL0]	A2UW166FA1 [FM17AH UL1]
Reliability	Defrost / Deicing	O	O	O
	High Pressure Switch	X	X	X
	Low Pressure Switch	X	X	X
	Phase protection	X	X	X
	Restart Delay (3-minutes)	O	O	O
	Self Diagnosis	O	O	O
	Soft Start	O	O	O
	Test Function	O	O	O
Convenience	Auto operation(Artificial intelligence)	O	O	O
	Auto Restart Operation	O	O	O
CAC Network Function	Central control(LGAP)	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI485	PMNFP14A0	PMNFP14A0	PMNFP14A0
Others	Thermistor	-	-	-

Category	Function	A3UW186FA0 [FM19AH UE0]	A3UW216FA3 [FM21AH UE3]	A4UW246FA3 [FM25AH UE3]
Reliability	Defrost / Deicing	O	O	O
	High Pressure Switch	X	X	X
	Low Pressure Switch	O	O	O
	Phase protection	X	X	X
	Restart Delay (3-minutes)	O	O	O
	Self Diagnosis	O	O	O
	Soft Start	O	O	O
	Test Function	O	O	O
Convenience	Auto operation(Artificial intelligence)	O	O	O
	Auto Restart Operation	O	O	O
CAC Network Function	Central control(LGAP)	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI485	PMNFP14A0	PMNFP14A0	PMNFP14A0
Others	Thermistor	-	-	-

Category	Function	A4UW276FA3 [FM27AH UE3]	A5UW306FA3 [FM30AH UE3]	A5UW406FA3 [FM38AH UH3]
Reliability	Defrost / Deicing	O	O	O
	High Pressure Switch	X	X	X
	Low Pressure Switch	O	O	O
	Phase protection	X	X	X
	Restart Delay (3-minutes)	O	O	O
	Self Diagnosis	O	O	O
	Soft Start	O	O	O
	Test Function	O	O	O
Convenience	Auto operation(Artificial intelligence)	O	O	O
	Auto Restart Operation	O	O	O
CAC Network Function	Central control(LGAP)	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI485	PMNFP14A0	PMNFP14A0	PMNFP14A0
Others	Thermistor	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

2.1.3 Specifications

Outdoor Unit			A2UW146FA3 [FM15AH UL3]	A2UW166FA0 [FM17AH UL0]
Nominal Capacity (Min~Rated~Max)	Cooling	kW	1.35~4.10~4.69	1.35~4.69~5.27
		Btu/h	4,600~14,000~16,000	4,600~16,000~18,000
	Heating	kW	1.41~4.70~5.27	1.41~5.27~5.71
		Btu/h	4,800~16,000~18,000	4,800~18,000~19,500
Nominal Input (Min~Rated~Max)	Cooling	kW	0.38~1.25~1.50	0.38~1.38~1.60
	Heating	kW	0.45~1.25~1.50	0.45~1.40~1.55
Energy label			A/A	A/A
Testing Combination			MS09AH N40 + MS12AH N40	MS12AH*2EA

Running Current	Cooling	A	1.6~5.4~6.3	1.6~6.1~6.7
	Heating	A	2.0~5.4~5.6	2.0~6.2~6.7
Starting Current	(Cooling/Heating)	A	8	8
Power Supply		Ø / V / Hz	1 / 220~240 / 50	1 / 220~240 / 50
Power Supply Cable (outdoor)		No.* mm^2	3*2.5	3*2.5
Power and transmission cable (outdoor to indoor)		No.* mm^2	4*0.75 (including earth)	4*0.75 (including earth)

Dimensions	W*H*D	mm(inch)	770*540*245 (30.3*21.3*10)	770*540*245 (30.3*21.3*10)
Net Weight		kg(lbs)	37(81.6)	37(81.6)
Max. Number of Connectable Indoor Units			2	2
Compressor (Inverter)	Type		Rotary	Twin Rotary
	Qty x Model		1 x 5RS102XAA21	1 x GKT141NAA
	Motor Type		BLDC	DC Inverter
	Oil Charge volume	cc	320	570
	Oil Type		RB68A	FVC68D
Compressor (Constant)	Type		-	-
	Qty x Model		-	-
	Motor Type		-	-
	Oil Charge volume	cc	-	-
	Oil Type		-	-
Refrigerant	Charge (at 7.5m)	g(oz)	950(33.5)	950(33.5)
	Type		R410A	R410A
	Control		EEV	EEV
Heat Exchanger	Rows x Column x FPI		2R x 24C x 18	2R x 24C x 18
	Defrosting Method		Reversing cycle	Reversing cycle
Fan	Capacitor	µF/Vac	2.0/400	2.0/400
	Drive		Direct	Direct
	Discharge direction	Side / Top	Side	Side
	Air Flow Rate	CMM(CFM)	35(1,236)	35(1,236)
Noise Level(H/L)	Sound Pressure at 1m	dB(A)+3	51/45	51/45
Piping connections	Liquid(ø)	mm(inch)	6.35(1/4)*2EA	6.35(1/4)*2EA
	Gas(ø)	mm(inch)	9.52(3/8)*2EA	9.52(3/8)*2EA
Max. Interunit Piping Length	Total of Each Room	m	30	30
	For One Room	m	20	20
Max. Elevation	Indoor Unit~Outdoor Unit	m	15	15
	Indoor Unit~Indoor Unit	m	7.5	7.5

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Due to our policy of innovation some specifications may be changed without notification.
3. At least two indoor units should be connected.
4. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Outdoor Unit			A2UW166FA1 [FM17AH UL1]	A3UW186FA0 [FM19AH UE0]
Nominal Capacity (Min~Rated~Max)	Cooling	kW	1.35~4.69~5.13	1.35~5.30~6.33
		Btu/h	4,600~16,000~17,500	4,600~18,000~21,600
	Heating	kW	1.41~5.27~5.71	1.41~6.30~7.27
		Btu/h	4,800~18,000~19,500	4,800~21,600~24,800
Nominal Input (Min~Rated~Max)	Cooling	kW	0.38~1.38~1.60	0.38~1.55~2.35
	Heating	kW	0.45~1.40~1.55	0.45~1.65~2.32
Energy label			A/A	A/A
Testing Combination			MS12AH N40 * 2EA	MS09AH N40 * 3EA
Running Current	Cooling	A	1.7-6.3-7.3	2.3~7.3~10.5
	Heating	A	2.1-6.4-7.1	2.6~7.8~10.6
Starting Current	(Cooling/Heating)	A	8	8
Power Supply		Ø / V / Hz	1 / 220~240 / 50	1 / 220~240 / 50
Power Supply Cable (outdoor)		No.* mm^2	3*2.5	3*2.5
Power and transmission cable (outdoor to indoor)		No.* mm^2	4*0.75 (including earth)	4*0.75 (including earth)
Dimensions	W*H*D	mm(inch)	770*540*245 (30.3*21.3*10)	870*655*320 (34.3*25.8*12.6)
Net Weight		kg(lbs)	37(81.6)	52(115)
Max. Number of Connectable Indoor Units			2	3
Compressor (Inverter)	Type		e-Scroll	e-Scroll
	Qty x Model		1 x 5CS130XCC03	1 x 5CS130XCC03
	Motor Type		BLDC	BLDC
	Oil Charge volume	cc	480	480
	Oil Type		RB68A	RB68A
Compressor (Constant)	Type		-	-
	Qty x Model		-	-
	Motor Type		-	-
	Oil Charge volume	cc	-	-
	Oil Type		-	-
Refrigerant	Charge (at 7.5m)	g(oz)	950(33.5)	1,650(59.97)
	Type		R410A	R410A
	Control		EEV	EEV
Heat Exchanger	Rows x Column x FPI		2R x 24C x 18	2R x 28C x 18
	Defrosting Method		Reversing cycle	Reversing cycle
Fan	Capacitor	µF/Vac	2.0/400	6/370
	Drive		Direct	Direct
	Discharge direction	Side / Top	Side	Side
	Air Flow Rate	CMM(CFM)	35(1,236)	53(1,766)
Noise Level(H/L)	Sound Pressure at 1m	dB(A)+3	51/45	51/45
Piping connections	Liquid(ø)	mm(inch)	6.35(1/4)*2EA	6.35(1/4)*3EA
	Gas(ø)	mm(inch)	9.52(3/8)*2EA	9.52(3/8)*3EA
Max. Interunit Piping Length	Total of Each Room	m	30	50
	For One Room	m	20	25
Max. Elevation	Indoor Unit~Outdoor Unit	m	15	15
	Indoor Unit~Indoor Unit	m	7.5	7.5

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Due to our policy of innovation some specifications may be changed without notification.
3. At least two indoor units should be connected.
4. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Outdoor Unit			A3UW216FA3 [FM21AH UE3]	A4UW246FA3 [FM25AH UE3]
Nominal Capacity (Min~Rated~Max)	Cooling	kW	1.85~6.15~7.33	1.85~7.03~8.5
		Btu/h	6,300~21,000~25,000	6,300~24,000~29,000
	Heating	kW	2.22~7.03~7.77	2.22~8.44~9.38
		Btu/h	7,560~24,000~26,500	7,560~28,800~32,000
Nominal Input (Min~Rated~Max)	Cooling	kW	0.72~1.75~2.33	0.72~1.99~2.75
	Heating	kW	0.88~1.88~2.26	0.88~1.96~2.79
Energy label			A/A	A/A
Testing Combination			MS09AH N40 * 2EA + MS12AH N40	MS07AH N40 * 2EA + MS09AH N40 * 2EA

Running Current	Cooling	A	2.4~7.4~10.1	2.3~8.0~13.0
	Heating	A	3.1~7.8~10.4	3.0~9.0~13.0
Starting Current	(Cooling/Heating)	A	-	-
Power Supply		Ø / V / Hz	1 / 220~240 / 50	1/220~240/50
Power Supply Cable (outdoor)		No.* mm^2	3*2.5	3*2.5
Power and transmission cable (outdoor to indoor)		No.* mm^2	4*0.75 (including earth)	4 x 0.75(Including Earth)

Dimensions	W*H*D	mm(inch)	870*655*320 (34.3*25.8*12.6)	870*808*320(34.3*31.8*12.6)
Net Weight		kg(lbs)	57(126)	61(134)
Max. Number of Connectable Indoor Units			3	4
Compressor (Inverter)	Type		Twin-Rotary	Twin-Rotary
	Qty x Model		5KD240X	5KD240X
	Motor Type		BLDC	BLDC
	Oil Charge volume	cc	900	900
	Oil Type		FV50S	FV50S
Compressor (Constant)	Type		-	-
	Qty x Model		-	-
	Motor Type		-	-
	Oil Charge volume	cc	-	-
	Oil Type		-	-
Refrigerant	Charge (at 7.5m)	g(oz)	1,700(60)	2,000(70.5)
	Type		R410A	R410A
	Control		EEV	EEV
Heat Exchanger	Rows x Column x FPI		2R*28C*18	2R*36C*18
	Defrosting Method		Reversing cycle	Reversing cycle
Fan	Capacitor	µF/Vac	2.0/400	-
	Drive		Direct	DC
	Discharge direction	Side / Top	Side	Side
	Air Flow Rate	CMM(CFM)	53(1872)	53(1872)
Noise Level(H/L)	Sound Pressure at 1m	dB(A)+3	51	52
Piping connections	Liquid(ø)	mm(inch)	6.35(1/4)*3EA	6.35(1/4)*4EA
	Gas(ø)	mm(inch)	9.52(3/8)*3EA	9.52(3/8)*4EA
Max. Interunit Piping Length	Total of Each Room	m	50	70
	For One Room	m	25	25
Max. Elevation	Indoor Unit~Outdoor Unit	m	15	15
	Indoor Unit~Indoor Unit	m	7.5	7.5

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Due to our policy of innovation some specifications may be changed without notification.
3. At least two indoor units should be connected.
4. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Outdoor Unit			A4UW276FA3 [FM27AH UE3]	A5UW306FA3 [FM30AH UE3]
Nominal Capacity (Min~Rated~Max)	Cooling	kW	1.85~7.91~9.49	1.85~8.80~10.55
		Btu/h	6,300~27,000~32,400	6,300~30,000~36,000
	Heating	kW	2.22~9.08~10.55	2.22~10.1~12.1
		Btu/h	7,560~31,000~36,000	7,560~34,500~41,400
Nominal Input (Min~Rated~Max)	Cooling	kW	0.72~2.04~3.2	0.72~2.39~3.96
	Heating	kW	0.88~1.96~3.1	0.88~2.25~4.13
Energy label			A/A	A/A
Testing Combination			MS07AH N40 * 4EA	MS07AH N40 * 3EA + MS09AH N40 * 2EA

Running Current	Cooling	A	2.9~9.0~16.6	2.9~10.7~17.5
	Heating	A	3.1~8.6~16.9	3.1~10.0~18.2
Starting Current	(Cooling/Heating)	A		-
Power Supply		Ø / V / Hz	1/220~240/50	1/220~240/50
Power Supply Cable (outdoor)		No.* mm^2	3*2.5	3*2.5
Power and transmission cable (outdoor to indoor)		No.* mm^2	4 x 0.75(Including Earth)	4 x 0.75(Including Earth)

Dimensions	W*H*D	mm(inch)	870*808*320(34.3*31.8*12.6)	870*808*320(34.3*31.8*12.6)
Net Weight		kg(lbs)	65(143.3)	65(143.3)
Max. Number of Connectable Indoor Units			4	5
Compressor (Inverter)	Type		Twin-Rotary	Twin-Rotary
	Qty x Model		5KD240X	5KD240X
	Motor Type		BLDC	BLDC
	Oil Charge volume	cc	900	900
	Oil Type		FV50S	FV50S
Compressor (Constant)	Type		-	-
	Qty x Model		-	-
	Motor Type		-	-
	Oil Charge volume	cc	-	-
	Oil Type		-	-
Refrigerant	Charge (at 7.5m)	g(oz)	2,550(89.95)	2,550(89.95)
	Type		R410A	R410A
	Control		EEV	EEV
Heat Exchanger	Rows x Column x FPI		2R*36C*18	2R*36C*18
	Defrosting Method		Reversing cycle	Reversing cycle
Fan	Capacitor	µF/Vac	-	-
	Drive		DC	DC
	Discharge direction	Side / Top	Side	Side
	Air Flow Rate	CMM(CFM)	60(2119)	60(2119)
Noise Level(H/L)	Sound Pressure at 1m	dB(A)+3	52	52
Piping connections	Liquid(ø)	mm(inch)	6.35(1/4)*4EA	6.35(1/4)*5EA
	Gas(ø)	mm(inch)	9.52(3/8)*4EA	9.52(3/8)*5EA
Max. Interunit Piping Length	Total of Each Room	m	70	75
	For One Room	m	25	25
Max. Elevation	Indoor Unit~Outdoor Unit	m	15	15
	Indoor Unit~Indoor Unit	m	7.5	7.5

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Due to our policy of innovation some specifications may be changed without notification.
3. At least two indoor units should be connected.
4. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Outdoor Unit			A5UW406FA3 [FM38AH UH3]
Nominal Capacity (Min~Rated~Max)	Cooling	kW	2.8~11.7~13.5
		Btu/h	9,600~40,000~46,000
	Heating	kW	3.2~13.5~15.0
		Btu/h	11,040~46,000~51,000
Nominal Input (Min~Rated~Max)	Cooling	kW	1.1~3.63~4.65
	Heating	kW	1.4~3.65~4.84
Energy label			A/.A
Testing Combination			MS09AH N40 * 3EA + MS12AH N40 * 2EA

Running Current	Cooling	A	6.2~16.0~20.0
	Heating	A	6.9~16.4~20.5
Starting Current	(Cooling/Heating)	A	-
Power Supply		Ø / V / Hz	1/220~240/50
Power Supply Cable (outdoor)		No.* mm^2	3*3.5
Power and transmission cable (outdoor to indoor)		No.* mm^2	4 x 0.75(Including Earth)

Dimensions	W*H*D	mm(inch)	900*1165*370(35.4*45.8*14.5)
Net Weight		kg(lbs)	95(209)
Max. Number of Connectable Indoor Units			5
Compressor (Inverter)	Type		Twin-Rotary
	Qty x Model		5JD420X
	Motor Type		BLDC
	Oil Charge volume	cc	1300
	Oil Type		FV50S
Compressor (Constant)	Type		-
	Qty x Model		-
	Motor Type		-
	Oil Charge volume	cc	-
	Oil Type		-
Refrigerant	Charge (at 7.5m)	g(oz)	4,400(155.2)
	Type		R410A
	Control		EEV
Heat Exchanger	Rows x Column x FPI		2R*52C*18
	Defrosting Method		Reversing cycle
Fan	Capacitor	µF/Vac	6 / 370
	Drive		Direct
	Discharge direction	Side / Top	Side
	Air Flow Rate	CMM(CFM)	53(1872)*2
Noise Level(H/L)	Sound Pressure at 1m	dB(A)+3	58
Piping connections	Liquid(ø)	mm(inch)	6.35(1/4)*5EA
	Gas(ø)	mm(inch)	9.52(3/8)*5EA
Max. Interunit Piping Length	Total of Each Room	m	85
	For One Room	m	25
Max. Elevation	Indoor Unit~Outdoor Unit	m	15
	Indoor Unit~Indoor Unit	m	7.5

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Due to our policy of innovation some specifications may be changed without notification.
3. At least two indoor units should be connected.
4. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

2.1.4 Combination table

Models : A2UW146FA3 [FM15AH UL3]

Cooling

Operation	Combination (kBtu/h)			Cooling										
				Each capacity (Btu/h)		Total capacity						Input (W)		
						Min		Rated		Max				
	Unit-A	Unit-B	Total	Unit-A	Unit-B	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 unit	7		7	7000	-	4600	1.5	7000	2.1	8400	2.5	380	630	757
	9		9	9000	-	5400	1.7	9000	2.6	10800	3.2	514	840	1028
	12		12	12000	-	7200	2.1	12000	3.5	14400	4.2	703	1150	1406
2 units	7	7	14	7000	7000	8400	2.5	14000	4.1	15500	4.5	784	1250	1450
	7	9	16	6125	7875	8400	2.5	14000	4.1	15800	4.6	784	1200	1420
	9	9	18	7000	7000	8400	2.5	14000	4.1	16000	4.7	784	1200	1420
	7	12	19	5158	8842	8400	2.5	14000	4.1	16000	4.7	784	1200	1420
	9	12	21	6000	8000	8400	2.5	14000	4.1	16000	4.7	784	1200	1420

Heating

Operation	Combination (kBtu/h)			Heating										
				Each capacity (Btu/h)		Total capacity						Input (W)		
						Min		Rated		Max				
	Unit-A	Unit-B	Total	Unit-A	Unit-B	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 unit	7	-	7	8400	-	5300	1.5	8400	2.5	9660	2.8	450	750	881
	9	-	9	10800	-	6480	1.7	10800	3.2	12420	3.6	541	870	1037
	12	-	12	13200	-	7920	2.3	13200	3.9	14400	4.2	757	1300	1400
2 units	7	7	14	8000	8000	9600	2.8	16000	4.7	17400	5.1	744	1250	1300
	7	9	16	7000	9000	9600	2.8	16000	4.7	17500	5.1	730	1220	1262
	9	9	18	8000	8000	9600	2.8	16000	4.7	17800	5.2	730	1220	1262
	7	12	19	5895	10105	9600	2.8	16000	4.7	17600	5.2	730	1220	1262
	9	12	21	6857	9143	9600	2.8	16000	4.7	18000	5.3	730	1220	1262

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 21kBtu/h
4. At least two indoor units should be connected.

Models : A2UW166FA0 [FM17AH UL0], A2UW166FA1 [FM17AH UL1]

Cooling

Operation	Combination (kBtu/h)			Cooling										
				Each capacity (Btu/h)		Total capacity						Input (W)		
						Min		Rated		Max				
	Unit-A	Unit-B	Total	Unit-A	Unit-B	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 unit	7		7	7000	-	4600	1.5	7000	2.1	8400	2.5	380	630	757
	9		9	9000	-	5400	1.7	9000	2.6	10800	3.2	514	840	1028
	12		12	12000	-	7200	2.1	12000	3.5	14400	4.2	703	1150	1406
2 units	7	7	14	7000	7000	8400	2.5	14000	4.1	16800	4.9	784	1250	1450
	7	9	16	7000	9000	9600	2.8	16000	4.7	17500	5.1	784	1380	1500
	9	9	18	8000	8000	9600	2.8	16000	4.7	18000	5.3	784	1380	1500
	7	12	19	5894	10105	9600	2.8	16000	4.7	18000	5.3	784	1380	1500
	9	12	21	6857	9143	9600	2.8	16000	4.7	18000	5.3	784	1380	1500
	12	12	24	8000	8000	9600	2.8	16000	4.7	18000	5.3	784	1380	1500

Heating

Operation	Combination (kBtu/h)			Heating										
				Each capacity (Btu/h)		Total capacity						Input (W)		
						Min		Rated		Max				
	Unit-A	Unit-B	Total	Unit-A	Unit-B	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 unit	7		7	8400	-	5300	1.5	8400	2.5	9660	2.8	450	750	881
	9		9	10800	-	6480	1.7	10800	3.2	12420	3.6	541	870	1037
	12		12	13200	-	7920	2.3	13200	3.9	14400	4.2	757	1300	1400
2 units	7	7	14	8000	8000	9600	2.8	16000	4.7	17400	5.1	744	1250	1300
	7	9	16	7875	10125	9600	2.8	18000	5.3	19500	5.7	730	1400	1500
	9	9	18	9000	9000	9600	2.8	18000	5.3	19500	5.7	730	1400	1500
	7	12	19	6631	11368	9600	2.8	18000	5.3	19500	5.7	730	1400	1500
	9	12	21	7714	10286	9600	2.8	18000	5.3	19500	5.7	730	1400	1500
	12	12	24	9000	9000	9600	2.8	18000	5.3	19500	5.7	730	1400	1500

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 24kBtu/h
4. At least two indoor units should be connected.

Models : A3UW186FA0[FM19AH UE0]

Cooling

Operation	Combination (kBtu/h)				Cooling											
					Each capacity (Btu/h)			Total capacity						Input (W)		
								Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Total	Unit-A	Unit-B	Unit-C	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7			7	7000	-	-	4600	1.3	7000	2.1	8400	2.5	480	690	866
	9			9	9000	-	-	5400	1.6	9000	2.6	10800	3.2	541	874	1082
	12			12	12000	-	-	7200	2.1	12000	3.5	14400	4.2	690	1149	1465
	18			18	18000	-	-	10800	3.2	18000	5.3	21600	6.3	924	1685	2370
2 UNIT	7	7		14	7000	7000	-	8400	2.5	14000	4.1	16800	4.9	811	1333	1668
	7	9		16	7000	9000	-	9600	2.8	16000	4.7	19200	5.6	906	1516	1984
	9	9		18	9000	9000	-	10800	3.2	18000	5.3	21600	6.3	924	1685	2370
	7	12		19	6632	11368	-	10800	3.2	18000	5.3	21600	6.3	924	1685	2370
	9	12		21	7714	10286	-	10800	3.2	18000	5.3	21600	6.3	924	1685	2370
	12	12		24	9000	9000	-	10800	3.2	18000	5.3	21600	6.3	924	1685	2370
	7	18		25	5040	12960	-	10800	3.2	18000	5.3	21600	6.3	924	1685	2370
	9	18		27	6000	12000	-	10800	3.2	18000	5.3	21600	6.3	924	1685	2370
	12	18		30	7200	10800	-	10800	3.2	18000	5.3	21600	6.3	924	1685	2370
3 UNIT	7	7	7	21	6000	6000	6000	10800	3.2	18000	5.3	21600	6.3	947	1580	2350
	7	7	9	23	5478	5478	7043	10800	3.2	18000	5.3	21600	6.3	947	1580	2350
	7	9	9	25	5040	6480	6480	10800	3.2	18000	5.3	21600	6.3	947	1580	2350
	7	7	12	26	4846	4846	8308	10800	3.2	18000	5.3	21600	6.3	947	1580	2350
	9	9	9	27	6000	6000	6000	10800	3.2	18000	5.3	21600	6.3	947	1580	2350
	7	9	12	28	4500	5786	7714	10800	3.2	18000	5.3	21600	6.3	947	1580	2350
	9	9	12	30	5400	5400	7200	10800	3.2	18000	5.3	21600	6.3	947	1580	2350

Heating

Operation	Combination (kBtu/h)				Heating											
					Each capacity (Btu/h)			Total capacity						Input (W)		
								Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Total	Unit-A	Unit-B	Unit-C	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7			7	8400	-	-	4800	1.4	8400	2.5	9660	2.8	630	1030	1271
	9			9	10800	-	-	6480	1.9	10800	3.2	12420	3.6	771	1265	1542
	12			12	13200	-	-	7920	2.3	13200	3.9	15180	4.4	866	1437	1731
	18			18	21600	-	-	12960	3.8	21600	6.3	24840	7.3	1150	1884	2370
2 UNIT	7	7		14	8400	8400	-	10080	3.0	16800	4.9	19320	5.7	933	1551	1866
	7	9		16	8400	10800	-	11520	3.4	19200	5.6	22080	6.5	1001	1666	2029
	9	9		18	10800	10800	-	12960	3.8	21600	6.3	24840	7.3	1150	1884	2370
	7	12		19	7957	13643	-	12960	3.8	21600	6.3	24840	7.3	1150	1884	2370
	9	12		21	9257	12343	-	12960	3.8	21600	6.3	24840	7.3	1150	1884	2370
	12	12		24	10800	10800	-	12960	3.8	21600	6.3	24840	7.3	1150	1884	2370
	7	18		25	6048	15552	-	12960	3.8	21600	6.3	24840	7.3	1150	1884	2370
	9	18		27	7200	14400	-	12960	3.8	21600	6.3	24840	7.3	1150	1884	2370
	12	18		30	8640	12960	-	12960	3.8	21600	6.3	24840	7.3	1150	1884	2370
3 UNIT	7	7	7	21	7200	7200	7200	12960	3.8	21600	6.3	24840	7.3	1095	1800	2320
	7	7	9	23	6574	6574	8452	12960	3.8	21600	6.3	24840	7.3	1095	1800	2320
	7	9	9	25	6048	7776	7776	12960	3.8	21600	6.3	24840	7.3	1095	1800	2320
	7	7	12	26	5815	5815	9969	12960	3.8	21600	6.3	24840	7.3	1095	1800	2320
	9	9	9	27	7200	7200	7200	12960	3.8	21600	6.3	24840	7.3	1095	1800	2320
	7	9	12	28	5400	6943	9257	12960	3.8	21600	6.3	24840	7.3	1095	1800	2320
	9	9	12	30	6480	6480	8640	12960	3.8	21600	6.3	24840	7.3	1095	1800	2320

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 30kBtu/h
4. At least two indoor units should be connected.

Models : A3UW216FA3 [FM21AH UE3]

Cooling

Operation	Combination (kBtu/h)				Cooling											
					Each capacity (Btu/h)			Total capacity						Input (W)		
								Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Total	Unit-A	Unit-B	Unit-C	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7	-	-	7	7,000	-	-	6,300	1.85	7,000	2.05	8,400	2.46	720	740	800
	9	-	-	9	9,000	-	-	6,300	1.85	9,000	2.64	10,800	3.16	720	860	1,000
	12	-	-	12	12,000	-	-	7,200	2.11	12,000	3.52	14,400	4.22	780	1,110	1,290
	18	-	-	18	18,000	-	-	10,800	3.16	18,000	5.27	21,600	6.33	950	1,360	1,580
2 UNIT	7	7	-	14	7,000	7,000	-	8,400	2.46	14,000	4.10	16,800	4.92	690	1,100	1,420
	7	9	-	16	7,000	9,000	-	9,600	2.81	16,000	4.69	19,200	5.63	850	1,220	1,650
	9	9	-	18	9,000	9,000	-	10,800	3.16	18,000	5.27	21,600	6.33	1,020	1,450	2,080
	7	12	-	19	7,000	12,000	-	11,400	3.34	19,000	5.57	22,800	6.68	1,140	1,630	2,330
	9	12	-	21	9,000	12,000	-	12,600	3.69	21,000	6.15	25,000	7.33	1,140	1,800	2,330
	12	12	-	24	10,500	10,500	-	12,600	3.69	21,000	6.15	25,000	7.33	1,140	1,800	2,330
	7	18	-	25	5,880	15,120	-	12,600	3.69	21,000	6.15	25,000	7.33	1,140	1,800	2,330
	9	18	-	27	7,000	14,000	-	12,600	3.69	21,000	6.15	25,000	7.33	1,140	1,800	2,330
	12	18	-	30	8,400	12,600	-	12,600	3.69	21,000	6.15	25,000	7.33	1,140	1,800	2,330
3 UNIT	7	7	7	21	7,000	7,000	7,000	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	7	7	9	23	6,391	6,391	8,217	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	7	9	9	25	5,880	7,560	7,560	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	7	7	12	26	5,654	5,654	9,692	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	9	9	9	27	7,000	7,000	7,000	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	7	9	12	28	5,250	6,750	9,000	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	9	9	12	30	6,300	6,300	8,400	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	7	12	12	31	4,742	8,129	8,129	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	7	7	18	32	4,594	4,594	11,813	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250
	9	12	12	33	5,727	7,636	7,636	12,600	3.69	21,000	6.15	25,000	7.33	1,120	1,750	2,250

Heating

Operation	Combination (kBtu/h)				Heating											
					Each capacity (Btu/h)			Total capacity						Input (W)		
								Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Total	Unit-A	Unit-B	Unit-C	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7	-	-	7	8,400	-	-	7,560	2.22	8,400	2.46	9,240	2.71	888	1,040	1,120
	9	-	-	9	10,800	-	-	7,560	2.22	10,800	3.16	11,880	3.48	888	1,230	1,330
	12	-	-	12	13,200	-	-	7,920	2.32	13,200	3.87	14,520	4.25	1,000	1,430	1,540
	18	-	-	18	21,600	-	-	12,960	3.80	21,600	6.33	23,760	6.96	1,130	1,620	1,750
2 UNIT	7	7	-	14	8,400	8,400	-	10,080	2.95	16,800	4.92	18,480	5.42	1,020	1,460	1,680
	7	9	-	16	8,400	10,800	-	11,520	3.38	19,200	5.63	21,120	6.19	1,100	1,570	1,810
	9	9	-	18	10,800	10,800	-	12,960	3.80	21,600	6.33	23,760	6.96	1,180	1,680	1,940
	7	12	-	19	8,400	14,400	-	13,680	4.01	22,800	6.68	25,080	7.35	1,250	1,790	2,070
	9	12	-	21	10,286	13,714	-	14,400	4.22	24,000	7.03	26,500	7.77	1,370	1,960	2,260
	12	12	-	24	12,000	12,000	-	14,400	4.22	24,000	7.03	26,500	7.77	1,370	1,960	2,260
	7	18	-	25	6,720	17,280	-	14,400	4.22	24,000	7.03	26,500	7.77	1,370	1,960	2,260
	9	18	-	27	8,000	16,000	-	14,400	4.22	24,000	7.03	26,500	7.77	1,370	1,940	2,260
	12	18	-	30	9,600	14,400	-	14,400	4.22	24,000	7.03	26,500	7.77	1,370	1,930	2,260
3 UNIT	7	7	7	21	8,000	8,000	8,000	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	7	7	9	23	7,304	7,304	9,391	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	7	9	9	25	6,720	8,640	8,640	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	7	7	12	26	6,462	6,462	11,077	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	9	9	9	27	8,000	8,000	8,000	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	7	9	12	28	6,000	7,714	10,286	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	9	9	12	30	7,200	7,200	9,600	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	7	12	12	31	5,419	9,290	9,290	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	7	7	18	32	5,250	5,250	13,500	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250
	9	12	12	33	6,545	8,727	8,727	14,400	4.22	24,000	7.03	26,500	7.77	1,320	1,880	2,250

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 33kBtu/h
4. At least two indoor units should be connected.

Models : A4UW246FA3 [FM25AH UE3]

Cooling

Operation	Combination (kBtu/h)					Cooling												
						Each capacity (Btu/h)				Total capacity						Input (W)		
										Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Total	Unit-A	Unit-B	Unit-C	Unit-D	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7				7	7,000	-	-	-	6,300	1.9	7,000	2.1	7,700	2.3	720	740	760
	9				9	9,000	-	-	-	6,300	1.9	9,000	2.6	9,900	2.9	720	780	850
	12				12	12,000	-	-	-	7,200	2.1	12,000	3.5	13,200	3.9	672	1,120	1,340
	18				18	18,000	-	-	-	10,800	3.2	18,000	5.3	19,800	5.8	1,002	1,670	1,750
	24				24	24,000	-	-	-	14,400	4.2	24,000	7.1	25,500	7.5	1,230	2,050	2,750
2 UNIT	7	7			14	7,000	7,000	-	-	8,400	2.5	14,000	4.1	15,400	4.5	756	1,260	1,390
	7	9			16	7,000	9,000	-	-	9,600	2.8	16,000	4.7	17,600	5.2	876	1,460	1,550
	9	9			18	9,000	9,000	-	-	10,800	3.2	18,000	5.3	19,800	5.8	1,002	1,670	1,750
	7	12			19	7,000	12,000	-	-	11,400	3.4	19,000	5.6	20,900	6.1	1,008	1,680	1,820
	9	12			21	9,000	12,000	-	-	12,600	3.7	21,000	6.2	23,100	6.8	1,044	1,740	1,940
	12	12			24	11,500	11,500	-	-	13,800	4.1	23,000	6.8	25,500	7.5	1,194	1,990	2,380
	7	18			25	6,720	17,280	-	-	14,400	4.2	24,000	7.1	26,500	7.8	1,284	2,140	2,570
	9	18			27	8,000	16,000	-	-	14,400	4.2	24,000	7.1	27,500	8.1	1,284	2,140	2,680
	12	18			30	9,600	14,400	-	-	14,400	4.2	24,000	7.1	28,800	8.5	1,284	2,140	2,730
	7	24			31	5,419	18,581	-	-	14,400	4.2	24,000	7.1	29,000	8.5	1,284	2,140	2,730
	9	24			33	6,545	17,455	-	-	14,400	4.2	24,000	7.1	29,000	8.5	1,284	2,140	2,730
	18	18			36	12,000	12,000	-	-	14,400	4.2	24,000	7.1	29,000	8.5	1,284	2,140	2,730
	12	24			36	8,000	16,000	-	-	14,400	4.2	24,000	7.1	29,000	8.5	1,284	2,140	2,730
3 UNIT	7	7	7		21	7,000	7,000	7,000	-	12,600	3.7	21,000	6.2	23,100	6.8	1,044	1,740	1,940
	7	7	9		23	7,000	7,000	9,000	-	13,800	4.1	23,000	6.8	25,300	7.4	1,152	1,920	2,130
	7	9	9		25	6,720	8,640	8,640	-	14,400	4.2	24,000	7.1	26,500	7.8	1,200	2,000	2,570
	7	7	12		26	6,462	6,462	11,077	-	14,400	4.2	24,000	7.1	27,000	7.9	1,200	2,000	2,570
	9	9	9		27	8,000	8,000	8,000	-	14,400	4.2	24,000	7.1	27,500	8.1	1,200	2,000	2,680
	7	9	12		28	6,000	7,714	10,286	-	14,400	4.2	24,000	7.1	28,500	8.4	1,200	2,000	2,680
	9	9	12		30	7,200	7,200	9,600	-	14,400	4.2	24,000	7.1	29,000	8.5	1,200	2,000	2,680
	7	12	12		31	5,419	9,290	9,290	-	14,400	4.2	24,000	7.1	29,000	8.5	1,200	2,000	2,680
	7	7	18		32	5,250	5,250	13,500	-	14,400	4.2	24,000	7.1	29,000	8.5	1,230	2,050	2,750
	9	12	12		33	6,545	8,727	8,727	-	14,400	4.2	24,000	7.1	29,000	8.5	1,230	2,050	2,750
	7	9	18		34	4,941	6,353	12,706	-	14,400	4.2	24,000	7.1	29,000	8.5	1,230	2,050	2,750
	12	12	12		36	8,000	8,000	8,000	-	14,400	4.2	24,000	7.1	29,000	8.5	1,230	2,050	2,750
	9	9	18		36	6,000	6,000	12,000	-	14,400	4.2	24,000	7.1	29,000	8.5	1,230	2,050	2,750
	7	12	18		37	4,541	7,784	11,676	-	14,400	4.2	24,000	7.1	29,000	8.5	1,230	2,050	2,750
	7	7	24		38	4,421	4,421	15,158	-	14,400	4.2	24,000	7.1	29,000	8.5	1,230	2,050	2,750
	9	12	18		39	5,538	7,385	11,077	-	14,400	4.2	24,000	7.1	29,000	8.5	1,230	2,050	2,750
4 UNIT	7	7	7	7	28	6,000	6,000	6,000	6,000	14,400	4.2	24,000	7.1	28,500	8.4	1,194	1,990	2,730
	7	7	7	9	30	5,600	5,600	5,600	7,200	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	7	7	9	9	32	5,250	5,250	6,750	6,750	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	7	7	7	12	33	5,091	5,091	5,091	8,727	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	7	9	9	9	34	4,941	6,353	6,353	6,353	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	7	7	9	12	35	4,800	4,800	6,171	8,229	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	9	9	9	9	36	6,000	6,000	6,000	6,000	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	7	9	9	12	37	4,541	5,838	5,838	7,784	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	7	7	12	12	38	4,421	4,421	7,579	7,579	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	9	9	9	12	39	5,538	5,538	5,538	7,385	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730
	7	7	7	18	39	4,308	4,308	4,308	11,077	14,400	4.2	24,000	7.1	29,000	8.5	1,194	1,990	2,730

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 39kBtu/h
4. At least two indoor units should be connected.

Heating

Operation	Combination (kBtu/h)					Heating												
						Each capacity (Btu/h)				Total capacity						Input (W)		
										Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Total	Unit-A	Unit-B	Unit-C	Unit-D	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7				7	8,000	-	-	-	7,560	2.2	8,000	2.4	8,800	3.0	880	1,050	1,260
	9				9	10,000	-	-	-	7,560	2.2	10,000	2.9	10,900	3.2	880	1,050	1,260
	12				12	13,200	-	-	-	7,920	2.3	13,200	3.9	14,500	4.3	880	1,200	1,320
	18				18	19,800	-	-	-	11,880	3.5	19,800	5.8	21,800	6.4	1,200	2,000	2,370
	24				24	25,400	-	-	-	15,240	4.5	25,400	7.5	26,600	7.8	1,368	2,280	2,500
2 UNIT	7	7			14	8,400	8,400	-	-	10,080	3.0	16,800	4.9	18,500	5.4	918	1,530	1,470
	7	9			16	8,400	10,800	-	-	11,520	3.4	19,200	5.6	21,100	6.2	1,038	1,730	1,690
	9	9			18	10,800	10,800	-	-	12,960	3.8	21,600	6.4	23,700	7.0	1,200	2,000	2,200
	7	12			19	8,400	14,400	-	-	13,680	4.0	22,800	6.7	25,000	7.4	1,212	2,020	2,200
	9	12			21	10,800	14,400	-	-	15,120	4.4	25,200	7.4	27,700	8.1	1,260	2,100	2,260
	12	12			24	13,800	13,800	-	-	16,560	4.9	27,600	8.1	30,000	8.8	1,368	2,280	2,500
	7	18			25	7,784	20,016	-	-	16,680	4.9	27,800	8.2	30,000	8.8	1,428	2,380	2,740
	9	18			27	9,600	19,200	-	-	17,280	5.1	28,800	8.5	31,500	9.3	1,428	2,380	2,740
	12	18			30	11,520	17,280	-	-	17,280	5.1	28,800	8.5	32,000	9.4	1,428	2,380	2,740
	7	24			31	6,503	22,297	-	-	17,280	5.1	28,800	8.5	32,000	9.4	1,428	2,380	2,740
	9	24			33	7,855	20,945	-	-	17,280	5.1	28,800	8.5	32,000	9.4	1,428	2,380	2,740
	18	18			36	14,400	14,400	-	-	17,280	5.1	28,800	8.5	32,000	9.4	1,428	2,380	2,740
	12	24			36	9,600	19,200	-	-	17,280	5.1	28,800	8.5	32,000	9.4	1,428	2,380	2,740
3 UNIT	7	7	7		21	8,400	8,400	8,400	-	15,120	4.4	25,200	7.4	27,700	8.1	1,260	2,100	2,260
	7	7	9		23	8,400	8,400	10,800	-	16,560	4.9	27,600	8.1	30,000	8.8	1,278	2,130	2,430
	7	9	9		25	7,784	10,008	10,008	-	16,680	4.9	27,800	8.2	30,000	8.8	1,308	2,180	2,740
	7	7	12		26	7,754	7,754	13,292	-	17,280	5.1	28,800	8.5	31,500	9.3	1,308	2,180	2,740
	9	9	9		27	9,600	9,600	9,600	-	17,280	5.1	28,800	8.5	31,500	9.3	1,308	2,180	2,740
	7	9	12		28	7,200	9,257	12,343	-	17,280	5.1	28,800	8.5	31,500	9.3	1,308	2,180	2,740
	9	9	12		30	8,640	8,640	11,520	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,740
	7	12	12		31	6,503	11,148	11,148	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,740
	7	7	18		32	6,300	6,300	16,200	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,790
	9	12	12		33	7,855	10,473	10,473	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,790
	7	9	18		34	5,929	7,624	15,247	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,790
	12	12	12		36	9,600	9,600	9,600	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,790
	9	9	18		36	7,200	7,200	14,400	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,790
	7	12	18		37	5,449	9,341	14,011	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,790
	7	7	24		38	5,305	5,305	18,189	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,790
	9	12	18		39	6,646	8,862	13,292	-	17,280	5.1	28,800	8.5	32,000	9.4	1,308	2,180	2,790
4 UNIT	7	7	7	7	28	7,200	7,200	7,200	7,200	17,280	5.1	28,800	8.5	31,500	9.3	1,176	1,960	2,740
	7	7	7	9	30	6,720	6,720	6,720	8,640	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	7	7	9	9	32	6,300	6,300	8,100	8,100	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	7	7	7	12	33	6,109	6,109	6,109	10,473	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	7	9	9	9	34	5,929	7,624	7,624	7,624	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	7	7	9	12	35	5,760	5,760	7,406	9,874	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	9	9	9	9	36	7,200	7,200	7,200	7,200	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	7	9	9	12	37	5,449	7,005	7,005	9,341	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	7	7	12	12	38	5,305	5,305	9,095	9,095	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	9	9	9	12	39	6,646	6,646	6,646	8,862	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740
	7	7	7	18	39	5,169	5,169	5,169	13,292	17,280	5.1	28,800	8.5	32,000	9.4	1,176	1,960	2,740

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 39kBtu/h
4. At least two indoor units should be connected.

Models : A4UW276FA3 [FM27AH UE3]

Cooling

Operation	Combination (kBtu/h)						Cooling													
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7					7	7,000	-	-	-	-	6,300	1.9	7,000	2.1	7,700	2.3	720	740	1,001
	9					9	9,000	-	-	-	-	6,300	1.9	9,000	2.6	9,900	2.9	720	834	1,285
	12					12	12,000	-	-	-	-	7,200	2.1	12,000	3.5	13,200	3.9	774	1,106	1,703
	18					18	18,000	-	-	-	-	10,800	3.2	18,000	5.3	19,800	5.8	1,209	1,727	2,659
	24					24	24,000	-	-	-	-	14,400	4.2	24,000	7.1	25,500	7.5	1,446	2,066	3,182
2 UNIT	7	7				14	7,000	7,000	-	-	-	8,400	2.5	14,000	4.1	16,100	4.7	834	1,232	1,897
	7	9				16	7,000	9,000	-	-	-	9,600	2.8	16,000	4.7	18,400	5.4	1,094	1,368	2,106
	9	9				18	9,000	9,000	-	-	-	10,800	3.2	18,000	5.3	20,700	6.1	1,265	1,581	2,435
	7	12				19	7,000	12,000	-	-	-	11,400	3.4	19,000	5.6	20,900	6.1	1,311	1,639	2,525
	9	12				21	9,000	12,000	-	-	-	12,600	3.7	21,000	6.2	23,100	6.8	1,490	1,862	2,868
	12	12				24	12,000	12,000	-	-	-	14,400	4.2	24,000	7.1	26,400	7.8	1,575	1,969	3,032
	7	18				25	7,000	18,000	-	-	-	15,000	4.4	25,000	7.4	27,500	8.1	1,699	2,400	3,271
	9	18				27	8,333	16,667	-	-	-	15,000	4.4	25,000	7.4	27,500	8.1	1,738	2,450	3,346
	12	18				30	10,800	16,200	-	-	-	16,200	4.8	27,000	7.9	29,700	8.7	1,738	2,500	3,346
	7	24				31	5,645	19,355	-	-	-	15,000	4.4	25,000	7.4	27,500	8.1	1,738	2,500	3,346
	9	24				33	6,818	18,182	-	-	-	15,000	4.4	25,000	7.4	27,500	8.1	1,738	2,500	3,346
	18	18				36	13,500	13,500	-	-	-	16,200	4.8	27,000	7.9	29,700	8.7	1,738	2,500	3,346
	12	24				36	9,000	18,000	-	-	-	16,200	4.8	27,000	7.9	29,700	8.7	1,738	2,500	3,346
3 UNIT	7	7	7			21	7,000	7,000	7,000	-	-	12,600	3.7	21,000	6.2	24,150	7.1	1,490	1,862	2,868
	7	7	9			23	7,000	7,000	9,000	-	-	13,800	4.1	23,000	6.8	26,450	7.8	1,575	1,969	3,032
	7	9	9			25	7,000	9,000	9,000	-	-	15,000	4.4	25,000	7.4	28,750	8.5	1,630	2,037	3,137
	7	7	12			26	7,000	7,000	12,000	-	-	15,600	4.6	26,000	7.6	29,900	8.8	1,661	2,076	3,197
	9	9	9			27	9,000	9,000	9,000	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	7	9	12			28	6,750	8,679	11,571	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	9	9	12			30	8,100	8,100	10,800	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	7	12	12			31	6,097	10,452	10,452	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	7	7	18			32	5,906	5,906	15,188	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	9	12	12			33	7,364	9,818	9,818	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	7	9	18			34	5,559	7,147	14,294	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	12	12	12			36	9,000	9,000	9,000	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	9	9	18			36	6,750	6,750	13,500	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	7	12	18			37	5,108	8,757	13,135	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	7	7	24			38	4,974	4,974	17,053	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	9	12	18			39	6,231	8,308	12,462	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
	7	9	24			40	4,725	6,075	16,200	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,661	2,076	3,197
4 UNIT	7	7	7	7		28	6,750	6,750	6,750	6,750	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	7	7	9		30	6,300	6,300	6,300	8,100	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	7	9	9		32	5,906	5,906	7,594	7,594	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	7	7	12		33	5,727	5,727	5,727	9,818	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	9	9	9		34	5,559	7,147	7,147	7,147	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	7	9	12		35	5,400	5,400	6,943	9,257	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	9	9	9	9		36	6,750	6,750	6,750	6,750	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	9	9	12		37	5,108	6,568	6,568	8,757	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	7	12	12		38	4,974	4,974	8,526	8,526	-	16,200	4.8	27,000	7.9	31,050	9.1	1,630	2,037	3,137
	9	9	9	12		39	6,231	6,231	6,231	8,308	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	7	7	18		39	4,846	4,846	4,846	12,462	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137
	7	9	12	12		40	4,725	6,075	8,100	8,100	-	16,200	4.8	27,000	7.9	31,050	9.1	1,630	2,037	3,137
	7	7	9	18		41	4,610	4,610	5,927	11,854	-	16,200	4.8	27,000	7.9	32,400	9.5	1,630	2,037	3,137

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 41kBtu/h
4. At least two indoor units should be connected.

Heating

Operation	Combination (kBtu/h)						Heating												
							Each capacity (Btu/h)					Total capacity						Input (W)	
												Min		Rated		Max			
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7					7	8,000	-	-	-	-	7,560	2.2	8,000	2.4	8,800	2.6	880	900	1,170
	9					9	10,000	-	-	-	-	7,560	2.2	10,000	2.9	11,000	3.2	978	1,222	1,638
	12					12	13,200	-	-	-	-	7,920	2.3	13,200	3.9	14,520	4.3	1,273	1,591	2,132
	18					18	19,800	-	-	-	-	11,880	3.5	19,800	5.8	21,780	6.4	1,606	2,008	2,691
	24					24	25,400	-	-	-	-	15,240	4.5	25,400	7.5	26,600	7.8	1,746	2,183	2,925
2 UNIT	7	7				14	9,600	9,600	-	-	-	11,520	3.4	19,200	5.6	22,080	6.5	1,249	1,562	2,093
	7	9				16	9,450	12,150	-	-	-	12,960	3.8	21,600	6.4	24,840	7.3	1,366	1,707	2,288
	9	9				18	11,400	11,400	-	-	-	13,680	4.0	22,800	6.7	26,220	7.7	1,606	2,008	2,691
	7	12				19	9,284	15,916	-	-	-	15,120	4.4	25,200	7.4	27,720	8.1	1,653	2,066	2,769
	9	12				21	12,343	16,457	-	-	-	17,280	5.1	28,800	8.5	31,680	9.3	1,699	2,124	2,847
	12	12				24	15,000	15,000	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,746	2,183	2,925
	7	18				25	8,400	21,600	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,855	2,330	3,107
	9	18				27	10,333	20,667	-	-	-	18,600	5.5	31,000	9.1	34,100	10.0	1,855	2,512	3,107
	12	18				30	12,400	18,600	-	-	-	18,600	5.5	31,000	9.1	34,100	10.0	1,855	2,500	3,107
	7	24				31	7,000	24,000	-	-	-	18,600	5.5	31,000	9.1	34,100	10.0	1,855	2,555	3,107
	9	24				33	8,455	22,545	-	-	-	18,600	5.5	31,000	9.1	34,100	10.0	1,855	2,555	3,107
	18	18				36	15,500	15,500	-	-	-	18,600	5.5	31,000	9.1	34,100	10.0	1,855	2,450	3,107
	12	24				36	10,333	20,667	-	-	-	18,600	5.5	31,000	9.1	34,100	10.0	1,855	2,450	3,107
3 UNIT	7	7	7			21	9,200	9,200	9,200	-	-	16,560	4.9	27,600	8.1	30,912	9.1	1,513	1,892	2,535
	7	7	9			23	9,130	9,130	11,739	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,591	1,989	2,665
	7	9	9			25	8,736	11,232	11,232	-	-	18,720	5.5	31,200	9.2	34,944	10.3	1,645	2,056	2,756
	7	7	12			26	8,346	8,346	14,308	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	9	9	9			27	10,333	10,333	10,333	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	7	9	12			28	7,750	9,964	13,286	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	9	9	12			30	9,300	9,300	12,400	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	7	12	12			31	7,000	12,000	12,000	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	7	7	18			32	6,781	6,781	17,438	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	9	12	12			33	8,455	11,273	11,273	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	7	9	18			34	6,382	8,206	16,412	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	12	12	12			36	10,333	10,333	10,333	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	9	9	18			36	7,750	7,750	15,500	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	7	12	18			37	5,865	10,054	15,081	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	7	7	24			38	5,711	5,711	19,579	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	9	12	18			39	7,154	9,538	14,308	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
	7	9	24			40	5,425	6,975	18,600	-	-	18,600	5.5	31,000	9.1	34,720	10.2	1,668	2,086	2,795
4 UNIT	7	7	7	7		28	7,750	7,750	7,750	7,750	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	7	7	9		30	7,233	7,233	7,233	9,300	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	7	9	9		32	6,781	6,781	8,719	8,719	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	7	7	12		33	6,576	6,576	6,576	11,273	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	9	9	9		34	6,382	8,206	8,206	8,206	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	7	9	12		35	6,200	6,200	7,971	10,629	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	9	9	9	9		36	7,750	7,750	7,750	7,750	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	9	9	12		37	5,865	7,541	7,541	10,054	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	7	12	12		38	5,711	5,711	9,789	9,789	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	9	9	9	12		39	7,154	7,154	7,154	9,538	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	7	7	18		39	5,564	5,564	5,564	14,308	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	9	12	12		40	5,425	6,975	9,300	9,300	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,825
	7	7	9	18		41	5,293	5,293	6,805	13,610	-	18,600	5.5	31,000	9.1	36,000	10.6	1,552	1,960	2,835

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 41kBtu/h
4. At least two indoor units should be connected.

Models : A5UW306FA3 [FM30AH UE3]

Cooling

Operation	Combination (kBtu/h)						Cooling													
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7					7	7,000	-	-	-	-	6,300	1.9	7,000	2.1	7,700	2.3	720	740	1,077
	9					9	9,000	-	-	-	-	6,300	1.9	9,000	2.6	9,900	2.9	720	834	1,165
	12					12	12,000	-	-	-	-	7,200	2.1	12,000	3.5	13,200	3.9	774	1,106	1,510
	18					18	18,000	-	-	-	-	10,800	3.2	18,000	5.3	19,800	5.8	1,209	1,727	2,528
	24					24	24,000	-	-	-	-	14,400	4.2	24,000	7.1	25,500	7.5	1,650	2,357	3,347
2 UNIT	7	7				14	7,000	7,000	-	-	-	8,400	2.5	14,000	4.1	16,100	4.7	834	1,232	1,678
	7	9				16	7,000	9,000	-	-	-	9,600	2.8	16,000	4.7	18,400	5.4	1,094	1,368	2,106
	9	9				18	9,000	9,000	-	-	-	10,800	3.2	18,000	5.3	20,700	6.1	1,265	1,581	2,435
	7	12				19	7,000	12,000	-	-	-	11,400	3.4	19,000	5.6	20,900	6.1	1,311	1,639	2,525
	9	12				21	9,000	12,000	-	-	-	12,600	3.7	21,000	6.2	23,100	6.8	1,490	1,862	2,868
	12	12				24	12,000	12,000	-	-	-	14,400	4.2	24,000	7.1	26,400	7.8	1,653	2,066	3,182
	7	18				25	7,000	18,000	-	-	-	15,000	4.4	25,000	7.4	28,750	8.5	1,746	2,183	3,361
	9	18				27	9,000	18,000	-	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,893	2,367	3,645
	12	18				30	12,000	18,000	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,979	2,474	3,809
	7	24				31	6,774	23,226	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,979	2,474	3,834
	9	24				33	8,182	21,818	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,979	2,474	3,834
	18	18				36	15,000	15,000	-	-	-	18,000	5.3	30,000	8.8	34,500	10.1	1,979	2,474	3,834
	12	24				36	10,000	20,000	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,979	2,474	3,834
	18	24				42	12,857	17,143	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,979	2,474	3,834
	24	24				48	15,000	15,000	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	1,979	2,474	3,834
3 UNIT	7	7	7			21	7,000	7,000	7,000	-	-	12,600	3.7	21,000	6.2	24,150	7.1	1,490	1,862	2,872
	7	7	9			23	7,000	7,000	9,000	-	-	13,800	4.1	23,000	6.8	26,450	7.8	1,575	1,969	3,288
	7	9	9			25	7,000	9,000	9,000	-	-	15,000	4.4	25,000	7.4	28,750	8.5	1,746	2,183	3,557
	7	7	12			26	7,000	7,000	12,000	-	-	15,600	4.6	26,000	7.6	29,900	8.8	1,800	2,250	3,601
	9	9	9			27	9,000	9,000	9,000	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,893	2,367	3,787
	7	9	12			28	7,000	9,000	12,000	-	-	16,800	4.9	28,000	8.2	32,200	9.5	1,909	2,386	3,818
	9	9	12			30	9,000	9,000	12,000	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	7	12	12			31	6,774	11,613	11,613	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	7	7	18			32	6,563	6,563	16,875	-	-	18,000	5.3	30,000	8.8	34,500	10.1	1,948	2,435	3,896
	9	12	12			33	8,182	10,909	10,909	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	7	9	18			34	6,176	7,941	15,882	-	-	18,000	5.3	30,000	8.8	34,500	10.1	1,948	2,435	3,896
	12	12	12			36	10,000	10,000	10,000	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	9	9	18			36	7,500	7,500	15,000	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	7	12	18			37	5,676	9,730	14,595	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	7	7	24			38	5,526	5,526	18,947	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	9	12	18			39	6,923	9,231	13,846	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	7	9	24			40	5,250	6,750	18,000	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	12	12	18			42	8,571	8,571	12,857	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	9	9	24			42	6,429	6,429	17,143	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	7	18	18			43	4,884	12,558	12,558	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	7	12	24			43	4,884	8,372	16,744	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	9	18	18			45	6,000	12,000	12,000	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	9	12	24			45	6,000	8,000	16,000	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	12	18	18			48	7,500	11,250	11,250	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
	12	12	24			48	7,500	7,500	15,000	-	-	18,000	5.3	30,000	8.8	33,600	9.9	1,948	2,435	3,896
4 UNIT	7	7	7	7		28	7,000	7,000	7,000	7,000	-	16,800	4.9	28,000	8.2	33,600	9.9	1,948	2,435	3,870
	7	7	7	9		30	7,000	7,000	7,000	9,000	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	7	9	9		32	6,563	6,563	8,438	8,438	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	7	7	12		33	6,364	6,364	6,364	10,909	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	9	9	9		34	6,176	7,941	7,941	7,941	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	7	9	12		35	6,000	6,000	7,714	10,286	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	9	9	9	9		36	7,500	7,500	7,500	7,500	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	9	9	12		37	5,676	7,297	7,297	9,730	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	7	12	12		38	5,526	5,526	9,474	9,474	-	18,000	5.3	30,000	8.8	34,500	10.1	1,948	2,435	3,749
	9	9	9	12		39	6,923	6,923	6,923	9,231	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	7	7	18		39	5,385	5,385	5,385	13,846	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	9	12	12		40	5,250	6,750	9,000	9,000	-	18,000	5.3	30,000	8.8	34,500	10.1	1,948	2,435	3,749
	7	7	9	18		41	5,122	5,122	6,585	13,171	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	9	9	12	12		42	6,429	6,429	8,571	8,571	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	12	12	12		43	4,884	8,372	8,372	8,372	-	18,000	5.3	30,000	8.8	34,500	10.1	1,948	2,435	3,749
	7	9	9	18		43	4,884	6,279	6,279	12,558	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	7	12	18		44	4,773	4,773	8,182	12,273	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749

Operation	Combination (kBtu/h)						Cooling													
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
4 UNIT	9	12	12	12		45	6,000	8,000	8,000	8,000	-	18,000	5.3	30,000	8.8	34,500	10.1	1,948	2,435	3,749
	9	9	9	18		45	6,000	6,000	6,000	12,000	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	7	7	24		45	4,667	4,667	4,667	16,000	-	18,000	5.3	30,000	8.8	34,500	10.1	1,948	2,435	3,749
	7	9	12	18		46	4,565	5,870	7,826	11,739	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	7	7	9	24		47	4,468	4,468	5,745	15,319	-	18,000	5.3	30,000	8.8	34,500	10.1	1,948	2,435	3,749
	12	12	12	12		48	7,500	7,500	7,500	7,500	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
	9	9	12	18		48	5,625	5,625	7,500	11,250	-	18,000	5.3	30,000	8.8	36,000	10.6	1,948	2,435	3,749
5 UNIT	7	7	7	7	7	35	6,000	6,000	6,000	6,000	6,000	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	7	7	9	37	5,676	5,676	5,676	5,676	7,297	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	7	9	9	39	5,385	5,385	5,385	6,923	6,923	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	7	7	12	40	5,250	5,250	5,250	5,250	9,000	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	9	9	9	41	5,122	5,122	6,585	6,585	6,585	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	7	9	12	42	5,000	5,000	5,000	6,429	8,571	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	9	9	9	9	43	4,884	6,279	6,279	6,279	6,279	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	9	9	12	44	4,773	4,773	6,136	6,136	8,182	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	9	9	9	9	9	45	6,000	6,000	6,000	6,000	6,000	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	9	9	9	12	46	4,565	5,870	5,870	5,870	7,826	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	9	9	9	9	12	48	5,625	5,625	5,625	5,625	7,500	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	7	12	12	45	4,667	4,667	4,667	8,000	8,000	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	7	7	18	46	4,565	4,565	4,565	4,565	11,739	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	9	12	12	47	4,468	4,468	5,745	7,660	7,660	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961
	7	7	7	9	18	48	4,375	4,375	4,375	5,625	11,250	18,000	5.3	30,000	8.8	36,000	10.6	1,909	2,386	3,961

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 48kBtu/h
4. At least two indoor units should be connected.

Heating

Operation	Combination (kBtu/h)						Heating													
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7					7	8,000	-	-	-	-	7,560	2.2	8,000	2.4	8,800	2.6	880	900	1,440
	9					9	10,000	-	-	-	-	7,560	2.2	10,000	2.9	11,000	3.2	978	1,222	2,004
	12					12	13,200	-	-	-	-	7,920	2.3	13,200	3.9	14,520	4.3	1,273	1,591	2,609
	18					18	19,800	-	-	-	-	11,880	3.5	19,800	5.8	21,780	6.4	1,901	2,377	3,327
	24					24	25,400	-	-	-	-	15,240	4.5	25,400	7.5	26,600	7.8	2,569	3,211	4,026
2 UNIT	7	7				14	9,600	9,600	-	-	-	11,520	3.4	19,200	5.6	22,080	6.5	1,249	1,562	2,349
	7	9				16	9,450	12,150	-	-	-	12,960	3.8	21,600	6.4	24,840	7.3	1,366	1,707	2,677
	9	9				18	11,400	11,400	-	-	-	13,680	4.0	22,800	6.7	26,220	7.7	1,606	2,008	3,065
	7	12				19	9,284	15,916	-	-	-	15,120	4.4	25,200	7.4	27,720	8.1	1,886	2,357	3,337
	9	12				21	12,343	16,457	-	-	-	17,280	5.1	28,800	8.5	31,680	9.3	2,320	2,900	3,647
	12	12				24	15,000	15,000	-	-	-	18,000	5.3	30,000	8.8	33,000	9.7	2,522	3,153	3,919
	7	18				25	9,072	23,328	-	-	-	19,440	5.7	32,400	9.5	37,260	11.0	2,631	3,288	4,035
	9	18				27	12,000	24,000	-	-	-	21,600	6.4	36,000	10.6	41,400	12.2	2,770	3,463	4,093
	12	18				30	13,800	20,700	-	-	-	20,700	6.1	34,500	10.1	37,950	11.2	2,957	3,696	4,132
	7	24				31	7,790	26,710	-	-	-	20,700	6.1	34,500	10.1	37,950	11.2	2,957	3,696	4,132
	9	24				33	9,409	25,091	-	-	-	20,700	6.1	34,500	10.1	37,950	11.2	2,957	3,696	4,132
	18	18				36	17,250	17,250	-	-	-	20,700	6.1	34,500	10.1	39,675	11.7	2,910	3,638	4,074
	12	24				36	11,500	23,000	-	-	-	20,700	6.1	34,500	10.1	37,950	11.2	2,910	3,638	4,074
	18	24				42	14,786	19,714	-	-	-	20,700	6.1	34,500	10.1	37,950	11.2	2,910	3,638	4,074
	24	24				48	12,075	12,075	-	-	-	14,490	4.3	24,150	7.1	26,565	7.8	2,910	3,638	4,074
3 UNIT	7	7	7			21	9,200	9,200	9,200	-	-	16,560	4.9	27,600	8.1	31,740	9.3	1,599	1,998	3,247
	7	7	9			23	9,130	9,130	11,739	-	-	18,000	5.3	30,000	8.8	34,500	10.1	1,754	2,192	3,398
	7	9	9			25	8,736	11,232	11,232	-	-	18,720	5.5	31,200	9.2	35,880	10.5	1,979	2,474	3,638
	7	7	12			26	8,723	8,723	14,954	-	-	19,440	5.7	32,400	9.5	37,260	11.0	2,103	2,629	3,744
	9	9	9			27	11,200	11,200	11,200	-	-	20,160	5.9	33,600	9.9	38,640	11.4	2,243	2,803	3,870
	7	9	12			28	8,275	10,639	14,186	-	-	19,860	5.8	33,100	9.7	38,065	11.2	2,359	2,949	3,958
	9	9	12			30	10,350	10,350	13,800	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,103
	7	12	12			31	7,790	13,355	13,355	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,064
	7	7	18			32	7,547	7,547	19,406	-	-	20,700	6.1	34,500	10.1	39,675	11.7	2,491	3,114	4,064
	9	12	12			33	9,409	12,545	12,545	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,055
	7	9	18			34	7,103	9,132	18,265	-	-	20,700	6.1	34,500	10.1	39,675	11.7	2,491	3,114	4,035
	12	12	12			36	11,500	11,500	11,500	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	9	9	18			36	8,625	8,625	17,250	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	7	12	18			37	6,527	11,189	16,784	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	7	7	24			38	6,355	6,355	21,789	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	9	12	18			39	7,962	10,615	15,923	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	7	9	24			40	6,038	7,763	20,700	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	12	12	18			42	9,857	9,857	14,786	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	9	9	24			42	7,393	7,393	19,714	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	7	18	18			43	5,616	14,442	14,442	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	7	12	24			43	5,616	9,628	19,256	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	9	18	18			45	6,900	13,800	13,800	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	9	12	24			45	6,900	9,200	18,400	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	12	18	18			48	8,625	12,938	12,938	-	-	20,700	6.1	34,500	10.1	38,640	11.4	2,491	3,114	4,016
	12	12	24			48	8,050	8,050	16,100	-	-	19,320	5.7	32,200	9.5	36,064	10.6	2,491	3,114	4,016
4 UNIT	7	7	7	7		28	8,275	8,275	8,275	8,275	-	19,860	5.8	33,100	9.7	39,720	11.7	2,095	2,619	4,108
	7	7	7	9		30	8,050	8,050	8,050	10,350	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,123
	7	7	9	9		32	7,547	7,547	9,703	9,703	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	7	7	12		33	7,318	7,318	7,318	12,545	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	9	9	9		34	7,103	9,132	9,132	9,132	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	7	9	12		35	6,900	6,900	8,871	11,829	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	9	9	9	9		36	8,625	8,625	8,625	8,625	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	9	9	12		37	6,527	8,392	8,392	11,189	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	7	12	12		38	6,355	6,355	10,895	10,895	-	20,700	6.1	34,500	10.1	39,675	11.7	2,157	2,697	4,113
	9	9	9	12		39	7,962	7,962	7,962	10,615	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	7	7	18		39	6,192	6,192	6,192	15,923	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	9	12	12		40	6,038	7,763	10,350	10,350	-	20,700	6.1	34,500	10.1	39,675	11.7	2,157	2,697	4,113
	7	7	9	18		41	5,890	5,890	7,573	15,146	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	9	9	12	12		42	7,393	7,393	9,857	9,857	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	12	12	12		43	5,616	9,628	9,628	9,628	-	20,700	6.1	34,500	10.1	39,675	11.7	2,157	2,697	4,113
	7	9	9	18		43	5,616	7,221	7,221	14,442	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	7	12	18		44	5,489	5,489	9,409	14,114	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113

Operation	Combination (kBtu/h)						Heating													
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
4 UNIT	9	12	12	12		45	6,900	9,200	9,200	9,200	-	20,700	6.1	34,500	10.1	39,675	11.7	2,157	2,697	4,113
	9	9	9	18		45	6,900	6,900	6,900	13,800	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	7	7	24		45	5,367	5,367	5,367	18,400	-	20,700	6.1	34,500	10.1	39,675	11.7	2,157	2,697	4,113
	7	9	12	18		46	5,250	6,750	9,000	13,500	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	7	7	9	24		47	5,138	5,138	6,606	17,617	-	20,700	6.1	34,500	10.1	39,675	11.7	2,157	2,697	4,113
	12	12	12	12		48	8,625	8,625	8,625	8,625	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
	9	9	12	18		48	6,469	6,469	8,625	12,938	-	20,700	6.1	34,500	10.1	41,400	12.2	2,157	2,697	4,113
5 UNIT	7	7	7	7	7	35	6,900	6,900	6,900	6,900	6,900	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	7	7	9	37	6,527	6,527	6,527	6,527	8,392	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	7	9	9	39	6,192	6,192	6,192	7,962	7,962	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	7	7	12	40	6,038	6,038	6,038	6,038	10,350	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	9	9	9	41	5,890	5,890	7,573	7,573	7,573	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	7	9	12	42	5,750	5,750	5,750	7,393	9,857	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	9	9	9	9	43	5,616	7,221	7,221	7,221	7,221	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	9	9	12	44	5,489	5,489	7,057	7,057	9,409	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	9	9	9	9	9	45	6,900	6,900	6,900	6,900	6,900	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	9	9	9	12	46	5,250	6,750	6,750	6,750	9,000	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	9	9	9	9	12	48	6,469	6,469	6,469	6,469	8,625	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	7	12	12	45	5,367	5,367	5,367	9,200	9,200	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	7	7	18	46	5,250	5,250	5,250	5,250	13,500	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	9	12	12	47	5,138	5,138	6,606	8,809	8,809	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030
	7	7	7	9	18	48	5,031	5,031	5,031	6,469	12,938	20,700	6.1	34,500	10.1	41,400	12.2	1,800	2,250	4,030

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 48kBtu/h
4. At least two indoor units should be connected.

Models : A5UW406FA3 [FM38AH UH3]

Cooling

Operation	Combination (kBtu/h)						Cooling													
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7					7	7,000	-	-	-	-	4,200	1.2	7,000	2.1	8,050	2.4	1,038	1,730	2,076
	9					9	9,000	-	-	-	-	5,400	1.6	9,000	2.6	10,350	3.0	1,038	1,730	2,076
	12					12	12,000	-	-	-	-	7,200	2.1	12,000	3.5	13,800	4.1	1,038	1,730	2,076
	18					18	18,000	-	-	-	-	10,800	3.2	18,000	5.3	20,700	6.1	1,107	1,845	2,280
	24					24	24,000	-	-	-	-	14,400	4.2	24,000	7.1	27,600	8.1	1,420	2,366	2,960
2 UNIT	7	7				14	7,000	7,000	-	-	-	8,400	2.5	14,000	4.1	16,100	4.7	1,038	1,730	2,076
	7	9				16	7,000	9,000	-	-	-	9,600	2.8	16,000	4.7	18,400	5.4	1,038	1,730	2,140
	9	9				18	9,000	9,000	-	-	-	10,800	3.2	18,000	5.3	20,700	6.1	1,107	1,845	2,280
	7	12				19	7,000	12,000	-	-	-	11,400	3.4	19,000	5.6	21,850	6.4	1,136	1,894	2,360
	9	12				21	9,000	12,000	-	-	-	12,600	3.7	21,000	6.2	24,150	7.1	1,244	2,074	2,575
	12	12				24	12,000	12,000	-	-	-	14,400	4.2	24,000	7.1	27,600	8.1	1,420	2,366	2,960
	7	18				25	7,000	18,000	-	-	-	15,000	4.4	25,000	7.4	28,750	8.5	1,459	2,432	3,024
	9	18				27	9,000	18,000	-	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,536	2,560	3,190
	12	18				30	12,000	18,000	-	-	-	18,000	5.3	30,000	8.8	34,500	10.1	1,688	2,814	3,487
	7	24				31	7,000	24,000	-	-	-	18,600	5.5	31,000	9.1	35,650	10.5	1,696	2,826	3,524
	9	24				33	9,000	24,000	-	-	-	19,800	5.8	33,000	9.7	37,950	11.2	1,788	2,980	3,712
	18	18				36	18,000	18,000	-	-	-	21,600	6.4	36,000	10.6	41,400	12.2	2,020	3,366	4,232
	12	24				36	12,000	24,000	-	-	-	21,600	6.4	36,000	10.6	41,400	12.2	2,020	3,366	4,232
	18	24				42	17,143	22,857	-	-	-	24,000	7.1	40,000	11.8	45,000	13.2	2,190	3,650	4,652
	24	24				48	20,000	20,000	-	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
3 UNIT	7	7	7			21	7,000	7,000	7,000	-	-	12,600	3.7	21,000	6.2	24,150	7.1	1,244	2,074	2,575
	7	7	9			23	7,000	7,000	9,000	-	-	13,800	4.1	23,000	6.8	26,450	7.8	1,317	2,195	2,708
	7	9	9			25	7,000	9,000	9,000	-	-	15,000	4.4	25,000	7.4	28,750	8.5	1,459	2,432	3,024
	7	7	12			26	7,000	7,000	12,000	-	-	15,600	4.6	26,000	7.6	29,900	8.8	1,501	2,502	3,140
	9	9	9			27	9,000	9,000	9,000	-	-	16,200	4.8	27,000	7.9	31,050	9.1	1,536	2,560	3,190
	7	9	12			28	7,000	9,000	12,000	-	-	16,800	4.9	28,000	8.2	32,200	9.5	1,593	2,655	3,310
	9	9	12			30	9,000	9,000	12,000	-	-	18,000	5.3	30,000	8.8	34,500	10.1	1,688	2,814	3,487
	7	12	12			31	7,000	12,000	12,000	-	-	18,600	5.5	31,000	9.1	35,650	10.5	1,696	2,826	3,524
	7	7	18			32	7,000	7,000	18,000	-	-	19,200	5.6	32,000	9.4	36,800	10.8	1,755	2,925	3,640
	9	12	12			33	9,000	12,000	12,000	-	-	19,800	5.8	33,000	9.7	37,950	11.2	1,788	2,980	3,712
	7	9	18			34	7,000	9,000	18,000	-	-	20,400	6.0	34,000	10.0	39,100	11.5	1,872	3,120	3,820
	12	12	12			36	12,000	12,000	12,000	-	-	21,600	6.4	36,000	10.6	41,400	12.2	2,020	3,366	4,232
	9	9	18			36	9,000	9,000	18,000	-	-	21,600	6.4	36,000	10.6	41,400	12.2	2,020	3,366	4,232
	7	12	18			37	7,000	12,000	18,000	-	-	22,200	6.5	37,000	10.9	42,550	12.5	2,106	3,510	4,410
	7	7	24			38	7,000	7,000	24,000	-	-	22,800	6.7	38,000	11.2	43,700	12.8	2,144	3,574	4,500
	9	12	18			39	9,000	12,000	18,000	-	-	23,400	6.9	39,000	11.5	44,850	13.2	2,173	3,621	4,570
	7	9	24			40	7,000	9,000	24,000	-	-	24,000	7.1	40,000	11.8	45,000	13.2	2,178	3,630	4,652
	12	12	18			42	11,429	11,429	17,143	-	-	24,000	7.1	40,000	11.8	45,000	13.2	2,190	3,650	4,652
	9	9	24			42	8,571	8,571	22,857	-	-	24,000	7.1	40,000	11.8	45,000	13.2	2,190	3,650	4,652
	7	18	18			43	6,512	16,744	16,744	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	7	12	24			43	6,512	11,163	22,326	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	9	18	18			45	8,000	16,000	16,000	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	9	12	24			45	8,000	10,667	21,333	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	12	18	18			48	10,000	15,000	15,000	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	12	12	24			48	10,000	10,000	20,000	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	18	24			49	5,714	14,694	19,592	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	9	18	24			51	7,059	14,118	18,824	-	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
4 UNIT	7	7	7	7		28	7,000	7,000	7,000	7,000	-	16,800	4.9	28,000	8.2	32,200	9.5	1,593	2,655	3,310
	7	7	7	9		30	7,000	7,000	7,000	9,000	-	18,000	5.3	30,000	8.8	34,500	10.1	1,688	2,814	3,487
	7	7	9	9		32	7,000	7,000	9,000	9,000	-	19,200	5.6	32,000	9.4	36,800	10.8	1,755	2,925	3,640
	7	7	7	12		33	7,000	7,000	7,000	12,000	-	19,800	5.8	33,000	9.7	37,950	11.2	1,788	2,980	3,712
	7	9	9	9		34	7,000	9,000	9,000	9,000	-	20,400	6.0	34,000	10.0	39,100	11.5	1,872	3,120	3,820
	7	7	9	12		35	7,000	7,000	9,000	12,000	-	21,000	6.2	35,000	10.3	40,250	11.8	1,944	3,240	4,068
	9	9	9	9		36	9,000	9,000	9,000	9,000	-	21,600	6.4	36,000	10.6	41,400	12.2	2,020	3,366	4,232
	7	9	9	12		37	7,000	9,000	9,000	12,000	-	22,200	6.5	37,000	10.9	42,550	12.5	2,106	3,510	4,410
	7	7	12	12		38	7,000	7,000	12,000	12,000	-	22,800	6.7	38,000	11.2	43,700	12.8	2,144	3,574	4,500
	9	9	9	12		39	9,000	9,000	9,000	12,000	-	23,400	6.9	39,000	11.5	44,850	13.2	2,173	3,621	4,570
	7	7	7	18		39	7,000	7,000	7,000	18,000	-	23,400	6.9	39,000	11.5	44,850	13.2	2,173	3,621	4,570
	7	9	12	12		40	7,000	9,000	12,000	12,000	-	24,000	7.1	40,000	11.8	45,000	13.2	2,178	3,630	4,652
	7	7	9	18		41	6,829	6,829	8,780	17,561	-	24,000	7.1	40,000	11.8	45,000	13.2	2,190	3,650	4,652
	9	9	12	12		42	8,571	8,571	11,429	11,429	-	24,000	7.1	40,000	11.8	45,000	13.2	2,190	3,650	4,652
	7	12	12	12		43	6,512	11,163	11,163	11,163	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652

Operation	Combination (kBtu/h)						Cooling													
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
4 UNIT	7	9	9	18		43	6,512	8,372	8,372	16,744	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	7	7	12	18		44	6,364	6,364	10,909	16,364	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	9	12	12	12		45	8,000	10,667	10,667	10,667	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	9	9	9	18		45	8,000	8,000	8,000	16,000	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	7	7	7	24		45	6,222	6,222	6,222	21,333	-	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	7	9	12	18		46	6,087	7,826	10,435	15,652	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	9	24		47	5,957	5,957	7,660	20,426	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	12	12	12	12		48	10,000	10,000	10,000	10,000	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	9	9	12	18		48	7,500	7,500	10,000	15,000	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	12	12	18		49	5,714	9,796	9,796	14,694	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	9	9	24		49	5,714	7,347	7,347	19,592	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	12	24		50	5,600	5,600	9,600	19,200	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	9	12	12	18		51	7,059	9,412	9,412	14,118	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	9	9	9	24		51	7,059	7,059	7,059	18,824	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	9	12	24		52	5,385	6,923	9,231	18,462	-	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
5 UNIT	7	7	7	7	7	35	7,000	7,000	7,000	7,000	7,000	21,000	6.2	35,000	10.3	40,250	11.8	1,944	3,240	4,068
	7	7	7	7	9	37	7,000	7,000	7,000	7,000	9,000	22,200	6.5	37,000	10.9	42,550	12.5	2,106	3,510	4,410
	7	7	7	9	9	39	7,000	7,000	7,000	9,000	9,000	23,400	6.9	39,000	11.5	44,850	13.2	2,173	3,621	4,570
	7	7	7	7	12	40	7,000	7,000	7,000	7,000	12,000	24,000	7.1	40,000	11.8	45,000	13.2	2,178	3,630	4,652
	7	7	9	9	9	41	6,829	6,829	8,780	8,780	8,780	24,000	7.1	40,000	11.8	45,000	13.2	2,190	3,650	4,652
	7	7	7	9	12	42	6,667	6,667	6,667	8,571	11,429	24,000	7.1	40,000	11.8	45,000	13.2	2,190	3,650	4,652
	7	9	9	9	9	43	6,512	8,372	8,372	8,372	8,372	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	7	7	9	9	12	44	6,364	6,364	8,182	8,182	10,909	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	9	9	9	9	9	45	8,000	8,000	8,000	8,000	8,000	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	7	9	9	9	12	46	6,087	7,826	7,826	7,826	10,435	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	9	9	9	9	12	48	7,500	7,500	7,500	7,500	10,000	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	7	12	12	45	6,222	6,222	6,222	10,667	10,667	24,000	7.1	40,000	11.8	46,000	13.5	2,190	3,650	4,652
	7	7	7	7	18	46	6,087	6,087	6,087	6,087	15,652	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	9	12	12	47	5,957	5,957	7,660	10,213	10,213	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	7	9	18	48	5,833	5,833	5,833	7,500	15,000	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	9	9	12	12	49	5,714	7,347	7,347	9,796	9,796	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	12	12	12	50	5,600	5,600	9,600	9,600	9,600	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	9	9	18	50	5,600	5,600	7,200	7,200	14,400	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	9	9	9	12	12	51	7,059	7,059	7,059	9,412	9,412	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	7	12	18	51	5,490	5,490	5,490	9,412	14,118	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	9	12	12	12	52	5,385	6,923	9,231	9,231	9,231	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	9	9	9	18	52	5,385	6,923	6,923	6,923	13,846	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652
	7	7	7	7	24	52	5,385	5,385	5,385	5,385	18,462	24,000	7.1	40,000	11.8	46,000	13.5	2,178	3,630	4,652

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 52kBtu/h
4. At least two indoor units should be connected.

Heating

Operation	Combination (kBtu/h)						Heating												
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
1 UNIT	7					7	8,050	-	-	-	-	4,830	1.4	8,050	2.4	8,936	2.6	1,428	2,000	2,300
	9					9	10,350	-	-	-	-	6,210	1.8	10,350	3.0	11,489	3.4	1,428	2,080	2,392
	12					12	13,800	-	-	-	-	8,280	2.4	13,800	4.1	15,318	4.5	1,428	2,150	2,473
	18					18	20,700	-	-	-	-	12,420	3.7	20,700	6.1	22,977	6.8	1,562	2,604	2,860
	24					24	27,600	-	-	-	-	16,560	4.9	27,600	8.1	30,636	9.0	1,809	3,015	3,412
2 UNIT	7	7				14	8,050	8,050	-	-	-	9,660	2.8	16,100	4.7	17,871	5.3	1,428	2,240	2,576
	7	9				16	8,050	10,350	-	-	-	11,040	3.2	18,400	5.4	20,424	6.0	1,428	2,380	2,642
	9	9				18	10,350	10,350	-	-	-	12,420	3.7	20,700	6.1	22,977	6.8	1,562	2,604	2,860
	7	12				19	8,050	13,800	-	-	-	13,110	3.9	21,850	6.4	24,254	7.1	1,638	2,730	3,004
	9	12				21	10,350	13,800	-	-	-	14,490	4.3	24,150	7.1	26,807	7.9	1,728	2,880	3,292
	12	12				24	13,800	13,800	-	-	-	16,560	4.9	27,600	8.1	30,636	9.0	1,809	3,015	3,412
	7	18				25	8,050	20,700	-	-	-	17,250	5.1	28,750	8.5	31,913	9.4	1,859	3,098	3,540
	9	18				27	10,350	20,700	-	-	-	18,630	5.5	31,050	9.1	34,466	10.1	2,009	3,349	3,818
	12	18				30	13,800	20,700	-	-	-	20,700	6.1	34,500	10.1	38,295	11.3	2,074	3,456	4,165
	7	24				31	8,050	27,600	-	-	-	21,390	6.3	35,650	10.5	39,572	11.6	2,090	3,483	4,234
	9	24				33	10,350	27,600	-	-	-	22,770	6.7	37,950	11.2	42,125	12.4	2,143	3,571	4,464
	18	18				36	20,700	20,700	-	-	-	24,840	7.3	41,400	12.2	45,954	13.5	2,182	3,636	4,655
	12	24				36	13,800	27,600	-	-	-	24,840	7.3	41,400	12.2	45,954	13.5	2,182	3,636	4,655
	18	24				42	19,714	26,286	-	-	-	27,600	8.1	46,000	13.5	51,060	15.0	2,220	3,700	4,843
	24	24				48	23,000	23,000	-	-	-	27,600	8.1	46,000	13.5	51,060	15.0	2,190	3,650	4,843
3 UNIT	7	7	7			21	8,050	8,050	8,050	-	-	14,490	4.3	24,150	7.1	26,807	7.9	1,728	2,880	3,292
	7	7	9			23	8,050	8,050	10,350	-	-	15,870	4.7	26,450	7.8	29,360	8.6	1,749	2,915	3,346
	7	9	9			25	8,050	10,350	10,350	-	-	17,250	5.1	28,750	8.5	31,913	9.4	1,859	3,098	3,540
	7	7	12			26	8,050	8,050	13,800	-	-	17,940	5.3	29,900	8.8	33,189	9.8	1,958	3,264	3,705
	9	9	9			27	10,350	10,350	10,350	-	-	18,630	5.5	31,050	9.1	34,466	10.1	2,009	3,349	3,818
	7	9	12			28	8,050	10,350	13,800	-	-	19,320	5.7	32,200	9.5	35,742	10.5	2,055	3,425	3,980
	9	9	12			30	10,350	10,350	13,800	-	-	20,700	6.1	34,500	10.1	38,295	11.3	2,074	3,456	4,165
	7	12	12			31	8,050	13,800	13,800	-	-	21,390	6.3	35,650	10.5	39,572	11.6	2,090	3,483	4,234
	7	7	18			32	8,050	8,050	20,700	-	-	22,080	6.5	36,800	10.8	40,848	12.0	2,110	3,517	4,312
	9	12	12			33	10,350	13,800	13,800	-	-	22,770	6.7	37,950	11.2	42,125	12.4	2,143	3,571	4,464
	7	9	18			34	8,050	10,350	20,700	-	-	23,460	6.9	39,100	11.5	43,401	12.8	2,162	3,604	4,585
	12	12	12			36	13,800	13,800	13,800	-	-	24,840	7.3	41,400	12.2	45,954	13.5	2,182	3,636	4,655
	9	9	18			36	10,350	10,350	20,700	-	-	24,840	7.3	41,400	12.2	45,954	13.5	2,182	3,636	4,655
	7	12	18			37	8,050	13,800	20,700	-	-	25,530	7.5	42,550	12.5	47,231	13.9	2,186	3,644	4,745
	7	7	24			38	8,050	8,050	27,600	-	-	26,220	7.7	43,700	12.8	48,507	14.3	2,190	3,650	4,770
	9	12	18			39	10,350	13,800	20,700	-	-	26,910	7.9	44,850	13.2	49,784	14.6	2,204	3,674	4,811
	7	9	24			40	8,050	10,350	27,600	-	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	12	12	18			42	13,143	13,143	19,714	-	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	9	9	24			42	9,857	9,857	26,286	-	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	18	18			43	7,488	19,256	19,256	-	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	12	24			43	7,488	12,837	25,674	-	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	9	18	18			45	9,200	18,400	18,400	-	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	9	12	24			45	9,200	12,267	24,533	-	-	27,600	8.1	46,000	13.5	51,000	15.0	2,220	3,700	4,843
	12	18	18			48	11,500	17,250	17,250	-	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	12	12	24			48	11,500	11,500	23,000	-	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	18	24			49	6,571	16,898	22,531	-	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	9	18	24			51	8,118	16,235	21,647	-	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
4 UNIT	7	7	7	7		28	8,050	8,050	8,050	8,050	-	19,320	5.7	32,200	9.5	35,742	10.5	2,055	3,425	3,980
	7	7	7	9		30	8,050	8,050	8,050	10,350	-	20,700	6.1	34,500	10.1	38,295	11.3	2,074	3,456	4,165
	7	7	9	9		32	8,050	8,050	10,350	10,350	-	22,080	6.5	36,800	10.8	40,848	12.0	2,110	3,517	4,312
	7	7	7	12		33	8,050	8,050	8,050	13,800	-	22,770	6.7	37,950	11.2	42,125	12.4	2,143	3,571	4,464
	7	9	9	9		34	8,050	10,350	10,350	10,350	-	23,460	6.9	39,100	11.5	43,401	12.8	2,162	3,604	4,585
	7	7	9	12		35	8,050	8,050	10,350	13,800	-	24,150	7.1	40,250	11.8	44,678	13.1	2,167	3,612	4,606
	9	9	9	9		36	10,350	10,350	10,350	10,350	-	24,840	7.3	41,400	12.2	45,954	13.5	2,182	3,636	4,655
	7	9	9	12		37	8,050	10,350	10,350	13,800	-	25,530	7.5	42,550	12.5	47,231	13.9	2,186	3,644	4,745
	7	7	12	12		38	8,050	8,050	13,800	13,800	-	26,220	7.7	43,700	12.8	48,507	14.3	2,190	3,650	4,770
	9	9	9	12		39	10,350	10,350	10,350	13,800	-	26,910	7.9	44,850	13.2	49,784	14.6	2,204	3,674	4,811
	7	7	7	18		39	8,050	8,050	8,050	20,700	-	26,910	7.9	44,850	13.2	49,784	14.6	2,204	3,674	4,811
	7	9	12	12		40	8,050	10,350	13,800	13,800	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	7	9	18		41	7,854	7,854	10,098	20,195	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	9	9	12	12		42	9,857	9,857	13,143	13,143	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	12	12	12		43	7,488	12,837	12,837	12,837	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843

Operation	Combination (kBtu/h)						Heating													
							Each capacity (Btu/h)					Total capacity						Input (W)		
												Min		Rated		Max				
	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Total	Unit-A	Unit-B	Unit-C	Unit-D	Unit-E	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
4 UNIT	7	9	9	18		43	7,488	9,628	9,628	19,256	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	7	12	18		44	7,318	7,318	12,545	18,818	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	9	12	12	12		45	9,200	12,267	12,267	12,267	-	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	9	9	9	18		45	9,200	9,200	9,200	18,400	-	27,600	8.1	46,000	13.5	51,000	15.0	2,220	3,700	4,843
	7	7	7	24		45	7,156	7,156	7,156	24,533	-	27,600	8.1	46,000	13.5	51,000	15.0	2,220	3,700	4,843
	7	9	12	18		46	7,000	9,000	12,000	18,000	-	27,600	8.1	46,000	13.5	51,000	15.0	2,220	3,700	4,843
	7	7	9	24		47	6,851	6,851	8,809	23,489	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	12	12	12	12		48	11,500	11,500	11,500	11,500	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	9	9	12	18		48	8,625	8,625	11,500	17,250	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	12	12	18		49	6,571	11,265	11,265	16,898	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	9	9	24		49	6,571	8,449	8,449	22,531	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	7	12	24		50	6,440	6,440	11,040	22,080	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	9	12	12	18		51	8,118	10,824	10,824	16,235	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	9	9	9	24		51	8,118	8,118	8,118	21,647	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	9	12	24		52	6,192	7,962	10,615	21,231	-	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
5 UNIT	7	7	7	7	7	35	8,050	8,050	8,050	8,050	8,050	24,150	7.1	40,250	11.8	44,678	13.1	2,167	3,612	4,606
	7	7	7	7	9	37	8,050	8,050	8,050	8,050	10,350	25,530	7.5	42,550	12.5	47,231	13.9	2,186	3,644	4,745
	7	7	7	9	9	39	8,050	8,050	8,050	10,350	10,350	26,910	7.9	44,850	13.2	49,784	14.6	2,204	3,674	4,811
	7	7	7	7	12	40	8,050	8,050	8,050	8,050	13,800	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	7	9	9	9	41	7,854	7,854	10,098	10,098	10,098	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	7	7	9	12	42	7,667	7,667	7,667	9,857	13,143	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	9	9	9	9	43	7,488	9,628	9,628	9,628	9,628	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	7	9	9	12	44	7,318	7,318	9,409	9,409	12,545	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	9	9	9	9	9	45	9,200	9,200	9,200	9,200	9,200	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
	7	9	9	9	12	46	7,000	9,000	9,000	9,000	12,000	27,600	8.1	46,000	13.5	51,000	15.0	2,220	3,700	4,843
	9	9	9	9	12	48	8,625	8,625	8,625	8,625	11,500	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	7	7	12	12	45	7,156	7,156	7,156	12,267	12,267	27,600	8.1	46,000	13.5	51,000	15.0	2,220	3,700	4,843
	7	7	7	7	18	46	7,000	7,000	7,000	7,000	18,000	27,600	8.1	46,000	13.5	51,000	15.0	2,220	3,700	4,843
	7	7	9	12	12	47	6,851	6,851	8,809	11,745	11,745	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	7	7	9	18	48	6,708	6,708	6,708	8,625	17,250	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	9	9	12	12	49	6,571	8,449	8,449	11,265	11,265	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	7	12	12	12	50	6,440	6,440	11,040	11,040	11,040	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	7	9	9	18	50	6,440	6,440	8,280	8,280	16,560	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	9	9	9	12	12	51	8,118	8,118	8,118	10,824	10,824	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	7	7	12	18	51	6,314	6,314	6,314	10,824	16,235	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	9	12	12	12	52	6,192	7,962	10,615	10,615	10,615	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	9	9	9	18	52	6,192	7,962	7,962	7,962	15,923	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843
	7	7	7	7	24	52	6,192	6,192	6,192	6,192	21,231	27,600	8.1	46,000	13.5	51,000	15.0	2,190	3,650	4,843

Note :

1. Cooling Capacity is based on : indoor temp.27°CDB, 19°CWB
   ; outdoor temp. 35°CDB
2. Heating Capacity is based on : indoor temp.20°CDB
   ; outdoor temp. 7°CDB, 6°CWB
3. The total ability of connected a indoor unit is up to 52kBtu/h
4. At least two indoor units should be connected.

2.1.5 Dimensions

OUTDOOR UNIT

A2UW146FA3

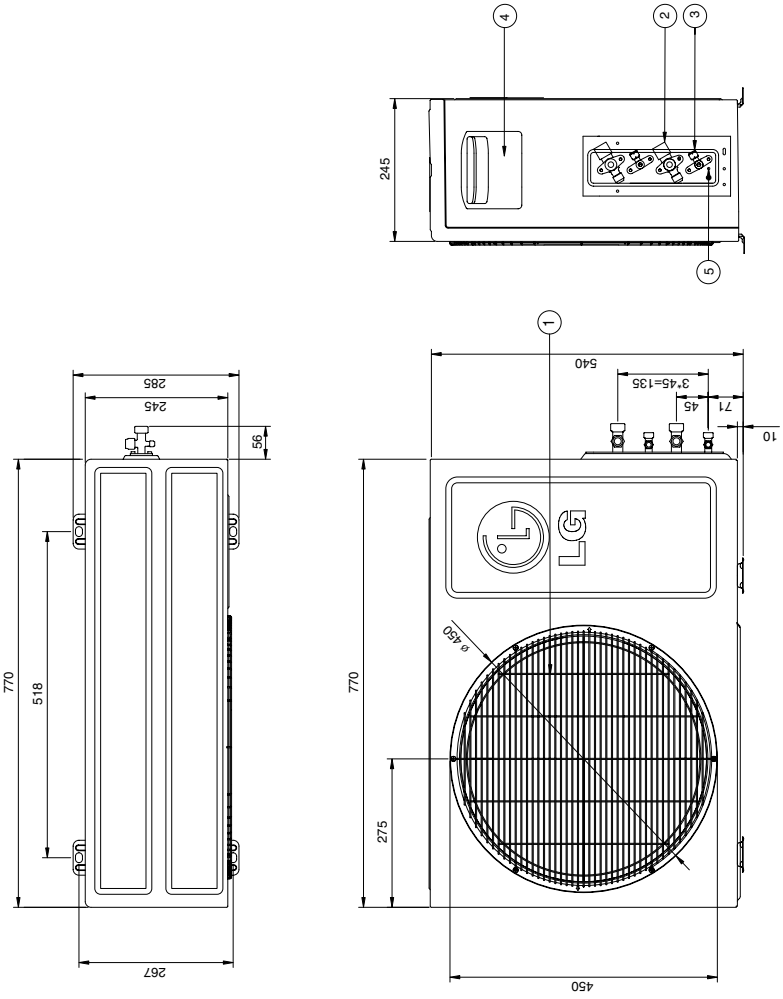
No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	4.10
		Btu/h	14,000
Heating Capacity		kW	4.70
		Btu/h	16,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.



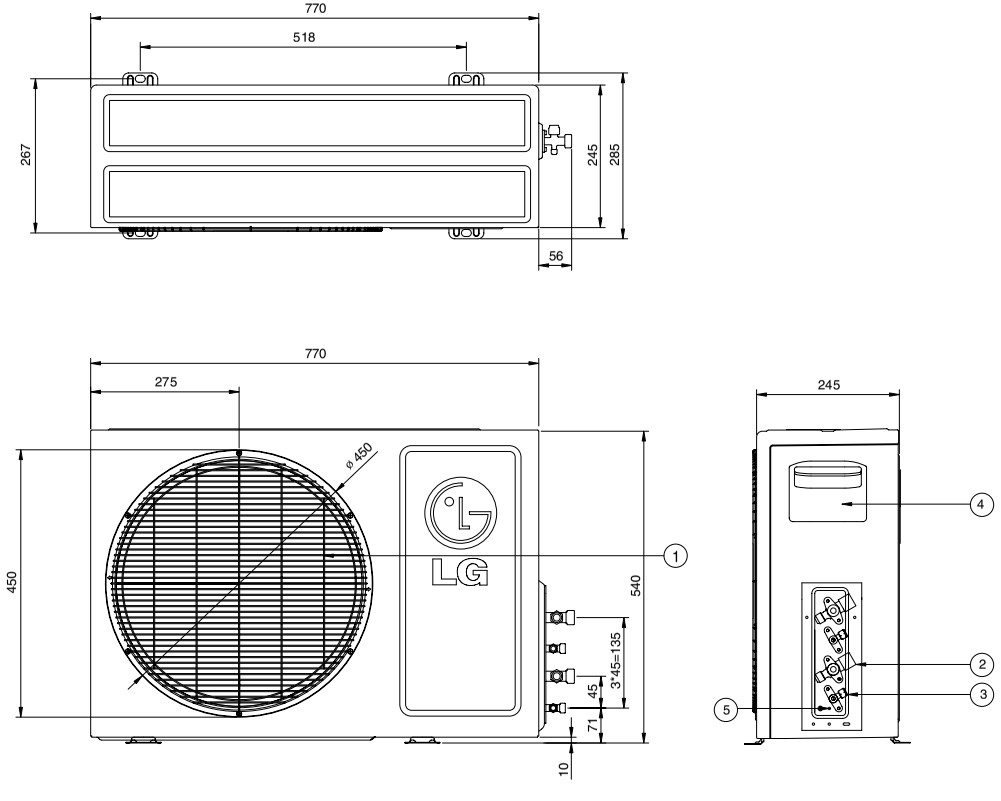
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: UL

OUTDOOR UNIT

A2UW166FA0 [FM17AH UL0]
A2UW166FA1 [FM17AH UL1]



No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	4.69
		Btu/h	16,000
Heating Capacity		kW	5.27
		Btu/h	18,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

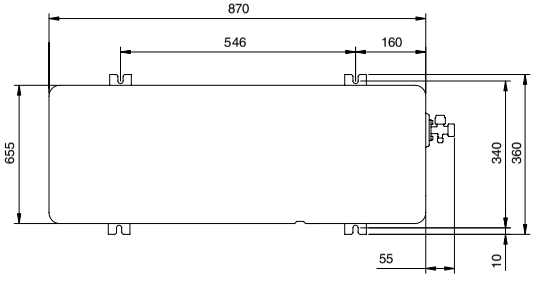
LG Electronics

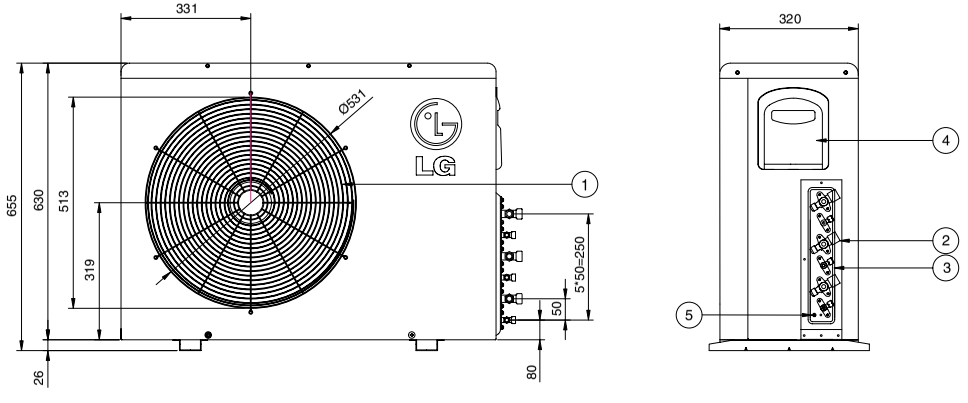
76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: UL

OUTDOOR UNIT

A3UW186FA0 [FM19AH UE0]





No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	5.30
		Btu/h	18,000
Heating Capacity		kW	6.30
		Btu/h	21,600
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

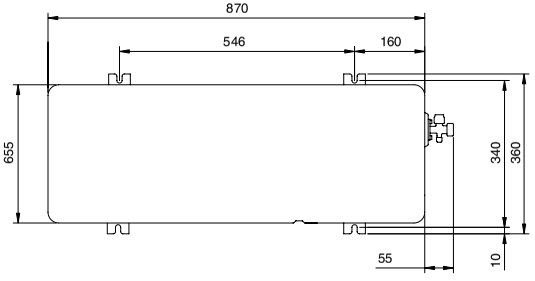
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

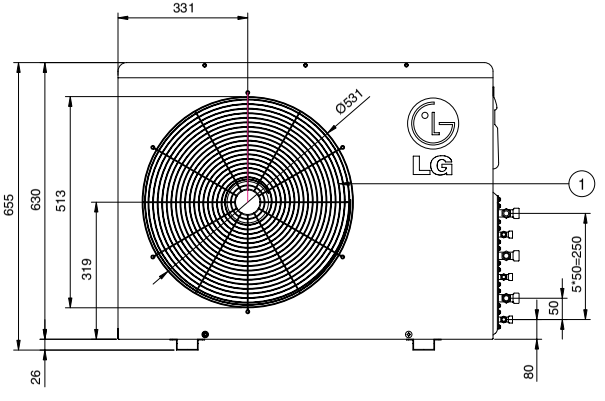
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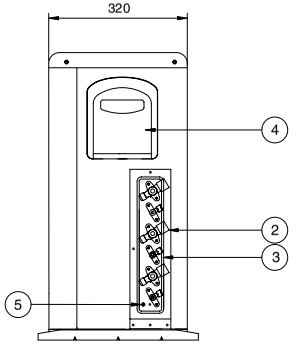
CHASSIS CODE: UE

OUTDOOR UNIT

A3UW216FA3 [FM21AH UE3]







No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	

▣ Technical Specification

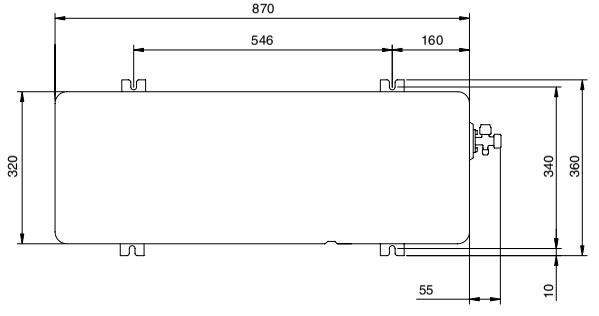
Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	6.15
		Btu/h	21,000
Heating Capacity		kW	7.03
		Btu/h	24,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

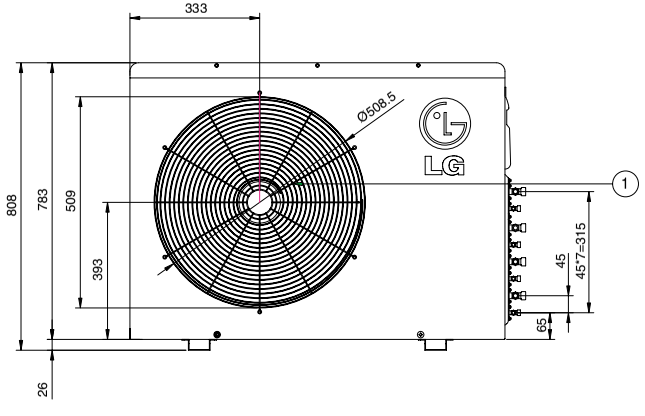
▣ Note

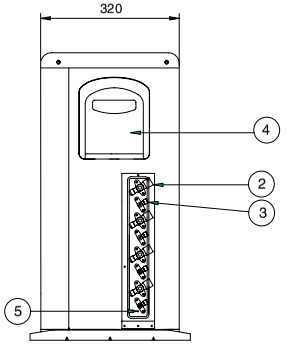
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

OUTDOOR UNIT

A4UW246FA3 [FM25AH UE3]







No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	7.03
		Btu/h	24,000
Heating Capacity		kW	8.44
		Btu/h	28,800
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

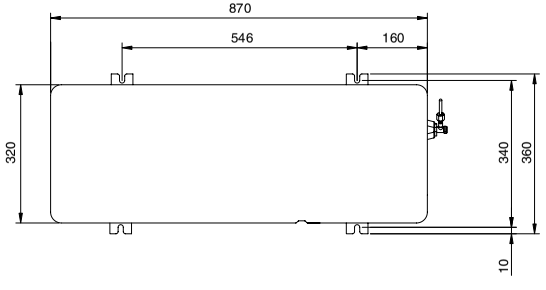
▣ Note

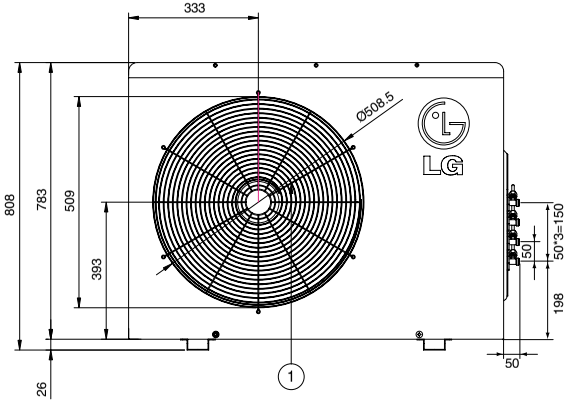
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

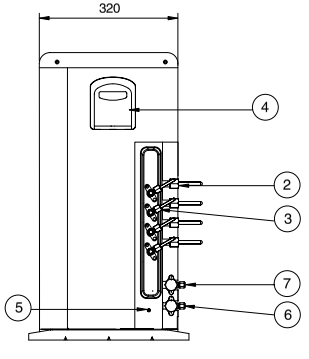
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CHASSIS CODE: UE1

OUTDOOR UNIT

A4UW276FA3 [FM27AH UE3]







No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	
6	Main service valve(Liquid)	
7	Main service valve(Gas)	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	7.91
		Btu/h	27,000
Heating Capacity		kW	9.08
		Btu/h	31,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

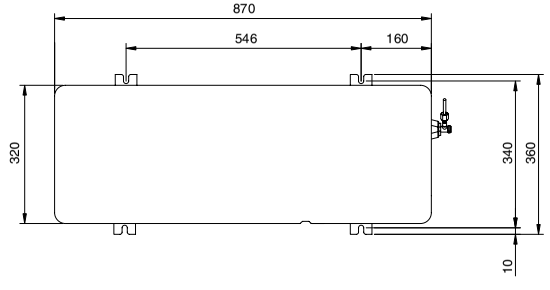
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.
5. When pumping down the system, use main service valve.
   When you are installing the system, not used valve should be closed by cap that equipped from factory.

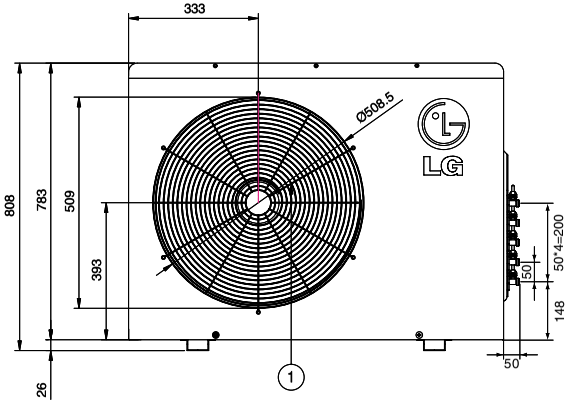
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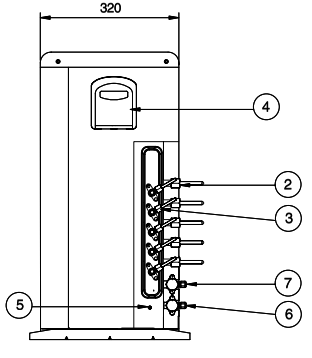
CHASSIS CODE: UE1

OUTDOOR UNIT

A5UW306FA3 [FM30AH UE3]







No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	
6	Main service valve(Liquid)	
7	Main service valve(Gas)	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	8.80
		Btu/h	30,000
Heating Capacity		kW	10.1
		Btu/h	34,500
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

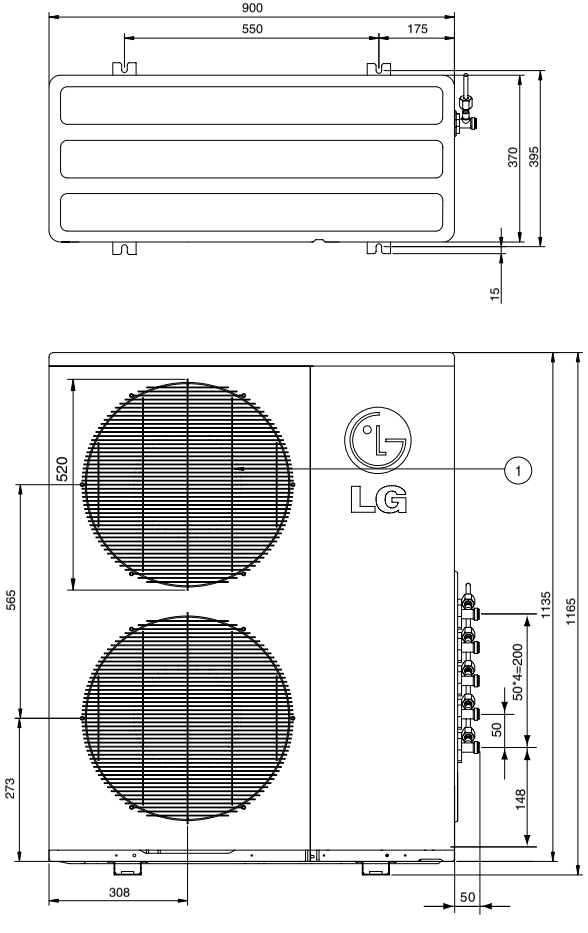
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.
5. When pumping down the system, use main service valve.
   When you are installing the system, not used valve should be closed by cap that equipped from factory.

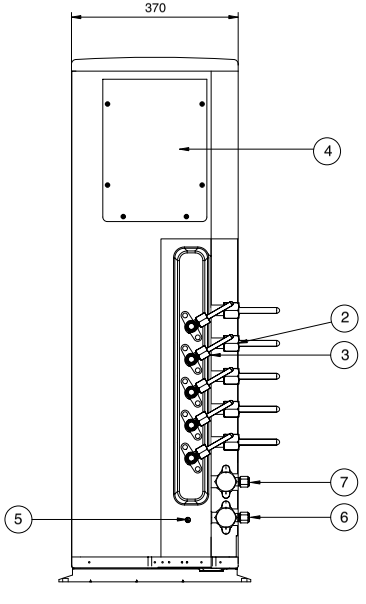
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CHASSIS CODE: UE1

OUTDOOR UNIT

A5UW406FA3 [FM38AH UH3]





No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	
6	Main service valve(Liquid)	
7	Main service valve(Gas)	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	11.7
		Btu/h	40,000
Heating Capacity		kW	13.5
		Btu/h	46,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	9.52(3/8)

▣ Note

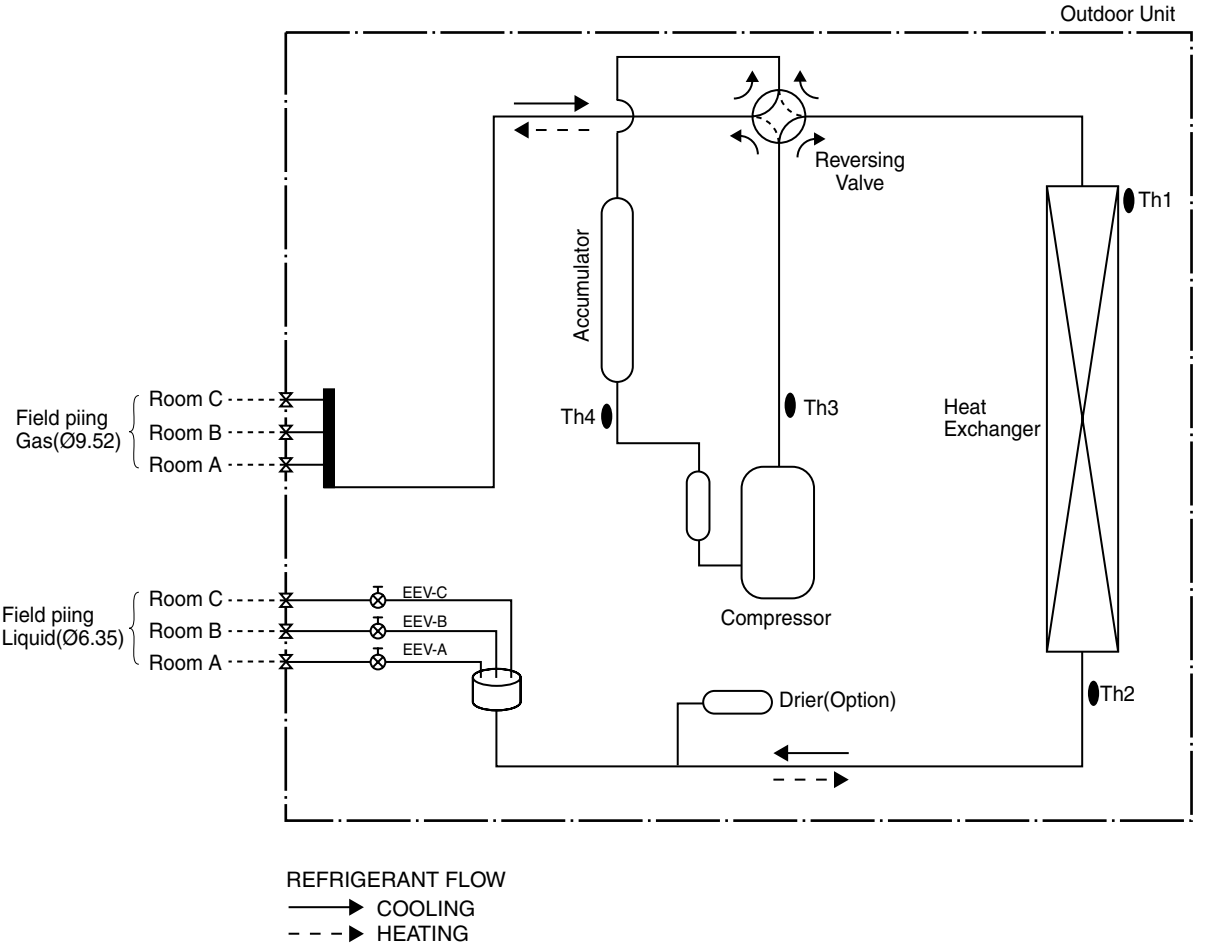
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.
5. When pumping down the system, use main service valve.
   When you are installing the system, not used valve should be closed by cap that equipped from factory.

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CHASSIS CODE: UH

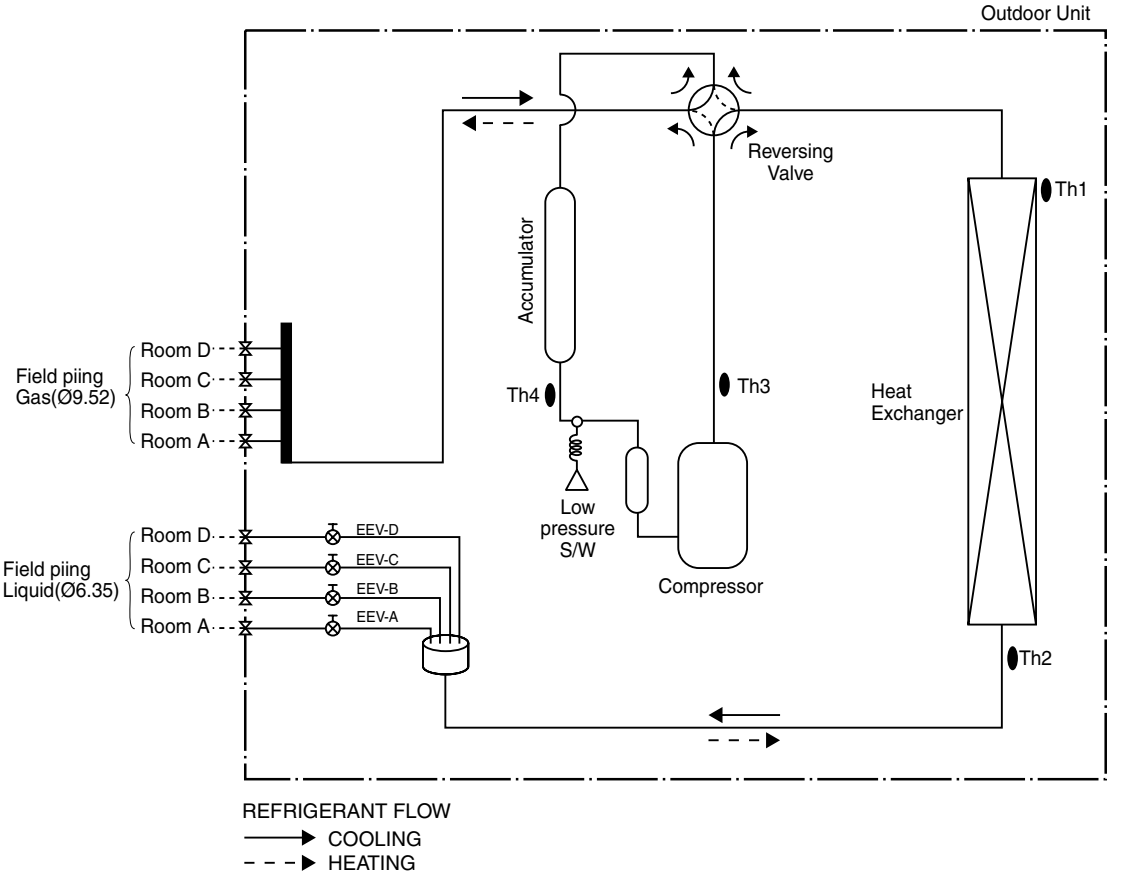
2.1.6 Piping diagrams

Models : A2UW166FA0 [FM17AH UL0], A2UW166FA1 [FM17AH UL1]
A3UW186FA0 [FM19AH UE0]



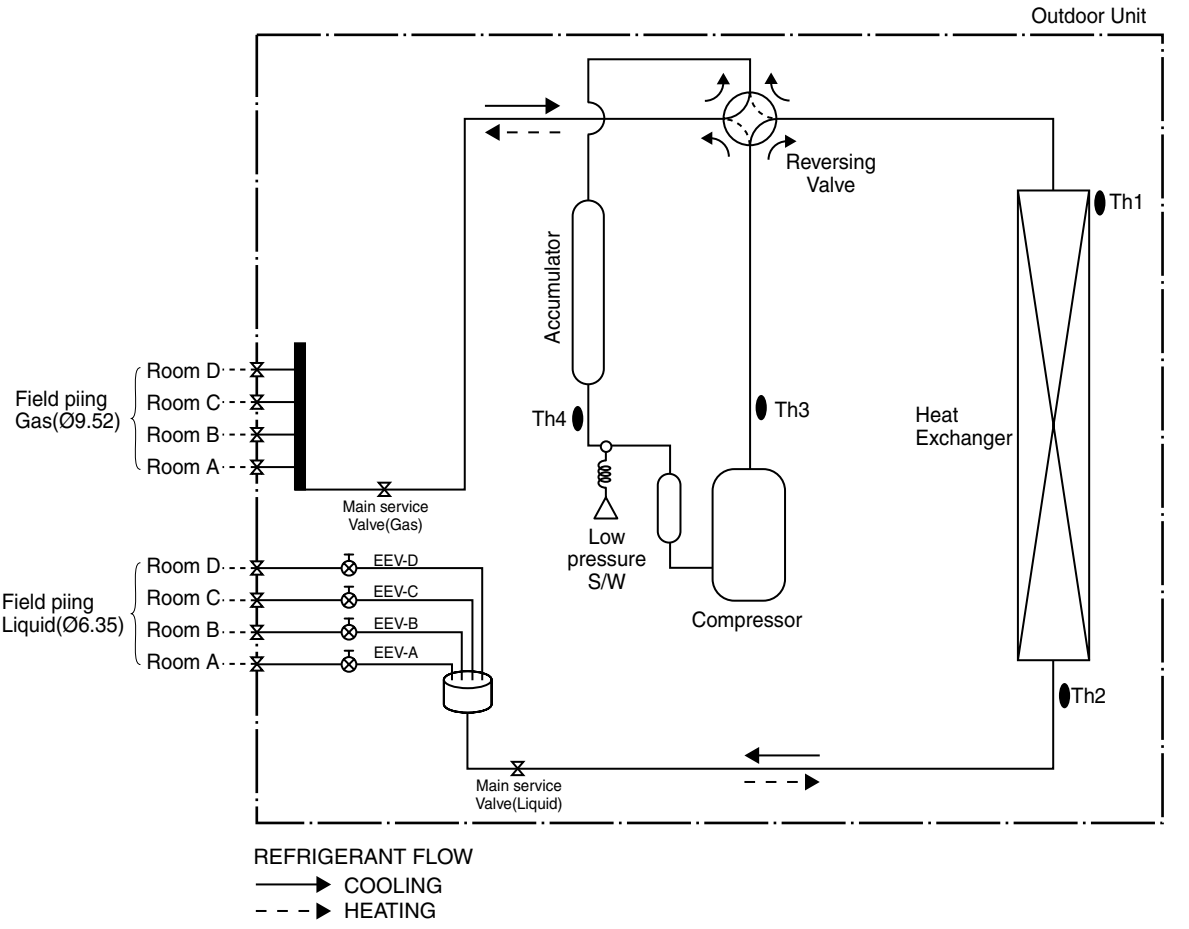
LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

Models : A3UW216FA3 [FM21AH UE3], A4UW246FA3 [FM25AH UE3]



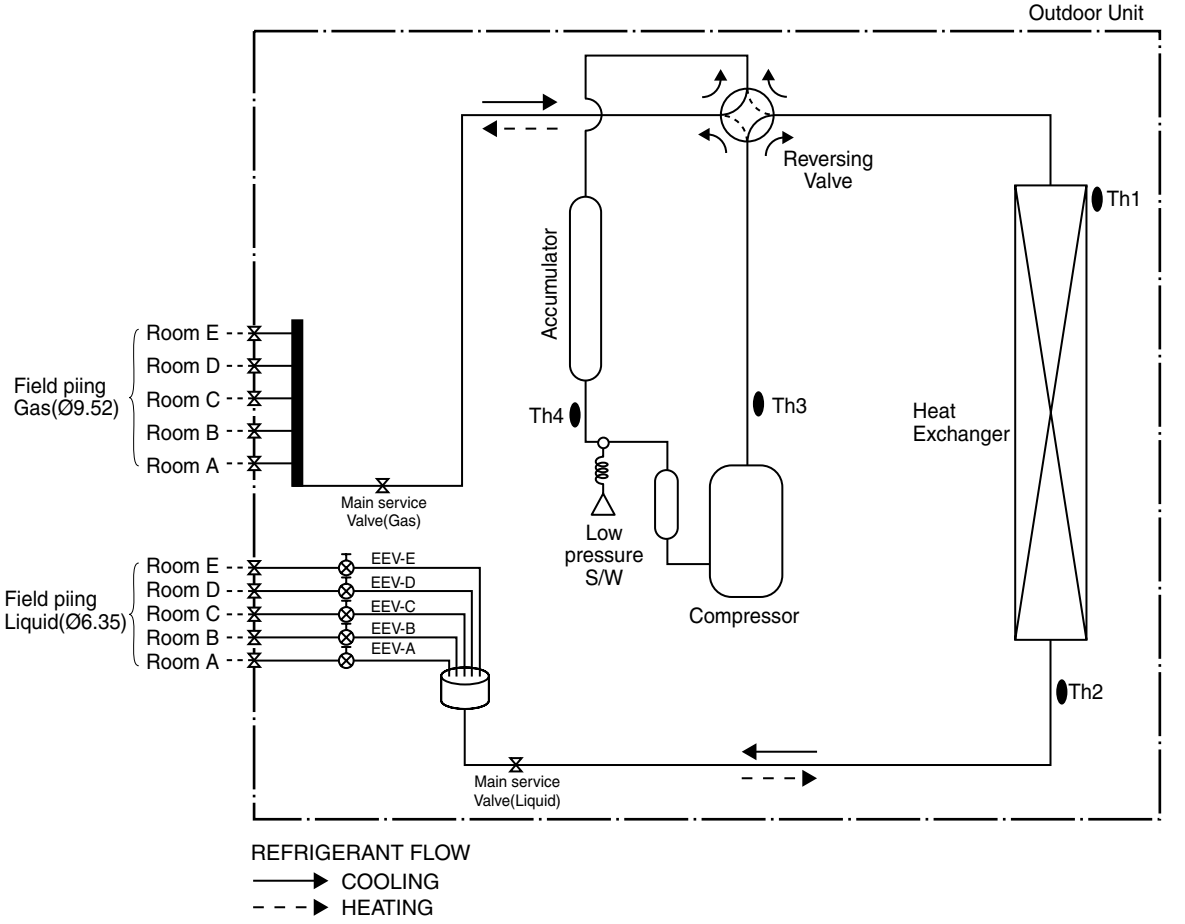
LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

Models : A4UW276FA3 [FM27AH UE3]



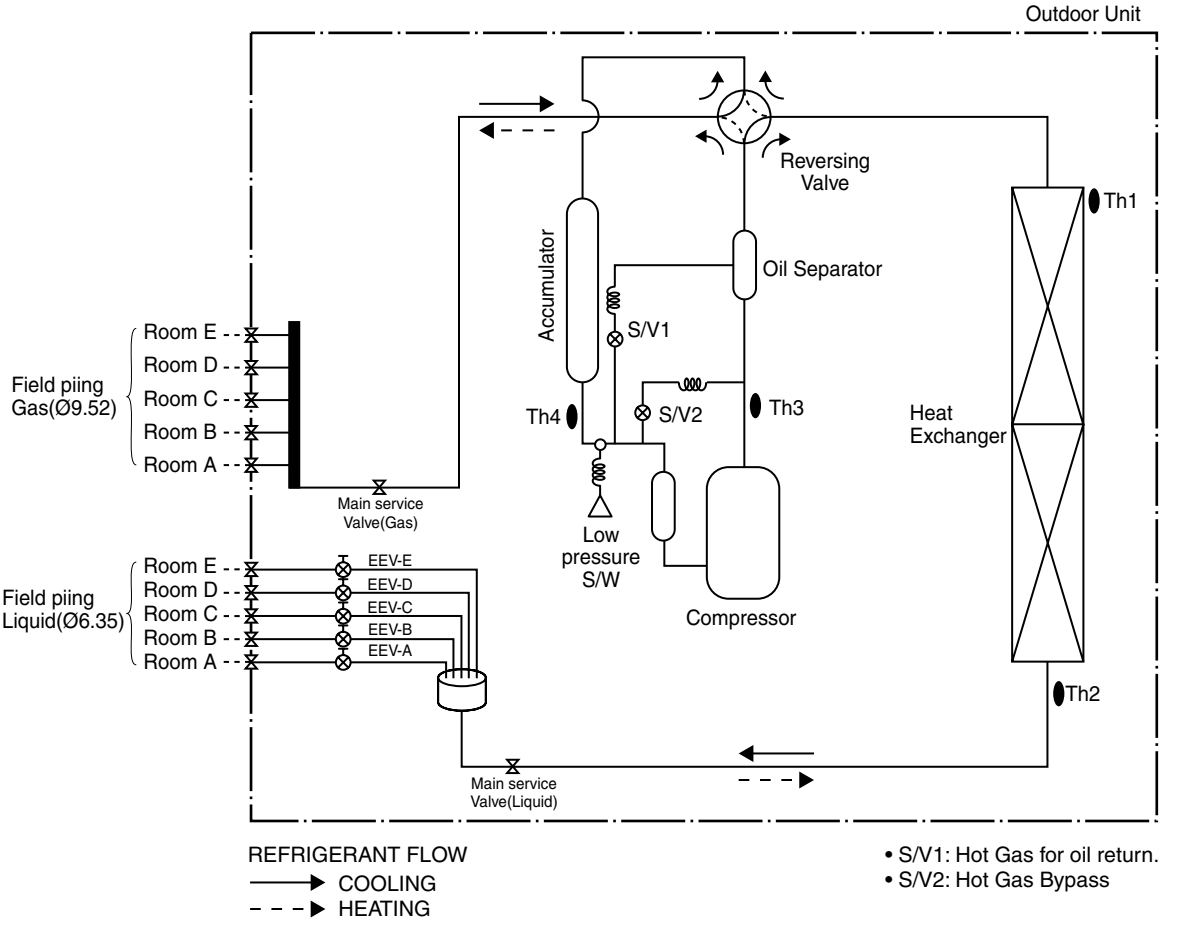
LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

Models : A5UW306FA3 [FM30AH UE3]



LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

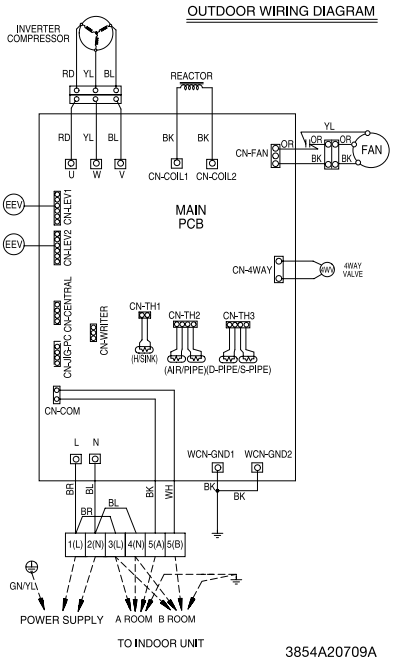
Models : A5UW406FA3 [FM38AH UH3]



LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

2.1.7 Wiring diagrams

Models : A2UW146FA3 [FM15AH UL3], A2UW166FA0[FM17AH UL0], A2UW166FA1[FM17AH UL1]

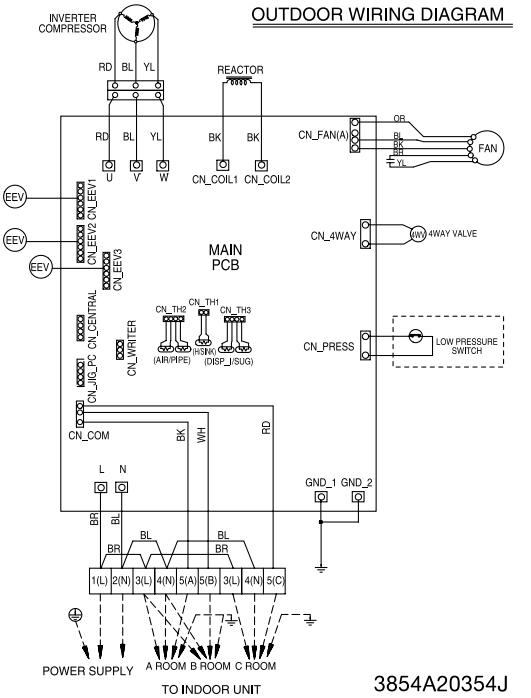


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Notes:

BL	BLUE	BK	BLACK	BR	BROWN
RD	RED	OR	ORANGE	WH	WHITE
YL	YELLOW	GN/YL	GREEN/YELLOW	--------	FIELD WIRING

Models : A3UW186FA0[FM19AH UE0]

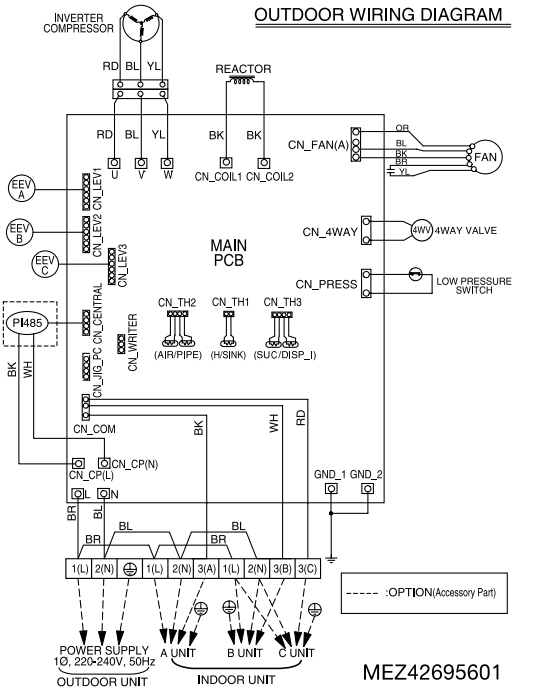


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Notes:

BL	BLUE	BK	BLACK	BR	BROWN
RD	RED	OR	ORANGE	WH	WHITE
YL	YELLOW	GN/YL	GREEN/YELLOW	--------	FIELD WIRING

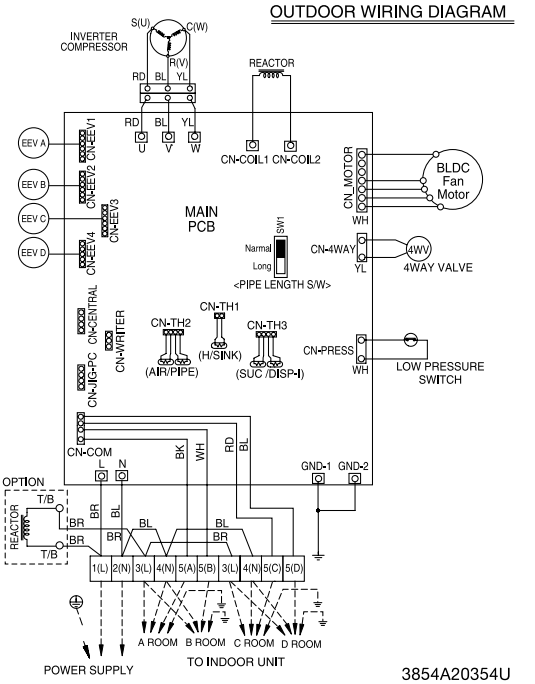
Models : A3UW216FA3 [FM21AH UE3]



Notes:

BL	BLUE	BK	BLACK	BR	BROWN
RD	RED	OR	ORANGE	WH	WHITE
YL	YELLOW	GN/YL	GREEN/YELLOW	--------	FIELD WIRING

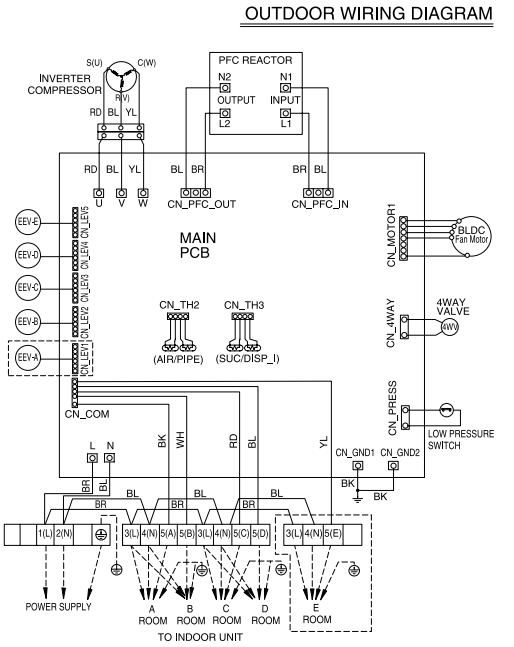
Models : A4UW246FA3 [FM25AH UE3]



Notes:

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RD	RED	OR	ORANGE	WH	WHITE
YL	YELLOW	GN/YL	GREEN/YELLOW	--------	FIELD WIRING

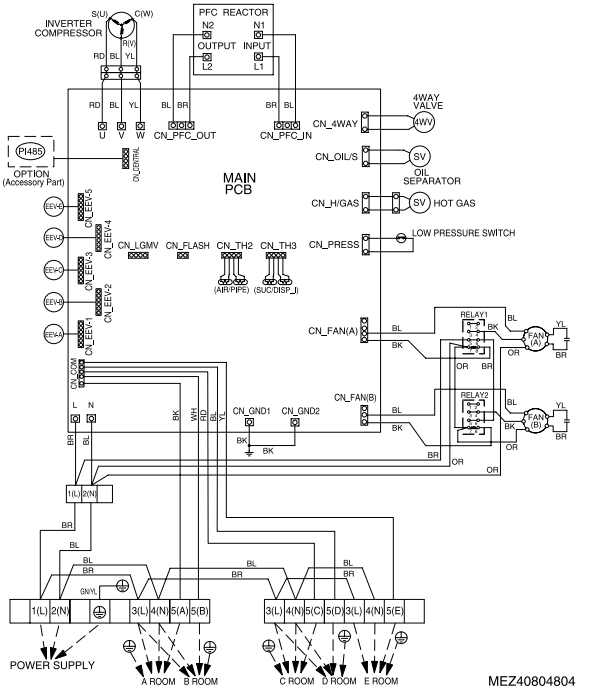
Models : A4UW276FA3 [FM24AH UE3], A5UW306FA3 [FM30AH UE3],



Notes:

BL	BLUE	BK	BLACK	BR	BROWN
RD	RED	OR	ORANGE	WH	WHITE
YL	YELLOW	GN/YL	GREEN/YELLOW	- - - - - - - -	FIELD WIRING

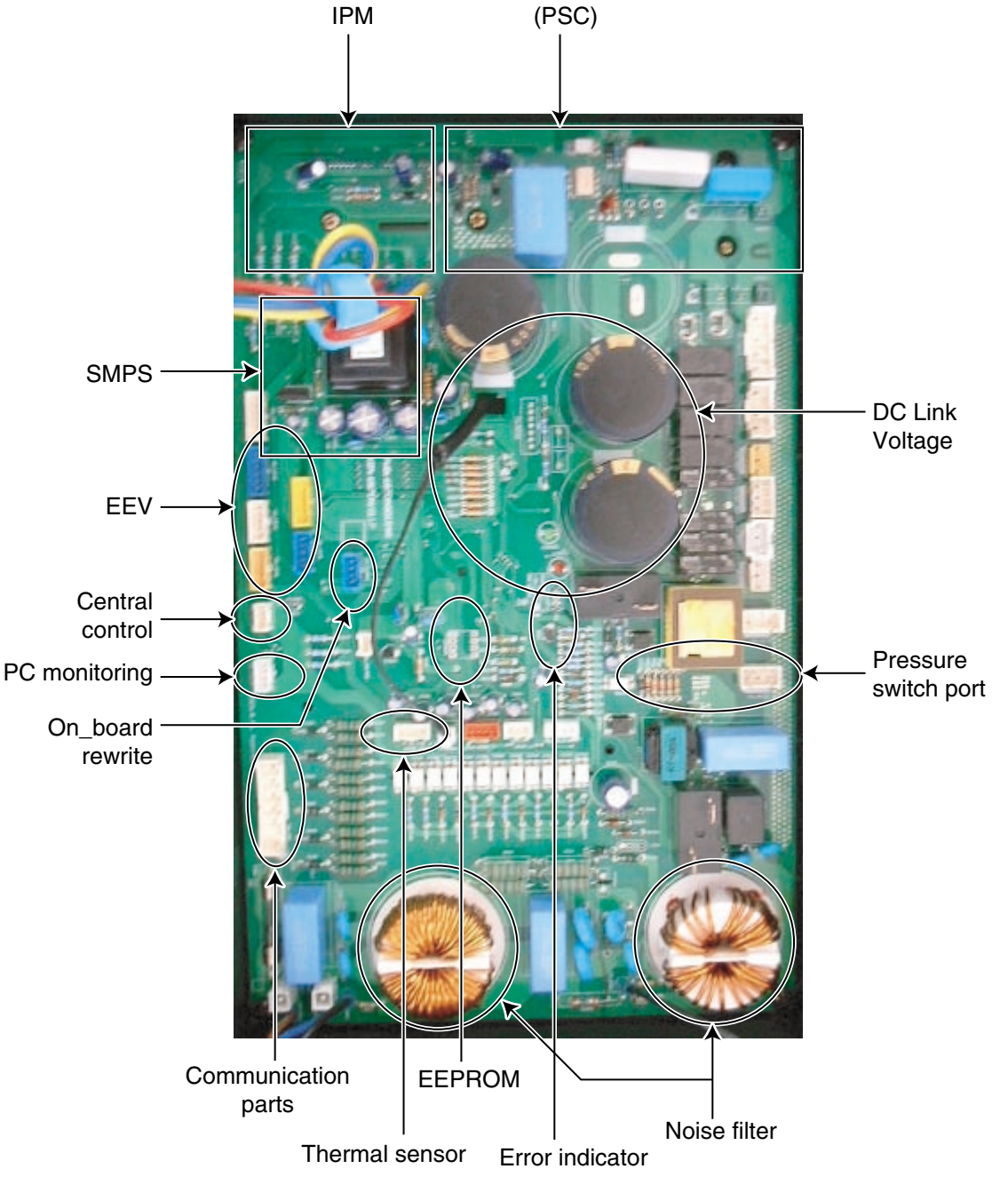
Models : A5UW406FA3 [FM38AH UH3]



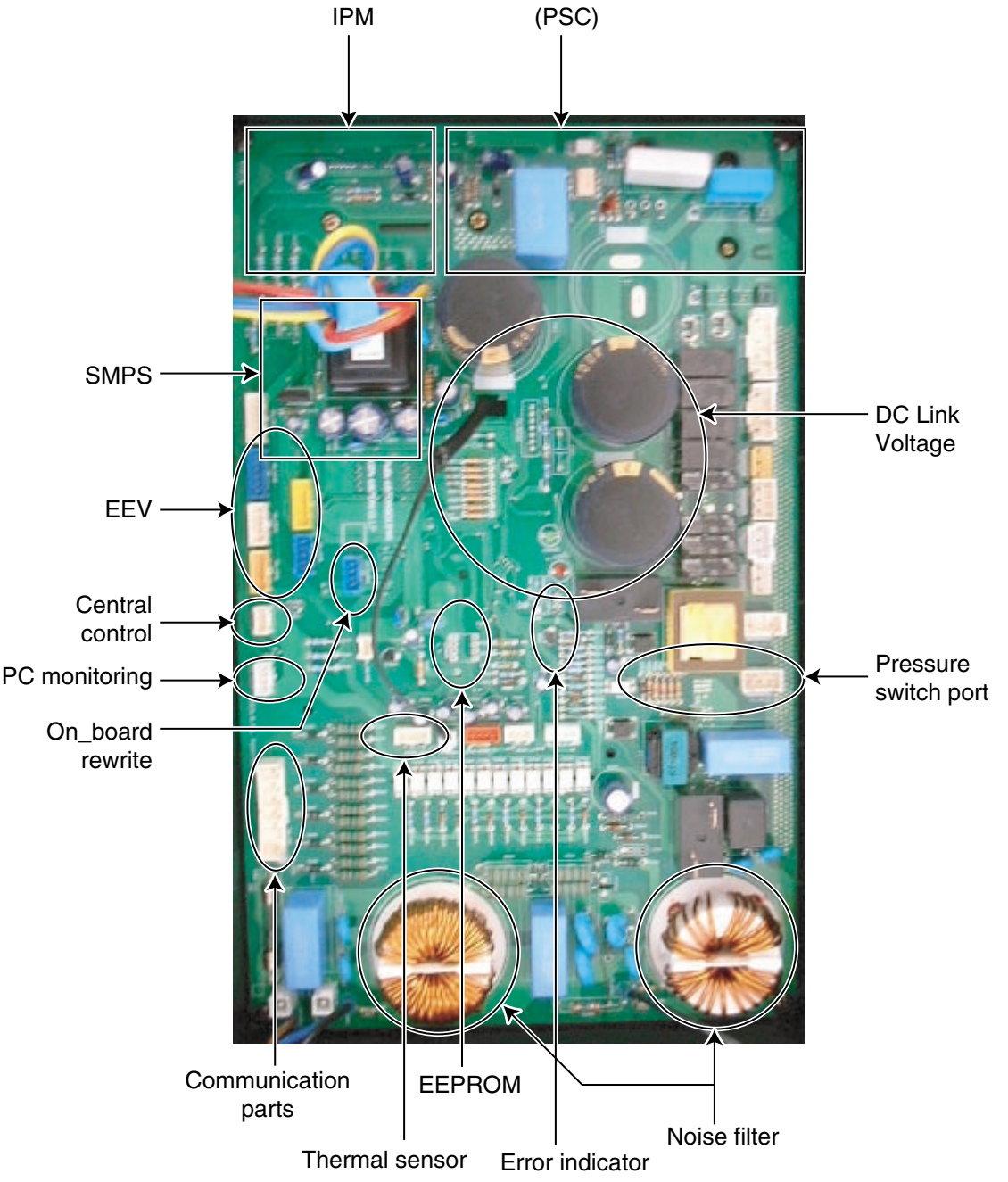
Notes:

BL	BLUE	BK	BLACK	BR	BROWN
RD	RED	OR	ORANGE	WH	WHITE
YL	YELLOW	GN/YL	GREEN/YELLOW	- - - - - - - -	FIELD WIRING

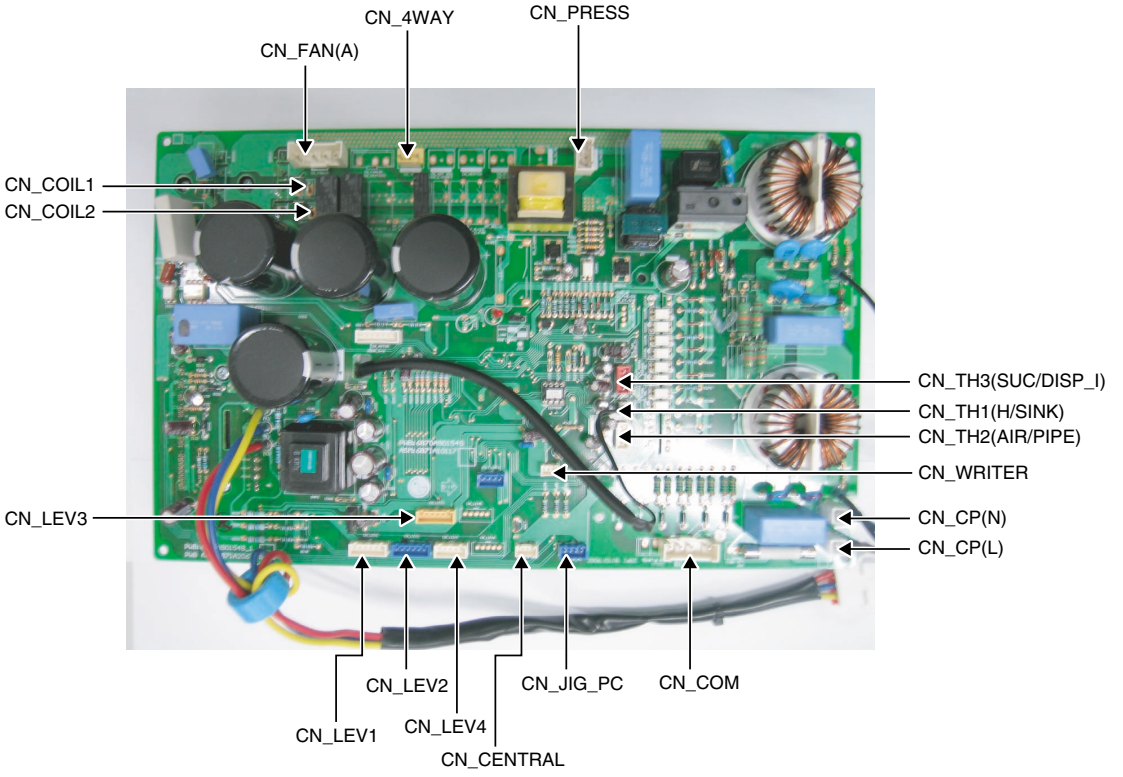
Models : UL series



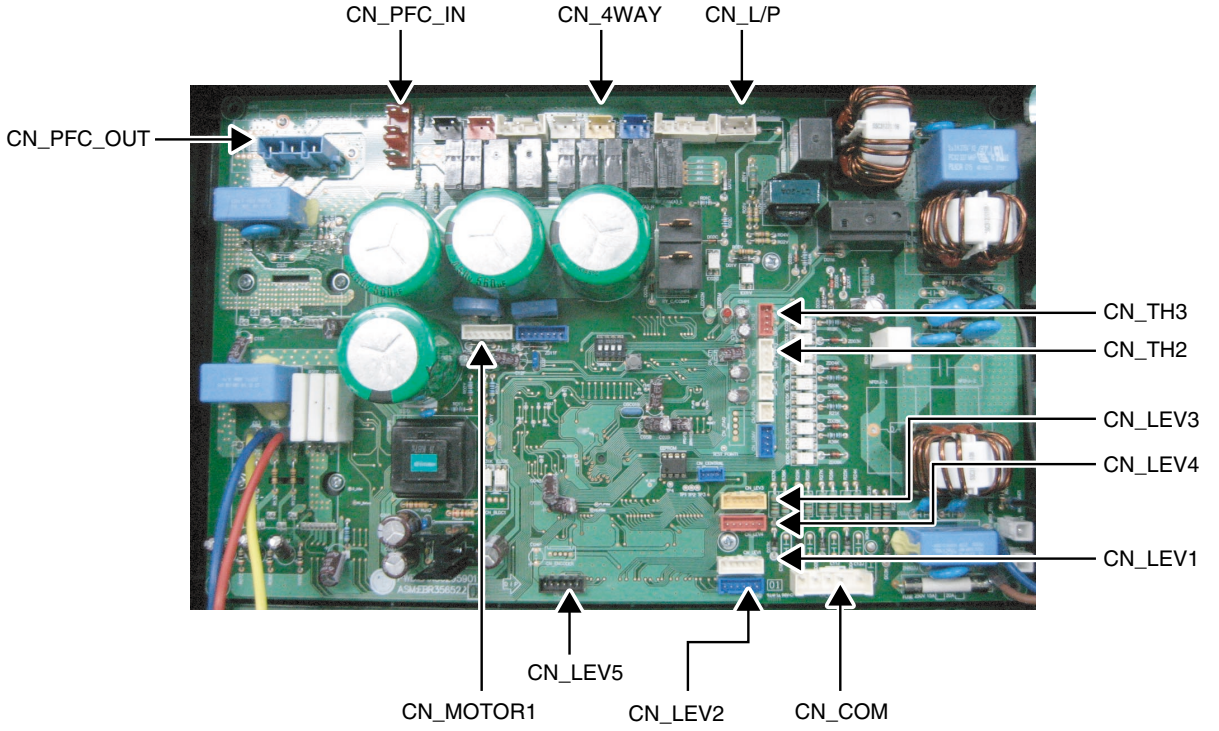
Models : A3UW186FA0 [FM19AH UE0]



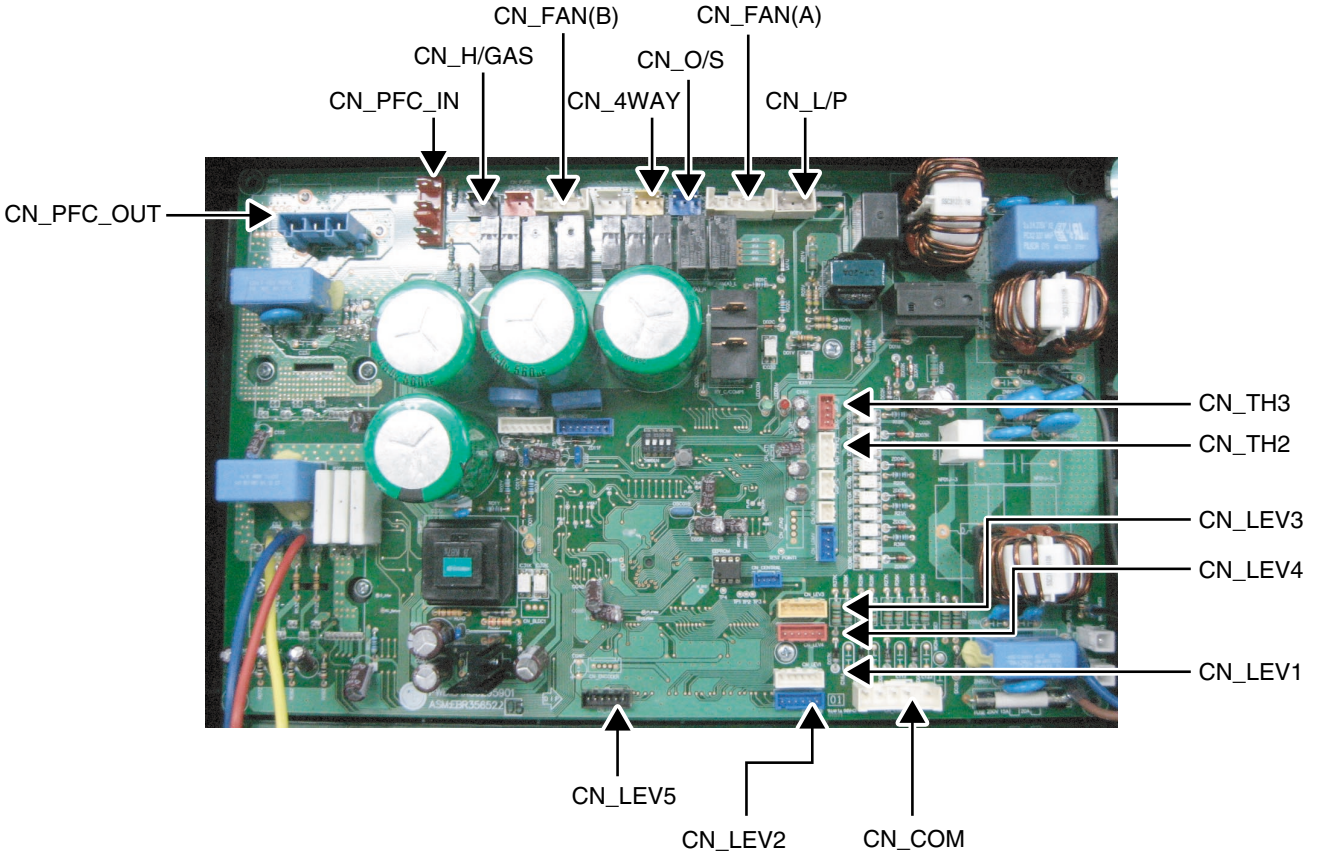
Models : A3UW216FA3 [FM21AH UE3], A4UW246FA3 [FM25AH UE3]



Models : A4UW276FA3 [FM27AH UE3], A5UW306FA3 [FM30AH UE3]



Models : A5UW406FA3 [FM38AH UH3]



2.1.8 Capacity tables

Models : A2UW146FA3 [FM15AH UL3]

[Cooling capacity]

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	22	2.00	0.34	2.12	0.46	2.25	0.50	2.31	0.51	2.50	0.51	2.62	0.51
		25	1.95	0.36	2.07	0.48	2.20	0.51	2.26	0.52	2.45	0.53	2.57	0.53
		32	1.84	0.49	1.96	0.58	2.09	0.60	2.15	0.61	2.34	0.63	2.46	0.64
		35	1.79	0.54	1.92	0.62	2.04	0.64	2.10	0.63	2.29	0.66	2.42	0.67
		40	1.71	0.60	1.84	0.64	1.96	0.65	2.03	0.66	2.21	0.67	2.34	0.68
		43	1.67	0.59	1.79	0.61	1.92	0.61	1.98	0.61	2.17	0.62	2.29	0.63
		46	1.62	0.53	1.74	0.53	1.87	0.52	1.93	0.51	2.12	0.52	2.24	0.53
	9	22	2.47	0.46	2.63	0.62	2.78	0.67	2.86	0.68	3.09	0.68	3.25	0.68
		25	2.41	0.48	2.57	0.63	2.72	0.68	2.80	0.69	3.03	0.71	3.19	0.71
		32	2.28	0.65	2.43	0.77	2.59	0.81	2.66	0.81	2.90	0.83	3.05	0.85
		35	2.22	0.73	2.37	0.82	2.53	0.85	2.60	0.84	2.84	0.88	2.99	0.90
		40	2.12	0.80	2.28	0.86	2.43	0.87	2.51	0.87	2.74	0.89	2.90	0.91
		43	2.06	0.78	2.22	0.82	2.37	0.82	2.45	0.81	2.68	0.82	2.84	0.84
		46	2.01	0.70	2.16	0.71	2.31	0.69	2.39	0.69	2.62	0.69	2.78	0.70
	12	22	3.33	0.62	3.54	0.84	3.75	0.91	3.85	0.93	4.16	0.93	4.37	0.93
		25	3.25	0.66	3.46	0.87	3.67	0.94	3.77	0.95	4.08	0.97	4.29	0.97
		32	3.07	0.89	3.27	1.05	3.48	1.10	3.59	1.12	3.90	1.14	4.11	1.16
		35	2.99	0.99	3.20	1.13	3.40	1.17	3.50	1.15	3.82	1.21	4.03	1.23
		40	2.86	1.09	3.07	1.18	3.27	1.19	3.38	1.20	3.69	1.21	3.90	1.24
		43	2.78	1.07	2.99	1.12	3.19	1.12	3.30	1.12	3.61	1.13	3.82	1.15
		46	2.70	0.96	2.91	0.97	3.12	0.95	3.22	0.94	3.53	0.94	3.74	0.96
2 units	7+7	22	3.90	0.68	4.14	0.92	4.39	0.99	4.51	1.01	4.87	1.01	5.12	1.02
		25	3.81	0.72	4.05	0.94	4.29	1.02	4.42	1.03	4.78	1.05	5.03	1.06
		32	3.59	0.97	3.84	1.14	4.08	1.20	4.20	1.21	4.57	1.24	4.81	1.26
		35	3.50	1.08	3.74	1.23	3.99	1.27	4.10	1.25	4.48	1.31	4.72	1.34
		40	3.35	1.19	3.59	1.28	3.83	1.30	3.96	1.30	4.32	1.32	4.57	1.35
		43	3.25	1.16	3.50	1.22	3.74	1.21	3.86	1.21	4.23	1.22	4.47	1.25
		46	3.16	1.04	3.41	1.06	3.65	1.03	3.77	1.02	4.14	1.02	4.38	1.05
	7+9	22	3.90	0.65	4.14	0.88	4.39	0.95	4.51	0.97	4.87	0.97	5.12	0.97
		25	3.81	0.69	4.05	0.91	4.29	0.98	4.42	0.99	4.78	1.01	5.03	1.02
		32	3.59	0.93	3.84	1.10	4.08	1.15	4.20	1.16	4.57	1.19	4.81	1.21
		35	3.50	1.04	3.74	1.18	3.99	1.22	4.10	1.20	4.48	1.26	4.72	1.28
		40	3.35	1.14	3.59	1.23	3.83	1.24	3.96	1.25	4.32	1.27	4.57	1.29
		43	3.25	1.12	3.50	1.17	3.74	1.17	3.86	1.16	4.23	1.18	4.47	1.20
		46	3.16	1.00	3.41	1.01	3.65	0.99	3.77	0.98	4.14	0.98	4.38	1.00
	9+9	22	3.90	0.65	4.14	0.88	4.39	0.95	4.51	0.97	4.87	0.97	5.12	0.97
		25	3.81	0.69	4.05	0.91	4.29	0.98	4.42	0.99	4.78	1.01	5.03	1.02
		32	3.59	0.93	3.84	1.10	4.08	1.15	4.20	1.16	4.57	1.19	4.81	1.21
		35	3.50	1.04	3.74	1.18	3.99	1.22	4.10	1.20	4.48	1.26	4.72	1.28
		40	3.35	1.14	3.59	1.23	3.83	1.24	3.96	1.25	4.32	1.27	4.57	1.29
		43	3.25	1.12	3.50	1.17	3.74	1.17	3.86	1.16	4.23	1.18	4.47	1.20
		46	3.16	1.00	3.41	1.01	3.65	0.99	3.77	0.98	4.14	0.98	4.38	1.00
	7+12	22	3.90	0.65	4.14	0.88	4.39	0.95	4.51	0.97	4.87	0.97	5.12	0.97
		25	3.81	0.69	4.05	0.91	4.29	0.98	4.42	0.99	4.78	1.01	5.03	1.02
		32	3.59	0.93	3.84	1.10	4.08	1.15	4.20	1.16	4.57	1.19	4.81	1.21
		35	3.50	1.04	3.74	1.18	3.99	1.22	4.10	1.20	4.48	1.26	4.72	1.28
		40	3.35	1.14	3.59	1.23	3.83	1.24	3.96	1.25	4.32	1.27	4.57	1.29
		43	3.25	1.12	3.50	1.17	3.74	1.17	3.86	1.16	4.23	1.18	4.47	1.20
		46	3.16	1.00	3.41	1.01	3.65	0.99	3.77	0.98	4.14	0.98	4.38	1.00
	9+12	22	3.90	0.65	4.14	0.88	4.39	0.95	4.51	0.97	4.87	0.97	5.12	0.97
		25	3.81	0.69	4.05	0.91	4.29	0.98	4.42	0.99	4.78	1.01	5.03	1.02
		32	3.59	0.93	3.84	1.10	4.08	1.15	4.20	1.16	4.57	1.19	4.81	1.21
		35	3.50	1.04	3.74	1.18	3.99	1.22	4.10	1.20	4.48	1.26	4.72	1.28
		40	3.35	1.14	3.59	1.23	3.83	1.24	3.96	1.25	4.32	1.27	4.57	1.29
		43	3.25	1.12	3.50	1.17	3.74	1.17	3.86	1.16	4.23	1.18	4.47	1.20
		46	3.16	1.00	3.41	1.01	3.65	0.99	3.77	0.98	4.14	0.98	4.38	1.00

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	16	1.44	0.71	1.78	0.75	2.04	0.75	2.28	0.75	2.53	0.75	2.64	0.74	2.65	0.74
		18	1.43	0.71	1.76	0.75	2.02	0.75	2.26	0.75	2.51	0.75	2.62	0.74	2.63	0.74
		20	1.42	0.71	1.75	0.75	2.02	0.75	2.25	0.75	2.50	0.75	2.61	0.74	2.62	0.74
		21	1.40	0.71	1.74	0.75	2.00	0.75	2.24	0.75	2.49	0.75	2.60	0.74	2.61	0.73
		22	1.39	0.71	1.72	0.75	1.98	0.75	2.22	0.75	2.47	0.75	2.58	0.74	2.59	0.73
		24	1.33	0.71	1.66	0.74	1.92	0.74	2.16	0.74	2.41	0.74	2.52	0.73	2.53	0.73
	9	16	1.85	0.83	2.27	0.87	2.61	0.87	2.91	0.87	3.23	0.87	3.38	0.86	3.39	0.85
		18	1.83	0.83	2.25	0.88	2.59	0.87	2.90	0.87	3.21	0.87	3.36	0.86	3.37	0.86
		20	1.82	0.83	2.24	0.87	2.58	0.87	2.89	0.87	3.20	0.87	3.35	0.86	3.36	0.85
		21	1.81	0.83	2.23	0.87	2.57	0.87	2.87	0.87	3.19	0.87	3.33	0.86	3.34	0.85
		22	1.78	0.82	2.20	0.87	2.54	0.87	2.84	0.87	3.16	0.87	3.31	0.86	3.32	0.85
		24	1.70	0.82	2.13	0.86	2.46	0.86	2.77	0.86	3.09	0.86	3.23	0.85	3.24	0.84
	12	16	2.26	1.24	2.77	1.31	3.18	1.30	3.55	1.30	3.94	1.30	4.11	1.29	4.13	1.28
		18	2.23	1.24	2.75	1.31	3.16	1.31	3.53	1.31	3.92	1.30	4.09	1.29	4.10	1.28
		20	2.22	1.24	2.74	1.31	3.15	1.30	3.52	1.30	3.90	1.30	4.08	1.29	4.09	1.28
		21	2.20	1.24	2.72	1.30	3.13	1.30	3.50	1.30	3.88	1.30	4.06	1.29	4.07	1.27
		22	2.17	1.23	2.68	1.30	3.10	1.30	3.47	1.30	3.85	1.30	4.03	1.28	4.04	1.27
		24	2.08	1.22	2.59	1.29	3.00	1.29	3.37	1.29	3.76	1.29	3.93	1.27	3.95	1.26
2 units	7+7	16	2.72	1.19	3.34	1.26	3.83	1.25	4.28	1.25	4.75	1.25	4.96	1.24	4.97	1.23
		18	2.69	1.19	3.31	1.26	3.81	1.26	4.25	1.25	4.72	1.25	4.93	1.24	4.95	1.23
		20	2.68	1.19	3.30	1.26	3.79	1.25	4.24	1.25	4.70	1.25	4.92	1.24	4.93	1.23
		21	2.65	1.19	3.27	1.25	3.77	1.25	4.21	1.25	4.68	1.25	4.89	1.24	4.91	1.22
		22	2.61	1.18	3.24	1.25	3.73	1.25	4.18	1.25	4.64	1.25	4.85	1.23	4.87	1.22
		24	2.50	1.18	3.12	1.24	3.62	1.24	4.06	1.24	4.53	1.24	4.74	1.22	4.76	1.21
	7+9	16	2.72	1.16	3.34	1.23	3.83	1.22	4.28	1.22	4.75	1.22	4.96	1.21	4.97	1.20
		18	2.69	1.16	3.31	1.23	3.81	1.23	4.25	1.22	4.72	1.22	4.93	1.21	4.95	1.20
		20	2.68	1.16	3.30	1.23	3.79	1.22	4.24	1.22	4.70	1.22	4.92	1.21	4.93	1.20
		21	2.65	1.16	3.27	1.22	3.77	1.22	4.21	1.22	4.68	1.22	4.89	1.21	4.91	1.19
		22	2.61	1.16	3.24	1.22	3.73	1.22	4.18	1.22	4.64	1.22	4.85	1.20	4.87	1.19
		24	2.50	1.15	3.12	1.21	3.62	1.21	4.06	1.21	4.53	1.21	4.74	1.19	4.76	1.18
	9+9	16	2.72	1.16	3.34	1.23	3.83	1.22	4.28	1.22	4.75	1.22	4.96	1.21	4.97	1.20
		18	2.69	1.16	3.31	1.23	3.81	1.23	4.25	1.22	4.72	1.22	4.93	1.21	4.95	1.20
		20	2.68	1.16	3.30	1.23	3.79	1.22	4.24	1.22	4.70	1.22	4.92	1.21	4.93	1.20
		21	2.65	1.16	3.27	1.22	3.77	1.22	4.21	1.22	4.68	1.22	4.89	1.21	4.91	1.19
		22	2.61	1.16	3.24	1.22	3.73	1.22	4.18	1.22	4.64	1.22	4.85	1.20	4.87	1.19
		24	2.50	1.15	3.12	1.21	3.62	1.21	4.06	1.21	4.53	1.21	4.74	1.19	4.76	1.18
	7+12	16	2.72	1.16	3.34	1.23	3.83	1.22	4.28	1.22	4.75	1.22	4.96	1.21	4.97	1.20
		18	2.69	1.16	3.31	1.23	3.81	1.23	4.25	1.22	4.72	1.22	4.93	1.21	4.95	1.20
		20	2.68	1.16	3.30	1.23	3.79	1.22	4.24	1.22	4.70	1.22	4.92	1.21	4.93	1.20
		21	2.65	1.16	3.27	1.22	3.77	1.22	4.21	1.22	4.68	1.22	4.89	1.21	4.91	1.19
		22	2.61	1.16	3.24	1.22	3.73	1.22	4.18	1.22	4.64	1.22	4.85	1.20	4.87	1.19
		24	2.50	1.15	3.12	1.21	3.62	1.21	4.06	1.21	4.53	1.21	4.74	1.19	4.76	1.18
	9+12	16	2.72	1.16	3.34	1.23	3.83	1.22	4.28	1.22	4.75	1.22	4.96	1.21	4.97	1.20
		18	2.69	1.16	3.31	1.23	3.81	1.23	4.25	1.22	4.72	1.22	4.93	1.21	4.95	1.20
		20	2.68	1.16	3.30	1.23	3.79	1.22	4.24	1.22	4.70	1.22	4.92	1.21	4.93	1.20
		21	2.65	1.16	3.27	1.22	3.77	1.22	4.21	1.22	4.68	1.22	4.89	1.21	4.91	1.19
		22	2.61	1.16	3.24	1.22	3.73	1.22	4.18	1.22	4.64	1.22	4.85	1.20	4.87	1.19
		24	2.50	1.15	3.12	1.21	3.62	1.21	4.06	1.21	4.53	1.21	4.74	1.19	4.76	1.18

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A2UW166FA0 [FM17AH UL0], A2UW166FA1 [FM17AH UL1]

[Cooling capacity]

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
1 unit	7	22	2.00	0.34	2.12	0.46	2.25	0.50	2.31	0.51	2.50	0.51	2.62	0.51
		25	1.95	0.36	2.07	0.48	2.20	0.51	2.26	0.52	2.45	0.53	2.57	0.53
		32	1.84	0.49	1.96	0.58	2.09	0.60	2.15	0.61	2.34	0.63	2.46	0.64
		35	1.79	0.54	1.92	0.62	2.04	0.64	2.10	0.63	2.29	0.66	2.42	0.67
		40	1.71	0.60	1.84	0.64	1.96	0.65	2.03	0.66	2.21	0.67	2.34	0.68
		43	1.67	0.59	1.79	0.61	1.92	0.61	1.98	0.61	2.17	0.62	2.29	0.63
		46	1.62	0.53	1.74	0.53	1.87	0.52	1.93	0.51	2.12	0.52	2.24	0.53
	9	22	2.47	0.46	2.63	0.62	2.78	0.67	2.86	0.68	3.09	0.68	3.25	0.68
		25	2.41	0.48	2.57	0.63	2.72	0.68	2.80	0.69	3.03	0.71	3.19	0.71
		32	2.28	0.65	2.43	0.77	2.59	0.81	2.66	0.81	2.90	0.83	3.05	0.85
		35	2.22	0.73	2.37	0.82	2.53	0.85	2.60	0.84	2.84	0.88	2.99	0.90
		40	2.12	0.80	2.28	0.86	2.43	0.87	2.51	0.87	2.74	0.89	2.90	0.91
		43	2.06	0.78	2.22	0.82	2.37	0.82	2.45	0.81	2.68	0.82	2.84	0.84
		46	2.01	0.70	2.16	0.71	2.31	0.69	2.39	0.69	2.62	0.69	2.78	0.70
	12	22	3.33	0.62	3.54	0.84	3.75	0.91	3.85	0.93	4.16	0.93	4.37	0.93
		25	3.25	0.66	3.46	0.87	3.67	0.94	3.77	0.95	4.08	0.97	4.29	0.97
		32	3.07	0.89	3.27	1.05	3.48	1.10	3.59	1.12	3.90	1.14	4.11	1.16
		35	2.99	0.99	3.20	1.13	3.40	1.17	3.50	1.15	3.82	1.21	4.03	1.23
		40	2.86	1.09	3.07	1.18	3.27	1.19	3.38	1.20	3.69	1.21	3.90	1.24
		43	2.78	1.07	2.99	1.12	3.19	1.12	3.30	1.12	3.61	1.13	3.82	1.15
		46	2.70	0.96	2.91	0.97	3.12	0.95	3.22	0.94	3.53	0.94	3.74	0.96
2 units	7+7	22	3.90	0.68	4.14	0.92	4.39	0.99	4.51	1.01	4.87	1.01	5.12	1.02
		25	3.81	0.72	4.05	0.94	4.29	1.02	4.42	1.03	4.78	1.05	5.03	1.06
		32	3.59	0.97	3.84	1.14	4.08	1.20	4.20	1.21	4.57	1.24	4.81	1.26
		35	3.50	1.08	3.74	1.23	3.99	1.27	4.10	1.25	4.48	1.31	4.72	1.34
		40	3.35	1.19	3.59	1.28	3.83	1.30	3.96	1.30	4.32	1.32	4.57	1.35
		43	3.25	1.16	3.50	1.22	3.74	1.21	3.86	1.21	4.23	1.22	4.47	1.25
		46	3.16	1.04	3.41	1.06	3.65	1.03	3.77	1.02	4.14	1.02	4.38	1.05
	7+9	22	4.47	0.75	4.75	1.01	5.03	1.10	5.17	1.11	5.59	1.12	5.87	1.12
		25	4.36	0.80	4.64	1.04	4.92	1.12	5.06	1.14	5.48	1.16	5.76	1.17
		32	4.12	1.07	4.40	1.26	4.68	1.32	4.82	1.34	5.24	1.37	5.52	1.40
		35	4.01	1.19	4.29	1.35	4.57	1.40	4.70	1.38	5.13	1.45	5.41	1.48
		40	3.84	1.31	4.12	1.41	4.40	1.43	4.54	1.44	4.95	1.46	5.23	1.49
		43	3.73	1.28	4.01	1.34	4.29	1.34	4.43	1.34	4.85	1.35	5.13	1.38
		46	3.63	1.15	3.91	1.17	4.18	1.14	4.32	1.13	4.74	1.13	5.02	1.16
	9+9	22	4.47	0.75	4.75	1.01	5.03	1.10	5.17	1.11	5.59	1.12	5.87	1.12
		25	4.36	0.80	4.64	1.04	4.92	1.12	5.06	1.14	5.48	1.16	5.76	1.17
		32	4.12	1.07	4.40	1.26	4.68	1.32	4.82	1.34	5.24	1.37	5.52	1.40
		35	4.01	1.19	4.29	1.35	4.57	1.40	4.70	1.38	5.13	1.45	5.41	1.48
		40	3.84	1.31	4.12	1.41	4.40	1.43	4.54	1.44	4.95	1.46	5.23	1.49
		43	3.73	1.28	4.01	1.34	4.29	1.34	4.43	1.34	4.85	1.35	5.13	1.38
		46	3.63	1.15	3.91	1.17	4.18	1.14	4.32	1.13	4.74	1.13	5.02	1.16
	7+12	22	4.47	0.75	4.75	1.01	5.03	1.10	5.17	1.11	5.59	1.12	5.87	1.12
		25	4.36	0.80	4.64	1.04	4.92	1.12	5.06	1.14	5.48	1.16	5.76	1.17
		32	4.12	1.07	4.40	1.26	4.68	1.32	4.82	1.34	5.24	1.37	5.52	1.40
		35	4.01	1.19	4.29	1.35	4.57	1.40	4.70	1.38	5.13	1.45	5.41	1.48
		40	3.84	1.31	4.12	1.41	4.40	1.43	4.54	1.44	4.95	1.46	5.23	1.49
		43	3.73	1.28	4.01	1.34	4.29	1.34	4.43	1.34	4.85	1.35	5.13	1.38
		46	3.63	1.15	3.91	1.17	4.18	1.14	4.32	1.13	4.74	1.13	5.02	1.16
	9+12	22	4.47	0.75	4.75	1.01	5.03	1.10	5.17	1.11	5.59	1.12	5.87	1.12
		25	4.36	0.80	4.64	1.04	4.92	1.12	5.06	1.14	5.48	1.16	5.76	1.17
		32	4.12	1.07	4.40	1.26	4.68	1.32	4.82	1.34	5.24	1.37	5.52	1.40
		35	4.01	1.19	4.29	1.35	4.57	1.40	4.70	1.38	5.13	1.45	5.41	1.48
		40	3.84	1.31	4.12	1.41	4.40	1.43	4.54	1.44	4.95	1.46	5.23	1.49
		43	3.73	1.28	4.01	1.34	4.29	1.34	4.43	1.34	4.85	1.35	5.13	1.38
		46	3.63	1.15	3.91	1.17	4.18	1.14	4.32	1.13	4.74	1.13	5.02	1.16
	12+12	22	4.47	0.75	4.75	1.01	5.03	1.10	5.17	1.11	5.59	1.12	5.87	1.12
		25	4.36	0.80	4.64	1.04	4.92	1.12	5.06	1.14	5.48	1.16	5.76	1.17
		32	4.12	1.07	4.40	1.26	4.68	1.32	4.82	1.34	5.24	1.37	5.52	1.40
		35	4.01	1.19	4.29	1.35	4.57	1.40	4.70	1.38	5.13	1.45	5.41	1.48
		40	3.84	1.31	4.12	1.41	4.40	1.43	4.54	1.44	4.95	1.46	5.23	1.49
		43	3.73	1.28	4.01	1.34	4.29	1.34	4.43	1.34	4.85	1.35	5.13	1.38
		46	3.63	1.15	3.91	1.17	4.18	1.14	4.32	1.13	4.74	1.13	5.02	1.16

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	16	1.45	0.71	1.78	0.75	2.04	0.75	2.28	0.75	2.53	0.75	2.64	0.74	2.65	0.74
		18	1.43	0.71	1.76	0.75	2.02	0.75	2.26	0.75	2.51	0.75	2.62	0.74	2.63	0.74
		20	1.42	0.71	1.75	0.75	2.02	0.75	2.25	0.75	2.50	0.75	2.61	0.74	2.62	0.74
		21	1.41	0.71	1.74	0.75	2.00	0.75	2.24	0.75	2.49	0.75	2.60	0.74	2.61	0.73
		22	1.39	0.71	1.72	0.75	1.98	0.75	2.22	0.75	2.47	0.75	2.58	0.74	2.59	0.73
		24	1.33	0.71	1.66	0.74	1.92	0.74	2.16	0.74	2.41	0.74	2.52	0.73	2.53	0.73
	9	16	1.85	0.83	2.27	0.87	2.61	0.87	2.91	0.87	3.23	0.87	3.38	0.86	3.39	0.85
		18	1.83	0.83	2.25	0.88	2.59	0.87	2.90	0.87	3.21	0.87	3.36	0.86	3.37	0.86
		20	1.82	0.83	2.24	0.87	2.58	0.87	2.89	0.87	3.20	0.87	3.35	0.86	3.36	0.85
		21	1.81	0.83	2.23	0.87	2.57	0.87	2.87	0.87	3.19	0.87	3.33	0.86	3.34	0.85
		22	1.78	0.82	2.20	0.87	2.54	0.87	2.84	0.87	3.16	0.87	3.31	0.86	3.32	0.85
		24	1.70	0.82	2.13	0.86	2.46	0.86	2.77	0.86	3.09	0.86	3.23	0.85	3.24	0.84
	12	16	2.26	1.24	2.77	1.31	3.18	1.30	3.55	1.30	3.94	1.30	4.11	1.29	4.13	1.28
		18	2.23	1.24	2.75	1.31	3.16	1.31	3.53	1.31	3.92	1.30	4.09	1.29	4.10	1.28
		20	2.22	1.24	2.74	1.31	3.15	1.30	3.52	1.30	3.90	1.30	4.08	1.29	4.09	1.28
		21	2.20	1.24	2.72	1.30	3.13	1.30	3.50	1.30	3.88	1.30	4.06	1.29	4.07	1.27
		22	2.17	1.23	2.68	1.30	3.10	1.30	3.47	1.30	3.85	1.30	4.03	1.28	4.04	1.27
		24	2.08	1.22	2.59	1.29	3.00	1.29	3.37	1.29	3.76	1.29	3.93	1.27	3.95	1.26
2 units	7+7	16	2.72	1.19	3.34	1.26	3.83	1.25	4.28	1.25	4.75	1.25	4.96	1.24	4.97	1.23
		18	2.69	1.19	3.31	1.26	3.81	1.26	4.25	1.25	4.72	1.25	4.93	1.24	4.95	1.23
		20	2.68	1.19	3.30	1.26	3.79	1.25	4.24	1.25	4.70	1.25	4.92	1.24	4.93	1.23
		21	2.65	1.19	3.27	1.25	3.77	1.25	4.21	1.25	4.68	1.25	4.89	1.24	4.91	1.22
		22	2.61	1.18	3.24	1.25	3.73	1.25	4.18	1.25	4.64	1.25	4.85	1.23	4.87	1.22
		24	2.50	1.18	3.12	1.24	3.62	1.24	4.06	1.24	4.53	1.24	4.74	1.22	4.76	1.21
	7+9	16	3.06	1.33	3.76	1.41	4.32	1.41	4.83	1.40	5.35	1.40	5.59	1.39	5.61	1.37
		18	3.03	1.34	3.73	1.41	4.29	1.41	4.80	1.41	5.32	1.40	5.56	1.39	5.58	1.38
		20	3.02	1.33	3.72	1.41	4.28	1.40	4.78	1.40	5.30	1.40	5.54	1.39	5.56	1.37
		21	2.99	1.33	3.69	1.40	4.25	1.40	4.75	1.40	5.28	1.40	5.52	1.38	5.53	1.37
		22	2.95	1.33	3.65	1.40	4.21	1.40	4.71	1.40	5.24	1.40	5.47	1.38	5.49	1.37
		24	2.82	1.32	3.52	1.39	4.08	1.39	4.58	1.39	5.11	1.38	5.35	1.37	5.36	1.36
	9+9	16	3.06	1.33	3.76	1.41	4.32	1.41	4.83	1.40	5.35	1.40	5.59	1.39	5.61	1.37
		18	3.03	1.34	3.73	1.41	4.29	1.41	4.80	1.41	5.32	1.40	5.56	1.39	5.58	1.38
		20	3.02	1.33	3.72	1.41	4.28	1.40	4.78	1.40	5.30	1.40	5.54	1.39	5.56	1.37
		21	2.99	1.33	3.69	1.40	4.25	1.40	4.75	1.40	5.28	1.40	5.52	1.38	5.53	1.37
		22	2.95	1.33	3.65	1.40	4.21	1.40	4.71	1.40	5.24	1.40	5.47	1.38	5.49	1.37
		24	2.82	1.32	3.52	1.39	4.08	1.39	4.58	1.39	5.11	1.38	5.35	1.37	5.36	1.36
	7+12	16	3.06	1.33	3.76	1.41	4.32	1.41	4.83	1.40	5.35	1.40	5.59	1.39	5.61	1.37
		18	3.03	1.34	3.73	1.41	4.29	1.41	4.80	1.41	5.32	1.40	5.56	1.39	5.58	1.38
		20	3.02	1.33	3.72	1.41	4.28	1.40	4.78	1.40	5.30	1.40	5.54	1.39	5.56	1.37
		21	2.99	1.33	3.69	1.40	4.25	1.40	4.75	1.40	5.28	1.40	5.52	1.38	5.53	1.37
		22	2.95	1.33	3.65	1.40	4.21	1.40	4.71	1.40	5.24	1.40	5.47	1.38	5.49	1.37
		24	2.82	1.32	3.52	1.39	4.08	1.39	4.58	1.39	5.11	1.38	5.35	1.37	5.36	1.36
	9+12	16	3.06	1.33	3.76	1.41	4.32	1.41	4.83	1.40	5.35	1.40	5.59	1.39	5.61	1.37
		18	3.03	1.34	3.73	1.41	4.29	1.41	4.80	1.41	5.32	1.40	5.56	1.39	5.58	1.38
		20	3.02	1.33	3.72	1.41	4.28	1.40	4.78	1.40	5.30	1.40	5.54	1.39	5.56	1.37
		21	2.99	1.33	3.69	1.40	4.25	1.40	4.75	1.40	5.28	1.40	5.52	1.38	5.53	1.37
		22	2.95	1.33	3.65	1.40	4.21	1.40	4.71	1.40	5.24	1.40	5.47	1.38	5.49	1.37
		24	2.82	1.32	3.52	1.39	4.08	1.39	4.58	1.39	5.11	1.38	5.35	1.37	5.36	1.36
	12+12	16	3.06	1.33	3.76	1.41	4.32	1.41	4.83	1.40	5.35	1.40	5.59	1.39	5.61	1.37
		18	3.03	1.34	3.73	1.41	4.29	1.41	4.80	1.41	5.32	1.40	5.56	1.39	5.58	1.38
		20	3.02	1.33	3.72	1.41	4.28	1.40	4.78	1.40	5.30	1.40	5.54	1.39	5.56	1.37
		21	2.99	1.33	3.69	1.40	4.25	1.40	4.75	1.40	5.28	1.40	5.52	1.38	5.53	1.37
		22	2.95	1.33	3.65	1.40	4.21	1.40	4.71	1.40	5.24	1.40	5.47	1.38	5.49	1.37
		24	2.82	1.32	3.52	1.39	4.08	1.39	4.58	1.39	5.11	1.38	5.35	1.37	5.36	1.36

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A3UW186FA0[FM19AH UE0]

[Cooling capacity]

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
1 unit	7	22	2.00	0.37	2.12	0.51	2.25	0.55	2.31	0.56	2.50	0.56	2.62	0.56
		25	1.95	0.40	2.07	0.52	2.20	0.56	2.26	0.57	2.45	0.58	2.57	0.58
		32	1.84	0.53	1.96	0.63	2.09	0.66	2.15	0.67	2.34	0.69	2.46	0.70
		35	1.79	0.60	1.92	0.68	2.04	0.70	2.10	0.69	2.29	0.72	2.42	0.74
		40	1.71	0.66	1.84	0.71	1.96	0.72	2.03	0.72	2.21	0.73	2.34	0.74
		43	1.67	0.64	1.79	0.67	1.92	0.67	1.98	0.67	2.17	0.68	2.29	0.69
		46	1.62	0.58	1.74	0.58	1.87	0.57	1.93	0.56	2.12	0.56	2.24	0.58
	9	22	2.47	0.47	2.63	0.64	2.78	0.69	2.86	0.70	3.09	0.71	3.25	0.71
		25	2.41	0.50	2.57	0.66	2.72	0.71	2.80	0.72	3.03	0.73	3.19	0.74
		32	2.28	0.68	2.43	0.80	2.59	0.84	2.66	0.85	2.90	0.87	3.05	0.88
		35	2.22	0.76	2.37	0.86	2.53	0.89	2.60	0.87	2.84	0.92	2.99	0.93
		40	2.12	0.83	2.28	0.89	2.43	0.91	2.51	0.91	2.74	0.92	2.90	0.94
		43	2.06	0.81	2.22	0.85	2.37	0.85	2.45	0.85	2.68	0.86	2.84	0.88
		46	2.01	0.73	2.16	0.74	2.31	0.72	2.39	0.71	2.62	0.71	2.78	0.73
	12	22	3.33	0.62	3.54	0.84	3.75	0.91	3.85	0.93	4.16	0.93	4.37	0.93
		25	3.25	0.66	3.46	0.87	3.67	0.94	3.77	0.95	4.08	0.97	4.29	0.97
		32	3.07	0.89	3.27	1.05	3.48	1.10	3.59	1.11	3.90	1.14	4.11	1.16
		35	2.99	0.99	3.20	1.13	3.40	1.17	3.50	1.15	3.82	1.20	4.03	1.23
		40	2.86	1.09	3.07	1.18	3.27	1.19	3.38	1.20	3.69	1.21	3.90	1.24
		43	2.78	1.07	2.99	1.12	3.19	1.12	3.30	1.11	3.61	1.13	3.82	1.15
		46	2.70	0.96	2.91	0.97	3.12	0.95	3.22	0.94	3.53	0.94	3.74	0.96
	18	22	5.04	0.92	5.36	1.24	5.67	1.34	5.83	1.36	6.30	1.37	6.62	1.37
		25	4.92	0.97	5.24	1.27	5.55	1.37	5.71	1.39	6.18	1.42	6.50	1.43
		32	4.64	1.31	4.96	1.54	5.27	1.62	5.43	1.63	5.90	1.67	6.22	1.70
		35	4.52	1.46	4.84	1.65	5.16	1.71	5.30	1.69	5.79	1.77	6.10	1.80
		40	4.33	1.60	4.64	1.72	4.96	1.75	5.11	1.75	5.59	1.78	5.90	1.82
		43	4.21	1.57	4.52	1.64	4.84	1.64	5.00	1.63	5.47	1.65	5.78	1.69
		46	4.09	1.41	4.40	1.42	4.72	1.39	4.88	1.38	5.35	1.38	5.66	1.41
2 units	7+7	22	3.90	0.72	4.14	0.98	4.39	1.06	4.51	1.07	4.87	1.08	5.12	1.08
		25	3.81	0.77	4.05	1.01	4.29	1.09	4.42	1.10	4.78	1.12	5.03	1.13
		32	3.59	1.03	3.84	1.22	4.08	1.28	4.20	1.29	4.57	1.32	4.81	1.35
		35	3.50	1.15	3.74	1.31	3.99	1.36	4.10	1.33	4.48	1.40	4.72	1.43
		40	3.35	1.27	3.59	1.36	3.83	1.38	3.96	1.39	4.32	1.41	4.57	1.44
		43	3.25	1.24	3.50	1.30	3.74	1.30	3.86	1.29	4.23	1.31	4.47	1.33
		46	3.16	1.11	3.41	1.13	3.65	1.10	3.77	1.09	4.14	1.09	4.38	1.12
	7+9	22	4.47	0.82	4.75	1.11	5.03	1.20	5.17	1.22	5.59	1.23	5.87	1.23
		25	4.36	0.87	4.64	1.15	4.92	1.23	5.06	1.25	5.48	1.27	5.76	1.29
		32	4.12	1.17	4.40	1.39	4.68	1.45	4.82	1.47	5.24	1.51	5.52	1.53
		35	4.01	1.31	4.29	1.49	4.57	1.54	4.70	1.52	5.13	1.59	5.41	1.62
		40	3.84	1.44	4.12	1.55	4.40	1.57	4.54	1.58	4.95	1.60	5.23	1.64
		43	3.73	1.41	4.01	1.48	4.29	1.47	4.43	1.47	4.85	1.48	5.13	1.52
		46	3.63	1.27	3.91	1.28	4.18	1.25	4.32	1.24	4.74	1.24	5.02	1.27
	9+9	22	5.04	0.92	5.36	1.24	5.67	1.34	5.83	1.36	6.30	1.37	6.62	1.37
		25	4.92	0.97	5.24	1.27	5.55	1.37	5.71	1.39	6.18	1.42	6.50	1.43
		32	4.64	1.31	4.96	1.54	5.27	1.62	5.43	1.63	5.90	1.67	6.22	1.70
		35	4.52	1.46	4.84	1.65	5.16	1.71	5.30	1.69	5.79	1.77	6.10	1.80
		40	4.33	1.60	4.64	1.72	4.96	1.75	5.11	1.75	5.59	1.78	5.90	1.82
		43	4.21	1.57	4.52	1.64	4.84	1.64	5.00	1.63	5.47	1.65	5.78	1.69
		46	4.09	1.41	4.40	1.42	4.72	1.39	4.88	1.38	5.35	1.38	5.66	1.41
	7+12	22	5.04	0.92	5.36	1.24	5.67	1.34	5.83	1.36	6.30	1.37	6.62	1.37
		25	4.92	0.97	5.24	1.27	5.55	1.37	5.71	1.39	6.18	1.42	6.50	1.43
		32	4.64	1.31	4.96	1.54	5.27	1.62	5.43	1.63	5.90	1.67	6.22	1.70
		35	4.52	1.46	4.84	1.65	5.16	1.71	5.30	1.69	5.79	1.77	6.10	1.80
		40	4.33	1.60	4.64	1.72	4.96	1.75	5.11	1.75	5.59	1.78	5.90	1.82
		43	4.21	1.57	4.52	1.64	4.84	1.64	5.00	1.63	5.47	1.65	5.78	1.69
		46	4.09	1.41	4.40	1.42	4.72	1.39	4.88	1.38	5.35	1.38	5.66	1.41
	9+12	22	5.04	0.92	5.36	1.24	5.67	1.34	5.83	1.36	6.30	1.37	6.62	1.37
		25	4.92	0.97	5.24	1.27	5.55	1.37	5.71	1.39	6.18	1.42	6.50	1.43
		32	4.64	1.31	4.96	1.54	5.27	1.62	5.43	1.63	5.90	1.67	6.22	1.70
		35	4.52	1.46	4.84	1.65	5.16	1.71	5.30	1.69	5.79	1.77	6.10	1.80
		40	4.33	1.60	4.64	1.72	4.96	1.75	5.11	1.75	5.59	1.78	5.90	1.82
		43	4.21	1.57	4.52	1.64	4.84	1.64	5.00	1.63	5.47	1.65	5.78	1.69
		46	4.09	1.41	4.40	1.42	4.72	1.39	4.88	1.38	5.35	1.38	5.66	1.41
	12+12	22	5.04	0.92	5.36	1.24	5.67	1.34	5.83	1.36	6.30	1.37	6.62	1.37
		25	4.92	0.97	5.24	1.27	5.55	1.37	5.71	1.39	6.18	1.42	6.50	1.43
		32	4.64	1.31	4.96	1.54	5.27	1.62	5.43	1.63	5.90	1.67	6.22	1.70
		35	4.52	1.46	4.84	1.65	5.16	1.71	5.30	1.69	5.79	1.77	6.10	1.80
		40	4.33	1.60	4.64	1.72	4.96	1.75	5.11	1.75	5.59	1.78	5.90	1.82
		43	4.21	1.57	4.52	1.64	4.84	1.64	5.00	1.63	5.47	1.65	5.78	1.69
		46	4.09	1.41	4.40	1.42	4.72	1.39	4.88	1.38	5.35	1.38	5.66	1.41

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	7+18	22	5.04	0.92	5.36	1.24	5.67	1.34	5.83	1.36	6.30	1.37	6.62	1.37
		25	4.92	0.97	5.24	1.27	5.55	1.37	5.71	1.39	6.18	1.42	6.50	1.43
		32	4.64	1.31	4.96	1.54	5.27	1.62	5.43	1.63	5.90	1.67	6.22	1.70
		35	4.52	1.46	4.84	1.65	5.16	1.71	5.30	1.69	5.79	1.77	6.10	1.80
		40	4.33	1.60	4.64	1.72	4.96	1.75	5.11	1.75	5.59	1.78	5.90	1.82
		43	4.21	1.57	4.52	1.64	4.84	1.64	5.00	1.63	5.47	1.65	5.78	1.69
		46	4.09	1.41	4.40	1.42	4.72	1.39	4.88	1.38	5.35	1.38	5.66	1.41
	9+18	22	5.04	0.92	5.36	1.24	5.67	1.34	5.83	1.36	6.30	1.37	6.62	1.37
		25	4.92	0.97	5.24	1.27	5.55	1.37	5.71	1.39	6.18	1.42	6.50	1.43
		32	4.64	1.31	4.96	1.54	5.27	1.62	5.43	1.63	5.90	1.67	6.22	1.70
		35	4.52	1.46	4.84	1.65	5.16	1.71	5.30	1.69	5.79	1.77	6.10	1.80
		40	4.33	1.60	4.64	1.72	4.96	1.75	5.11	1.75	5.59	1.78	5.90	1.82
		43	4.21	1.57	4.52	1.64	4.84	1.64	5.00	1.63	5.47	1.65	5.78	1.69
		46	4.09	1.41	4.40	1.42	4.72	1.39	4.88	1.38	5.35	1.38	5.66	1.41
	12+18	22	5.04	0.92	5.36	1.24	5.67	1.34	5.83	1.36	6.30	1.37	6.62	1.37
		25	4.92	0.97	5.24	1.27	5.55	1.37	5.71	1.39	6.18	1.42	6.50	1.43
		32	4.64	1.31	4.96	1.54	5.27	1.62	5.43	1.63	5.90	1.67	6.22	1.70
		35	4.52	1.46	4.84	1.65	5.16	1.71	5.30	1.69	5.79	1.77	6.10	1.80
		40	4.33	1.60	4.64	1.72	4.96	1.75	5.11	1.75	5.59	1.78	5.90	1.82
		43	4.21	1.57	4.52	1.64	4.84	1.64	5.00	1.63	5.47	1.65	5.78	1.69
		46	4.09	1.41	4.40	1.42	4.72	1.39	4.88	1.38	5.35	1.38	5.66	1.41
3 units	7+7+7	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.70
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.33	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32
	7+7+9	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.70
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.33	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32
	7+9+9	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.70
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.33	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32
	7+7+12	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.70
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.33	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32
	9+9+9	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.70
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.33	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32
	7+9+12	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.70
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.33	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32
	9+9+12	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.70
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.33	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	16	1.45	0.98	1.78	1.03	2.04	1.03	2.28	1.03	2.53	1.03	2.64	1.02	2.65	1.01
		18	1.43	0.98	1.76	1.04	2.02	1.04	2.26	1.03	2.51	1.03	2.62	1.02	2.63	1.01
		20	1.42	0.98	1.75	1.03	2.02	1.03	2.25	1.03	2.50	1.03	2.61	1.02	2.62	1.01
		21	1.41	0.98	1.74	1.03	2.00	1.03	2.24	1.03	2.49	1.03	2.60	1.02	2.61	1.01
		22	1.39	0.98	1.72	1.03	1.98	1.03	2.22	1.03	2.47	1.03	2.58	1.02	2.59	1.01
		24	1.33	0.97	1.66	1.02	1.92	1.02	2.16	1.02	2.41	1.02	2.52	1.01	2.53	1.00
	9	16	1.84	1.21	2.27	1.27	2.60	1.27	2.90	1.27	3.22	1.27	3.37	1.25	3.38	1.24
		18	1.83	1.21	2.25	1.27	2.58	1.27	2.89	1.27	3.20	1.27	3.35	1.26	3.36	1.24
		20	1.82	1.20	2.24	1.27	2.57	1.27	2.88	1.27	3.19	1.27	3.34	1.25	3.35	1.24
		21	1.80	1.20	2.22	1.27	2.56	1.27	2.86	1.27	3.18	1.26	3.32	1.25	3.33	1.24
		22	1.77	1.20	2.20	1.26	2.53	1.26	2.83	1.26	3.15	1.26	3.30	1.25	3.31	1.24
		24	1.70	1.19	2.12	1.25	2.46	1.25	2.76	1.25	3.08	1.25	3.22	1.24	3.23	1.23
	12	16	2.26	1.37	2.77	1.44	3.18	1.44	3.55	1.44	3.94	1.44	4.11	1.43	4.13	1.41
		18	2.23	1.37	2.75	1.45	3.16	1.44	3.53	1.44	3.92	1.44	4.09	1.43	4.10	1.41
		20	2.22	1.37	2.74	1.44	3.15	1.44	3.52	1.44	3.90	1.44	4.08	1.42	4.09	1.41
		21	2.20	1.37	2.72	1.44	3.13	1.44	3.50	1.44	3.88	1.44	4.06	1.42	4.07	1.41
		22	2.17	1.36	2.68	1.44	3.10	1.43	3.47	1.43	3.85	1.43	4.03	1.42	4.04	1.40
		24	2.08	1.35	2.59	1.43	3.00	1.42	3.37	1.42	3.76	1.42	3.93	1.41	3.95	1.39
	18	16	3.64	1.80	4.48	1.89	5.14	1.89	5.74	1.89	6.36	1.89	6.65	1.87	6.67	1.85
		18	3.61	1.80	4.44	1.90	5.10	1.89	5.70	1.89	6.33	1.89	6.61	1.87	6.63	1.85
		20	3.59	1.79	4.42	1.89	5.08	1.89	5.68	1.89	6.30	1.88	6.59	1.87	6.61	1.85
		21	3.55	1.79	4.39	1.89	5.05	1.89	5.65	1.88	6.28	1.88	6.56	1.86	6.58	1.85
		22	3.50	1.79	4.34	1.88	5.00	1.88	5.60	1.88	6.23	1.88	6.51	1.86	6.53	1.84
		24	3.35	1.77	4.19	1.87	4.85	1.87	5.45	1.86	6.07	1.86	6.36	1.84	6.38	1.83
2 units	7+7	16	2.83	1.48	3.48	1.56	4.00	1.56	4.46	1.56	4.95	1.55	5.17	1.54	5.18	1.52
		18	2.81	1.48	3.45	1.56	3.97	1.56	4.43	1.56	4.92	1.56	5.14	1.54	5.16	1.52
		20	2.79	1.48	3.44	1.56	3.95	1.56	4.42	1.55	4.90	1.55	5.12	1.54	5.14	1.52
		21	2.76	1.47	3.41	1.55	3.93	1.55	4.39	1.55	4.88	1.55	5.10	1.53	5.12	1.52
		22	2.73	1.47	3.37	1.55	3.89	1.55	4.35	1.55	4.84	1.55	5.06	1.53	5.08	1.51
		24	2.61	1.46	3.26	1.54	3.77	1.54	4.24	1.54	4.72	1.53	4.94	1.52	4.96	1.50
	7+9	16	3.24	1.59	3.98	1.67	4.57	1.67	5.10	1.67	5.66	1.67	5.91	1.65	5.93	1.64
		18	3.21	1.59	3.95	1.68	4.54	1.67	5.07	1.67	5.62	1.67	5.88	1.65	5.89	1.64
		20	3.19	1.59	3.93	1.67	4.52	1.67	5.05	1.67	5.60	1.67	5.86	1.65	5.87	1.63
		21	3.16	1.58	3.90	1.67	4.49	1.67	5.02	1.67	5.58	1.66	5.83	1.65	5.85	1.63
		22	3.12	1.58	3.86	1.67	4.45	1.66	4.98	1.66	5.53	1.66	5.78	1.64	5.80	1.63
		24	2.98	1.57	3.72	1.65	4.31	1.65	4.84	1.65	5.40	1.65	5.65	1.63	5.67	1.61
	9+9	16	3.64	1.80	4.48	1.89	5.14	1.89	5.74	1.89	6.36	1.89	6.65	1.87	6.67	1.85
		18	3.61	1.80	4.44	1.90	5.10	1.89	5.70	1.89	6.33	1.89	6.61	1.87	6.63	1.85
		20	3.59	1.79	4.42	1.89	5.08	1.89	5.68	1.89	6.30	1.88	6.59	1.87	6.61	1.85
		21	3.55	1.79	4.39	1.89	5.05	1.89	5.65	1.88	6.28	1.88	6.56	1.86	6.58	1.85
		22	3.50	1.79	4.34	1.88	5.00	1.88	5.60	1.88	6.23	1.88	6.51	1.86	6.53	1.84
		24	3.35	1.77	4.19	1.87	4.85	1.87	5.45	1.86	6.07	1.86	6.36	1.84	6.38	1.83
	7+12	16	3.64	1.80	4.48	1.89	5.14	1.89	5.74	1.89	6.36	1.89	6.65	1.87	6.67	1.85
		18	3.61	1.80	4.44	1.90	5.10	1.89	5.70	1.89	6.33	1.89	6.61	1.87	6.63	1.85
		20	3.59	1.79	4.42	1.89	5.08	1.89	5.68	1.89	6.30	1.88	6.59	1.87	6.61	1.85
		21	3.55	1.79	4.39	1.89	5.05	1.89	5.65	1.88	6.28	1.88	6.56	1.86	6.58	1.85
		22	3.50	1.79	4.34	1.88	5.00	1.88	5.60	1.88	6.23	1.88	6.51	1.86	6.53	1.84
		24	3.35	1.77	4.19	1.87	4.85	1.87	5.45	1.86	6.07	1.86	6.36	1.84	6.38	1.83
	9+12	16	3.64	1.80	4.48	1.89	5.14	1.89	5.74	1.89	6.36	1.89	6.65	1.87	6.67	1.85
		18	3.61	1.80	4.44	1.90	5.10	1.89	5.70	1.89	6.33	1.89	6.61	1.87	6.63	1.85
		20	3.59	1.79	4.42	1.89	5.08	1.89	5.68	1.89	6.30	1.88	6.59	1.87	6.61	1.85
		21	3.55	1.79	4.39	1.89	5.05	1.89	5.65	1.88	6.28	1.88	6.56	1.86	6.58	1.85
		22	3.50	1.79	4.34	1.88	5.00	1.88	5.60	1.88	6.23	1.88	6.51	1.86	6.53	1.84
		24	3.35	1.77	4.19	1.87	4.85	1.87	5.45	1.86	6.07	1.86	6.36	1.84	6.38	1.83
	12+12	16	3.64	1.80	4.48	1.89	5.14	1.89	5.74	1.89	6.36	1.89	6.65	1.87	6.67	1.85
		18	3.61	1.80	4.44	1.90	5.10	1.89	5.70	1.89	6.33	1.89	6.61	1.87	6.63	1.85
		20	3.59	1.79	4.42	1.89	5.08	1.89	5.68	1.89	6.30	1.88	6.59	1.87	6.61	1.85
		21	3.55	1.79	4.39	1.89	5.05	1.89	5.65	1.88	6.28	1.88	6.56	1.86	6.58	1.85
		22	3.50	1.79	4.34	1.88	5.00	1.88	5.60	1.88	6.23	1.88	6.51	1.86	6.53	1.84
		24	3.35	1.77	4.19	1.87	4.85	1.87	5.45	1.86	6.07	1.86	6.36	1.84	6.38	1.83
	7+18	16	3.64	1.80	4.48	1.89	5.14	1.89	5.74	1.89	6.36	1.89	6.65	1.87	6.67	1.85
		18	3.61	1.80	4.44	1.90	5.10	1.89	5.70	1.89	6.33	1.89	6.61	1.87	6.63	1.85
		20	3.59	1.79	4.42	1.89	5.08	1.89	5.68	1.89	6.30	1.88	6.59	1.87	6.61	1.85
		21	3.55	1.79	4.39	1.89	5.05	1.89	5.65	1.88	6.28	1.88	6.56	1.86	6.58	1.85
		22	3.50	1.79	4.34	1.88	5.00	1.88	5.60	1.88	6.23	1.88	6.51	1.86	6.53	1.84
		24	3.35	1.77	4.19	1.87	4.85	1.87	5.45	1.86	6.07	1.86	6.36	1.84	6.38	1.83

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	9+18	16	3.64	1.80	4.48	1.89	5.14	1.89	5.74	1.89	6.36	1.89	6.65	1.87	6.67	1.85
		18	3.61	1.80	4.44	1.90	5.10	1.89	5.70	1.89	6.33	1.89	6.61	1.87	6.63	1.85
		20	3.59	1.79	4.42	1.89	5.08	1.89	5.68	1.89	6.30	1.88	6.59	1.87	6.61	1.85
		21	3.55	1.79	4.39	1.89	5.05	1.89	5.65	1.88	6.28	1.88	6.56	1.86	6.58	1.85
		22	3.50	1.79	4.34	1.88	5.00	1.88	5.60	1.88	6.23	1.88	6.51	1.86	6.53	1.84
		24	3.35	1.77	4.19	1.87	4.85	1.87	5.45	1.86	6.07	1.86	6.36	1.84	6.38	1.83
	12+18	16	3.64	1.80	4.48	1.89	5.14	1.89	5.74	1.89	6.36	1.89	6.65	1.87	6.67	1.85
		18	3.61	1.80	4.44	1.90	5.10	1.89	5.70	1.89	6.33	1.89	6.61	1.87	6.63	1.85
		20	3.59	1.79	4.42	1.89	5.08	1.89	5.68	1.89	6.30	1.88	6.59	1.87	6.61	1.85
		21	3.55	1.79	4.39	1.89	5.05	1.89	5.65	1.88	6.28	1.88	6.56	1.86	6.58	1.85
		22	3.50	1.79	4.34	1.88	5.00	1.88	5.60	1.88	6.23	1.88	6.51	1.86	6.53	1.84
		24	3.35	1.77	4.19	1.87	4.85	1.87	5.45	1.86	6.07	1.86	6.36	1.84	6.38	1.83
3 units	7+7+7	16	3.64	1.72	4.48	1.81	5.14	1.81	5.74	1.80	6.36	1.80	6.65	1.79	6.67	1.77
		18	3.61	1.72	4.44	1.81	5.10	1.81	5.70	1.81	6.33	1.81	6.61	1.79	6.63	1.77
		20	3.59	1.71	4.42	1.81	5.08	1.81	5.68	1.80	6.30	1.80	6.59	1.78	6.61	1.77
		21	3.55	1.71	4.39	1.80	5.05	1.80	5.65	1.80	6.28	1.80	6.56	1.78	6.58	1.76
		22	3.50	1.71	4.34	1.80	5.00	1.80	5.60	1.80	6.23	1.79	6.51	1.78	6.53	1.76
		24	3.35	1.69	4.19	1.79	4.85	1.78	5.45	1.78	6.07	1.78	6.36	1.76	6.38	1.74
	7+7+9	16	3.64	1.72	4.48	1.81	5.14	1.81	5.74	1.80	6.36	1.80	6.65	1.79	6.67	1.77
		18	3.61	1.72	4.44	1.81	5.10	1.81	5.70	1.81	6.33	1.81	6.61	1.79	6.63	1.77
		20	3.59	1.71	4.42	1.81	5.08	1.81	5.68	1.80	6.30	1.80	6.59	1.78	6.61	1.77
		21	3.55	1.71	4.39	1.80	5.05	1.80	5.65	1.80	6.28	1.80	6.56	1.78	6.58	1.76
		22	3.50	1.71	4.34	1.80	5.00	1.80	5.60	1.80	6.23	1.79	6.51	1.78	6.53	1.76
		24	3.35	1.69	4.19	1.79	4.85	1.78	5.45	1.78	6.07	1.78	6.36	1.76	6.38	1.74
	7+9+9	16	3.64	1.72	4.48	1.81	5.14	1.81	5.74	1.80	6.36	1.80	6.65	1.79	6.67	1.77
		18	3.61	1.72	4.44	1.81	5.10	1.81	5.70	1.81	6.33	1.81	6.61	1.79	6.63	1.77
		20	3.59	1.71	4.42	1.81	5.08	1.81	5.68	1.80	6.30	1.80	6.59	1.78	6.61	1.77
		21	3.55	1.71	4.39	1.80	5.05	1.80	5.65	1.80	6.28	1.80	6.56	1.78	6.58	1.76
		22	3.50	1.71	4.34	1.80	5.00	1.80	5.60	1.80	6.23	1.79	6.51	1.78	6.53	1.76
		24	3.35	1.69	4.19	1.79	4.85	1.78	5.45	1.78	6.07	1.78	6.36	1.76	6.38	1.74
	7+7+12	16	3.64	1.72	4.48	1.81	5.14	1.81	5.74	1.80	6.36	1.80	6.65	1.79	6.67	1.77
		18	3.61	1.72	4.44	1.81	5.10	1.81	5.70	1.81	6.33	1.81	6.61	1.79	6.63	1.77
		20	3.59	1.71	4.42	1.81	5.08	1.81	5.68	1.80	6.30	1.80	6.59	1.78	6.61	1.77
		21	3.55	1.71	4.39	1.80	5.05	1.80	5.65	1.80	6.28	1.80	6.56	1.78	6.58	1.76
		22	3.50	1.71	4.34	1.80	5.00	1.80	5.60	1.80	6.23	1.79	6.51	1.78	6.53	1.76
		24	3.35	1.69	4.19	1.79	4.85	1.78	5.45	1.78	6.07	1.78	6.36	1.76	6.38	1.74
	9+9+9	16	3.64	1.72	4.48	1.81	5.14	1.81	5.74	1.80	6.36	1.80	6.65	1.79	6.67	1.77
		18	3.61	1.72	4.44	1.81	5.10	1.81	5.70	1.81	6.33	1.81	6.61	1.79	6.63	1.77
		20	3.59	1.71	4.42	1.81	5.08	1.81	5.68	1.80	6.30	1.80	6.59	1.78	6.61	1.77
		21	3.55	1.71	4.39	1.80	5.05	1.80	5.65	1.80	6.28	1.80	6.56	1.78	6.58	1.76
		22	3.50	1.71	4.34	1.80	5.00	1.80	5.60	1.80	6.23	1.79	6.51	1.78	6.53	1.76
		24	3.35	1.69	4.19	1.79	4.85	1.78	5.45	1.78	6.07	1.78	6.36	1.76	6.38	1.74
	7+9+12	16	3.64	1.72	4.48	1.81	5.14	1.81	5.74	1.80	6.36	1.80	6.65	1.79	6.67	1.77
		18	3.61	1.72	4.44	1.81	5.10	1.81	5.70	1.81	6.33	1.81	6.61	1.79	6.63	1.77
		20	3.59	1.71	4.42	1.81	5.08	1.81	5.68	1.80	6.30	1.80	6.59	1.78	6.61	1.77
		21	3.55	1.71	4.39	1.80	5.05	1.80	5.65	1.80	6.28	1.80	6.56	1.78	6.58	1.76
		22	3.50	1.71	4.34	1.80	5.00	1.80	5.60	1.80	6.23	1.79	6.51	1.78	6.53	1.76
		24	3.35	1.69	4.19	1.79	4.85	1.78	5.45	1.78	6.07	1.78	6.36	1.76	6.38	1.74
	9+9+12	16	3.64	1.72	4.48	1.81	5.14	1.81	5.74	1.80	6.36	1.80	6.65	1.79	6.67	1.77
		18	3.61	1.72	4.44	1.81	5.10	1.81	5.70	1.81	6.33	1.81	6.61	1.79	6.63	1.77
		20	3.59	1.71	4.42	1.81	5.08	1.81	5.68	1.80	6.30	1.80	6.59	1.78	6.61	1.77
		21	3.55	1.71	4.39	1.80	5.05	1.80	5.65	1.80	6.28	1.80	6.56	1.78	6.58	1.76
		22	3.50	1.71	4.34	1.80	5.00	1.80	5.60	1.80	6.23	1.79	6.51	1.78	6.53	1.76
		24	3.35	1.69	4.19	1.79	4.85	1.78	5.45	1.78	6.07	1.78	6.36	1.76	6.38	1.74

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A3UW216FA3[FM21AH UE3]

[Cooling capacity]

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	22	1.95	0.40	2.07	0.54	2.19	0.59	2.25	0.60	2.44	0.60	2.56	0.60
		25	1.90	0.43	2.03	0.56	2.15	0.60	2.21	0.61	2.39	0.62	2.51	0.63
		32	1.80	0.57	1.92	0.68	2.04	0.71	2.10	0.72	2.28	0.73	2.41	0.75
		35	1.75	0.64	1.87	0.73	1.99	0.75	2.05	0.74	2.24	0.78	2.36	0.79
		40	1.67	0.70	1.80	0.76	1.92	0.77	1.98	0.77	2.16	0.78	2.28	0.80
		43	1.63	0.69	1.75	0.72	1.87	0.72	1.93	0.72	2.12	0.72	2.24	0.74
		46	1.58	0.62	1.70	0.63	1.83	0.61	1.89	0.60	2.07	0.60	2.19	0.62
	9	22	2.51	0.47	2.67	0.63	2.82	0.68	2.90	0.69	3.14	0.70	3.30	0.70
		25	2.45	0.50	2.61	0.65	2.77	0.70	2.84	0.71	3.08	0.72	3.24	0.73
		32	2.31	0.67	2.47	0.79	2.63	0.82	2.71	0.83	2.94	0.85	3.10	0.87
		35	2.25	0.74	2.41	0.84	2.57	0.87	2.64	0.86	2.88	0.90	3.04	0.92
		40	2.16	0.82	2.31	0.88	2.47	0.89	2.55	0.89	2.78	0.91	2.94	0.93
		43	2.10	0.80	2.25	0.84	2.41	0.84	2.49	0.83	2.72	0.84	2.88	0.86
		46	2.04	0.72	2.19	0.73	2.35	0.71	2.43	0.70	2.66	0.70	2.82	0.72
	12	22	3.35	0.60	3.56	0.81	3.77	0.88	3.87	0.89	4.19	0.90	4.39	0.90
		25	3.27	0.64	3.48	0.84	3.69	0.90	3.79	0.92	4.11	0.93	4.32	0.94
		32	3.08	0.86	3.29	1.01	3.50	1.06	3.61	1.08	3.92	1.10	4.13	1.12
		35	3.01	0.96	3.21	1.09	3.42	1.13	3.52	1.11	3.84	1.16	4.05	1.19
		40	2.87	1.05	3.08	1.14	3.29	1.15	3.40	1.15	3.71	1.17	3.92	1.20
		43	2.79	1.03	3.00	1.08	3.21	1.08	3.32	1.08	3.63	1.09	3.84	1.11
		46	2.72	0.93	2.92	0.94	3.13	0.92	3.24	0.91	3.55	0.91	3.76	0.93
	18	22	5.01	0.74	5.33	1.00	5.64	1.08	5.80	1.10	6.27	1.10	6.58	1.10
		25	4.89	0.78	5.21	1.03	5.52	1.11	5.68	1.12	6.15	1.14	6.46	1.15
		32	4.62	1.05	4.93	1.24	5.24	1.30	5.40	1.32	5.87	1.35	6.18	1.38
		35	4.50	1.18	4.81	1.33	5.13	1.38	5.27	1.36	5.75	1.43	6.07	1.45
		40	4.30	1.29	4.62	1.39	4.93	1.41	5.09	1.41	5.56	1.44	5.87	1.47
		43	4.18	1.26	4.50	1.32	4.81	1.32	4.97	1.32	5.44	1.33	5.75	1.36
		46	4.07	1.14	4.38	1.15	4.69	1.12	4.85	1.11	5.32	1.11	5.63	1.14
2 units	7+7	22	3.90	0.60	4.14	0.81	4.39	0.87	4.51	0.89	4.87	0.89	5.12	0.89
		25	3.81	0.63	4.05	0.83	4.29	0.90	4.42	0.91	4.78	0.92	5.03	0.93
		32	3.59	0.85	3.84	1.01	4.08	1.06	4.20	1.07	4.57	1.09	4.81	1.11
		35	3.50	0.95	3.74	1.08	3.99	1.12	4.10	1.10	4.48	1.15	4.72	1.18
		40	3.35	1.04	3.59	1.13	3.83	1.14	3.96	1.14	4.32	1.16	4.57	1.19
		43	3.25	1.02	3.50	1.07	3.74	1.07	3.86	1.07	4.23	1.08	4.47	1.10
		46	3.16	0.92	3.41	0.93	3.65	0.91	3.77	0.90	4.14	0.90	4.38	0.92
	7+9	22	4.46	0.66	4.74	0.90	5.02	0.97	5.16	0.98	5.58	0.99	5.86	0.99
		25	4.36	0.70	4.63	0.92	4.91	0.99	5.05	1.01	5.47	1.03	5.75	1.03
		32	4.11	0.95	4.39	1.11	4.67	1.17	4.81	1.18	5.23	1.21	5.50	1.23
		35	4.00	1.05	4.28	1.20	4.56	1.24	4.69	1.22	5.12	1.28	5.40	1.30
		40	3.83	1.16	4.11	1.25	4.39	1.27	4.53	1.27	4.94	1.29	5.22	1.32
		43	3.72	1.13	4.00	1.19	4.28	1.19	4.42	1.18	4.84	1.19	5.12	1.22
		46	3.62	1.02	3.90	1.03	4.18	1.01	4.32	1.00	4.73	1.00	5.01	1.02
	9+9	22	5.01	0.79	5.33	1.06	5.64	1.15	5.80	1.17	6.27	1.18	6.58	1.18
		25	4.89	0.84	5.21	1.10	5.52	1.18	5.68	1.20	6.15	1.22	6.46	1.23
		32	4.62	1.12	4.93	1.32	5.24	1.39	5.40	1.41	5.87	1.44	6.18	1.47
		35	4.50	1.25	4.81	1.42	5.13	1.48	5.27	1.45	5.75	1.52	6.07	1.55
		40	4.30	1.38	4.62	1.48	4.93	1.50	5.09	1.51	5.56	1.53	5.87	1.56
		43	4.18	1.35	4.50	1.41	4.81	1.41	4.97	1.41	5.44	1.42	5.75	1.45
		46	4.07	1.21	4.38	1.23	4.69	1.20	4.85	1.18	5.32	1.19	5.63	1.21
	7+12	22	5.30	0.89	5.63	1.20	5.96	1.30	6.13	1.31	6.62	1.32	6.95	1.32
		25	5.17	0.94	5.50	1.23	5.83	1.33	6.00	1.35	6.50	1.37	6.83	1.38
		32	4.88	1.26	5.21	1.49	5.54	1.56	5.71	1.58	6.21	1.62	6.54	1.65
		35	4.76	1.41	5.09	1.60	5.42	1.66	5.57	1.63	6.08	1.71	6.41	1.74
		40	4.55	1.55	4.88	1.67	5.21	1.69	5.38	1.70	5.87	1.72	6.20	1.76
		43	4.42	1.52	4.75	1.59	5.08	1.58	5.25	1.58	5.75	1.60	6.08	1.63
		46	4.30	1.36	4.63	1.38	4.96	1.34	5.13	1.33	5.62	1.33	5.95	1.36
	9+12	22	5.85	0.98	6.21	1.32	6.58	1.43	6.76	1.45	7.31	1.46	7.68	1.46
		25	5.71	1.04	6.08	1.36	6.44	1.47	6.63	1.49	7.17	1.51	7.54	1.53
		32	5.39	1.39	5.75	1.64	6.12	1.73	6.30	1.75	6.85	1.79	7.22	1.82
		35	5.25	1.56	5.62	1.77	5.98	1.83	6.15	1.80	6.71	1.89	7.08	1.92
		40	5.02	1.71	5.39	1.84	5.75	1.87	5.93	1.87	6.48	1.90	6.85	1.94
		43	4.88	1.67	5.25	1.75	5.61	1.75	5.80	1.7	6.35	1.8	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.5	5.66	1.5	6.21	1.5	6.57	1.5

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	12+12	22	5.85	0.98	6.21	1.32	6.58	1.43	6.76	1.45	7.31	1.46	7.68	1.46
		25	5.71	1.04	6.08	1.36	6.44	1.47	6.63	1.49	7.17	1.51	7.54	1.53
		32	5.39	1.39	5.75	1.64	6.12	1.73	6.30	1.75	6.85	1.79	7.22	1.82
		35	5.25	1.56	5.62	1.77	5.98	1.83	6.15	1.80	6.71	1.89	7.08	1.92
		40	5.02	1.71	5.39	1.84	5.75	1.87	5.93	1.87	6.48	1.90	6.85	1.94
		43	4.88	1.67	5.25	1.75	5.61	1.75	5.80	1.75	6.35	1.76	6.71	1.80
		46	4.74	1.50	5.11	1.52	5.48	1.48	5.66	1.47	6.21	1.47	6.57	1.51
	7+18	22	5.85	0.98	6.21	1.32	6.58	1.43	6.76	1.45	7.31	1.46	7.68	1.46
		25	5.71	1.04	6.08	1.36	6.44	1.47	6.63	1.49	7.17	1.51	7.54	1.53
		32	5.39	1.39	5.75	1.64	6.12	1.73	6.30	1.75	6.85	1.79	7.22	1.82
		35	5.25	1.56	5.62	1.77	5.98	1.83	6.15	1.80	6.71	1.89	7.08	1.92
		40	5.02	1.71	5.39	1.84	5.75	1.87	5.93	1.87	6.48	1.90	6.85	1.94
		43	4.88	1.67	5.25	1.75	5.61	1.75	5.80	1.75	6.35	1.76	6.71	1.80
		46	4.74	1.50	5.11	1.52	5.48	1.48	5.66	1.47	6.21	1.47	6.57	1.51
	9+18	22	5.85	0.98	6.21	1.32	6.58	1.43	6.76	1.45	7.31	1.46	7.68	1.46
		25	5.71	1.04	6.08	1.36	6.44	1.47	6.63	1.49	7.17	1.51	7.54	1.53
		32	5.39	1.39	5.75	1.64	6.12	1.73	6.30	1.75	6.85	1.79	7.22	1.82
		35	5.25	1.56	5.62	1.77	5.98	1.83	6.15	1.80	6.71	1.89	7.08	1.92
		40	5.02	1.71	5.39	1.84	5.75	1.87	5.93	1.9	6.48	1.9	6.85	1.9
		43	4.88	1.7	5.25	1.8	5.61	1.7	5.80	1.7	6.35	1.8	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.5	5.66	1.5	6.21	1.5	6.57	1.5
	12+18	22	5.85	0.98	6.21	1.32	6.58	1.43	6.76	1.45	7.31	1.46	7.68	1.46
		25	5.71	1.04	6.08	1.36	6.44	1.47	6.63	1.49	7.17	1.51	7.54	1.53
		32	5.39	1.39	5.75	1.64	6.12	1.73	6.30	1.75	6.85	1.79	7.22	1.82
		35	5.25	1.56	5.62	1.77	5.98	1.83	6.15	1.80	6.71	1.89	7.08	1.92
		40	5.02	1.71	5.39	1.84	5.75	1.87	5.93	1.87	6.48	1.90	6.85	1.94
		43	4.88	1.67	5.25	1.75	5.61	1.75	5.80	1.7	6.35	1.8	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.5	5.66	1.5	6.21	1.5	6.57	1.5
3 units	7+7+7	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.87
		40	5.02	1.66	5.39	1.8	5.75	1.8	5.93	1.8	6.48	1.8	6.85	1.9
		43	4.88	1.6	5.25	1.7	5.61	1.7	5.80	1.7	6.35	1.7	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.4	5.66	1.4	6.21	1.4	6.57	1.5
	7+7+9	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.5	5.62	1.7	5.98	1.8	6.15	1.8	6.71	1.8	7.08	1.9
		40	5.02	1.7	5.39	1.8	5.75	1.8	5.93	1.8	6.48	1.8	6.85	1.9
		43	4.88	1.6	5.25	1.7	5.61	1.7	5.80	1.7	6.35	1.7	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.4	5.66	1.4	6.21	1.4	6.57	1.5
	7+9+9	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.87
		40	5.02	1.66	5.39	1.79	5.75	1.82	5.93	1.82	6.48	1.85	6.85	1.89
		43	4.88	1.63	5.25	1.70	5.61	1.70	5.80	1.70	6.35	1.71	6.71	1.75
		46	4.74	1.46	5.11	1.48	5.48	1.44	5.66	1.43	6.21	1.43	6.57	1.46
	7+7+12	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.87
		40	5.02	1.66	5.39	1.79	5.75	1.82	5.93	1.82	6.48	1.85	6.85	1.89
		43	4.88	1.63	5.25	1.70	5.61	1.70	5.80	1.70	6.35	1.71	6.71	1.75
		46	4.74	1.46	5.11	1.48	5.48	1.44	5.66	1.43	6.21	1.43	6.57	1.46
	9+9+9	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.87
		40	5.02	1.66	5.39	1.79	5.75	1.82	5.93	1.82	6.48	1.85	6.85	1.89
		43	4.88	1.63	5.25	1.70	5.61	1.70	5.80	1.70	6.35	1.71	6.71	1.75
		46	4.74	1.46	5.11	1.48	5.48	1.44	5.66	1.43	6.21	1.43	6.57	1.46
	7+9+12	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.87
		40	5.02	1.66	5.39	1.79	5.75	1.82	5.93	1.82	6.48	1.85	6.85	1.89
		43	4.88	1.63	5.25	1.70	5.61	1.70	5.80	1.7	6.35	1.7	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.4	5.66	1.4	6.21	1.4	6.57	1.5

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	9+9+12	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.9
		40	5.02	1.66	5.39	1.8	5.75	1.8	5.93	1.8	6.48	1.8	6.85	1.9
		43	4.88	1.6	5.25	1.7	5.61	1.7	5.80	1.7	6.35	1.7	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.4	5.66	1.4	6.21	1.4	6.57	1.5
	7+12+12	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.87
		40	5.02	1.66	5.39	1.79	5.75	1.82	5.93	1.82	6.48	1.85	6.85	1.89
		43	4.88	1.63	5.25	1.70	5.61	1.70	5.80	1.70	6.35	1.71	6.71	1.75
		46	4.74	1.46	5.11	1.48	5.48	1.44	5.66	1.43	6.21	1.43	6.57	1.46
	7+7+18	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.87
		40	5.02	1.66	5.39	1.79	5.75	1.82	5.93	1.82	6.48	1.85	6.85	1.89
		43	4.88	1.63	5.25	1.70	5.61	1.70	5.80	1.7	6.35	1.7	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.4	5.66	1.4	6.21	1.4	6.57	1.5
	9+12+12	22	5.85	0.95	6.21	1.28	6.58	1.39	6.76	1.41	7.31	1.42	7.68	1.42
		25	5.71	1.01	6.08	1.32	6.44	1.43	6.63	1.45	7.17	1.47	7.54	1.48
		32	5.39	1.36	5.75	1.60	6.12	1.68	6.30	1.70	6.85	1.74	7.22	1.77
		35	5.25	1.51	5.62	1.72	5.98	1.78	6.15	1.75	6.71	1.83	7.08	1.87
		40	5.02	1.66	5.39	1.79	5.75	1.82	5.93	1.8	6.48	1.8	6.85	1.9
		43	4.88	1.6	5.25	1.7	5.61	1.7	5.80	1.7	6.35	1.7	6.71	1.8
		46	4.74	1.5	5.11	1.5	5.48	1.4	5.66	1.4	6.21	1.4	6.57	1.5

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
1 unit	7	16	1.42	0.99	1.75	1.04	2.01	1.04	2.24	1.04	2.48	1.04	2.60	1.03	2.60	1.02
		18	1.41	0.99	1.73	1.05	1.99	1.05	2.23	1.04	2.47	1.04	2.58	1.03	2.59	1.02
		20	1.40	0.99	1.73	1.04	1.98	1.04	2.22	1.04	2.46	1.04	2.57	1.03	2.58	1.02
		21	1.39	0.99	1.71	1.04	1.97	1.04	2.21	1.04	2.45	1.04	2.56	1.03	2.57	1.02
		22	1.37	0.99	1.69	1.04	1.95	1.04	2.19	1.04	2.43	1.04	2.54	1.03	2.55	1.02
		24	1.31	0.98	1.63	1.03	1.89	1.03	2.13	1.03	2.37	1.03	2.48	1.02	2.49	1.01
	9	16	1.83	1.17	2.24	1.24	2.58	1.23	2.88	1.23	3.19	1.23	3.33	1.22	3.34	1.21
		18	1.81	1.17	2.23	1.24	2.56	1.24	2.86	1.23	3.17	1.23	3.32	1.22	3.33	1.21
		20	1.80	1.17	2.22	1.24	2.55	1.23	2.85	1.23	3.16	1.23	3.31	1.22	3.32	1.21
		21	1.78	1.17	2.20	1.23	2.53	1.23	2.83	1.23	3.15	1.23	3.29	1.22	3.30	1.20
		22	1.76	1.17	2.18	1.23	2.51	1.23	2.81	1.23	3.12	1.23	3.26	1.21	3.27	1.20
		24	1.68	1.16	2.10	1.22	2.43	1.22	2.73	1.22	3.05	1.22	3.19	1.20	3.20	1.19
	12	16	2.24	1.36	2.75	1.44	3.16	1.44	3.52	1.43	3.91	1.43	4.08	1.42	4.10	1.40
		18	2.22	1.36	2.73	1.44	3.13	1.44	3.50	1.44	3.89	1.43	4.06	1.42	4.07	1.41
		20	2.20	1.36	2.71	1.44	3.12	1.43	3.49	1.43	3.87	1.43	4.05	1.42	4.06	1.40
		21	2.18	1.36	2.69	1.43	3.10	1.43	3.47	1.43	3.85	1.43	4.03	1.41	4.04	1.40
		22	2.15	1.36	2.66	1.43	3.07	1.43	3.44	1.43	3.82	1.43	4.00	1.41	4.01	1.40
		24	2.06	1.34	2.57	1.42	2.98	1.42	3.35	1.42	3.73	1.41	3.90	1.40	3.92	1.39
	18	16	3.66	1.54	4.50	1.63	5.16	1.63	5.76	1.62	6.39	1.62	6.68	1.61	6.70	1.59
		18	3.62	1.55	4.46	1.63	5.13	1.63	5.73	1.63	6.36	1.62	6.64	1.61	6.66	1.59
		20	3.60	1.54	4.44	1.63	5.11	1.63	5.71	1.62	6.33	1.62	6.62	1.61	6.64	1.59
		21	3.57	1.54	4.41	1.62	5.07	1.62	5.68	1.62	6.31	1.62	6.59	1.60	6.61	1.59
		22	3.52	1.54	4.36	1.62	5.02	1.62	5.63	1.62	6.26	1.61	6.54	1.60	6.56	1.58
		24	3.37	1.52	4.21	1.61	4.87	1.61	5.47	1.60	6.10	1.60	6.39	1.59	6.41	1.57
2 units	7+7	16	2.85	1.39	3.49	1.47	4.01	1.47	4.48	1.46	4.97	1.46	5.19	1.45	5.21	1.43
		18	2.82	1.39	3.47	1.47	3.99	1.47	4.45	1.47	4.94	1.46	5.16	1.45	5.18	1.44
		20	2.80	1.39	3.45	1.47	3.97	1.46	4.44	1.46	4.92	1.46	5.15	1.45	5.16	1.43
		21	2.78	1.39	3.43	1.46	3.94	1.46	4.41	1.46	4.90	1.46	5.12	1.44	5.14	1.43
		22	2.74	1.38	3.39	1.46	3.91	1.46	4.37	1.46	4.86	1.45	5.08	1.44	5.10	1.43
		24	2.62	1.37	3.27	1.45	3.79	1.45	4.25	1.45	4.74	1.44	4.96	1.43	4.98	1.41
	7+9	16	3.26	1.50	4.00	1.58	4.59	1.58	5.13	1.57	5.69	1.57	5.94	1.56	5.96	1.54
		18	3.22	1.50	3.97	1.58	4.56	1.58	5.09	1.58	5.65	1.57	5.91	1.56	5.92	1.54
		20	3.20	1.50	3.95	1.58	4.54	1.58	5.08	1.57	5.63	1.57	5.89	1.56	5.91	1.54
		21	3.18	1.49	3.92	1.57	4.51	1.57	5.05	1.57	5.61	1.57	5.86	1.55	5.88	1.54
		22	3.13	1.49	3.88	1.57	4.47	1.57	5.00	1.57	5.56	1.56	5.82	1.55	5.83	1.53
		24	3.00	1.48	3.74	1.56	4.33	1.56	4.87	1.55	5.43	1.55	5.68	1.54	5.70	1.52
	9+9	16	3.66	1.60	4.50	1.69	5.16	1.69	5.76	1.68	6.39	1.68	6.68	1.67	6.70	1.65
		18	3.62	1.60	4.46	1.69	5.13	1.69	5.73	1.69	6.36	1.68	6.64	1.67	6.66	1.65
		20	3.60	1.60	4.44	1.69	5.11	1.69	5.71	1.68	6.33	1.68	6.62	1.67	6.64	1.65
		21	3.57	1.60	4.41	1.68	5.07	1.68	5.68	1.68	6.31	1.68	6.59	1.66	6.61	1.65
		22	3.52	1.59	4.36	1.68	5.02	1.68	5.63	1.68	6.26	1.67	6.54	1.66	6.56	1.64
		24	3.37	1.58	4.21	1.67	4.87	1.66	5.47	1.66	6.10	1.66	6.39	1.64	6.41	1.63
	7+12	16	3.86	1.71	4.75	1.80	5.45	1.80	6.08	1.79	6.75	1.79	7.05	1.78	7.07	1.76
		18	3.82	1.71	4.71	1.80	5.41	1.80	6.04	1.80	6.71	1.80	7.01	1.78	7.03	1.76
		20	3.80	1.70	4.68	1.80	5.39	1.80	6.02	1.79	6.68	1.79	6.99	1.77	7.01	1.76
		21	3.77	1.70	4.65	1.79	5.36	1.79	5.99	1.79	6.65	1.79	6.95	1.77	6.97	1.75
		22	3.72	1.70	4.60	1.79	5.30	1.79	5.94	1.79	6.60	1.78	6.90	1.77	6.92	1.75
		24	3.56	1.68	4.44	1.78	5.14	1.77	5.78	1.77	6.44	1.77	6.74	1.75	6.76	1.73
	9+12	16	4.07	1.87	4.99	1.97	5.73	1.97	6.40	1.97	7.10	1.96	7.42	1.94	7.44	1.92
		18	4.02	1.87	4.95	1.97	5.69	1.97	6.36	1.97	7.06	1.97	7.38	1.95	7.40	1.93
		20	4.00	1.87	4.93	1.97	5.67	1.97	6.34	1.96	7.03	1.96	7.35	1.94	7.38	1.92
		21	3.97	1.86	4.89	1.96	5.64	1.96	6.30	1.96	7.00	1.96	7.32	1.94	7.34	1.92
		22	3.91	1.86	4.84	1.96	5.58	1.96	6.25	1.96	6.95	1.95	7.26	1.93	7.28	1.91
		24	3.74	1.84	4.67	1.94	5.41	1.94	6.08	1.94	6.78	1.94	7.09	1.92	7.12	1.90
	12+12	16	4.07	1.87	4.99	1.97	5.73	1.97	6.40	1.97	7.10	1.96	7.42	1.94	7.44	1.92
		18	4.02	1.87	4.95	1.97	5.69	1.97	6.36	1.97	7.06	1.97	7.38	1.95	7.40	1.93
		20	4.00	1.87	4.93	1.97	5.67	1.97	6.34	1.96	7.03	1.96	7.35	1.94	7.38	1.92
		21	3.97	1.86	4.89	1.96	5.64	1.96	6.30	1.96	7.00	1.96	7.32	1.94	7.34	1.92
		22	3.91	1.86	4.84	1.96	5.58	1.96	6.25	1.96	6.95	1.95	7.26	1.93	7.28	1.91
		24	3.74	1.84	4.67	1.94	5.41	1.94	6.08	1.94	6.78	1.94	7.09	1.92	7.12	1.90
	7+18	16	4.07	1.87	4.99	1.97	5.73	1.97	6.40	1.97	7.10	1.96	7.42	1.94	7.44	1.92
		18	4.02	1.87	4.95	1.97	5.69	1.97	6.36	1.97	7.06	1.97	7.38	1.95	7.40	1.93
		20	4.00	1.87	4.93	1.97	5.67	1.97	6.34	1.96	7.03	1.96	7.35	1.94	7.38	1.92
		21	3.97	1.86	4.89	1.96	5.64	1.96	6.30	1.96	7.00	1.96	7.32	1.94	7.34	1.92
		22	3.91	1.86	4.84	1.96	5.58	1.96	6.25	1.96	6.95	1.95	7.26	1.93	7.28	1.91
		24	3.74	1.84	4.67	1.94	5.41	1.94	6.08	1.94	6.78	1.94	7.09	1.92	7.12	1.90
	9+18	16	4.07	1.85	4.99	1.95	5.73	1.95	6.40	1.95	7.10	1.94	7.42	1.92	7.44	1.90
		18	4.02	1.85	4.95	1.95	5.69	1.95	6.36	1.95	7.06	1.95	7.38	1.93	7.40	1.91
		20	4.00	1.85	4.93	1.95	5.67	1.95	6.34	1.94	7.03	1.94	7.35	1.92	7.38	1.90
		21	3.97	1.84	4.89	1.94	5.64	1.94	6.30	1.94	7.00	1.94	7.32	1.92	7.34	1.90
		22	3.91	1.84	4.84	1.94	5.58	1.94	6.25	1.94	6.95	1.93	7.26	1.91	7.28	1.89
		24	3.74	1.82	4.67	1.92	5.41	1.92	6.08	1.92	6.78	1.92	7.09	1.90	7.12	1.88
	12+18	16	4.07	1.84	4.99	1.94	5.73	1.94	6.40	1.94	7.10	1.93	7.42	1.91	7.44	1.89
		18	4.02	1.84	4.95	1.94	5.69	1.94	6.36	1.94	7.06	1.94	7.38	1.92	7.40	1.90
		20	4.00	1.84	4.93	1.94	5.67	1.94	6.34	1.93	7.03	1.93	7.35	1.91	7.38	1.89
		21	3.97	1.83	4.89	1.93	5.64	1.93	6.30	1.93	7.00	1.93	7.32	1.91	7.34	1.89
		22	3.91	1.83	4.84	1.93	5.58	1.93	6.25	1.93	6.95	1.92	7.26	1.90	7.28	1.88
		24	3.74	1.81	4.67	1.91	5.41	1.91	6.08	1.91	6.78	1.91	7.09	1.89	7.12	1.87
3 units	7+7+7	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	7+7+9	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82
	7+9+9	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82
	7+7+12	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82
	9+9+9	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82
	7+9+12	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82
	9+9+12	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82
	7+12+12	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82
	7+7+18	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82
	9+12+12	16	4.07	1.79	4.99	1.89	5.73	1.89	6.40	1.89	7.10	1.88	7.42	1.86	7.44	1.85
		18	4.02	1.79	4.95	1.89	5.69	1.89	6.36	1.89	7.06	1.89	7.38	1.87	7.40	1.85
		20	4.00	1.79	4.93	1.89	5.67	1.89	6.34	1.88	7.03	1.88	7.35	1.86	7.38	1.84
		21	3.97	1.79	4.89	1.88	5.64	1.88	6.30	1.88	7.00	1.88	7.32	1.86	7.34	1.84
		22	3.91	1.78	4.84	1.88	5.58	1.88	6.25	1.88	6.95	1.87	7.26	1.85	7.28	1.84
		24	3.74	1.77	4.67	1.86	5.41	1.86	6.08	1.86	6.78	1.86	7.09	1.84	7.12	1.82

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A4UW246FA3[FM25AH UE3]

[Cooling capacity]

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	22	2.00	0.40	2.12	0.54	2.25	0.59	2.31	0.60	2.50	0.60	2.62	0.60
		25	1.95	0.43	2.07	0.56	2.20	0.60	2.26	0.61	2.45	0.62	2.57	0.63
		32	1.84	0.57	1.96	0.68	2.09	0.71	2.15	0.72	2.34	0.73	2.46	0.75
		35	1.79	0.64	1.92	0.73	2.04	0.75	2.10	0.74	2.29	0.78	2.42	0.79
		40	1.71	0.70	1.84	0.76	1.96	0.77	2.03	0.77	2.21	0.78	2.34	0.80
		43	1.67	0.69	1.79	0.72	1.92	0.72	1.98	0.72	2.17	0.72	2.29	0.74
		46	1.62	0.62	1.74	0.63	1.87	0.61	1.93	0.60	2.12	0.60	2.24	0.62
	9	22	2.47	0.42	2.63	0.57	2.78	0.62	2.86	0.63	3.09	0.63	3.25	0.63
		25	2.41	0.45	2.57	0.59	2.72	0.64	2.80	0.64	3.03	0.66	3.19	0.66
		32	2.28	0.60	2.43	0.71	2.59	0.75	2.66	0.76	2.90	0.77	3.05	0.79
		35	2.22	0.67	2.37	0.77	2.53	0.79	2.60	0.78	2.84	0.82	2.99	0.83
		40	2.12	0.74	2.28	0.80	2.43	0.81	2.51	0.81	2.74	0.82	2.90	0.84
		43	2.06	0.73	2.22	0.76	2.37	0.76	2.45	0.76	2.68	0.76	2.84	0.78
		46	2.01	0.65	2.16	0.66	2.31	0.64	2.39	0.64	2.62	0.64	2.78	0.65
	12	22	3.33	0.61	3.54	0.82	3.75	0.89	3.85	0.90	4.16	0.91	4.37	0.91
		25	3.25	0.65	3.46	0.85	3.67	0.91	3.77	0.93	4.08	0.94	4.29	0.95
		32	3.07	0.87	3.27	1.02	3.48	1.07	3.59	1.09	3.90	1.11	4.11	1.13
		35	2.99	0.97	3.20	1.10	3.40	1.14	3.50	1.12	3.82	1.17	4.03	1.20
		40	2.86	1.06	3.07	1.15	3.27	1.16	3.38	1.16	3.69	1.18	3.90	1.21
		43	2.78	1.04	2.99	1.09	3.19	1.09	3.30	1.09	3.61	1.10	3.82	1.12
		46	2.70	0.93	2.91	0.95	3.12	0.92	3.22	0.92	3.53	0.92	3.74	0.94
	18	22	5.04	0.91	5.36	1.23	5.67	1.33	5.83	1.34	6.30	1.36	6.62	1.36
		25	4.92	0.96	5.24	1.26	5.55	1.36	5.71	1.38	6.18	1.40	6.50	1.42
		32	4.64	1.29	4.96	1.53	5.27	1.60	5.43	1.62	5.90	1.66	6.22	1.69
		35	4.52	1.44	4.84	1.64	5.16	1.70	5.30	1.67	5.79	1.75	6.10	1.79
		40	4.33	1.59	4.64	1.71	4.96	1.73	5.11	1.74	5.59	1.76	5.90	1.80
		43	4.21	1.55	4.52	1.63	4.84	1.62	5.00	1.62	5.47	1.64	5.78	1.67
		46	4.09	1.39	4.40	1.41	4.72	1.38	4.88	1.36	5.35	1.37	5.66	1.40
	24	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72
2 units	7+7	22	3.90	0.68	4.14	0.92	4.39	1.00	4.51	1.01	4.87	1.02	5.12	1.02
		25	3.81	0.73	4.05	0.95	4.29	1.03	4.42	1.04	4.78	1.06	5.03	1.07
		32	3.59	0.98	3.84	1.15	4.08	1.21	4.20	1.22	4.57	1.25	4.81	1.27
		35	3.50	1.09	3.74	1.24	3.99	1.28	4.10	1.26	4.48	1.32	4.72	1.35
		40	3.35	1.20	3.59	1.29	3.83	1.31	3.96	1.31	4.32	1.33	4.57	1.36
		43	3.25	1.17	3.50	1.23	3.74	1.22	3.86	1.22	4.23	1.23	4.47	1.26
		46	3.16	1.05	3.41	1.06	3.65	1.04	3.77	1.03	4.14	1.03	4.38	1.05
	7+9	22	4.47	0.79	4.75	1.07	5.03	1.16	5.17	1.18	5.59	1.18	5.87	1.19
		25	4.36	0.84	4.64	1.10	4.92	1.19	5.06	1.21	5.48	1.23	5.76	1.24
		32	4.12	1.13	4.40	1.33	4.68	1.40	4.82	1.42	5.24	1.45	5.52	1.48
		35	4.01	1.26	4.29	1.43	4.57	1.49	4.70	1.46	5.13	1.53	5.41	1.56
		40	3.84	1.39	4.12	1.49	4.40	1.51	4.54	1.52	4.95	1.54	5.23	1.58
		43	3.73	1.36	4.01	1.42	4.29	1.42	4.43	1.42	4.85	1.43	5.13	1.46
		46	3.63	1.22	3.91	1.23	4.18	1.20	4.32	1.19	4.74	1.19	5.02	1.22
	9+9	22	5.04	0.91	5.36	1.23	5.67	1.33	5.83	1.34	6.30	1.36	6.62	1.36
		25	4.92	0.96	5.24	1.26	5.55	1.36	5.71	1.38	6.18	1.40	6.50	1.42
		32	4.64	1.29	4.96	1.53	5.27	1.60	5.43	1.62	5.90	1.66	6.22	1.69
		35	4.52	1.44	4.84	1.64	5.16	1.70	5.30	1.67	5.79	1.75	6.10	1.79
		40	4.33	1.59	4.64	1.71	4.96	1.73	5.11	1.74	5.59	1.76	5.90	1.80
		43	4.21	1.55	4.52	1.63	4.84	1.62	5.00	1.62	5.47	1.64	5.78	1.67
		46	4.09	1.39	4.40	1.41	4.72	1.38	4.88	1.36	5.35	1.37	5.66	1.40
	7+12	22	5.33	0.91	5.66	1.23	5.99	1.33	6.16	1.35	6.66	1.36	6.99	1.36
		25	5.20	0.97	5.53	1.27	5.87	1.37	6.03	1.39	6.53	1.41	6.87	1.42
		32	4.91	1.30	5.24	1.54	5.57	1.61	5.74	1.63	6.24	1.67	6.57	1.70
		35	4.78	1.45	5.11	1.65	5.45	1.71	5.60	1.68	6.11	1.76	6.45	1.80
		40	4.57	1.59	4.90	1.72	5.24	1.74	5.40	1.75	5.90	1.77	6.24	1.81
		43	4.45	1.56	4.78	1.64	5.11	1.63	5.28	1.63	5.78	1.65	6.11	1.68
		46	4.32	1.40	4.65	1.42	4.99	1.39	5.15	1.37	5.65	1.37	5.99	1.41
	9+12	22	5.90	0.95	6.27	1.28	6.63	1.38	6.82	1.40	7.37	1.41	7.74	1.41
		25	5.76	1.00	6.13	1.31	6.49	1.42	6.68	1.44	7.23	1.46	7.60	1.48
		32	5.43	1.35	5.80	1.59	6.17	1.67	6.35	1.69	6.91	1.73	7.28	1.76
		35	5.29	1.50	5.66	1.71	6.03	1.77	6.20	1.74	6.77	1.82	7.14	1.86
		40	5.06	1.65	5.43	1.78	5.80	1.80	5.98	1.81	6.54	1.84	6.91	1.88
		43	4.92	1.62	5.29	1.69	5.66	1.69	5.84	1.69	6.40	1.70	6.77	1.74
		46	4.78	1.45	5.15	1.47	5.52	1.44	5.70	1.42	6.26	1.42	6.63	1.46

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	12+12	22	6.47	1.08	6.87	1.46	7.28	1.58	7.48	1.60	8.08	1.62	8.49	1.62
		25	6.31	1.15	6.72	1.50	7.12	1.62	7.33	1.64	7.93	1.67	8.34	1.69
		32	5.96	1.54	6.36	1.82	6.77	1.91	6.97	1.93	7.58	1.98	7.98	2.01
		35	5.81	1.72	6.21	1.95	6.61	2.02	6.80	1.99	7.42	2.09	7.83	2.13
		40	5.55	1.89	5.96	2.04	6.36	2.06	6.56	2.07	7.17	2.10	7.57	2.15
		43	5.40	1.85	5.80	1.94	6.21	1.93	6.41	1.93	7.02	1.95	7.42	1.99
		46	5.25	1.66	5.65	1.68	6.05	1.64	6.26	1.63	6.86	1.63	7.27	1.67
	7+18	22	6.75	1.16	7.17	1.57	7.60	1.70	7.81	1.72	8.44	1.74	8.86	1.74
		25	6.59	1.23	7.02	1.62	7.44	1.74	7.65	1.77	8.28	1.80	8.70	1.81
		32	6.22	1.66	6.64	1.96	7.07	2.05	7.28	2.08	7.91	2.12	8.33	2.16
		35	6.06	1.85	6.48	2.10	6.91	2.18	7.10	2.14	7.75	2.24	8.17	2.29
		40	5.80	2.03	6.22	2.19	6.64	2.22	6.85	2.23	7.49	2.26	7.91	2.31
		43	5.64	1.99	6.06	2.08	6.48	2.08	6.69	2.08	7.33	2.10	7.75	2.14
		46	5.48	1.79	5.90	1.81	6.32	1.77	6.53	1.75	7.17	1.75	7.59	1.79
	9+18	22	6.75	1.16	7.17	1.57	7.60	1.70	7.81	1.72	8.44	1.74	8.86	1.74
		25	6.59	1.23	7.02	1.62	7.44	1.74	7.65	1.77	8.28	1.80	8.70	1.81
		32	6.22	1.66	6.64	1.96	7.07	2.05	7.28	2.08	7.91	2.12	8.33	2.16
		35	6.06	1.85	6.48	2.10	6.91	2.18	7.10	2.14	7.75	2.24	8.17	2.29
		40	5.80	2.03	6.22	2.19	6.64	2.22	6.85	2.23	7.49	2.26	7.91	2.31
		43	5.64	1.99	6.06	2.08	6.48	2.08	6.69	2.08	7.33	2.10	7.75	2.14
		46	5.48	1.79	5.90	1.81	6.32	1.77	6.53	1.75	7.17	1.75	7.59	1.79
	12+18	22	6.75	1.16	7.17	1.57	7.60	1.70	7.81	1.72	8.44	1.74	8.86	1.74
		25	6.59	1.23	7.02	1.62	7.44	1.74	7.65	1.77	8.28	1.80	8.70	1.81
		32	6.22	1.66	6.64	1.96	7.07	2.05	7.28	2.08	7.91	2.12	8.33	2.16
		35	6.06	1.85	6.48	2.10	6.91	2.18	7.10	2.14	7.75	2.24	8.17	2.29
		40	5.80	2.03	6.22	2.19	6.64	2.22	6.85	2.23	7.49	2.26	7.91	2.31
		43	5.64	1.99	6.06	2.08	6.48	2.08	6.69	2.08	7.33	2.10	7.75	2.14
		46	5.48	1.79	5.90	1.81	6.32	1.77	6.53	1.75	7.17	1.75	7.59	1.79
	7+24	22	6.75	1.16	7.17	1.57	7.60	1.70	7.81	1.72	8.44	1.74	8.86	1.74
		25	6.59	1.23	7.02	1.62	7.44	1.74	7.65	1.77	8.28	1.80	8.70	1.81
		32	6.22	1.66	6.64	1.96	7.07	2.05	7.28	2.08	7.91	2.12	8.33	2.16
		35	6.06	1.85	6.48	2.10	6.91	2.18	7.10	2.14	7.75	2.24	8.17	2.29
		40	5.80	2.03	6.22	2.19	6.64	2.22	6.85	2.23	7.49	2.26	7.91	2.31
		43	5.64	1.99	6.06	2.08	6.48	2.08	6.69	2.08	7.33	2.10	7.75	2.14
		46	5.48	1.79	5.90	1.81	6.32	1.77	6.53	1.75	7.17	1.75	7.59	1.79
	9+24	22	6.75	1.16	7.17	1.57	7.60	1.70	7.81	1.72	8.44	1.74	8.86	1.74
		25	6.59	1.23	7.02	1.62	7.44	1.74	7.65	1.77	8.28	1.80	8.70	1.81
		32	6.22	1.66	6.64	1.96	7.07	2.05	7.28	2.08	7.91	2.12	8.33	2.16
		35	6.06	1.85	6.48	2.10	6.91	2.18	7.10	2.14	7.75	2.24	8.17	2.29
		40	5.80	2.03	6.22	2.19	6.64	2.22	6.85	2.23	7.49	2.26	7.91	2.31
		43	5.64	1.99	6.06	2.08	6.48	2.08	6.69	2.08	7.33	2.10	7.75	2.14
		46	5.48	1.79	5.90	1.81	6.32	1.77	6.53	1.75	7.17	1.75	7.59	1.79
	18+18	22	6.75	1.16	7.17	1.57	7.60	1.70	7.81	1.72	8.44	1.74	8.86	1.74
		25	6.59	1.23	7.02	1.62	7.44	1.74	7.65	1.77	8.28	1.80	8.70	1.81
		32	6.22	1.66	6.64	1.96	7.07	2.05	7.28	2.08	7.91	2.12	8.33	2.16
		35	6.06	1.85	6.48	2.10	6.91	2.18	7.10	2.14	7.75	2.24	8.17	2.29
		40	5.80	2.03	6.22	2.19	6.64	2.22	6.85	2.23	7.49	2.26	7.91	2.31
		43	5.64	1.99	6.06	2.08	6.48	2.08	6.69	2.08	7.33	2.10	7.75	2.14
		46	5.48	1.79	5.90	1.81	6.32	1.77	6.53	1.75	7.17	1.75	7.59	1.79
	12+24	22	6.75	1.16	7.17	1.57	7.60	1.70	7.81	1.72	8.44	1.74	8.86	1.74
		25	6.59	1.23	7.02	1.62	7.44	1.74	7.65	1.77	8.28	1.80	8.70	1.81
		32	6.22	1.66	6.64	1.96	7.07	2.05	7.28	2.08	7.91	2.12	8.33	2.16
		35	6.06	1.85	6.48	2.10	6.91	2.18	7.10	2.14	7.75	2.24	8.17	2.29
		40	5.80	2.03	6.22	2.19	6.64	2.22	6.85	2.23	7.49	2.26	7.91	2.31
		43	5.64	1.99	6.06	2.08	6.48	2.08	6.69	2.08	7.33	2.10	7.75	2.14
		46	5.48	1.79	5.90	1.81	6.32	1.77	6.53	1.75	7.17	1.75	7.59	1.79
3 units	7+7+7	22	5.90	0.95	6.27	1.28	6.63	1.38	6.82	1.40	7.37	1.41	7.74	1.41
		25	5.76	1.00	6.13	1.31	6.49	1.42	6.68	1.44	7.23	1.46	7.60	1.48
		32	5.43	1.35	5.80	1.59	6.17	1.67	6.35	1.69	6.91	1.73	7.28	1.76
		35	5.29	1.50	5.66	1.71	6.03	1.77	6.20	1.74	6.77	1.82	7.14	1.86
		40	5.06	1.65	5.43	1.78	5.80	1.80	5.98	1.81	6.54	1.84	6.91	1.88
		43	4.92	1.62	5.29	1.69	5.66	1.69	5.84	1.69	6.40	1.70	6.77	1.74
		46	4.78	1.45	5.15	1.47	5.52	1.44	5.70	1.42	6.26	1.42	6.63	1.46
	7+7+9	22	6.47	1.04	6.87	1.41	7.28	1.53	7.48	1.55	8.08	1.56	8.49	1.56
		25	6.31	1.11	6.72	1.45	7.12	1.56	7.33	1.59	7.93	1.61	8.34	1.63
		32	5.96	1.49	6.36	1.75	6.77	1.84	6.97	1.86	7.58	1.91	7.98	1.94
		35	5.81	1.66	6.21	1.88	6.61	1.95	6.80	1.92	7.42	2.01	7.83	2.05
		40	5.55	1.82	5.96	1.96	6.36	1.99	6.56	2.00	7.17	2.03	7.57	2.07
		43	5.40	1.79	5.80	1.87	6.21	1.87	6.41	1.86	7.02	1.88	7.42	1.92
		46	5.25	1.60	5.65	1.62	6.05	1.58	6.26	1.57	6.86	1.57	7.27	1.61

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	7+9+9	22	6.75	1.09	7.17	1.47	7.60	1.59	7.81	1.61	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.51	7.44	1.63	7.65	1.65	8.28	1.68	8.70	1.70
		32	6.22	1.55	6.64	1.83	7.07	1.92	7.28	1.94	7.91	1.99	8.33	2.02
		35	6.06	1.73	6.48	1.96	6.91	2.03	7.10	2.00	7.75	2.10	8.17	2.14
		40	5.80	1.90	6.22	2.05	6.64	2.07	6.85	2.08	7.49	2.11	7.91	2.16
		43	5.64	1.86	6.06	1.95	6.48	1.94	6.69	1.94	7.33	1.96	7.75	2.00
		46	5.48	1.67	5.90	1.69	6.32	1.65	6.53	1.63	7.17	1.63	7.59	1.67
	7+7+12	22	6.75	1.09	7.17	1.47	7.60	1.59	7.81	1.61	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.51	7.44	1.63	7.65	1.65	8.28	1.68	8.70	1.70
		32	6.22	1.55	6.64	1.83	7.07	1.92	7.28	1.94	7.91	1.99	8.33	2.02
		35	6.06	1.73	6.48	1.96	6.91	2.03	7.10	2.00	7.75	2.10	8.17	2.14
		40	5.80	1.90	6.22	2.05	6.64	2.07	6.85	2.08	7.49	2.11	7.91	2.16
		43	5.64	1.86	6.06	1.95	6.48	1.94	6.69	1.94	7.33	1.96	7.75	2.00
		46	5.48	1.67	5.90	1.69	6.32	1.65	6.53	1.63	7.17	1.63	7.59	1.67
	9+9+9	22	6.75	1.09	7.17	1.47	7.60	1.59	7.81	1.61	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.51	7.44	1.63	7.65	1.65	8.28	1.68	8.70	1.70
		32	6.22	1.55	6.64	1.83	7.07	1.92	7.28	1.94	7.91	1.99	8.33	2.02
		35	6.06	1.73	6.48	1.96	6.91	2.03	7.10	2.00	7.75	2.10	8.17	2.14
		40	5.80	1.90	6.22	2.05	6.64	2.07	6.85	2.08	7.49	2.11	7.91	2.16
		43	5.64	1.86	6.06	1.95	6.48	1.94	6.69	1.94	7.33	1.96	7.75	2.00
		46	5.48	1.67	5.90	1.69	6.32	1.65	6.53	1.63	7.17	1.63	7.59	1.67
	7+9+12	22	6.75	1.09	7.17	1.47	7.60	1.59	7.81	1.61	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.51	7.44	1.63	7.65	1.65	8.28	1.68	8.70	1.70
		32	6.22	1.55	6.64	1.83	7.07	1.92	7.28	1.94	7.91	1.99	8.33	2.02
		35	6.06	1.73	6.48	1.96	6.91	2.03	7.10	2.00	7.75	2.10	8.17	2.14
		40	5.80	1.90	6.22	2.05	6.64	2.07	6.85	2.08	7.49	2.11	7.91	2.16
		43	5.64	1.86	6.06	1.95	6.48	1.94	6.69	1.94	7.33	1.96	7.75	2.00
		46	5.48	1.67	5.90	1.69	6.32	1.65	6.53	1.63	7.17	1.63	7.59	1.67
	9+9+12	22	6.75	1.09	7.17	1.47	7.60	1.59	7.81	1.61	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.51	7.44	1.63	7.65	1.65	8.28	1.68	8.70	1.70
		32	6.22	1.55	6.64	1.83	7.07	1.92	7.28	1.94	7.91	1.99	8.33	2.02
		35	6.06	1.73	6.48	1.96	6.91	2.03	7.10	2.00	7.75	2.10	8.17	2.14
		40	5.80	1.90	6.22	2.05	6.64	2.07	6.85	2.08	7.49	2.11	7.91	2.16
		43	5.64	1.86	6.06	1.95	6.48	1.94	6.69	1.94	7.33	1.96	7.75	2.00
		46	5.48	1.67	5.90	1.69	6.32	1.65	6.53	1.63	7.17	1.63	7.59	1.67
	7+12+12	22	6.75	1.09	7.17	1.47	7.60	1.59	7.81	1.61	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.51	7.44	1.63	7.65	1.65	8.28	1.68	8.70	1.70
		32	6.22	1.55	6.64	1.83	7.07	1.92	7.28	1.94	7.91	1.99	8.33	2.02
		35	6.06	1.73	6.48	1.96	6.91	2.03	7.10	2.00	7.75	2.10	8.17	2.14
		40	5.80	1.90	6.22	2.05	6.64	2.07	6.85	2.08	7.49	2.11	7.91	2.16
		43	5.64	1.86	6.06	1.95	6.48	1.94	6.69	1.94	7.33	1.96	7.75	2.00
		46	5.48	1.67	5.90	1.69	6.32	1.65	6.53	1.63	7.17	1.63	7.59	1.67
	7+7+18	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72
	9+12+12	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72
	7+9+18	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72
	12+12+12	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	9+9+18	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72
	7+12+18	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72
	7+7+24	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72
	9+12+18	22	6.75	1.11	7.17	1.50	7.60	1.63	7.81	1.65	8.44	1.66	8.86	1.66
		25	6.59	1.18	7.02	1.55	7.44	1.67	7.65	1.69	8.28	1.72	8.70	1.74
		32	6.22	1.59	6.64	1.87	7.07	1.97	7.28	1.99	7.91	2.04	8.33	2.07
		35	6.06	1.77	6.48	2.01	6.91	2.09	7.10	2.05	7.75	2.15	8.17	2.19
		40	5.80	1.95	6.22	2.10	6.64	2.13	6.85	2.13	7.49	2.17	7.91	2.21
		43	5.64	1.91	6.06	2.00	6.48	1.99	6.69	1.99	7.33	2.01	7.75	2.05
		46	5.48	1.71	5.90	1.73	6.32	1.69	6.53	1.68	7.17	1.68	7.59	1.72
4 units	7+7+7+7	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	7+7+7+9	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	7+7+9+9	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	7+7+7+12	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	7+9+9+9	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	7+7+9+12	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	9+9+9+9	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	7+9+9+12	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	7+7+12+12	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	9+9+9+12	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67
	7+7+7+18	22	6.75	1.08	7.17	1.46	7.60	1.58	7.81	1.60	8.44	1.62	8.86	1.62
		25	6.59	1.15	7.02	1.50	7.44	1.62	7.65	1.64	8.28	1.67	8.70	1.69
		32	6.22	1.54	6.64	1.82	7.07	1.91	7.28	1.93	7.91	1.98	8.33	2.01
		35	6.06	1.72	6.48	1.95	6.91	2.02	7.10	1.99	7.75	2.09	8.17	2.13
		40	5.80	1.89	6.22	2.04	6.64	2.06	6.85	2.07	7.49	2.10	7.91	2.15
		43	5.64	1.85	6.06	1.94	6.48	1.93	6.69	1.93	7.33	1.95	7.75	1.99
		46	5.48	1.66	5.90	1.68	6.32	1.64	6.53	1.63	7.17	1.63	7.59	1.67

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	16	1.39	1.00	1.70	1.05	1.96	1.05	2.19	1.05	2.42	1.05	2.53	1.04	2.54	1.03
		18	1.37	1.00	1.69	1.06	1.94	1.06	2.17	1.05	2.41	1.05	2.52	1.04	2.53	1.03
		20	1.37	1.00	1.68	1.05	1.94	1.05	2.16	1.05	2.40	1.05	2.51	1.04	2.52	1.03
		21	1.35	1.00	1.67	1.05	1.92	1.05	2.15	1.05	2.39	1.05	2.50	1.04	2.51	1.03
		22	1.34	1.00	1.65	1.05	1.91	1.05	2.13	1.05	2.37	1.05	2.48	1.04	2.49	1.03
		24	1.28	0.99	1.59	1.04	1.85	1.04	2.07	1.04	2.31	1.04	2.42	1.03	2.43	1.02
	9	16	1.68	1.00	2.06	1.05	2.37	1.05	2.64	1.05	2.93	1.05	3.06	1.04	3.07	1.03
		18	1.66	1.00	2.04	1.06	2.35	1.06	2.62	1.05	2.91	1.05	3.04	1.04	3.05	1.03
		20	1.65	1.00	2.03	1.05	2.34	1.05	2.61	1.05	2.90	1.05	3.03	1.04	3.04	1.03
		21	1.64	1.00	2.02	1.05	2.32	1.05	2.60	1.05	2.89	1.05	3.02	1.04	3.03	1.03
		22	1.61	1.00	2.00	1.05	2.30	1.05	2.58	1.05	2.87	1.05	3.00	1.04	3.00	1.03
		24	1.54	0.99	1.93	1.04	2.23	1.04	2.51	1.04	2.80	1.04	2.93	1.03	2.94	1.02
	12	16	2.26	1.14	2.77	1.21	3.18	1.20	3.55	1.20	3.94	1.20	4.11	1.19	4.13	1.18
		18	2.23	1.14	2.75	1.21	3.16	1.21	3.53	1.20	3.92	1.20	4.09	1.19	4.10	1.18
		20	2.22	1.14	2.74	1.21	3.15	1.20	3.52	1.20	3.90	1.20	4.08	1.19	4.09	1.18
		21	2.20	1.14	2.72	1.20	3.13	1.20	3.50	1.20	3.88	1.20	4.06	1.19	4.07	1.18
		22	2.17	1.14	2.68	1.20	3.10	1.20	3.47	1.20	3.85	1.20	4.03	1.18	4.04	1.17
		24	2.08	1.13	2.59	1.19	3.00	1.19	3.37	1.19	3.76	1.19	3.93	1.17	3.95	1.16
	18	16	3.35	1.91	4.12	2.01	4.73	2.01	5.28	2.01	5.86	2.00	6.12	1.98	6.14	1.96
		18	3.32	1.91	4.09	2.01	4.70	2.01	5.25	2.01	5.83	2.01	6.09	1.99	6.10	1.97
		20	3.30	1.90	4.07	2.01	4.68	2.01	5.23	2.00	5.80	2.00	6.07	1.98	6.08	1.96
		21	3.27	1.90	4.04	2.00	4.65	2.00	5.20	2.00	5.78	2.00	6.04	1.98	6.06	1.96
		22	3.23	1.90	3.99	2.00	4.60	2.00	5.15	2.00	5.73	1.99	5.99	1.97	6.01	1.95
		24	3.09	1.88	3.85	1.98	4.46	1.98	5.01	1.98	5.59	1.98	5.85	1.96	5.87	1.94
	24	16	4.34	2.17	5.33	2.29	6.12	2.29	6.83	2.29	7.58	2.28	7.91	2.26	7.94	2.24
		18	4.29	2.18	5.28	2.29	6.07	2.29	6.79	2.29	7.53	2.29	7.87	2.26	7.89	2.24
		20	4.27	2.17	5.26	2.29	6.05	2.29	6.76	2.29	7.50	2.28	7.84	2.26	7.87	2.24
		21	4.23	2.17	5.22	2.29	6.01	2.28	6.72	2.28	7.47	2.28	7.81	2.26	7.83	2.23
		22	4.17	2.16	5.16	2.28	5.95	2.28	6.66	2.27	7.41	2.27	7.75	2.25	7.77	2.23
		24	3.99	2.14	4.98	2.26	5.77	2.26	6.48	2.26	7.23	2.25	7.57	2.23	7.59	2.21
2 units	7+7	16	2.83	1.46	3.48	1.54	4.00	1.54	4.46	1.53	4.95	1.53	5.17	1.52	5.18	1.50
		18	2.81	1.46	3.45	1.54	3.97	1.54	4.43	1.54	4.92	1.53	5.14	1.52	5.16	1.50
		20	2.79	1.46	3.44	1.54	3.95	1.53	4.42	1.53	4.90	1.53	5.12	1.52	5.14	1.50
		21	2.76	1.45	3.41	1.53	3.93	1.53	4.39	1.53	4.88	1.53	5.10	1.51	5.12	1.50
		22	2.73	1.45	3.37	1.53	3.89	1.53	4.35	1.53	4.84	1.52	5.06	1.51	5.08	1.49
		24	2.61	1.44	3.26	1.52	3.77	1.52	4.24	1.51	4.72	1.51	4.94	1.50	4.96	1.48
	7+9	16	3.24	1.65	3.98	1.74	4.57	1.74	5.10	1.73	5.66	1.73	5.91	1.72	5.93	1.70
		18	3.21	1.65	3.95	1.74	4.54	1.74	5.07	1.74	5.62	1.74	5.88	1.72	5.89	1.70
		20	3.19	1.65	3.93	1.74	4.52	1.74	5.05	1.73	5.60	1.73	5.86	1.71	5.87	1.70
		21	3.16	1.64	3.90	1.73	4.49	1.73	5.02	1.73	5.58	1.73	5.83	1.71	5.85	1.69
		22	3.12	1.64	3.86	1.73	4.45	1.73	4.98	1.73	5.53	1.72	5.78	1.71	5.80	1.69
		24	2.98	1.63	3.72	1.72	4.31	1.71	4.84	1.71	5.40	1.71	5.65	1.69	5.67	1.68
	9+9	16	3.70	1.91	4.55	2.01	5.22	2.01	5.83	2.01	6.46	2.00	6.75	1.98	6.77	1.96
		18	3.66	1.91	4.51	2.01	5.18	2.01	5.79	2.01	6.43	2.01	6.71	1.99	6.74	1.97
		20	3.64	1.90	4.49	2.01	5.16	2.01	5.77	2.00	6.40	2.00	6.69	1.98	6.71	1.96
		21	3.61	1.90	4.46	2.00	5.13	2.00	5.74	2.00	6.37	2.00	6.66	1.98	6.68	1.96
		22	3.56	1.90	4.41	2.00	5.08	2.00	5.69	2.00	6.32	1.99	6.61	1.97	6.63	1.95
		24	3.41	1.88	4.25	1.98	4.93	1.98	5.53	1.98	6.17	1.98	6.46	1.96	6.48	1.94
	7+12	16	3.87	1.92	4.76	2.03	5.47	2.03	6.10	2.03	6.77	2.02	7.07	2.00	7.09	1.98
		18	3.84	1.93	4.72	2.03	5.43	2.03	6.06	2.03	6.73	2.03	7.03	2.01	7.05	1.99
		20	3.81	1.92	4.70	2.03	5.40	2.03	6.04	2.02	6.70	2.02	7.01	2.00	7.03	1.98
		21	3.78	1.92	4.67	2.02	5.37	2.02	6.01	2.02	6.67	2.02	6.97	2.00	7.00	1.98
		22	3.73	1.91	4.61	2.02	5.32	2.02	5.95	2.02	6.62	2.01	6.92	1.99	6.94	1.97
		24	3.57	1.90	4.45	2.00	5.16	2.00	5.79	2.00	6.46	2.00	6.76	1.98	6.78	1.96
	9+12	16	4.28	2.00	5.26	2.11	6.04	2.11	6.74	2.11	7.47	2.10	7.81	2.08	7.83	2.06
		18	4.24	2.00	5.21	2.11	5.99	2.11	6.70	2.11	7.43	2.11	7.76	2.09	7.79	2.06
		20	4.21	2.00	5.19	2.11	5.97	2.11	6.67	2.10	7.40	2.10	7.74	2.08	7.76	2.06
		21	4.18	2.00	5.15	2.10	5.93	2.10	6.63	2.10	7.37	2.10	7.70	2.08	7.73	2.06
		22	4.12	1.99	5.09	2.10	5.87	2.10	6.58	2.09	7.31	2.09	7.64	2.07	7.67	2.05
		24	3.94	1.97	4.92	2.08	5.70	2.08	6.40	2.08	7.13	2.08	7.47	2.06	7.49	2.03
	12+12	16	4.68	2.17	5.75	2.29	6.61	2.29	7.38	2.29	8.18	2.28	8.54	2.26	8.57	2.24
		18	4.64	2.18	5.71	2.29	6.56	2.29	7.33	2.29	8.14	2.29	8.50	2.26	8.52	2.24
		20	4.61	2.17	5.68	2.29	6.53	2.29	7.30	2.29	8.10	2.28	8.47	2.26	8.50	2.24
		21	4.57	2.17	5.64	2.29	6.49	2.28	7.26	2.28	8.07	2.28	8.43	2.26	8.46	2.23
		22	4.51	2.16	5.58	2.28	6.43	2.28	7.20	2.27	8.00	2.27	8.37	2.25	8.39	2.23
		24	4.31	2.14	5.38	2.26	6.23	2.26	7.00	2.26	7.81	2.25	8.17	2.23	8.20	2.21

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	7+18	16	4.74	2.27	5.82	2.39	6.69	2.39	7.47	2.39	8.28	2.38	8.65	2.36	8.68	2.34
		18	4.69	2.27	5.78	2.39	6.64	2.39	7.42	2.39	8.24	2.39	8.60	2.36	8.63	2.34
		20	4.67	2.27	5.75	2.39	6.62	2.39	7.39	2.39	8.20	2.38	8.58	2.36	8.60	2.34
		21	4.63	2.26	5.71	2.39	6.57	2.38	7.35	2.38	8.17	2.38	8.54	2.35	8.56	2.33
		22	4.56	2.26	5.64	2.38	6.51	2.38	7.29	2.37	8.10	2.37	8.47	2.35	8.50	2.32
		24	4.36	2.24	5.45	2.36	6.31	2.36	7.09	2.36	7.91	2.35	8.27	2.33	8.30	2.31
	9+18	16	4.92	2.27	6.04	2.39	6.93	2.39	7.74	2.39	8.59	2.38	8.97	2.36	8.99	2.34
		18	4.87	2.27	5.99	2.39	6.88	2.39	7.69	2.39	8.54	2.39	8.92	2.36	8.95	2.34
		20	4.84	2.27	5.96	2.39	6.86	2.39	7.66	2.39	8.50	2.38	8.89	2.36	8.92	2.34
		21	4.80	2.26	5.92	2.39	6.81	2.38	7.62	2.38	8.47	2.38	8.85	2.35	8.87	2.33
		22	4.73	2.26	5.85	2.38	6.75	2.38	7.55	2.37	8.40	2.37	8.78	2.35	8.81	2.32
		24	4.52	2.24	5.65	2.36	6.54	2.36	7.35	2.36	8.19	2.35	8.58	2.33	8.60	2.31
	12+18	16	4.92	2.27	6.04	2.39	6.93	2.39	7.74	2.39	8.59	2.38	8.97	2.36	8.99	2.34
		18	4.87	2.27	5.99	2.39	6.88	2.39	7.69	2.39	8.54	2.39	8.92	2.36	8.95	2.34
		20	4.84	2.27	5.96	2.39	6.86	2.39	7.66	2.39	8.50	2.38	8.89	2.36	8.92	2.34
		21	4.80	2.26	5.92	2.39	6.81	2.38	7.62	2.38	8.47	2.38	8.85	2.35	8.87	2.33
		22	4.73	2.26	5.85	2.38	6.75	2.38	7.55	2.37	8.40	2.37	8.78	2.35	8.81	2.32
		24	4.52	2.24	5.65	2.36	6.54	2.36	7.35	2.36	8.19	2.35	8.58	2.33	8.60	2.31
	7+24	16	4.92	2.27	6.04	2.39	6.93	2.39	7.74	2.39	8.59	2.38	8.97	2.36	8.99	2.34
		18	4.87	2.27	5.99	2.39	6.88	2.39	7.69	2.39	8.54	2.39	8.92	2.36	8.95	2.34
		20	4.84	2.27	5.96	2.39	6.86	2.39	7.66	2.39	8.50	2.38	8.89	2.36	8.92	2.34
		21	4.80	2.26	5.92	2.39	6.81	2.38	7.62	2.38	8.47	2.38	8.85	2.35	8.87	2.33
		22	4.73	2.26	5.85	2.38	6.75	2.38	7.55	2.37	8.40	2.37	8.78	2.35	8.81	2.32
		24	4.52	2.24	5.65	2.36	6.54	2.36	7.35	2.36	8.19	2.35	8.58	2.33	8.60	2.31
	9+24	16	4.92	2.27	6.04	2.39	6.93	2.39	7.74	2.39	8.59	2.38	8.97	2.36	8.99	2.34
		18	4.87	2.27	5.99	2.39	6.88	2.39	7.69	2.39	8.54	2.39	8.92	2.36	8.95	2.34
		20	4.84	2.27	5.96	2.39	6.86	2.39	7.66	2.39	8.50	2.38	8.89	2.36	8.92	2.34
		21	4.80	2.26	5.92	2.39	6.81	2.38	7.62	2.38	8.47	2.38	8.85	2.35	8.87	2.33
		22	4.73	2.26	5.85	2.38	6.75	2.38	7.55	2.37	8.40	2.37	8.78	2.35	8.81	2.32
		24	4.52	2.24	5.65	2.36	6.54	2.36	7.35	2.36	8.19	2.35	8.58	2.33	8.60	2.31
	18+18	16	4.92	2.27	6.04	2.39	6.93	2.39	7.74	2.39	8.59	2.38	8.97	2.36	8.99	2.34
		18	4.87	2.27	5.99	2.39	6.88	2.39	7.69	2.39	8.54	2.39	8.92	2.36	8.95	2.34
		20	4.84	2.27	5.96	2.39	6.86	2.39	7.66	2.39	8.50	2.38	8.89	2.36	8.92	2.34
		21	4.80	2.26	5.92	2.39	6.81	2.38	7.62	2.38	8.47	2.38	8.85	2.35	8.87	2.33
		22	4.73	2.26	5.85	2.38	6.75	2.38	7.55	2.37	8.40	2.37	8.78	2.35	8.81	2.32
		24	4.52	2.24	5.65	2.36	6.54	2.36	7.35	2.36	8.19	2.35	8.58	2.33	8.60	2.31
	12+24	16	4.92	2.27	6.04	2.39	6.93	2.39	7.74	2.39	8.59	2.38	8.97	2.36	8.99	2.34
		18	4.87	2.27	5.99	2.39	6.88	2.39	7.69	2.39	8.54	2.39	8.92	2.36	8.95	2.34
		20	4.84	2.27	5.96	2.39	6.86	2.39	7.66	2.39	8.50	2.38	8.89	2.36	8.92	2.34
		21	4.80	2.26	5.92	2.39	6.81	2.38	7.62	2.38	8.47	2.38	8.85	2.35	8.87	2.33
		22	4.73	2.26	5.85	2.38	6.75	2.38	7.55	2.37	8.40	2.37	8.78	2.35	8.81	2.32
		24	4.52	2.24	5.65	2.36	6.54	2.36	7.35	2.36	8.19	2.35	8.58	2.33	8.60	2.31
3 units	7+7+7	16	4.28	2.00	5.26	2.11	6.04	2.11	6.74	2.11	7.47	2.10	7.81	2.08	7.83	2.06
		18	4.24	2.00	5.21	2.11	5.99	2.11	6.70	2.11	7.43	2.11	7.76	2.09	7.79	2.06
		20	4.21	2.00	5.19	2.11	5.97	2.11	6.67	2.10	7.40	2.10	7.74	2.08	7.76	2.06
		21	4.18	2.00	5.15	2.10	5.93	2.10	6.63	2.10	7.37	2.10	7.70	2.08	7.73	2.06
		22	4.12	1.99	5.09	2.10	5.87	2.10	6.58	2.09	7.31	2.09	7.64	2.07	7.67	2.05
		24	3.94	1.97	4.92	2.08	5.70	2.08	6.40	2.08	7.13	2.08	7.47	2.06	7.49	2.03
	7+7+9	16	4.68	2.03	5.75	2.14	6.61	2.14	7.38	2.14	8.18	2.13	8.54	2.11	8.57	2.09
		18	4.64	2.03	5.71	2.14	6.56	2.14	7.33	2.14	8.14	2.14	8.50	2.11	8.52	2.09
		20	4.61	2.03	5.68	2.14	6.53	2.14	7.30	2.13	8.10	2.13	8.47	2.11	8.50	2.09
		21	4.57	2.02	5.64	2.13	6.49	2.13	7.26	2.13	8.07	2.13	8.43	2.11	8.46	2.09
		22	4.51	2.02	5.58	2.13	6.43	2.13	7.20	2.12	8.00	2.12	8.37	2.10	8.39	2.08
		24	4.31	2.00	5.38	2.11	6.23	2.11	7.00	2.11	7.81	2.11	8.17	2.09	8.20	2.06
	7+9+9	16	4.74	2.08	5.82	2.19	6.69	2.19	7.47	2.19	8.28	2.18	8.65	2.16	8.68	2.14
		18	4.69	2.08	5.78	2.19	6.64	2.19	7.42	2.19	8.24	2.19	8.60	2.16	8.63	2.14
		20	4.67	2.08	5.75	2.19	6.62	2.19	7.39	2.18	8.20	2.18	8.58	2.16	8.60	2.14
		21	4.63	2.07	5.71	2.18	6.57	2.18	7.35	2.18	8.17	2.18	8.54	2.16	8.56	2.14
		22	4.56	2.07	5.64	2.18	6.51	2.18	7.29	2.17	8.10	2.17	8.47	2.15	8.50	2.13
		24	4.36	2.05	5.45	2.16	6.31	2.16	7.09	2.16	7.91	2.16	8.27	2.13	8.30	2.11
	7+7+12	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	9+9+9	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	7+9+12	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	9+9+12	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	7+12+12	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	7+7+18	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	9+12+12	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	7+9+18	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	12+12+12	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	9+9+18	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	7+12+18	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	7+7+24	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
	9+12+18	16	4.92	2.08	6.04	2.19	6.93	2.19	7.74	2.19	8.59	2.18	8.97	2.16	8.99	2.14
		18	4.87	2.08	5.99	2.19	6.88	2.19	7.69	2.19	8.54	2.19	8.92	2.16	8.95	2.14
		20	4.84	2.08	5.96	2.19	6.86	2.19	7.66	2.18	8.50	2.18	8.89	2.16	8.92	2.14
		21	4.80	2.07	5.92	2.18	6.81	2.18	7.62	2.18	8.47	2.18	8.85	2.16	8.87	2.14
		22	4.73	2.07	5.85	2.18	6.75	2.18	7.55	2.17	8.40	2.17	8.78	2.15	8.81	2.13
		24	4.52	2.05	5.65	2.16	6.54	2.16	7.35	2.16	8.19	2.16	8.58	2.13	8.60	2.11
4 units	7+7+7+7	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+7+7+9	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	7+7+9+9	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	7+7+7+12	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	7+9+9+9	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	7+7+9+12	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	9+9+9+9	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	7+9+9+12	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	7+7+12+12	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	9+9+9+12	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90
	7+7+7+18	16	4.92	1.87	6.04	1.97	6.93	1.97	7.74	1.97	8.59	1.96	8.97	1.94	8.99	1.92
		18	4.87	1.87	5.99	1.97	6.88	1.97	7.69	1.97	8.54	1.97	8.92	1.95	8.95	1.93
		20	4.84	1.87	5.96	1.97	6.86	1.97	7.66	1.96	8.50	1.96	8.89	1.94	8.92	1.92
		21	4.80	1.86	5.92	1.96	6.81	1.96	7.62	1.96	8.47	1.96	8.85	1.94	8.87	1.92
		22	4.73	1.86	5.85	1.96	6.75	1.96	7.55	1.96	8.40	1.95	8.78	1.93	8.81	1.91
		24	4.52	1.84	5.65	1.94	6.54	1.94	7.35	1.94	8.19	1.94	8.58	1.92	8.60	1.90

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A4UW276FA3[FM27AH UE3]

[Cooling capacity]

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
1 unit	7	22	2.00	0.40	2.12	0.54	2.25	0.59	2.31	0.60	2.50	0.60	2.62	0.60
		25	1.95	0.43	2.07	0.56	2.20	0.60	2.26	0.61	2.45	0.62	2.57	0.63
		32	1.84	0.57	1.96	0.68	2.09	0.71	2.15	0.72	2.34	0.73	2.46	0.75
		35	1.79	0.64	1.92	0.73	2.04	0.75	2.10	0.74	2.29	0.78	2.42	0.79
		40	1.71	0.70	1.84	0.76	1.96	0.77	2.03	0.77	2.21	0.78	2.34	0.80
		43	1.67	0.69	1.79	0.72	1.92	0.72	1.98	0.72	2.17	0.72	2.29	0.74
		46	1.62	0.62	1.74	0.63	1.87	0.61	1.93	0.60	2.12	0.60	2.24	0.62
	9	22	2.47	0.45	2.63	0.61	2.78	0.66	2.86	0.67	3.09	0.68	3.25	0.68
		25	2.41	0.48	2.57	0.63	2.72	0.68	2.80	0.69	3.03	0.70	3.19	0.71
		32	2.28	0.65	2.43	0.76	2.59	0.80	2.66	0.81	2.90	0.83	3.05	0.84
		35	2.22	0.72	2.37	0.82	2.53	0.85	2.60	0.83	2.84	0.87	2.99	0.89
		40	2.12	0.79	2.28	0.85	2.43	0.87	2.51	0.87	2.74	0.88	2.90	0.90
		43	2.06	0.78	2.22	0.81	2.37	0.81	2.45	0.81	2.68	0.82	2.84	0.84
		46	2.01	0.70	2.16	0.70	2.31	0.69	2.39	0.68	2.62	0.68	2.78	0.70
	12	22	3.33	0.60	3.54	0.81	3.75	0.88	3.85	0.89	4.16	0.90	4.37	0.90
		25	3.25	0.64	3.46	0.84	3.67	0.90	3.77	0.91	4.08	0.93	4.29	0.94
		32	3.07	0.86	3.27	1.01	3.48	1.06	3.59	1.07	3.90	1.10	4.11	1.12
		35	2.99	0.96	3.20	1.09	3.40	1.13	3.50	1.11	3.82	1.16	4.03	1.18
		40	2.86	1.05	3.07	1.13	3.27	1.15	3.38	1.15	3.69	1.17	3.90	1.19
		43	2.78	1.03	2.99	1.08	3.19	1.07	3.30	1.07	3.61	1.08	3.82	1.11
		46	2.70	0.92	2.91	0.93	3.12	0.91	3.22	0.90	3.53	0.90	3.74	0.93
	18	22	5.04	0.94	5.36	1.27	5.67	1.37	5.83	1.39	6.30	1.40	6.62	1.40
		25	4.92	1.00	5.24	1.30	5.55	1.41	5.71	1.43	6.18	1.45	6.50	1.46
		32	4.64	1.34	4.96	1.58	5.27	1.66	5.43	1.68	5.90	1.71	6.22	1.75
		35	4.52	1.49	4.84	1.69	5.16	1.76	5.30	1.73	5.79	1.81	6.10	1.85
		40	4.33	1.64	4.64	1.77	4.96	1.79	5.11	1.80	5.59	1.82	5.90	1.86
		43	4.21	1.61	4.52	1.68	4.84	1.68	5.00	1.67	5.47	1.69	5.78	1.73
		46	4.09	1.44	4.40	1.46	4.72	1.42	4.88	1.41	5.35	1.41	5.66	1.45
	24	22	6.75	1.12	7.17	1.52	7.60	1.64	7.81	1.66	8.44	1.68	8.86	1.68
		25	6.59	1.19	7.02	1.56	7.44	1.68	7.65	1.71	8.28	1.74	8.70	1.75
		32	6.22	1.60	6.64	1.89	7.07	1.98	7.28	2.00	7.91	2.05	8.33	2.09
		35	6.06	1.79	6.48	2.03	6.91	2.10	7.10	2.07	7.75	2.17	8.17	2.21
		40	5.80	1.96	6.22	2.11	6.64	2.14	6.85	2.15	7.49	2.18	7.91	2.23
		43	5.64	1.92	6.06	2.01	6.48	2.01	6.69	2.00	7.33	2.02	7.75	2.07
		46	5.48	1.72	5.90	1.75	6.32	1.70	6.53	1.69	7.17	1.69	7.59	1.73
2 units	7+7	22	3.90	0.67	4.14	0.90	4.39	0.98	4.51	0.99	4.87	1.00	5.12	1.00
		25	3.81	0.71	4.05	0.93	4.29	1.00	4.42	1.02	4.78	1.04	5.03	1.04
		32	3.59	0.95	3.84	1.13	4.08	1.18	4.20	1.19	4.57	1.22	4.81	1.25
		35	3.50	1.07	3.74	1.21	3.99	1.25	4.10	1.23	4.48	1.29	4.72	1.32
		40	3.35	1.17	3.59	1.26	3.83	1.28	3.96	1.28	4.32	1.30	4.57	1.33
		43	3.25	1.15	3.50	1.20	3.74	1.20	3.86	1.19	4.23	1.21	4.47	1.23
		46	3.16	1.03	3.41	1.04	3.65	1.02	3.77	1.01	4.14	1.01	4.38	1.03
	7+9	22	4.47	0.74	4.75	1.00	5.03	1.09	5.17	1.10	5.59	1.11	5.87	1.11
		25	4.36	0.79	4.64	1.03	4.92	1.11	5.06	1.13	5.48	1.15	5.76	1.16
		32	4.12	1.06	4.40	1.25	4.68	1.31	4.82	1.33	5.24	1.36	5.52	1.38
		35	4.01	1.18	4.29	1.34	4.57	1.39	4.70	1.37	5.13	1.43	5.41	1.46
		40	3.84	1.30	4.12	1.40	4.40	1.42	4.54	1.42	4.95	1.45	5.23	1.48
		43	3.73	1.27	4.01	1.33	4.29	1.33	4.43	1.33	4.85	1.34	5.13	1.37
		46	3.63	1.14	3.91	1.16	4.18	1.13	4.32	1.12	4.74	1.12	5.02	1.15
	9+9	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.71
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.34	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32
	7+12	22	5.33	0.89	5.66	1.20	5.99	1.30	6.16	1.32	6.66	1.33	6.99	1.33
		25	5.20	0.95	5.53	1.24	5.87	1.33	6.03	1.35	6.53	1.38	6.87	1.39
		32	4.91	1.27	5.24	1.50	5.57	1.57	5.74	1.59	6.24	1.63	6.57	1.66
		35	4.78	1.42	5.11	1.61	5.45	1.67	5.60	1.64	6.11	1.72	6.45	1.75
		40	4.57	1.56	4.90	1.68	5.24	1.70	5.40	1.70	5.90	1.73	6.24	1.77
		43	4.45	1.52	4.78	1.60	5.11	1.59	5.28	1.59	5.78	1.61	6.11	1.64
		46	4.32	1.37	4.65	1.38	4.99	1.35	5.15	1.34	5.65	1.34	5.99	1.37

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
2 units	9+12	22	5.90	1.01	6.27	1.37	6.63	1.48	6.82	1.50	7.37	1.51	7.74	1.51
		25	5.76	1.07	6.13	1.41	6.49	1.52	6.68	1.54	7.23	1.56	7.60	1.58
		32	5.43	1.44	5.80	1.70	6.17	1.79	6.35	1.81	6.91	1.85	7.28	1.88
		35	5.29	1.61	5.66	1.83	6.03	1.89	6.20	1.86	6.77	1.95	7.14	1.99
		40	5.06	1.77	5.43	1.90	5.80	1.93	5.98	1.94	6.54	1.97	6.91	2.01
		43	4.92	1.73	5.29	1.81	5.66	1.81	5.84	1.81	6.40	1.82	6.77	1.86
		46	4.78	1.55	5.15	1.57	5.52	1.54	5.70	1.52	6.26	1.52	6.63	1.56
	12+12	22	6.75	1.07	7.17	1.44	7.60	1.56	7.81	1.59	8.44	1.60	8.86	1.60
		25	6.59	1.14	7.02	1.49	7.44	1.60	7.65	1.63	8.28	1.65	8.70	1.67
		32	6.22	1.53	6.64	1.80	7.07	1.89	7.28	1.91	7.91	1.95	8.33	1.99
		35	6.06	1.70	6.48	1.93	6.91	2.00	7.10	1.97	7.75	2.06	8.17	2.11
		40	5.80	1.87	6.22	2.01	6.64	2.04	6.85	2.05	7.49	2.08	7.91	2.12
		43	5.64	1.83	6.06	1.92	6.48	1.91	6.69	1.91	7.33	1.93	7.75	1.97
		46	5.48	1.64	5.90	1.66	6.32	1.62	6.53	1.61	7.17	1.61	7.59	1.65
	7+18	22	7.04	1.30	7.48	1.76	7.92	1.91	8.14	1.93	8.80	1.95	9.24	1.95
		25	6.87	1.38	7.31	1.81	7.75	1.95	7.97	1.98	8.63	2.02	9.07	2.03
		32	6.48	1.86	6.92	2.19	7.36	2.30	7.58	2.33	8.24	2.38	8.68	2.43
		35	6.32	2.07	6.76	2.36	7.20	2.44	7.40	2.40	8.08	2.52	8.52	2.57
		40	6.04	2.28	6.48	2.45	6.92	2.49	7.14	2.50	7.80	2.54	8.24	2.59
		43	5.87	2.23	6.31	2.34	6.75	2.33	6.98	2.33	7.64	2.35	8.08	2.40
		46	5.71	2.00	6.15	2.03	6.59	1.98	6.81	1.96	7.47	1.96	7.91	2.01
	9+18	22	7.04	1.33	7.48	1.80	7.92	1.95	8.14	1.97	8.80	1.99	9.24	1.99
		25	6.87	1.41	7.31	1.85	7.75	2.00	7.97	2.02	8.63	2.06	9.07	2.08
		32	6.48	1.90	6.92	2.24	7.36	2.35	7.58	2.38	8.24	2.43	8.68	2.48
		35	6.32	2.12	6.76	2.40	7.20	2.49	7.40	2.45	8.08	2.57	8.52	2.62
		40	6.04	2.33	6.48	2.51	6.92	2.54	7.14	2.55	7.80	2.59	8.24	2.64
		43	5.87	2.28	6.31	2.38	6.75	2.38	6.98	2.38	7.64	2.40	8.08	2.45
		46	5.71	2.04	6.15	2.07	6.59	2.02	6.81	2.00	7.47	2.00	7.91	2.05
	12+18	22	7.51	1.36	7.98	1.83	8.45	1.99	8.69	2.01	9.39	2.03	9.86	2.03
		25	7.34	1.44	7.81	1.89	8.28	2.04	8.51	2.07	9.22	2.10	9.69	2.12
		32	6.92	1.94	7.39	2.28	7.86	2.40	8.10	2.42	8.80	2.48	9.27	2.53
		35	6.74	2.16	7.21	2.45	7.68	2.54	7.90	2.50	8.62	2.62	9.09	2.67
		40	6.45	2.37	6.92	2.56	7.39	2.59	7.62	2.60	8.33	2.64	8.80	2.70
		43	6.27	2.33	6.74	2.43	7.21	2.43	7.45	2.42	8.15	2.45	8.62	2.50
		46	6.09	2.09	6.56	2.11	7.03	2.06	7.27	2.04	7.97	2.04	8.44	2.09
	7+24	22	7.04	1.36	7.48	1.83	7.92	1.99	8.14	2.01	8.80	2.03	9.24	2.03
		25	6.87	1.44	7.31	1.89	7.75	2.04	7.97	2.07	8.63	2.10	9.07	2.12
		32	6.48	1.94	6.92	2.28	7.36	2.40	7.58	2.42	8.24	2.48	8.68	2.53
		35	6.32	2.16	6.76	2.45	7.20	2.54	7.40	2.50	8.08	2.62	8.52	2.67
		40	6.04	2.37	6.48	2.56	6.92	2.59	7.14	2.60	7.80	2.64	8.24	2.70
		43	5.87	2.33	6.31	2.43	6.75	2.43	6.98	2.42	7.64	2.45	8.08	2.50
		46	5.71	2.09	6.15	2.11	6.59	2.06	6.81	2.04	7.47	2.04	7.91	2.09
	9+24	22	7.04	1.36	7.48	1.83	7.92	1.99	8.14	2.01	8.80	2.03	9.24	2.03
		25	6.87	1.44	7.31	1.89	7.75	2.04	7.97	2.07	8.63	2.10	9.07	2.12
		32	6.48	1.94	6.92	2.28	7.36	2.40	7.58	2.42	8.24	2.48	8.68	2.53
		35	6.32	2.16	6.76	2.45	7.20	2.54	7.40	2.50	8.08	2.62	8.52	2.67
		40	6.04	2.37	6.48	2.56	6.92	2.59	7.14	2.60	7.80	2.64	8.24	2.70
		43	5.87	2.33	6.31	2.43	6.75	2.43	6.98	2.42	7.64	2.45	8.08	2.50
		46	5.71	2.09	6.15	2.11	6.59	2.06	6.81	2.04	7.47	2.04	7.91	2.09
	18+18	22	7.51	1.36	7.98	1.83	8.45	1.99	8.69	2.01	9.39	2.03	9.86	2.03
		25	7.34	1.44	7.81	1.89	8.28	2.04	8.51	2.07	9.22	2.10	9.69	2.12
		32	6.92	1.94	7.39	2.28	7.86	2.40	8.10	2.42	8.80	2.48	9.27	2.53
		35	6.74	2.16	7.21	2.45	7.68	2.54	7.90	2.50	8.62	2.62	9.09	2.67
		40	6.45	2.37	6.92	2.56	7.39	2.59	7.62	2.60	8.33	2.64	8.80	2.70
		43	6.27	2.33	6.74	2.43	7.21	2.43	7.45	2.42	8.15	2.45	8.62	2.50
		46	6.09	2.09	6.56	2.11	7.03	2.06	7.27	2.04	7.97	2.04	8.44	2.09
	12+24	22	7.51	1.36	7.98	1.83	8.45	1.99	8.69	2.01	9.39	2.03	9.86	2.03
		25	7.34	1.44	7.81	1.89	8.28	2.04	8.51	2.07	9.22	2.10	9.69	2.12
		32	6.92	1.94	7.39	2.28	7.86	2.40	8.10	2.42	8.80	2.48	9.27	2.53
		35	6.74	2.16	7.21	2.45	7.68	2.54	7.90	2.50	8.62	2.62	9.09	2.67
		40	6.45	2.37	6.92	2.56	7.39	2.59	7.62	2.60	8.33	2.64	8.80	2.70
		43	6.27	2.33	6.74	2.43	7.21	2.43	7.45	2.42	8.15	2.45	8.62	2.50
		46	6.09	2.09	6.56	2.11	7.03	2.06	7.27	2.04	7.97	2.04	8.44	2.09
3 units	7+7+7	22	5.90	1.01	6.27	1.37	6.63	1.48	6.82	1.50	7.37	1.51	7.74	1.51
		25	5.76	1.07	6.13	1.41	6.49	1.52	6.68	1.54	7.23	1.56	7.60	1.58
		32	5.43	1.44	5.80	1.70	6.17	1.79	6.35	1.81	6.91	1.85	7.28	1.88
		35	5.29	1.61	5.66	1.83	6.03	1.89	6.20	1.86	6.77	1.95	7.14	1.99
		40	5.06	1.77	5.43	1.90	5.80	1.93	5.98	1.94	6.54	1.97	6.91	2.01
		43	4.92	1.73	5.29	1.81	5.66	1.81	5.84	1.81	6.40	1.82	6.77	1.86
		46	4.78	1.55	5.15	1.57	5.52	1.54	5.70	1.52	6.26	1.52	6.63	1.56

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
3 units	7+7+9	22	6.47	1.07	6.87	1.44	7.28	1.56	7.48	1.59	8.08	1.60	8.49	1.60
		25	6.31	1.14	6.72	1.49	7.12	1.60	7.33	1.63	7.93	1.65	8.34	1.67
		32	5.96	1.53	6.36	1.80	6.77	1.89	6.97	1.91	7.58	1.95	7.98	1.99
		35	5.81	1.70	6.21	1.93	6.61	2.00	6.80	1.97	7.42	2.06	7.83	2.11
		40	5.55	1.87	5.96	2.01	6.36	2.04	6.56	2.05	7.17	2.08	7.57	2.12
		43	5.40	1.83	5.80	1.92	6.21	1.91	6.41	1.91	7.02	1.93	7.42	1.97
		46	5.25	1.64	5.65	1.66	6.05	1.62	6.26	1.61	6.86	1.61	7.27	1.65
	7+9+9	22	7.04	1.11	7.48	1.49	7.92	1.62	8.14	1.64	8.80	1.65	9.24	1.65
		25	6.87	1.18	7.31	1.54	7.75	1.66	7.97	1.68	8.63	1.71	9.07	1.73
		32	6.48	1.58	6.92	1.86	7.36	1.95	7.58	1.98	8.24	2.02	8.68	2.06
		35	6.32	1.76	6.76	2.00	7.20	2.07	7.40	2.04	8.08	2.14	8.52	2.18
		40	6.04	1.93	6.48	2.08	6.92	2.11	7.14	2.12	7.80	2.15	8.24	2.20
		43	5.87	1.89	6.31	1.98	6.75	1.98	6.98	1.98	7.64	2.00	8.08	2.04
		46	5.71	1.70	6.15	1.72	6.59	1.68	6.81	1.66	7.47	1.67	7.91	1.71
	7+7+12	22	7.23	1.13	7.68	1.52	8.13	1.65	8.36	1.67	9.04	1.68	9.49	1.69
		25	7.06	1.20	7.51	1.57	7.96	1.69	8.19	1.72	8.87	1.74	9.32	1.76
		32	6.66	1.61	7.11	1.90	7.56	1.99	7.79	2.01	8.47	2.06	8.92	2.10
		35	6.49	1.79	6.94	2.04	7.39	2.11	7.60	2.08	8.30	2.18	8.75	2.22
		40	6.20	1.97	6.66	2.12	7.11	2.15	7.33	2.16	8.01	2.19	8.46	2.24
		43	6.03	1.93	6.49	2.02	6.94	2.02	7.16	2.01	7.84	2.03	8.29	2.08
		46	5.86	1.73	6.31	1.75	6.77	1.71	6.99	1.70	7.67	1.70	8.12	1.74
	9+9+9	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	7+9+12	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	9+9+12	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	7+12+12	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	7+7+18	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	9+12+12	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	7+9+18	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	12+12+12	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	9+9+18	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	7+12+18	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	7+7+24	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	9+12+18	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
	7+9+24	22	7.51	1.13	7.98	1.52	8.45	1.65	8.69	1.67	9.39	1.68	9.86	1.69
		25	7.34	1.20	7.81	1.57	8.28	1.69	8.51	1.72	9.22	1.74	9.69	1.76
		32	6.92	1.61	7.39	1.90	7.86	1.99	8.10	2.01	8.80	2.06	9.27	2.10
		35	6.74	1.79	7.21	2.04	7.68	2.11	7.90	2.08	8.62	2.18	9.09	2.22
		40	6.45	1.97	6.92	2.12	7.39	2.15	7.62	2.16	8.33	2.19	8.80	2.24
		43	6.27	1.93	6.74	2.02	7.21	2.02	7.45	2.01	8.15	2.03	8.62	2.08
		46	6.09	1.73	6.56	1.75	7.03	1.71	7.27	1.70	7.97	1.70	8.44	1.74
4 units	7+7+7+7	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+7+7+9	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+7+9+9	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+7+7+12	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+9+9+9	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+7+9+12	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	9+9+9+9	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+9+9+12	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+7+12+12	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	9+9+9+12	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+7+7+18	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+9+12+12	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71
	7+7+9+18	22	7.51	1.11	7.98	1.49	8.45	1.62	8.69	1.64	9.39	1.65	9.86	1.65
		25	7.34	1.18	7.81	1.54	8.28	1.66	8.51	1.68	9.22	1.71	9.69	1.73
		32	6.92	1.58	7.39	1.86	7.86	1.95	8.10	1.98	8.80	2.02	9.27	2.06
		35	6.74	1.76	7.21	2.00	7.68	2.07	7.90	2.04	8.62	2.14	9.09	2.18
		40	6.45	1.93	6.92	2.08	7.39	2.11	7.62	2.12	8.33	2.15	8.80	2.20
		43	6.27	1.89	6.74	1.98	7.21	1.98	7.45	1.98	8.15	2.00	8.62	2.04
		46	6.09	1.70	6.56	1.72	7.03	1.68	7.27	1.66	7.97	1.67	8.44	1.71

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	16	1.39	0.86	1.70	0.90	1.96	0.90	2.19	0.90	2.42	0.90	2.53	0.89	2.54	0.88
		18	1.37	0.86	1.69	0.91	1.94	0.90	2.17	0.90	2.41	0.90	2.52	0.89	2.53	0.88
		20	1.37	0.86	1.68	0.90	1.94	0.90	2.16	0.90	2.40	0.90	2.51	0.89	2.52	0.88
		21	1.35	0.86	1.67	0.90	1.92	0.90	2.15	0.90	2.39	0.90	2.50	0.89	2.51	0.88
		22	1.34	0.85	1.65	0.90	1.91	0.90	2.13	0.90	2.37	0.90	2.48	0.89	2.49	0.88
		24	1.28	0.85	1.59	0.89	1.85	0.89	2.07	0.89	2.31	0.89	2.42	0.88	2.43	0.87
	9	16	1.68	1.16	2.06	1.23	2.37	1.23	2.64	1.23	2.93	1.22	3.06	1.21	3.07	1.20
		18	1.66	1.17	2.04	1.23	2.35	1.23	2.62	1.23	2.91	1.23	3.04	1.21	3.05	1.20
		20	1.65	1.16	2.03	1.23	2.34	1.23	2.61	1.22	2.90	1.22	3.03	1.21	3.04	1.20
		21	1.64	1.16	2.02	1.22	2.32	1.22	2.60	1.22	2.89	1.22	3.02	1.21	3.03	1.20
		22	1.61	1.16	2.00	1.22	2.30	1.22	2.58	1.22	2.87	1.22	3.00	1.21	3.00	1.19
		24	1.54	1.15	1.93	1.21	2.23	1.21	2.51	1.21	2.80	1.21	2.93	1.20	2.94	1.18
	12	16	2.26	1.52	2.77	1.60	3.18	1.60	3.55	1.60	3.94	1.59	4.11	1.58	4.13	1.56
		18	2.23	1.52	2.75	1.60	3.16	1.60	3.53	1.60	3.92	1.60	4.09	1.58	4.10	1.56
		20	2.22	1.52	2.74	1.60	3.15	1.60	3.52	1.59	3.90	1.59	4.08	1.58	4.09	1.56
		21	2.20	1.51	2.72	1.59	3.13	1.59	3.50	1.59	3.88	1.59	4.06	1.57	4.07	1.56
		22	2.17	1.51	2.68	1.59	3.10	1.59	3.47	1.59	3.85	1.59	4.03	1.57	4.04	1.55
		24	2.08	1.50	2.59	1.58	3.00	1.58	3.37	1.57	3.76	1.57	3.93	1.56	3.95	1.54
	18	16	3.35	1.91	4.12	2.02	4.73	2.02	5.28	2.01	5.86	2.01	6.12	1.99	6.14	1.97
		18	3.32	1.92	4.09	2.02	4.70	2.02	5.25	2.02	5.83	2.01	6.09	1.99	6.10	1.97
		20	3.30	1.91	4.07	2.02	4.68	2.01	5.23	2.01	5.80	2.01	6.07	1.99	6.08	1.97
		21	3.27	1.91	4.04	2.01	4.65	2.01	5.20	2.01	5.78	2.01	6.04	1.99	6.06	1.97
		22	3.23	1.90	3.99	2.01	4.60	2.01	5.15	2.00	5.73	2.00	5.99	1.98	6.01	1.96
		24	3.09	1.89	3.85	1.99	4.46	1.99	5.01	1.99	5.59	1.99	5.85	1.97	5.87	1.95
	24	16	4.34	2.08	5.33	2.19	6.12	2.19	6.83	2.19	7.58	2.19	7.91	2.16	7.94	2.14
		18	4.29	2.08	5.28	2.20	6.07	2.19	6.79	2.19	7.53	2.19	7.87	2.17	7.89	2.15
		20	4.27	2.08	5.26	2.19	6.05	2.19	6.76	2.19	7.50	2.18	7.84	2.16	7.87	2.14
		21	4.23	2.07	5.22	2.19	6.01	2.19	6.72	2.18	7.47	2.18	7.81	2.16	7.83	2.14
		22	4.17	2.07	5.16	2.18	5.95	2.18	6.66	2.18	7.41	2.18	7.75	2.15	7.77	2.13
		24	3.99	2.05	4.98	2.17	5.77	2.16	6.48	2.16	7.23	2.16	7.57	2.14	7.59	2.12
2 units	7+7	16	3.24	1.49	3.98	1.57	4.57	1.57	5.10	1.57	5.66	1.56	5.91	1.55	5.93	1.53
		18	3.21	1.49	3.95	1.57	4.54	1.57	5.07	1.57	5.62	1.57	5.88	1.55	5.89	1.54
		20	3.19	1.49	3.93	1.57	4.52	1.57	5.05	1.57	5.60	1.56	5.86	1.55	5.87	1.53
		21	3.16	1.48	3.90	1.57	4.49	1.56	5.02	1.56	5.58	1.56	5.83	1.55	5.85	1.53
		22	3.12	1.48	3.86	1.56	4.45	1.56	4.98	1.56	5.53	1.56	5.78	1.54	5.80	1.53
		24	2.98	1.47	3.72	1.55	4.31	1.55	4.84	1.55	5.40	1.54	5.65	1.53	5.67	1.51
	7+9	16	3.70	1.63	4.55	1.71	5.22	1.71	5.83	1.71	6.46	1.71	6.75	1.69	6.77	1.68
		18	3.66	1.63	4.51	1.72	5.18	1.72	5.79	1.71	6.43	1.71	6.71	1.69	6.74	1.68
		20	3.64	1.63	4.49	1.71	5.16	1.71	5.77	1.71	6.40	1.71	6.69	1.69	6.71	1.68
		21	3.61	1.62	4.46	1.71	5.13	1.71	5.74	1.71	6.37	1.71	6.66	1.69	6.68	1.67
		22	3.56	1.62	4.41	1.71	5.08	1.70	5.69	1.70	6.32	1.70	6.61	1.68	6.63	1.67
		24	3.41	1.60	4.25	1.69	4.93	1.69	5.53	1.69	6.17	1.69	6.46	1.67	6.48	1.65
	9+9	16	3.87	1.91	4.76	2.02	5.47	2.02	6.10	2.01	6.77	2.01	7.07	1.99	7.09	1.97
		18	3.84	1.92	4.72	2.02	5.43	2.02	6.06	2.02	6.73	2.01	7.03	1.99	7.05	1.97
		20	3.81	1.91	4.70	2.02	5.40	2.01	6.04	2.01	6.70	2.01	7.01	1.99	7.03	1.97
		21	3.78	1.91	4.67	2.01	5.37	2.01	6.01	2.01	6.67	2.01	6.97	1.99	7.00	1.97
		22	3.73	1.90	4.61	2.01	5.32	2.01	5.95	2.00	6.62	2.00	6.92	1.98	6.94	1.96
		24	3.57	1.89	4.45	1.99	5.16	1.99	5.79	1.99	6.46	1.99	6.76	1.97	6.78	1.95
	7+12	16	4.28	1.97	5.26	2.08	6.04	2.07	6.74	2.07	7.47	2.07	7.81	2.05	7.83	2.03
		18	4.24	1.97	5.21	2.08	5.99	2.08	6.70	2.07	7.43	2.07	7.76	2.05	7.79	2.03
		20	4.21	1.97	5.19	2.07	5.97	2.07	6.67	2.07	7.40	2.07	7.74	2.05	7.76	2.03
		21	4.18	1.96	5.15	2.07	5.93	2.07	6.63	2.07	7.37	2.06	7.70	2.04	7.73	2.02
		22	4.12	1.96	5.09	2.07	5.87	2.06	6.58	2.06	7.31	2.06	7.64	2.04	7.67	2.02
		24	3.94	1.94	4.92	2.05	5.70	2.05	6.40	2.05	7.13	2.04	7.47	2.02	7.49	2.00
	9+12	16	4.92	2.02	6.04	2.13	6.93	2.13	7.74	2.13	8.59	2.13	8.97	2.11	8.99	2.09
		18	4.87	2.03	5.99	2.14	6.88	2.13	7.69	2.13	8.54	2.13	8.92	2.11	8.95	2.09
		20	4.84	2.02	5.96	2.13	6.86	2.13	7.66	2.13	8.50	2.12	8.89	2.11	8.92	2.08
		21	4.80	2.02	5.92	2.13	6.81	2.13	7.62	2.12	8.47	2.12	8.85	2.10	8.87	2.08
		22	4.73	2.01	5.85	2.12	6.75	2.12	7.55	2.12	8.40	2.12	8.78	2.10	8.81	2.07
		24	4.52	2.00	5.65	2.11	6.54	2.10	7.35	2.10	8.19	2.10	8.58	2.08	8.60	2.06
	12+12	16	5.09	2.08	6.25	2.19	7.18	2.19	8.01	2.19	8.89	2.19	9.28	2.16	9.31	2.14
		18	5.04	2.08	6.20	2.20	7.13	2.19	7.96	2.19	8.84	2.19	9.23	2.17	9.26	2.15
		20	5.01	2.08	6.17	2.19	7.10	2.19	7.93	2.19	8.80	2.18	9.20	2.16	9.23	2.14
		21	4.96	2.07	6.13	2.19	7.05	2.19	7.89	2.18	8.77	2.18	9.16	2.16	9.19	2.14
		22	4.90	2.07	6.06	2.18	6.99	2.18	7.82	2.18	8.70	2.18	9.09	2.15	9.12	2.13
		24	4.68	2.05	5.85	2.17	6.77	2.16	7.61	2.16	8.48	2.16	8.88	2.14	8.91	2.12

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	7+18	16	5.09	2.22	6.25	2.34	7.18	2.34	8.01	2.34	8.89	2.33	9.28	2.31	9.31	2.29
		18	5.04	2.22	6.20	2.34	7.13	2.34	7.96	2.34	8.84	2.34	9.23	2.31	9.26	2.29
		20	5.01	2.22	6.17	2.34	7.10	2.34	7.93	2.34	8.80	2.33	9.20	2.31	9.23	2.29
		21	4.96	2.21	6.13	2.34	7.05	2.33	7.89	2.33	8.77	2.33	9.16	2.30	9.19	2.28
		22	4.90	2.21	6.06	2.33	6.99	2.33	7.82	2.32	8.70	2.32	9.09	2.30	9.12	2.28
		24	4.68	2.19	5.85	2.31	6.77	2.31	7.61	2.31	8.48	2.30	8.88	2.28	8.91	2.26
	9+18	16	5.26	2.39	6.46	2.52	7.42	2.52	8.29	2.52	9.19	2.52	9.60	2.49	9.63	2.47
		18	5.21	2.40	6.41	2.53	7.37	2.52	8.23	2.52	9.14	2.52	9.55	2.49	9.58	2.47
		20	5.18	2.39	6.38	2.52	7.34	2.52	8.20	2.52	9.10	2.51	9.52	2.49	9.55	2.47
		21	5.13	2.39	6.34	2.52	7.30	2.52	8.16	2.51	9.06	2.51	9.47	2.49	9.50	2.46
		22	5.06	2.38	6.26	2.51	7.22	2.51	8.09	2.51	8.99	2.50	9.40	2.48	9.43	2.45
		24	4.84	2.36	6.05	2.49	7.00	2.49	7.87	2.49	8.77	2.48	9.18	2.46	9.21	2.43
	12+18	16	5.26	2.38	6.46	2.51	7.42	2.51	8.29	2.51	9.19	2.50	9.60	2.48	9.63	2.45
		18	5.21	2.39	6.41	2.51	7.37	2.51	8.23	2.51	9.14	2.51	9.55	2.48	9.58	2.46
		20	5.18	2.38	6.38	2.51	7.34	2.51	8.20	2.51	9.10	2.50	9.52	2.48	9.55	2.45
		21	5.13	2.38	6.34	2.51	7.30	2.50	8.16	2.50	9.06	2.50	9.47	2.47	9.50	2.45
		22	5.06	2.37	6.26	2.50	7.22	2.50	8.09	2.49	8.99	2.49	9.40	2.47	9.43	2.44
		24	4.84	2.35	6.05	2.48	7.00	2.48	7.87	2.47	8.77	2.47	9.18	2.45	9.21	2.42
	7+24	16	5.26	2.43	6.46	2.57	7.42	2.56	8.29	2.56	9.19	2.56	9.60	2.53	9.63	2.51
		18	5.21	2.44	6.41	2.57	7.37	2.57	8.23	2.57	9.14	2.56	9.55	2.54	9.58	2.51
		20	5.18	2.43	6.38	2.57	7.34	2.56	8.20	2.56	9.10	2.56	9.52	2.53	9.55	2.51
		21	5.13	2.43	6.34	2.56	7.30	2.56	8.16	2.56	9.06	2.55	9.47	2.53	9.50	2.50
		22	5.06	2.42	6.26	2.55	7.22	2.55	8.09	2.55	8.99	2.55	9.40	2.52	9.43	2.50
		24	4.84	2.40	6.05	2.53	7.00	2.53	7.87	2.53	8.77	2.53	9.18	2.50	9.21	2.48
	9+24	16	5.26	2.43	6.46	2.57	7.42	2.56	8.29	2.56	9.19	2.56	9.60	2.53	9.63	2.51
		18	5.21	2.44	6.41	2.57	7.37	2.57	8.23	2.57	9.14	2.56	9.55	2.54	9.58	2.51
		20	5.18	2.43	6.38	2.57	7.34	2.56	8.20	2.56	9.10	2.56	9.52	2.53	9.55	2.51
		21	5.13	2.43	6.34	2.56	7.30	2.56	8.16	2.56	9.06	2.55	9.47	2.53	9.50	2.50
		22	5.06	2.42	6.26	2.55	7.22	2.55	8.09	2.55	8.99	2.55	9.40	2.52	9.43	2.50
		24	4.84	2.40	6.05	2.53	7.00	2.53	7.87	2.53	8.77	2.53	9.18	2.50	9.21	2.48
	18+18	16	5.26	2.33	6.46	2.46	7.42	2.46	8.29	2.46	9.19	2.45	9.60	2.43	9.63	2.41
		18	5.21	2.34	6.41	2.46	7.37	2.46	8.23	2.46	9.14	2.46	9.55	2.43	9.58	2.41
		20	5.18	2.33	6.38	2.46	7.34	2.46	8.20	2.46	9.10	2.45	9.52	2.43	9.55	2.40
		21	5.13	2.33	6.34	2.46	7.30	2.45	8.16	2.45	9.06	2.45	9.47	2.42	9.50	2.40
		22	5.06	2.32	6.26	2.45	7.22	2.45	8.09	2.44	8.99	2.44	9.40	2.42	9.43	2.39
		24	4.84	2.30	6.05	2.43	7.00	2.43	7.87	2.43	8.77	2.42	9.18	2.40	9.21	2.37
	12+24	16	5.26	2.33	6.46	2.46	7.42	2.46	8.29	2.46	9.19	2.45	9.60	2.43	9.63	2.41
		18	5.21	2.34	6.41	2.46	7.37	2.46	8.23	2.46	9.14	2.46	9.55	2.43	9.58	2.41
		20	5.18	2.33	6.38	2.46	7.34	2.46	8.20	2.46	9.10	2.45	9.52	2.43	9.55	2.40
		21	5.13	2.33	6.34	2.46	7.30	2.45	8.16	2.45	9.06	2.45	9.47	2.42	9.50	2.40
		22	5.06	2.32	6.26	2.45	7.22	2.45	8.09	2.44	8.99	2.44	9.40	2.42	9.43	2.39
		24	4.84	2.30	6.05	2.43	7.00	2.43	7.87	2.43	8.77	2.42	9.18	2.40	9.21	2.37
3 units	7+7+7	16	4.68	1.80	5.75	1.90	6.61	1.90	7.38	1.90	8.18	1.90	8.54	1.88	8.57	1.86
		18	4.64	1.81	5.71	1.90	6.56	1.90	7.33	1.90	8.14	1.90	8.50	1.88	8.52	1.86
		20	4.61	1.80	5.68	1.90	6.53	1.90	7.30	1.90	8.10	1.89	8.47	1.88	8.50	1.86
		21	4.57	1.80	5.64	1.90	6.49	1.89	7.26	1.89	8.07	1.89	8.43	1.87	8.46	1.85
		22	4.51	1.79	5.58	1.89	6.43	1.89	7.20	1.89	8.00	1.89	8.37	1.87	8.39	1.85
		24	4.31	1.78	5.38	1.88	6.23	1.87	7.00	1.87	7.81	1.87	8.17	1.85	8.20	1.83
	7+7+9	16	5.09	1.90	6.25	2.00	7.18	2.00	8.01	1.99	8.89	1.99	9.28	1.97	9.31	1.95
		18	5.04	1.90	6.20	2.00	7.13	2.00	7.96	2.00	8.84	1.99	9.23	1.97	9.26	1.96
		20	5.01	1.89	6.17	2.00	7.10	2.00	7.93	1.99	8.80	1.99	9.20	1.97	9.23	1.95
		21	4.96	1.89	6.13	1.99	7.05	1.99	7.89	1.99	8.77	1.99	9.16	1.97	9.19	1.95
		22	4.90	1.88	6.06	1.99	6.99	1.99	7.82	1.98	8.70	1.98	9.09	1.96	9.12	1.94
		24	4.68	1.87	5.85	1.97	6.77	1.97	7.61	1.97	8.48	1.97	8.88	1.95	8.91	1.93
	7+9+9	16	5.32	1.96	6.54	2.07	7.50	2.06	8.38	2.06	9.29	2.06	9.71	2.04	9.73	2.02
		18	5.27	1.96	6.48	2.07	7.45	2.07	8.32	2.06	9.24	2.06	9.65	2.04	9.68	2.02
		20	5.24	1.96	6.45	2.06	7.42	2.06	8.29	2.06	9.20	2.06	9.62	2.04	9.65	2.02
		21	5.19	1.95	6.41	2.06	7.38	2.06	8.25	2.06	9.16	2.05	9.58	2.03	9.61	2.01
		22	5.12	1.95	6.33	2.06	7.30	2.05	8.18	2.05	9.09	2.05	9.50	2.03	9.53	2.01
		24	4.90	1.93	6.11	2.04	7.08	2.04	7.95	2.04	8.87	2.03	9.28	2.01	9.31	1.99
	7+7+12	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	9+9+9	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	7+9+12	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	9+9+12	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	7+12+12	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	7+7+18	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	9+12+12	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	7+9+18	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	12+12+12	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	9+9+18	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	7+12+18	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	7+7+24	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	9+12+18	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02
	7+9+24	16	5.26	1.99	6.46	2.10	7.42	2.09	8.29	2.09	9.19	2.09	9.60	2.07	9.63	2.05
		18	5.21	1.99	6.41	2.10	7.37	2.10	8.23	2.09	9.14	2.09	9.55	2.07	9.58	2.05
		20	5.18	1.99	6.38	2.09	7.34	2.09	8.20	2.09	9.10	2.09	9.52	2.07	9.55	2.05
		21	5.13	1.98	6.34	2.09	7.30	2.09	8.16	2.09	9.06	2.08	9.47	2.06	9.50	2.04
		22	5.06	1.98	6.26	2.09	7.22	2.08	8.09	2.08	8.99	2.08	9.40	2.06	9.43	2.04
		24	4.84	1.96	6.05	2.07	7.00	2.07	7.87	2.06	8.77	2.06	9.18	2.04	9.21	2.02

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+7+7+7	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+7+7+9	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+7+9+9	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+7+7+12	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+9+9+9	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+7+9+12	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	9+9+9+9	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+9+9+12	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+7+12+12	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	9+9+9+12	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+7+7+18	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90
	7+9+12+12	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+7+9+18	16	5.26	1.87	6.46	1.97	7.42	1.97	8.29	1.97	9.19	1.96	9.60	1.94	9.63	1.92
		18	5.21	1.87	6.41	1.97	7.37	1.97	8.23	1.97	9.14	1.97	9.55	1.95	9.58	1.93
		20	5.18	1.87	6.38	1.97	7.34	1.97	8.20	1.96	9.10	1.96	9.52	1.94	9.55	1.92
		21	5.13	1.86	6.34	1.96	7.30	1.96	8.16	1.96	9.06	1.96	9.47	1.94	9.50	1.92
		22	5.06	1.86	6.26	1.96	7.22	1.96	8.09	1.96	8.99	1.95	9.40	1.93	9.43	1.91
		24	4.84	1.84	6.05	1.94	7.00	1.94	7.87	1.94	8.77	1.94	9.18	1.92	9.21	1.90

Notes:
1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A5UW306FA3[FM30AH UE3]

[Cooling capacity]

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	22	2.00	0.40	2.12	0.54	2.25	0.59	2.31	0.60	2.50	0.60	2.62	0.60
		25	1.95	0.43	2.07	0.56	2.20	0.60	2.26	0.61	2.45	0.62	2.57	0.63
		32	1.84	0.57	1.96	0.68	2.09	0.71	2.15	0.72	2.34	0.73	2.46	0.75
		35	1.79	0.64	1.92	0.73	2.04	0.75	2.10	0.74	2.29	0.78	2.42	0.79
		40	1.71	0.70	1.84	0.76	1.96	0.77	2.03	0.77	2.21	0.78	2.34	0.80
		43	1.67	0.69	1.79	0.72	1.92	0.72	1.98	0.72	2.17	0.72	2.29	0.74
		46	1.62	0.62	1.74	0.63	1.87	0.61	1.93	0.60	2.12	0.60	2.24	0.62
	9	22	2.47	0.45	2.63	0.61	2.78	0.66	2.86	0.67	3.09	0.68	3.25	0.68
		25	2.41	0.48	2.57	0.63	2.72	0.68	2.80	0.69	3.03	0.70	3.19	0.71
		32	2.28	0.65	2.43	0.76	2.59	0.80	2.66	0.81	2.90	0.83	3.05	0.84
		35	2.22	0.72	2.37	0.82	2.53	0.85	2.60	0.83	2.84	0.87	2.99	0.89
		40	2.12	0.79	2.28	0.85	2.43	0.87	2.51	0.87	2.74	0.88	2.90	0.90
		43	2.06	0.78	2.22	0.81	2.37	0.81	2.45	0.81	2.68	0.82	2.84	0.84
		46	2.01	0.70	2.16	0.70	2.31	0.69	2.39	0.68	2.62	0.68	2.78	0.70
	12	22	3.33	0.60	3.54	0.81	3.75	0.88	3.85	0.89	4.16	0.90	4.37	0.90
		25	3.25	0.64	3.46	0.84	3.67	0.90	3.77	0.91	4.08	0.93	4.29	0.94
		32	3.07	0.86	3.27	1.01	3.48	1.06	3.59	1.07	3.90	1.10	4.11	1.12
		35	2.99	0.96	3.20	1.09	3.40	1.13	3.50	1.11	3.82	1.16	4.03	1.18
		40	2.86	1.05	3.07	1.13	3.27	1.15	3.38	1.15	3.69	1.17	3.90	1.19
		43	2.78	1.03	2.99	1.08	3.19	1.07	3.30	1.07	3.61	1.08	3.82	1.11
		46	2.70	0.92	2.91	0.93	3.12	0.91	3.22	0.90	3.53	0.90	3.74	0.93
	18	22	5.04	0.94	5.36	1.27	5.67	1.37	5.83	1.39	6.30	1.40	6.62	1.40
		25	4.92	1.00	5.24	1.30	5.55	1.41	5.71	1.43	6.18	1.45	6.50	1.46
		32	4.64	1.34	4.96	1.58	5.27	1.66	5.43	1.68	5.90	1.71	6.22	1.75
		35	4.52	1.49	4.84	1.69	5.16	1.76	5.30	1.73	5.79	1.81	6.10	1.85
		40	4.33	1.64	4.64	1.77	4.96	1.79	5.11	1.80	5.59	1.82	5.90	1.86
		43	4.21	1.61	4.52	1.68	4.84	1.68	5.00	1.67	5.47	1.69	5.78	1.73
		46	4.09	1.44	4.40	1.46	4.72	1.42	4.88	1.41	5.35	1.41	5.66	1.45
	24	22	6.75	1.28	7.17	1.73	7.60	1.87	7.81	1.90	8.44	1.91	8.86	1.91
		25	6.59	1.36	7.02	1.78	7.44	1.92	7.65	1.95	8.28	1.98	8.70	2.00
		32	6.22	1.83	6.64	2.15	7.07	2.26	7.28	2.29	7.91	2.34	8.33	2.38
		35	6.06	2.04	6.48	2.31	6.91	2.40	7.10	2.36	7.75	2.47	8.17	2.52
		40	5.80	2.24	6.22	2.41	6.64	2.44	6.85	2.45	7.49	2.49	7.91	2.54
		43	5.64	2.19	6.06	2.29	6.48	2.29	6.69	2.29	7.33	2.31	7.75	2.36
		46	5.48	1.97	5.90	1.99	6.32	1.94	6.53	1.93	7.17	1.93	7.59	1.97
2 units	7+7	22	3.90	0.67	4.14	0.90	4.39	0.98	4.51	0.99	4.87	1.00	5.12	1.00
		25	3.81	0.71	4.05	0.93	4.29	1.00	4.42	1.02	4.78	1.04	5.03	1.04
		32	3.59	0.95	3.84	1.13	4.08	1.18	4.20	1.19	4.57	1.22	4.81	1.25
		35	3.50	1.07	3.74	1.21	3.99	1.25	4.10	1.23	4.48	1.29	4.72	1.32
		40	3.35	1.17	3.59	1.26	3.83	1.28	3.96	1.28	4.32	1.30	4.57	1.33
		43	3.25	1.15	3.50	1.20	3.74	1.20	3.86	1.19	4.23	1.21	4.47	1.23
		46	3.16	1.03	3.41	1.04	3.65	1.02	3.77	1.01	4.14	1.01	4.38	1.03
	7+9	22	4.47	0.74	4.75	1.00	5.03	1.09	5.17	1.10	5.59	1.11	5.87	1.11
		25	4.36	0.79	4.64	1.03	4.92	1.11	5.06	1.13	5.48	1.15	5.76	1.16
		32	4.12	1.06	4.40	1.25	4.68	1.31	4.82	1.33	5.24	1.36	5.52	1.38
		35	4.01	1.18	4.29	1.34	4.57	1.39	4.70	1.37	5.13	1.43	5.41	1.46
		40	3.84	1.30	4.12	1.40	4.40	1.42	4.54	1.42	4.95	1.45	5.23	1.48
		43	3.73	1.27	4.01	1.33	4.29	1.33	4.43	1.33	4.85	1.34	5.13	1.37
		46	3.63	1.14	3.91	1.16	4.18	1.13	4.32	1.12	4.74	1.12	5.02	1.15
	9+9	22	5.04	0.86	5.36	1.16	5.67	1.26	5.83	1.27	6.30	1.28	6.62	1.28
		25	4.92	0.91	5.24	1.19	5.55	1.29	5.71	1.31	6.18	1.33	6.50	1.34
		32	4.64	1.22	4.96	1.44	5.27	1.52	5.43	1.53	5.90	1.57	6.22	1.60
		35	4.52	1.37	4.84	1.55	5.16	1.61	5.30	1.58	5.79	1.66	6.10	1.69
		40	4.33	1.50	4.64	1.62	4.96	1.64	5.11	1.64	5.59	1.67	5.90	1.71
		43	4.21	1.47	4.52	1.54	4.84	1.54	5.00	1.53	5.47	1.55	5.78	1.58
		46	4.09	1.32	4.40	1.34	4.72	1.30	4.88	1.29	5.35	1.29	5.66	1.32
	7+12	22	5.33	0.89	5.66	1.20	5.99	1.30	6.16	1.32	6.66	1.33	6.99	1.33
		25	5.20	0.95	5.53	1.24	5.87	1.33	6.03	1.35	6.53	1.38	6.87	1.39
		32	4.91	1.27	5.24	1.50	5.57	1.57	5.74	1.59	6.24	1.63	6.57	1.66
		35	4.78	1.42	5.11	1.61	5.45	1.67	5.60	1.64	6.11	1.72	6.45	1.75
		40	4.57	1.56	4.90	1.68	5.24	1.70	5.40	1.70	5.90	1.73	6.24	1.77
		43	4.45	1.52	4.78	1.60	5.11	1.59	5.28	1.59	5.78	1.61	6.11	1.64
		46	4.32	1.37	4.65	1.38	4.99	1.35	5.15	1.34	5.65	1.34	5.99	1.37

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	9+12	22	5.90	1.01	6.27	1.37	6.63	1.48	6.82	1.50	7.37	1.51	7.74	1.51
		25	5.76	1.07	6.13	1.41	6.49	1.52	6.68	1.54	7.23	1.56	7.60	1.58
		32	5.43	1.44	5.80	1.70	6.17	1.79	6.35	1.81	6.91	1.85	7.28	1.88
		35	5.29	1.61	5.66	1.83	6.03	1.89	6.20	1.86	6.77	1.95	7.14	1.99
		40	5.06	1.77	5.43	1.90	5.80	1.93	5.98	1.94	6.54	1.97	6.91	2.01
		43	4.92	1.73	5.29	1.81	5.66	1.81	5.84	1.81	6.40	1.82	6.77	1.86
		46	4.78	1.55	5.15	1.57	5.52	1.54	5.70	1.52	6.26	1.52	6.63	1.56
	12+12	22	6.75	1.12	7.17	1.52	7.60	1.64	7.81	1.66	8.44	1.68	8.86	1.68
		25	6.59	1.19	7.02	1.56	7.44	1.68	7.65	1.71	8.28	1.74	8.70	1.75
		32	6.22	1.60	6.64	1.89	7.07	1.98	7.28	2.00	7.91	2.05	8.33	2.09
		35	6.06	1.79	6.48	2.03	6.91	2.10	7.10	2.07	7.75	2.17	8.17	2.21
		40	5.80	1.96	6.22	2.11	6.64	2.14	6.85	2.15	7.49	2.18	7.91	2.23
		43	5.64	1.92	6.06	2.01	6.48	2.01	6.69	2.00	7.33	2.02	7.75	2.07
		46	5.48	1.72	5.90	1.75	6.32	1.70	6.53	1.69	7.17	1.69	7.59	1.73
	7+18	22	7.04	1.19	7.48	1.60	7.92	1.73	8.14	1.76	8.80	1.77	9.24	1.77
		25	6.87	1.26	7.31	1.65	7.75	1.78	7.97	1.80	8.63	1.83	9.07	1.85
		32	6.48	1.69	6.92	1.99	7.36	2.09	7.58	2.12	8.24	2.17	8.68	2.21
		35	6.32	1.89	6.76	2.14	7.20	2.22	7.40	2.18	8.08	2.29	8.52	2.33
		40	6.04	2.07	6.48	2.23	6.92	2.26	7.14	2.27	7.80	2.31	8.24	2.36
		43	5.87	2.03	6.31	2.13	6.75	2.12	6.98	2.12	7.64	2.14	8.08	2.19
		46	5.71	1.82	6.15	1.84	6.59	1.80	6.81	1.78	7.47	1.78	7.91	1.83
	9+18	22	7.51	1.29	7.98	1.74	8.45	1.88	8.69	1.91	9.39	1.92	9.86	1.92
		25	7.34	1.37	7.81	1.79	8.28	1.93	8.51	1.96	9.22	1.99	9.69	2.01
		32	6.92	1.83	7.39	2.16	7.86	2.27	8.10	2.30	8.80	2.35	9.27	2.39
		35	6.74	2.05	7.21	2.32	7.68	2.41	7.90	2.37	8.62	2.48	9.09	2.53
		40	6.45	2.25	6.92	2.42	7.39	2.46	7.62	2.46	8.33	2.50	8.80	2.55
		43	6.27	2.20	6.74	2.30	7.21	2.30	7.45	2.30	8.15	2.32	8.62	2.37
		46	6.09	1.98	6.56	2.00	7.03	1.95	7.27	1.93	7.97	1.93	8.44	1.98
	12+18	22	8.37	1.34	8.89	1.82	9.42	1.97	9.68	1.99	10.5	2.01	11.0	2.01
		25	8.17	1.43	8.70	1.87	9.22	2.01	9.48	2.04	10.3	2.08	10.8	2.10
		32	7.71	1.92	8.23	2.26	8.76	2.37	9.02	2.40	9.80	2.46	10.3	2.50
		35	7.51	2.14	8.04	2.43	8.56	2.52	8.80	2.47	9.61	2.59	10.1	2.65
		40	7.18	2.35	7.71	2.53	8.23	2.57	8.49	2.57	9.28	2.61	9.80	2.67
		43	6.99	2.30	7.51	2.41	8.03	2.40	8.29	2.40	9.08	2.42	9.60	2.48
		46	6.79	2.06	7.31	2.09	7.84	2.04	8.10	2.02	8.88	2.02	9.41	2.07
	7+24	22	8.37	1.34	8.89	1.82	9.42	1.97	9.68	1.99	10.5	2.01	11.0	2.01
		25	8.17	1.43	8.70	1.87	9.22	2.01	9.48	2.04	10.3	2.08	10.8	2.10
		32	7.71	1.92	8.23	2.26	8.76	2.37	9.02	2.40	9.80	2.46	10.3	2.50
		35	7.51	2.14	8.04	2.43	8.56	2.52	8.80	2.47	9.61	2.59	10.1	2.65
		40	7.18	2.35	7.71	2.53	8.23	2.57	8.49	2.57	9.28	2.61	9.80	2.67
		43	6.99	2.30	7.51	2.41	8.03	2.40	8.29	2.40	9.08	2.42	9.60	2.48
		46	6.79	2.06	7.31	2.09	7.84	2.04	8.10	2.02	8.88	2.02	9.41	2.07
	9+24	22	8.37	1.34	8.89	1.82	9.42	1.97	9.68	1.99	10.5	2.01	11.0	2.01
		25	8.17	1.43	8.70	1.87	9.22	2.01	9.48	2.04	10.3	2.08	10.8	2.10
		32	7.71	1.92	8.23	2.26	8.76	2.37	9.02	2.40	9.80	2.46	10.3	2.50
		35	7.51	2.14	8.04	2.43	8.56	2.52	8.80	2.47	9.61	2.59	10.1	2.65
		40	7.18	2.35	7.71	2.53	8.23	2.57	8.49	2.57	9.28	2.61	9.80	2.67
		43	6.99	2.30	7.51	2.41	8.03	2.40	8.29	2.40	9.08	2.42	9.60	2.48
		46	6.79	2.06	7.31	2.09	7.84	2.04	8.10	2.02	8.88	2.02	9.41	2.07
	18+18	22	8.37	1.34	8.89	1.82	9.42	1.97	9.68	1.99	10.5	2.01	11.0	2.01
		25	8.17	1.43	8.70	1.87	9.22	2.01	9.48	2.04	10.3	2.08	10.8	2.10
		32	7.71	1.92	8.23	2.26	8.76	2.37	9.02	2.40	9.80	2.46	10.3	2.50
		35	7.51	2.14	8.04	2.43	8.56	2.52	8.80	2.47	9.61	2.59	10.1	2.65
		40	7.18	2.35	7.71	2.53	8.23	2.57	8.49	2.57	9.28	2.61	9.80	2.67
		43	6.99	2.30	7.51	2.41	8.03	2.40	8.29	2.40	9.08	2.42	9.60	2.48
		46	6.79	2.06	7.31	2.09	7.84	2.04	8.10	2.02	8.88	2.02	9.41	2.07
	12+24	22	8.37	1.34	8.89	1.82	9.42	1.97	9.68	1.99	10.5	2.01	11.0	2.01
		25	8.17	1.43	8.70	1.87	9.22	2.01	9.48	2.04	10.3	2.08	10.8	2.10
		32	7.71	1.92	8.23	2.26	8.76	2.37	9.02	2.40	9.80	2.46	10.3	2.50
		35	7.51	2.14	8.04	2.43	8.56	2.52	8.80	2.47	9.61	2.59	10.1	2.65
		40	7.18	2.35	7.71	2.53	8.23	2.57	8.49	2.57	9.28	2.61	9.80	2.67
		43	6.99	2.30	7.51	2.41	8.03	2.40	8.29	2.40	9.08	2.42	9.60	2.48
		46	6.79	2.06	7.31	2.09	7.84	2.04	8.10	2.02	8.88	2.02	9.41	2.07
	18+24	22	8.37	1.34	8.89	1.82	9.42	1.97	9.68	1.99	10.5	2.01	11.0	2.01
		25	8.17	1.43	8.70	1.87	9.22	2.01	9.48	2.04	10.3	2.08	10.8	2.10
		32	7.71	1.92	8.23	2.26	8.76	2.37	9.02	2.40	9.80	2.46	10.3	2.50
		35	7.51	2.14	8.04	2.43	8.56	2.52	8.80	2.47	9.61	2.59	10.1	2.65
		40	7.18	2.35	7.71	2.53	8.23	2.57	8.49	2.57	9.28	2.61	9.80	2.67
		43	6.99	2.30	7.51	2.41	8.03	2.40	8.29	2.40	9.08	2.42	9.60	2.48
		46	6.79	2.06	7.31	2.09	7.84	2.04	8.10	2.02	8.88	2.02	9.41	2.07

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
2 units	24+24	22	8.37	1.34	8.89	1.82	9.42	1.97	9.68	1.99	10.5	2.01	11.0	2.01
		25	8.17	1.43	8.70	1.87	9.22	2.01	9.48	2.04	10.3	2.08	10.8	2.10
		32	7.71	1.92	8.23	2.26	8.76	2.37	9.02	2.40	9.80	2.46	10.3	2.50
		35	7.51	2.14	8.04	2.43	8.56	2.52	8.80	2.47	9.61	2.59	10.1	2.65
		40	7.18	2.35	7.71	2.53	8.23	2.57	8.49	2.57	9.28	2.61	9.80	2.67
		43	6.99	2.30	7.51	2.41	8.03	2.40	8.29	2.40	9.08	2.42	9.60	2.48
		46	6.79	2.06	7.31	2.09	7.84	2.04	8.10	2.02	8.88	2.02	9.41	2.07
3 units	7+7+7	22	5.90	1.01	6.27	1.37	6.63	1.48	6.82	1.50	7.37	1.51	7.74	1.51
		25	5.76	1.07	6.13	1.41	6.49	1.52	6.68	1.54	7.23	1.56	7.60	1.58
		32	5.43	1.44	5.80	1.70	6.17	1.79	6.35	1.81	6.91	1.85	7.28	1.88
		35	5.29	1.61	5.66	1.83	6.03	1.89	6.20	1.86	6.77	1.95	7.14	1.99
		40	5.06	1.77	5.43	1.90	5.80	1.93	5.98	1.94	6.54	1.97	6.91	2.01
		43	4.92	1.73	5.29	1.81	5.66	1.81	5.84	1.81	6.40	1.82	6.77	1.86
		46	4.78	1.55	5.15	1.57	5.52	1.54	5.70	1.52	6.26	1.52	6.63	1.56
	7+7+9	22	6.47	1.07	6.87	1.44	7.28	1.56	7.48	1.59	8.08	1.60	8.49	1.60
		25	6.31	1.14	6.72	1.49	7.12	1.60	7.33	1.63	7.93	1.65	8.34	1.67
		32	5.96	1.53	6.36	1.80	6.77	1.89	6.97	1.91	7.58	1.95	7.98	1.99
		35	5.81	1.70	6.21	1.93	6.61	2.00	6.80	1.97	7.42	2.06	7.83	2.11
		40	5.55	1.87	5.96	2.01	6.36	2.04	6.56	2.05	7.17	2.08	7.57	2.12
		43	5.40	1.83	5.80	1.92	6.21	1.91	6.41	1.91	7.02	1.93	7.42	1.97
		46	5.25	1.64	5.65	1.66	6.05	1.62	6.26	1.61	6.86	1.61	7.27	1.65
	7+9+9	22	7.04	1.19	7.48	1.60	7.92	1.73	8.14	1.76	8.80	1.77	9.24	1.77
		25	6.87	1.26	7.31	1.65	7.75	1.78	7.97	1.80	8.63	1.83	9.07	1.85
		32	6.48	1.69	6.92	1.99	7.36	2.09	7.58	2.12	8.24	2.17	8.68	2.21
		35	6.32	1.89	6.76	2.14	7.20	2.22	7.40	2.18	8.08	2.29	8.52	2.33
		40	6.04	2.07	6.48	2.23	6.92	2.26	7.14	2.27	7.80	2.31	8.24	2.36
		43	5.87	2.03	6.31	2.13	6.75	2.12	6.98	2.12	7.64	2.14	8.08	2.19
		46	5.71	1.82	6.15	1.84	6.59	1.80	6.81	1.78	7.47	1.78	7.91	1.83
	7+7+12	22	7.23	1.22	7.68	1.65	8.13	1.79	8.36	1.81	9.04	1.83	9.49	1.83
		25	7.06	1.30	7.51	1.70	7.96	1.83	8.19	1.86	8.87	1.89	9.32	1.91
		32	6.66	1.74	7.11	2.06	7.56	2.16	7.79	2.18	8.47	2.23	8.92	2.28
		35	6.49	1.95	6.94	2.21	7.39	2.29	7.60	2.25	8.30	2.36	8.75	2.41
		40	6.20	2.14	6.66	2.30	7.11	2.33	7.33	2.34	8.01	2.38	8.46	2.43
		43	6.03	2.09	6.49	2.19	6.94	2.19	7.16	2.18	7.84	2.20	8.29	2.25
		46	5.86	1.88	6.31	1.90	6.77	1.86	6.99	1.84	7.67	1.84	8.12	1.88
	9+9+9	22	7.51	1.29	7.98	1.74	8.45	1.88	8.69	1.91	9.39	1.92	9.86	1.92
		25	7.34	1.37	7.81	1.79	8.28	1.93	8.51	1.96	9.22	1.99	9.69	2.01
		32	6.92	1.83	7.39	2.16	7.86	2.27	8.10	2.30	8.80	2.35	9.27	2.39
		35	6.74	2.05	7.21	2.32	7.68	2.41	7.90	2.37	8.62	2.48	9.09	2.53
		40	6.45	2.25	6.92	2.42	7.39	2.46	7.62	2.46	8.33	2.50	8.80	2.55
		43	6.27	2.20	6.74	2.30	7.21	2.30	7.45	2.30	8.15	2.32	8.62	2.37
		46	6.09	1.98	6.56	2.00	7.03	1.95	7.27	1.93	7.97	1.93	8.44	1.98
	7+9+12	22	7.80	1.30	8.29	1.75	8.77	1.90	9.02	1.92	9.75	1.94	10.2	1.94
		25	7.61	1.38	8.10	1.80	8.59	1.94	8.83	1.97	9.57	2.01	10.1	2.02
		32	7.18	1.85	7.67	2.18	8.16	2.29	8.40	2.31	9.14	2.37	9.62	2.41
		35	7.00	2.06	7.49	2.34	7.98	2.43	8.20	2.39	8.95	2.50	9.44	2.55
		40	6.69	2.27	7.18	2.44	7.67	2.47	7.91	2.48	8.64	2.52	9.13	2.57
		43	6.51	2.22	7.00	2.32	7.49	2.32	7.73	2.31	8.46	2.34	8.95	2.39
		46	6.33	1.99	6.81	2.02	7.30	1.97	7.55	1.95	8.28	1.95	8.76	2.00
	9+9+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	9+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+9+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	12+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+9+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+12+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+24	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+12+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+9+24	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	12+12+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+9+24	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
3 units	7+18+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+12+24	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+18+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+12+24	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	12+18+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	12+12+24	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
4 units	7+7+7+7	22	7.80	1.32	8.29	1.79	8.77	1.93	9.02	1.96	9.75	1.98	10.2	1.98
		25	7.61	1.40	8.10	1.84	8.59	1.98	8.83	2.01	9.57	2.05	10.1	2.06
		32	7.18	1.89	7.67	2.22	8.16	2.34	8.40	2.36	9.14	2.42	9.62	2.46
		35	7.00	2.11	7.49	2.39	7.98	2.48	8.20	2.44	8.95	2.55	9.44	2.60
		40	6.69	2.31	7.18	2.49	7.67	2.53	7.91	2.53	8.64	2.57	9.13	2.63
		43	6.51	2.26	7.00	2.37	7.49	2.37	7.73	2.36	8.46	2.38	8.95	2.44
		46	6.33	2.03	6.81	2.06	7.30	2.01	7.55	1.99	8.28	1.99	8.76	2.04
	7+7+7+9	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+9+9	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+7+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+9+9+9	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+9+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+9+9+9	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+9+9+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+9+9+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+7+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+9+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+9+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+9+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+12+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+9+9+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+12+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+12+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+9+9+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+7+24	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+9+12+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	7+7+9+24	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	12+12+12+12	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04
	9+9+12+18	22	8.37	1.32	8.89	1.79	9.42	1.93	9.68	1.96	10.5	1.98	11.0	1.98
		25	8.17	1.40	8.70	1.84	9.22	1.98	9.48	2.01	10.3	2.05	10.8	2.06
		32	7.71	1.89	8.23	2.22	8.76	2.34	9.02	2.36	9.80	2.42	10.3	2.46
		35	7.51	2.11	8.04	2.39	8.56	2.48	8.80	2.44	9.61	2.55	10.1	2.60
		40	7.18	2.31	7.71	2.49	8.23	2.53	8.49	2.53	9.28	2.57	9.80	2.63
		43	6.99	2.26	7.51	2.37	8.03	2.37	8.29	2.36	9.08	2.38	9.60	2.44
		46	6.79	2.03	7.31	2.06	7.84	2.01	8.10	1.99	8.88	1.99	9.41	2.04

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5 units	7+7+7+7+7	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+7+7+9	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+7+9+9	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+7+7+12	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+9+9+9	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+7+9+12	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+9+9+9+9	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+9+9+12	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	9+9+9+9+9	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+9+9+9+12	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5 units	9+9+9+9+12	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+7+12+12	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+7+7+18	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+9+12+12	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00
	7+7+7+9+18	22	8.37	1.30	8.89	1.75	9.42	1.90	9.68	1.92	10.5	1.94	11.0	1.94
		25	8.17	1.38	8.70	1.80	9.22	1.94	9.48	1.97	10.3	2.01	10.8	2.02
		32	7.71	1.85	8.23	2.18	8.76	2.29	9.02	2.31	9.80	2.37	10.3	2.41
		35	7.51	2.06	8.04	2.34	8.56	2.43	8.80	2.39	9.61	2.50	10.1	2.55
		40	7.18	2.27	7.71	2.44	8.23	2.47	8.49	2.48	9.28	2.52	9.80	2.57
		43	6.99	2.22	7.51	2.32	8.03	2.32	8.29	2.31	9.08	2.34	9.60	2.39
		46	6.79	1.99	7.31	2.02	7.84	1.97	8.10	1.95	8.88	1.95	9.41	2.00

Notes:
1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	16	1.39	0.86	1.70	0.90	1.96	0.90	2.19	0.90	2.42	0.90	2.53	0.89	2.54	0.88
		18	1.37	0.86	1.69	0.91	1.94	0.90	2.17	0.90	2.41	0.90	2.52	0.89	2.53	0.88
		20	1.37	0.86	1.68	0.90	1.94	0.90	2.16	0.90	2.40	0.90	2.51	0.89	2.52	0.88
		21	1.35	0.86	1.67	0.90	1.92	0.90	2.15	0.90	2.39	0.90	2.50	0.89	2.51	0.88
		22	1.34	0.85	1.65	0.90	1.91	0.90	2.13	0.90	2.37	0.90	2.48	0.89	2.49	0.88
		24	1.28	0.85	1.59	0.89	1.85	0.89	2.07	0.89	2.31	0.89	2.42	0.88	2.43	0.87
	9	16	1.68	1.16	2.06	1.23	2.37	1.23	2.64	1.23	2.93	1.22	3.06	1.21	3.07	1.20
		18	1.66	1.17	2.04	1.23	2.35	1.23	2.62	1.23	2.91	1.23	3.04	1.21	3.05	1.20
		20	1.65	1.16	2.03	1.23	2.34	1.23	2.61	1.22	2.90	1.22	3.03	1.21	3.04	1.20
		21	1.64	1.16	2.02	1.22	2.32	1.22	2.60	1.22	2.89	1.22	3.02	1.21	3.03	1.20
		22	1.61	1.16	2.00	1.22	2.30	1.22	2.58	1.22	2.87	1.22	3.00	1.21	3.00	1.19
		24	1.54	1.15	1.93	1.21	2.23	1.21	2.51	1.21	2.80	1.21	2.93	1.20	2.94	1.18
	12	16	2.26	1.52	2.77	1.60	3.18	1.60	3.55	1.60	3.94	1.59	4.11	1.58	4.13	1.56
		18	2.23	1.52	2.75	1.60	3.16	1.60	3.53	1.60	3.92	1.60	4.09	1.58	4.10	1.56
		20	2.22	1.52	2.74	1.60	3.15	1.60	3.52	1.59	3.90	1.59	4.08	1.58	4.09	1.56
		21	2.20	1.51	2.72	1.59	3.13	1.59	3.50	1.59	3.88	1.59	4.06	1.57	4.07	1.56
		22	2.17	1.51	2.68	1.59	3.10	1.59	3.47	1.59	3.85	1.59	4.03	1.57	4.04	1.55
		24	2.08	1.50	2.59	1.58	3.00	1.58	3.37	1.57	3.76	1.57	3.93	1.56	3.95	1.54
	18	16	3.35	2.26	4.12	2.39	4.73	2.39	5.28	2.38	5.86	2.38	6.12	2.36	6.14	2.33
		18	3.32	2.27	4.09	2.39	4.70	2.39	5.25	2.39	5.83	2.38	6.09	2.36	6.10	2.34
		20	3.30	2.26	4.07	2.39	4.68	2.38	5.23	2.38	5.80	2.38	6.07	2.36	6.08	2.33
		21	3.27	2.26	4.04	2.38	4.65	2.38	5.20	2.38	5.78	2.38	6.04	2.35	6.06	2.33
		22	3.23	2.25	3.99	2.38	4.60	2.37	5.15	2.37	5.73	2.37	5.99	2.35	6.01	2.32
		24	3.09	2.23	3.85	2.36	4.46	2.36	5.01	2.35	5.59	2.35	5.85	2.33	5.87	2.30
	24	16	4.34	3.06	5.33	3.23	6.12	3.22	6.83	3.22	7.58	3.22	7.91	3.18	7.94	3.15
		18	4.29	3.06	5.28	3.23	6.07	3.23	6.79	3.22	7.53	3.22	7.87	3.19	7.89	3.16
		20	4.27	3.06	5.26	3.22	6.05	3.22	6.76	3.22	7.50	3.21	7.84	3.18	7.87	3.15
		21	4.23	3.05	5.22	3.22	6.01	3.22	6.72	3.21	7.47	3.21	7.81	3.18	7.83	3.14
		22	4.17	3.04	5.16	3.21	5.95	3.21	6.66	3.20	7.41	3.20	7.75	3.17	7.77	3.14
		24	3.99	3.02	4.98	3.18	5.77	3.18	6.48	3.18	7.23	3.18	7.57	3.14	7.59	3.11
2 units	7+7	16	3.24	1.49	3.98	1.57	4.57	1.57	5.10	1.57	5.66	1.56	5.91	1.55	5.93	1.53
		18	3.21	1.49	3.95	1.57	4.54	1.57	5.07	1.57	5.62	1.57	5.88	1.55	5.89	1.54
		20	3.19	1.49	3.93	1.57	4.52	1.57	5.05	1.57	5.60	1.56	5.86	1.55	5.87	1.53
		21	3.16	1.48	3.90	1.57	4.49	1.56	5.02	1.56	5.58	1.56	5.83	1.55	5.85	1.53
		22	3.12	1.48	3.86	1.56	4.45	1.56	4.98	1.56	5.53	1.56	5.78	1.54	5.80	1.53
		24	2.98	1.47	3.72	1.55	4.31	1.55	4.84	1.55	5.40	1.54	5.65	1.53	5.67	1.51
	7+9	16	3.70	1.63	4.55	1.71	5.22	1.71	5.83	1.71	6.46	1.71	6.75	1.69	6.77	1.68
		18	3.66	1.63	4.51	1.72	5.18	1.72	5.79	1.71	6.43	1.71	6.71	1.69	6.74	1.68
		20	3.64	1.63	4.49	1.71	5.16	1.71	5.77	1.71	6.40	1.71	6.69	1.69	6.71	1.68
		21	3.61	1.62	4.46	1.71	5.13	1.71	5.74	1.71	6.37	1.71	6.66	1.69	6.68	1.67
		22	3.56	1.62	4.41	1.71	5.08	1.70	5.69	1.70	6.32	1.70	6.61	1.68	6.63	1.67
		24	3.41	1.60	4.25	1.69	4.93	1.69	5.53	1.69	6.17	1.69	6.46	1.67	6.48	1.65
	9+9	16	3.87	1.91	4.76	2.02	5.47	2.02	6.10	2.01	6.77	2.01	7.07	1.99	7.09	1.97
		18	3.84	1.92	4.72	2.02	5.43	2.02	6.06	2.02	6.73	2.01	7.03	1.99	7.05	1.97
		20	3.81	1.91	4.70	2.02	5.40	2.01	6.04	2.01	6.70	2.01	7.01	1.99	7.03	1.97
		21	3.78	1.91	4.67	2.01	5.37	2.01	6.01	2.01	6.67	2.01	6.97	1.99	7.00	1.97
		22	3.73	1.90	4.61	2.01	5.32	2.01	5.95	2.00	6.62	2.00	6.92	1.98	6.94	1.96
		24	3.57	1.89	4.45	1.99	5.16	1.99	5.79	1.99	6.46	1.99	6.76	1.97	6.78	1.95
	7+12	16	4.28	2.25	5.26	2.37	6.04	2.37	6.74	2.36	7.47	2.36	7.81	2.34	7.83	2.31
		18	4.24	2.25	5.21	2.37	5.99	2.37	6.70	2.37	7.43	2.36	7.76	2.34	7.79	2.32
		20	4.21	2.24	5.19	2.37	5.97	2.36	6.67	2.36	7.40	2.36	7.74	2.34	7.76	2.31
		21	4.18	2.24	5.15	2.36	5.93	2.36	6.63	2.36	7.37	2.36	7.70	2.33	7.73	2.31
		22	4.12	2.23	5.09	2.36	5.87	2.35	6.58	2.35	7.31	2.35	7.64	2.33	7.67	2.30
		24	3.94	2.22	4.92	2.34	5.70	2.34	6.40	2.33	7.13	2.33	7.47	2.31	7.49	2.28
	9+12	16	4.92	2.76	6.04	2.91	6.93	2.91	7.74	2.91	8.59	2.90	8.97	2.88	8.99	2.85
		18	4.87	2.77	5.99	2.92	6.88	2.91	7.69	2.91	8.54	2.91	8.92	2.88	8.95	2.85
		20	4.84	2.76	5.96	2.91	6.86	2.91	7.66	2.91	8.50	2.90	8.89	2.87	8.92	2.85
		21	4.80	2.76	5.92	2.91	6.81	2.90	7.62	2.90	8.47	2.90	8.85	2.87	8.87	2.84
		22	4.73	2.75	5.85	2.90	6.75	2.90	7.55	2.89	8.40	2.89	8.78	2.86	8.81	2.83
		24	4.52	2.73	5.65	2.88	6.54	2.87	7.35	2.87	8.19	2.87	8.58	2.84	8.60	2.81
	12+12	16	5.09	3.00	6.25	3.17	7.18	3.16	8.01	3.16	8.89	3.16	9.28	3.13	9.31	3.10
		18	5.04	3.01	6.20	3.17	7.13	3.17	7.96	3.17	8.84	3.16	9.23	3.13	9.26	3.10
		20	5.01	3.00	6.17	3.17	7.10	3.16	7.93	3.16	8.80	3.15	9.20	3.13	9.23	3.09
		21	4.96	3.00	6.13	3.16	7.05	3.16	7.89	3.15	8.77	3.15	9.16	3.12	9.19	3.09
		22	4.90	2.99	6.06	3.15	6.99	3.15	7.82	3.15	8.70	3.14	9.09	3.11	9.12	3.08
		24	4.68	2.96	5.85	3.13	6.77	3.12	7.61	3.12	8.48	3.12	8.88	3.09	8.91	3.06

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	7+18	16	5.49	3.13	6.75	3.30	7.75	3.30	8.65	3.30	9.60	3.29	10.0	3.26	10.1	3.23
		18	5.44	3.14	6.69	3.31	7.69	3.30	8.60	3.30	9.54	3.30	9.97	3.26	10.0	3.23
		20	5.41	3.13	6.66	3.30	7.66	3.30	8.57	3.30	9.50	3.29	9.94	3.26	9.97	3.23
		21	5.36	3.12	6.61	3.30	7.62	3.29	8.52	3.29	9.46	3.29	9.89	3.25	9.92	3.22
		22	5.28	3.12	6.54	3.29	7.54	3.28	8.44	3.28	9.39	3.28	9.81	3.24	9.84	3.21
		24	5.06	3.09	6.31	3.26	7.31	3.26	8.21	3.25	9.16	3.25	9.58	3.22	9.61	3.19
	9+18	16	6.13	3.30	7.53	3.48	8.65	3.48	9.65	3.47	10.7	3.47	11.2	3.43	11.2	3.40
		18	6.07	3.30	7.47	3.48	8.59	3.48	9.59	3.48	10.6	3.47	11.1	3.44	11.2	3.40
		20	6.03	3.30	7.43	3.48	8.55	3.47	9.56	3.47	10.6	3.46	11.1	3.43	11.1	3.40
		21	5.98	3.29	7.38	3.47	8.50	3.47	9.50	3.46	10.6	3.46	11.0	3.43	11.1	3.39
		22	5.90	3.28	7.30	3.46	8.41	3.46	9.42	3.45	10.5	3.45	10.9	3.42	11.0	3.38
		24	5.64	3.26	7.04	3.43	8.16	3.43	9.16	3.43	10.2	3.42	10.7	3.39	10.7	3.36
	12+18	16	5.84	3.52	7.17	3.71	8.24	3.71	9.20	3.71	10.2	3.70	10.7	3.67	10.7	3.63
		18	5.78	3.53	7.12	3.72	8.18	3.71	9.14	3.71	10.1	3.71	10.6	3.67	10.6	3.63
		20	5.75	3.52	7.08	3.71	8.15	3.71	9.11	3.70	10.1	3.70	10.6	3.66	10.6	3.63
		21	5.70	3.51	7.03	3.70	8.10	3.70	9.06	3.70	10.1	3.69	10.5	3.66	10.5	3.62
		22	5.62	3.50	6.95	3.69	8.02	3.69	8.98	3.69	9.98	3.68	10.4	3.65	10.5	3.61
		24	5.38	3.47	6.71	3.67	7.77	3.66	8.73	3.66	9.74	3.65	10.2	3.62	10.2	3.58
	7+24	16	5.84	3.52	7.17	3.71	8.24	3.71	9.20	3.71	10.2	3.70	10.7	3.67	10.7	3.63
		18	5.78	3.53	7.12	3.72	8.18	3.71	9.14	3.71	10.1	3.71	10.6	3.67	10.6	3.63
		20	5.75	3.52	7.08	3.71	8.15	3.71	9.11	3.70	10.1	3.70	10.6	3.66	10.6	3.63
		21	5.70	3.51	7.03	3.70	8.10	3.70	9.06	3.70	10.1	3.69	10.5	3.66	10.5	3.62
		22	5.62	3.50	6.95	3.69	8.02	3.69	8.98	3.69	9.98	3.68	10.4	3.65	10.5	3.61
		24	5.38	3.47	6.71	3.67	7.77	3.66	8.73	3.66	9.74	3.65	10.2	3.62	10.2	3.58
	9+24	16	5.84	3.52	7.17	3.71	8.24	3.71	9.20	3.71	10.2	3.70	10.7	3.67	10.7	3.63
		18	5.78	3.53	7.12	3.72	8.18	3.71	9.14	3.71	10.1	3.71	10.6	3.67	10.6	3.63
		20	5.75	3.52	7.08	3.71	8.15	3.71	9.11	3.70	10.1	3.70	10.6	3.66	10.6	3.63
		21	5.70	3.51	7.03	3.70	8.10	3.70	9.06	3.70	10.1	3.69	10.5	3.66	10.5	3.62
		22	5.62	3.50	6.95	3.69	8.02	3.69	8.98	3.69	9.98	3.68	10.4	3.65	10.5	3.61
		24	5.38	3.47	6.71	3.67	7.77	3.66	8.73	3.66	9.74	3.65	10.2	3.62	10.2	3.58
	18+18	16	5.84	3.47	7.17	3.66	8.24	3.65	9.20	3.65	10.2	3.64	10.7	3.61	10.7	3.57
		18	5.78	3.47	7.12	3.66	8.18	3.66	9.14	3.65	10.1	3.65	10.6	3.61	10.6	3.58
		20	5.75	3.46	7.08	3.65	8.15	3.65	9.11	3.65	10.1	3.64	10.6	3.61	10.6	3.57
		21	5.70	3.46	7.03	3.65	8.10	3.64	9.06	3.64	10.1	3.64	10.5	3.60	10.5	3.56
		22	5.62	3.45	6.95	3.64	8.02	3.63	8.98	3.63	9.98	3.63	10.4	3.59	10.5	3.55
		24	5.38	3.42	6.71	3.61	7.77	3.60	8.73	3.60	9.74	3.60	10.2	3.56	10.2	3.53
	12+24	16	5.84	3.47	7.17	3.66	8.24	3.65	9.20	3.65	10.2	3.64	10.7	3.61	10.7	3.57
		18	5.78	3.47	7.12	3.66	8.18	3.66	9.14	3.65	10.1	3.65	10.6	3.61	10.6	3.58
		20	5.75	3.46	7.08	3.65	8.15	3.65	9.11	3.65	10.1	3.64	10.6	3.61	10.6	3.57
		21	5.70	3.46	7.03	3.65	8.10	3.64	9.06	3.64	10.1	3.64	10.5	3.60	10.5	3.56
		22	5.62	3.45	6.95	3.64	8.02	3.63	8.98	3.63	9.98	3.63	10.4	3.59	10.5	3.55
		24	5.38	3.42	6.71	3.61	7.77	3.60	8.73	3.60	9.74	3.60	10.2	3.56	10.2	3.53
	18+24	16	5.84	3.47	7.17	3.66	8.24	3.65	9.20	3.65	10.2	3.64	10.7	3.61	10.7	3.57
		18	5.78	3.47	7.12	3.66	8.18	3.66	9.14	3.65	10.1	3.65	10.6	3.61	10.6	3.58
		20	5.75	3.46	7.08	3.65	8.15	3.65	9.11	3.65	10.1	3.64	10.6	3.61	10.6	3.57
		21	5.70	3.46	7.03	3.65	8.10	3.64	9.06	3.64	10.1	3.64	10.5	3.60	10.5	3.56
		22	5.62	3.45	6.95	3.64	8.02	3.63	8.98	3.63	9.98	3.63	10.4	3.59	10.5	3.55
		24	5.38	3.42	6.71	3.61	7.77	3.60	8.73	3.60	9.74	3.60	10.2	3.56	10.2	3.53
	24+24	16	4.11	3.47	5.04	3.66	5.79	3.65	6.47	3.65	7.17	3.64	7.49	3.61	7.51	3.57
		18	4.06	3.47	5.00	3.66	5.75	3.66	6.42	3.65	7.13	3.65	7.45	3.61	7.47	3.58
		20	4.04	3.46	4.98	3.65	5.73	3.65	6.40	3.65	7.10	3.64	7.43	3.61	7.45	3.57
		21	4.01	3.46	4.94	3.65	5.69	3.64	6.37	3.64	7.07	3.64	7.39	3.60	7.41	3.56
		22	3.95	3.45	4.89	3.64	5.64	3.63	6.31	3.63	7.02	3.63	7.33	3.59	7.36	3.55
		24	3.78	3.42	4.72	3.61	5.46	3.60	6.14	3.60	6.84	3.60	7.16	3.56	7.19	3.53
3 units	7+7+7	16	4.68	1.90	5.75	2.01	6.61	2.01	7.38	2.00	8.18	2.00	8.54	1.98	8.57	1.96
		18	4.64	1.91	5.71	2.01	6.56	2.01	7.33	2.01	8.14	2.00	8.50	1.98	8.52	1.96
		20	4.61	1.90	5.68	2.01	6.53	2.00	7.30	2.00	8.10	2.00	8.47	1.98	8.50	1.96
		21	4.57	1.90	5.64	2.00	6.49	2.00	7.26	2.00	8.07	2.00	8.43	1.98	8.46	1.96
		22	4.51	1.89	5.58	2.00	6.43	2.00	7.20	1.99	8.00	1.99	8.37	1.97	8.39	1.95
		24	4.31	1.88	5.38	1.98	6.23	1.98	7.00	1.98	7.81	1.98	8.17	1.96	8.20	1.94
	7+7+9	16	5.09	2.09	6.25	2.20	7.18	2.20	8.01	2.20	8.89	2.20	9.28	2.17	9.31	2.15
		18	5.04	2.09	6.20	2.21	7.13	2.20	7.96	2.20	8.84	2.20	9.23	2.18	9.26	2.15
		20	5.01	2.09	6.17	2.20	7.10	2.20	7.93	2.20	8.80	2.19	9.20	2.17	9.23	2.15
		21	4.96	2.08	6.13	2.20	7.05	2.19	7.89	2.19	8.77	2.19	9.16	2.17	9.19	2.15
		22	4.90	2.08	6.06	2.19	6.99	2.19	7.82	2.19	8.70	2.18	9.09	2.16	9.12	2.14
		24	4.68	2.06	5.85	2.17	6.77	2.17	7.61	2.17	8.48	2.17	8.88	2.15	8.91	2.12
	7+9+9	16	5.32	2.36	6.54	2.49	7.50	2.48	8.38	2.48	9.29	2.48	9.71	2.45	9.73	2.43
		18	5.27	2.36	6.48	2.49	7.45	2.49	8.32	2.48	9.24	2.48	9.65	2.46	9.68	2.43
		20	5.24	2.36	6.45	2.48	7.42	2.48	8.29	2.48	9.20	2.47	9.62	2.45	9.65	2.43
		21	5.19	2.35	6.41	2.48	7.38	2.48	8.25	2.47	9.16	2.47	9.58	2.45	9.61	2.42
		22	5.12	2.34	6.33	2.47	7.30	2.47	8.18	2.47	9.09	2.47	9.50	2.44	9.53	2.42
		24	4.90	2.33	6.11	2.45	7.08	2.45	7.95	2.45	8.87	2.45	9.28	2.42	9.31	2.40

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	7+7+12	16	5.49	2.50	6.75	2.64	7.75	2.64	8.65	2.64	9.60	2.63	10.0	2.61	10.1	2.58
		18	5.44	2.51	6.69	2.64	7.69	2.64	8.60	2.64	9.54	2.64	9.97	2.61	10.0	2.58
		20	5.41	2.50	6.66	2.64	7.66	2.64	8.57	2.63	9.50	2.63	9.94	2.61	9.97	2.58
		21	5.36	2.50	6.61	2.63	7.62	2.63	8.52	2.63	9.46	2.63	9.89	2.60	9.92	2.57
		22	5.28	2.49	6.54	2.63	7.54	2.63	8.44	2.62	9.39	2.62	9.81	2.59	9.84	2.57
		24	5.06	2.47	6.31	2.61	7.31	2.61	8.21	2.60	9.16	2.60	9.58	2.57	9.61	2.55
	9+9+9	16	5.72	2.67	7.03	2.82	8.08	2.81	9.02	2.81	10.0	2.81	10.4	2.78	10.5	2.75
		18	5.67	2.67	6.98	2.82	8.02	2.82	8.96	2.81	9.94	2.81	10.4	2.78	10.4	2.76
		20	5.64	2.67	6.94	2.81	7.99	2.81	8.93	2.81	9.90	2.80	10.4	2.78	10.4	2.75
		21	5.59	2.66	6.89	2.81	7.94	2.81	8.88	2.80	9.86	2.80	10.3	2.77	10.3	2.75
		22	5.51	2.66	6.82	2.80	7.86	2.80	8.80	2.80	9.78	2.79	10.2	2.77	10.3	2.74
		24	5.27	2.63	6.58	2.78	7.62	2.78	8.56	2.77	9.54	2.77	9.99	2.74	10.0	2.72
	7+9+12	16	5.61	2.81	6.89	2.96	7.91	2.96	8.83	2.96	9.80	2.95	10.2	2.92	10.3	2.90
		18	5.55	2.81	6.83	2.97	7.86	2.96	8.78	2.96	9.74	2.96	10.2	2.93	10.2	2.90
		20	5.52	2.81	6.80	2.96	7.83	2.96	8.75	2.96	9.70	2.95	10.1	2.92	10.2	2.89
		21	5.47	2.80	6.75	2.96	7.78	2.95	8.70	2.95	9.66	2.95	10.1	2.92	10.1	2.89
		22	5.40	2.79	6.68	2.95	7.70	2.94	8.62	2.94	9.59	2.94	10.0	2.91	10.1	2.88
		24	5.16	2.77	6.44	2.93	7.47	2.92	8.39	2.92	9.35	2.92	9.79	2.89	9.82	2.86
	9+9+12	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	7+12+12	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	7+7+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	9+12+12	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	7+9+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	12+12+12	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	9+9+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	7+12+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	7+7+24	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	9+12+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	7+9+24	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	12+12+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	9+9+24	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	7+18+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	7+12+24	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	9+18+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	9+12+24	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	12+18+18	16	5.84	2.97	7.17	3.13	8.24	3.13	9.20	3.12	10.2	3.12	10.7	3.09	10.7	3.06
		18	5.78	2.97	7.12	3.13	8.18	3.13	9.14	3.13	10.1	3.12	10.6	3.09	10.6	3.06
		20	5.75	2.97	7.08	3.13	8.15	3.12	9.11	3.12	10.1	3.11	10.6	3.09	10.6	3.06
		21	5.70	2.96	7.03	3.12	8.10	3.12	9.06	3.11	10.1	3.11	10.5	3.08	10.5	3.05
		22	5.62	2.95	6.95	3.11	8.02	3.11	8.98	3.11	9.98	3.10	10.4	3.07	10.5	3.04
		24	5.38	2.93	6.71	3.09	7.77	3.09	8.73	3.08	9.74	3.08	10.2	3.05	10.2	3.02
	12+12+24	16	5.49	2.97	6.75	3.13	7.75	3.13	8.65	3.12	9.60	3.12	10.0	3.09	10.1	3.06
		18	5.44	2.97	6.69	3.13	7.69	3.13	8.60	3.13	9.54	3.12	9.97	3.09	10.0	3.06
		20	5.41	2.97	6.66	3.13	7.66	3.12	8.57	3.12	9.50	3.11	9.94	3.09	9.97	3.06
		21	5.36	2.96	6.61	3.12	7.62	3.12	8.52	3.11	9.46	3.11	9.89	3.08	9.92	3.05
		22	5.28	2.95	6.54	3.11	7.54	3.11	8.44	3.11	9.39	3.10	9.81	3.07	9.84	3.04
		24	5.06	2.93	6.31	3.09	7.31	3.09	8.21	3.08	9.16	3.08	9.58	3.05	9.61	3.02
4 units	7+7+7+7	16	5.61	2.50	6.89	2.63	7.91	2.63	8.83	2.63	9.80	2.62	10.2	2.60	10.3	2.57
		18	5.55	2.50	6.83	2.63	7.86	2.63	8.78	2.63	9.74	2.63	10.2	2.60	10.2	2.57
		20	5.52	2.49	6.80	2.63	7.83	2.63	8.75	2.62	9.70	2.62	10.1	2.60	10.2	2.57
		21	5.47	2.49	6.75	2.62	7.78	2.62	8.70	2.62	9.66	2.62	10.1	2.59	10.1	2.57
		22	5.40	2.48	6.68	2.62	7.70	2.62	8.62	2.61	9.59	2.61	10.0	2.58	10.1	2.56
		24	5.16	2.46	6.44	2.60	7.47	2.60	8.39	2.59	9.35	2.59	9.79	2.56	9.82	2.54
	7+7+7+9	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+7+9+9	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+7+7+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+9+9+9	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+7+9+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	9+9+9+9	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+9+9+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+7+12+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	9+9+9+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+7+7+18	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+9+12+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+7+9+18	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	9+9+12+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
4 units	7+12+12+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+9+9+18	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+7+12+18	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	9+12+12+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	9+9+9+18	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+7+7+24	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+9+12+18	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	7+7+9+24	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	12+12+12+12	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
	9+9+12+18	16	5.84	2.57	7.17	2.71	8.24	2.71	9.20	2.70	10.2	2.70	10.7	2.67	10.7	2.65
		18	5.78	2.57	7.12	2.71	8.18	2.71	9.14	2.71	10.1	2.70	10.6	2.68	10.6	2.65
		20	5.75	2.57	7.08	2.71	8.15	2.71	9.11	2.70	10.1	2.70	10.6	2.67	10.6	2.65
		21	5.70	2.56	7.03	2.70	8.10	2.70	9.06	2.70	10.1	2.69	10.5	2.67	10.5	2.64
		22	5.62	2.56	6.95	2.70	8.02	2.69	8.98	2.69	9.98	2.69	10.4	2.66	10.5	2.63
		24	5.38	2.54	6.71	2.68	7.77	2.67	8.73	2.67	9.74	2.67	10.2	2.64	10.2	2.61
5 units	7+7+7+7+7	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+7+7+7+9	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5 units	7+7+7+9+9	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+7+7+7+12	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+7+9+9+9	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+7+7+9+12	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+9+9+9+9	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+7+9+9+12	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	9+9+9+9+9	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+9+9+9+12	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	9+9+9+9+12	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+7+7+12+12	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+7+7+7+18	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18
	7+7+9+12+12	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5 units	7+7+7+9+18	16	5.84	2.14	7.17	2.26	8.24	2.26	9.20	2.26	10.2	2.25	10.7	2.23	10.7	2.21
		18	5.78	2.15	7.12	2.26	8.18	2.26	9.14	2.26	10.1	2.26	10.6	2.23	10.6	2.21
		20	5.75	2.14	7.08	2.26	8.15	2.26	9.11	2.26	10.1	2.25	10.6	2.23	10.6	2.21
		21	5.70	2.14	7.03	2.26	8.10	2.25	9.06	2.25	10.1	2.25	10.5	2.23	10.5	2.20
		22	5.62	2.13	6.95	2.25	8.02	2.25	8.98	2.24	9.98	2.24	10.4	2.22	10.5	2.20
		24	5.38	2.12	6.71	2.23	7.77	2.23	8.73	2.23	9.74	2.22	10.2	2.20	10.2	2.18

Notes:
1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A5UW406FA3 [FM38AH UH3]

[Cooling capacity]

Operation	Combination capacity index	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	22	2.00	0.94	2.12	1.27	2.25	1.37	2.31	1.39	2.50	1.40	2.62	1.40
		25	1.95	1.00	2.07	1.31	2.20	1.41	2.26	1.43	2.45	1.45	2.57	1.47
		32	1.84	1.34	1.96	1.58	2.09	1.66	2.15	1.68	2.34	1.72	2.46	1.75
		35	1.79	1.50	1.92	1.70	2.04	1.76	2.10	1.73	2.29	1.81	2.42	1.85
		40	1.71	1.64	1.84	1.77	1.96	1.79	2.03	1.80	2.21	1.83	2.34	1.87
		43	1.67	1.61	1.79	1.68	1.92	1.68	1.98	1.68	2.17	1.69	2.29	1.73
		46	1.62	1.44	1.74	1.46	1.87	1.43	1.93	1.41	2.12	1.41	2.24	1.45
	9	22	2.47	0.94	2.63	1.27	2.78	1.37	2.86	1.39	3.09	1.40	3.25	1.40
		25	2.41	1.00	2.57	1.31	2.72	1.41	2.80	1.43	3.03	1.45	3.19	1.47
		32	2.28	1.34	2.43	1.58	2.59	1.66	2.66	1.68	2.90	1.72	3.05	1.75
		35	2.22	1.50	2.37	1.70	2.53	1.76	2.60	1.73	2.84	1.81	2.99	1.85
		40	2.12	1.64	2.28	1.77	2.43	1.79	2.51	1.80	2.74	1.83	2.90	1.87
		43	2.06	1.61	2.22	1.68	2.37	1.68	2.45	1.68	2.68	1.69	2.84	1.73
		46	2.01	1.44	2.16	1.46	2.31	1.43	2.39	1.41	2.62	1.41	2.78	1.45
	12	22	3.33	0.94	3.54	1.27	3.75	1.37	3.85	1.39	4.16	1.40	4.37	1.40
		25	3.25	1.00	3.46	1.31	3.67	1.41	3.77	1.43	4.08	1.45	4.29	1.47
		32	3.07	1.34	3.27	1.58	3.48	1.66	3.59	1.68	3.90	1.72	4.11	1.75
		35	2.99	1.50	3.20	1.70	3.40	1.76	3.50	1.73	3.82	1.81	4.03	1.85
		40	2.86	1.64	3.07	1.77	3.27	1.79	3.38	1.80	3.69	1.83	3.90	1.87
		43	2.78	1.61	2.99	1.68	3.19	1.68	3.30	1.68	3.61	1.69	3.82	1.73
		46	2.70	1.44	2.91	1.46	3.12	1.43	3.22	1.41	3.53	1.41	3.74	1.45
	18	22	5.04	1.00	5.36	1.35	5.67	1.47	5.83	1.49	6.30	1.50	6.62	1.50
		25	4.92	1.06	5.24	1.39	5.55	1.50	5.71	1.52	6.18	1.55	6.50	1.56
		32	4.64	1.43	4.96	1.69	5.27	1.77	5.43	1.79	5.90	1.83	6.22	1.87
		35	4.52	1.60	4.84	1.81	5.16	1.88	5.30	1.85	5.79	1.93	6.10	1.97
		40	4.33	1.75	4.64	1.89	4.96	1.91	5.11	1.92	5.59	1.95	5.90	1.99
		43	4.21	1.72	4.52	1.80	4.84	1.79	5.00	1.79	5.47	1.81	5.78	1.85
		46	4.09	1.54	4.40	1.56	4.72	1.52	4.88	1.51	5.35	1.51	5.66	1.54
	24	22	6.75	1.29	7.17	1.74	7.60	1.88	7.81	1.91	8.44	1.92	8.86	1.92
		25	6.59	1.36	7.02	1.79	7.44	1.93	7.65	1.95	8.28	1.99	8.70	2.01
		32	6.22	1.83	6.64	2.16	7.07	2.27	7.28	2.29	7.91	2.35	8.33	2.39
		35	6.06	2.05	6.48	2.32	6.91	2.41	7.10	2.37	7.75	2.48	8.17	2.53
		40	5.80	2.25	6.22	2.42	6.64	2.45	6.85	2.46	7.49	2.50	7.91	2.55
		43	5.64	2.20	6.06	2.30	6.48	2.30	6.69	2.29	7.33	2.32	7.75	2.37
		46	5.48	1.97	5.90	2.00	6.32	1.95	6.53	1.93	7.17	1.93	7.59	1.98
2 units	7+7	22	3.90	0.94	4.14	1.27	4.39	1.37	4.51	1.39	4.87	1.40	5.12	1.40
		25	3.81	1.00	4.05	1.31	4.29	1.41	4.42	1.43	4.78	1.45	5.03	1.47
		32	3.59	1.34	3.84	1.58	4.08	1.66	4.20	1.68	4.57	1.72	4.81	1.75
		35	3.50	1.50	3.74	1.70	3.99	1.76	4.10	1.73	4.48	1.81	4.72	1.85
		40	3.35	1.64	3.59	1.77	3.83	1.79	3.96	1.80	4.32	1.83	4.57	1.87
		43	3.25	1.61	3.50	1.68	3.74	1.68	3.86	1.68	4.23	1.69	4.47	1.73
		46	3.16	1.44	3.41	1.46	3.65	1.43	3.77	1.41	4.14	1.41	4.38	1.45
	7+9	22	4.47	0.94	4.75	1.27	5.03	1.37	5.17	1.39	5.59	1.40	5.87	1.40
		25	4.36	1.00	4.64	1.31	4.92	1.41	5.06	1.43	5.48	1.45	5.76	1.47
		32	4.12	1.34	4.40	1.58	4.68	1.66	4.82	1.68	5.24	1.72	5.52	1.75
		35	4.01	1.50	4.29	1.70	4.57	1.76	4.70	1.73	5.13	1.81	5.41	1.85
		40	3.84	1.64	4.12	1.77	4.40	1.79	4.54	1.80	4.95	1.83	5.23	1.87
		43	3.73	1.61	4.01	1.68	4.29	1.68	4.43	1.68	4.85	1.69	5.13	1.73
		46	3.63	1.44	3.91	1.46	4.18	1.43	4.32	1.41	4.74	1.41	5.02	1.45
	9+9	22	5.04	1.00	5.36	1.35	5.67	1.47	5.83	1.49	6.30	1.50	6.62	1.50
		25	4.92	1.06	5.24	1.39	5.55	1.50	5.71	1.52	6.18	1.55	6.50	1.56
		32	4.64	1.43	4.96	1.69	5.27	1.77	5.43	1.79	5.90	1.83	6.22	1.87
		35	4.52	1.60	4.84	1.81	5.16	1.88	5.30	1.85	5.79	1.93	6.10	1.97
		40	4.33	1.75	4.64	1.89	4.96	1.91	5.11	1.92	5.59	1.95	5.90	1.99
		43	4.21	1.72	4.52	1.80	4.84	1.79	5.00	1.79	5.47	1.81	5.78	1.85
		46	4.09	1.54	4.40	1.56	4.72	1.52	4.88	1.51	5.35	1.51	5.66	1.54
	7+12	22	5.33	1.03	5.66	1.39	5.99	1.50	6.16	1.53	6.66	1.54	6.99	1.54
		25	5.20	1.09	5.53	1.43	5.87	1.54	6.03	1.56	6.53	1.59	6.87	1.61
		32	4.91	1.47	5.24	1.73	5.57	1.82	5.74	1.84	6.24	1.88	6.57	1.92
		35	4.78	1.64	5.11	1.86	5.45	1.93	5.60	1.89	6.11	1.99	6.45	2.03
		40	4.57	1.80	4.90	1.94	5.24	1.96	5.40	1.97	5.90	2.00	6.24	2.04
		43	4.45	1.76	4.78	1.84	5.11	1.84	5.28	1.84	5.78	1.86	6.11	1.90
		46	4.32	1.58	4.65	1.60	4.99	1.56	5.15	1.55	5.65	1.55	5.99	1.59

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
2 units	9+12	22	5.90	1.13	6.27	1.52	6.63	1.65	6.82	1.67	7.37	1.68	7.74	1.68
		25	5.76	1.20	6.13	1.57	6.49	1.69	6.68	1.71	7.23	1.74	7.60	1.76
		32	5.43	1.61	5.80	1.90	6.17	1.99	6.35	2.01	6.91	2.06	7.28	2.10
		35	5.29	1.79	5.66	2.04	6.03	2.11	6.20	2.07	6.77	2.17	7.14	2.22
		40	5.06	1.97	5.43	2.12	5.80	2.15	5.98	2.16	6.54	2.19	6.91	2.24
		43	4.92	1.93	5.29	2.02	5.66	2.02	5.84	2.01	6.40	2.03	6.77	2.08
		46	4.78	1.73	5.15	1.75	5.52	1.71	5.70	1.69	6.26	1.70	6.63	1.74
	12+12	22	6.75	1.29	7.17	1.74	7.60	1.88	7.81	1.91	8.44	1.92	8.86	1.92
		25	6.59	1.36	7.02	1.79	7.44	1.93	7.65	1.95	8.28	1.99	8.70	2.01
		32	6.22	1.83	6.64	2.16	7.07	2.27	7.28	2.29	7.91	2.35	8.33	2.39
		35	6.06	2.05	6.48	2.32	6.91	2.41	7.10	2.37	7.75	2.48	8.17	2.53
		40	5.80	2.25	6.22	2.42	6.64	2.45	6.85	2.46	7.49	2.50	7.91	2.55
		43	5.64	2.20	6.06	2.30	6.48	2.30	6.69	2.29	7.33	2.32	7.75	2.37
		46	5.48	1.97	5.90	2.00	6.32	1.95	6.53	1.93	7.17	1.93	7.59	1.98
	7+18	22	7.04	1.32	7.48	1.78	7.92	1.93	8.14	1.96	8.80	1.97	9.24	1.98
		25	6.87	1.40	7.31	1.84	7.75	1.98	7.97	2.01	8.63	2.04	9.07	2.06
		32	6.48	1.88	6.92	2.22	7.36	2.33	7.58	2.36	8.24	2.41	8.68	2.46
		35	6.32	2.10	6.76	2.39	7.20	2.47	7.40	2.43	8.08	2.55	8.52	2.60
		40	6.04	2.31	6.48	2.49	6.92	2.52	7.14	2.53	7.80	2.57	8.24	2.62
		43	5.87	2.26	6.31	2.37	6.75	2.36	6.98	2.36	7.64	2.38	8.08	2.43
		46	5.71	2.03	6.15	2.05	6.59	2.01	6.81	1.99	7.47	1.99	7.91	2.04
	9+18	22	7.51	1.39	7.98	1.88	8.45	2.03	8.69	2.06	9.39	2.08	9.86	2.08
		25	7.34	1.48	7.81	1.93	8.28	2.08	8.51	2.12	9.22	2.15	9.69	2.17
		32	6.92	1.98	7.39	2.34	7.86	2.46	8.10	2.48	8.80	2.54	9.27	2.59
		35	6.74	2.21	7.21	2.51	7.68	2.60	7.90	2.56	8.62	2.68	9.09	2.74
		40	6.45	2.43	6.92	2.62	7.39	2.66	7.62	2.66	8.33	2.70	8.80	2.76
		43	6.27	2.38	6.74	2.49	7.21	2.49	7.45	2.48	8.15	2.51	8.62	2.56
		46	6.09	2.14	6.56	2.16	7.03	2.11	7.27	2.09	7.97	2.09	8.44	2.14
	12+18	22	8.37	1.53	8.89	2.06	9.42	2.24	9.68	2.27	10.5	2.28	11.0	2.29
		25	8.17	1.62	8.70	2.13	9.22	2.29	9.48	2.33	10.3	2.36	10.8	2.39
		32	7.71	2.18	8.23	2.57	8.76	2.70	9.02	2.73	9.80	2.79	10.3	2.85
		35	7.51	2.43	8.04	2.76	8.56	2.86	8.80	2.81	9.61	2.95	10.1	3.01
		40	7.18	2.67	7.71	2.88	8.23	2.92	8.49	2.93	9.28	2.97	9.80	3.04
		43	6.99	2.62	7.51	2.74	8.03	2.73	8.29	2.73	9.08	2.76	9.60	2.82
		46	6.79	2.35	7.31	2.38	7.84	2.32	8.10	2.30	8.88	2.30	9.41	2.36
	7+24	22	8.65	1.54	9.20	2.07	9.74	2.25	10.01	2.28	10.8	2.29	11.4	2.30
		25	8.45	1.63	8.99	2.13	9.53	2.30	9.80	2.33	10.6	2.37	11.2	2.40
		32	7.97	2.19	8.51	2.58	9.06	2.71	9.33	2.74	10.14	2.81	10.7	2.86
		35	7.77	2.44	8.31	2.77	8.85	2.87	9.10	2.83	9.93	2.96	10.5	3.02
		40	7.43	2.68	7.97	2.89	8.51	2.93	8.78	2.94	9.59	2.99	10.13	3.05
		43	7.22	2.63	7.77	2.75	8.31	2.75	8.58	2.74	9.39	2.77	9.93	2.83
		46	7.02	2.36	7.56	2.39	8.10	2.33	8.37	2.31	9.18	2.31	9.73	2.37
	9+24	22	9.23	1.62	9.80	2.19	10.38	2.37	10.67	2.40	11.5	2.42	12.1	2.42
		25	9.01	1.72	9.58	2.25	10.16	2.43	10.45	2.46	11.3	2.50	11.9	2.53
		32	8.50	2.31	9.08	2.72	9.65	2.86	9.94	2.89	10.81	2.96	11.4	3.01
		35	8.28	2.58	8.86	2.92	9.44	3.03	9.70	2.98	10.59	3.12	11.2	3.19
		40	7.92	2.83	8.50	3.05	9.07	3.09	9.36	3.10	10.23	3.15	10.80	3.22
		43	7.70	2.77	8.28	2.90	8.85	2.90	9.14	2.89	10.01	2.92	10.59	2.98
		46	7.48	2.49	8.06	2.52	8.64	2.46	8.93	2.44	9.79	2.44	10.37	2.49
	18+18	22	10.08	1.83	10.71	2.47	11.34	2.67	11.66	2.71	12.6	2.73	13.2	2.73
		25	9.84	1.94	10.47	2.54	11.10	2.74	11.42	2.78	12.4	2.83	13.0	2.85
		32	9.29	2.61	9.92	3.08	10.55	3.23	10.86	3.26	11.81	3.34	12.4	3.40
		35	9.05	2.91	9.68	3.30	10.31	3.42	10.60	3.37	11.57	3.53	12.2	3.60
		40	8.65	3.20	9.28	3.44	9.91	3.49	10.23	3.50	11.18	3.56	11.81	3.63
		43	8.42	3.13	9.05	3.28	9.68	3.27	9.99	3.26	10.94	3.30	11.57	3.37
		46	8.18	2.81	8.81	2.84	9.44	2.78	9.75	2.75	10.70	2.75	11.33	2.82
	12+24	22	10.08	1.83	10.71	2.47	11.34	2.67	11.66	2.71	12.6	2.73	13.2	2.73
		25	9.84	1.94	10.47	2.54	11.10	2.74	11.42	2.78	12.4	2.83	13.0	2.85
		32	9.29	2.61	9.92	3.08	10.55	3.23	10.86	3.26	11.81	3.34	12.4	3.40
		35	9.05	2.91	9.68	3.30	10.31	3.42	10.60	3.37	11.57	3.53	12.2	3.60
		40	8.65	3.20	9.28	3.44	9.91	3.49	10.23	3.50	11.18	3.56	11.81	3.63
		43	8.42	3.13	9.05	3.28	9.68	3.27	9.99	3.26	10.94	3.30	11.57	3.37
		46	8.18	2.81	8.81	2.84	9.44	2.78	9.75	2.75	10.70	2.75	11.33	2.82
	18+24	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	24+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
3 Units	7+7+7	22	5.90	1.13	6.27	1.52	6.63	1.65	6.82	1.67	7.37	1.68	7.74	1.68
		25	5.76	1.20	6.13	1.57	6.49	1.69	6.68	1.71	7.23	1.74	7.60	1.76
		32	5.43	1.61	5.80	1.90	6.17	1.99	6.35	2.01	6.91	2.06	7.28	2.10
		35	5.29	1.79	5.66	2.04	6.03	2.11	6.20	2.07	6.77	2.17	7.14	2.22
		40	5.06	1.97	5.43	2.12	5.80	2.15	5.98	2.16	6.54	2.19	6.91	2.24
		43	4.92	1.93	5.29	2.02	5.66	2.02	5.84	2.01	6.40	2.03	6.77	2.08
		46	4.78	1.73	5.15	1.75	5.52	1.71	5.70	1.69	6.26	1.70	6.63	1.74
	7+7+9	22	6.47	1.19	6.87	1.61	7.28	1.74	7.48	1.77	8.08	1.78	8.49	1.78
		25	6.31	1.27	6.72	1.66	7.12	1.79	7.33	1.81	7.93	1.84	8.34	1.86
		32	5.96	1.70	6.36	2.01	6.77	2.11	6.97	2.13	7.58	2.18	7.98	2.22
		35	5.81	1.90	6.21	2.15	6.61	2.23	6.80	2.20	7.42	2.30	7.83	2.35
		40	5.55	2.08	5.96	2.25	6.36	2.28	6.56	2.28	7.17	2.32	7.57	2.37
		43	5.40	2.04	5.80	2.14	6.21	2.13	6.41	2.13	7.02	2.15	7.42	2.20
		46	5.25	1.83	5.65	1.85	6.05	1.81	6.26	1.79	6.86	1.79	7.27	1.84
	7+9+9	22	7.04	1.32	7.48	1.78	7.92	1.93	8.14	1.96	8.80	1.97	9.24	1.98
		25	6.87	1.40	7.31	1.84	7.75	1.98	7.97	2.01	8.63	2.04	9.07	2.06
		32	6.48	1.88	6.92	2.22	7.36	2.33	7.58	2.36	8.24	2.41	8.68	2.46
		35	6.32	2.10	6.76	2.39	7.20	2.47	7.40	2.43	8.08	2.55	8.52	2.60
		40	6.04	2.31	6.48	2.49	6.92	2.52	7.14	2.53	7.80	2.57	8.24	2.62
		43	5.87	2.26	6.31	2.37	6.75	2.36	6.98	2.36	7.64	2.38	8.08	2.43
		46	5.71	2.03	6.15	2.05	6.59	2.01	6.81	1.99	7.47	1.99	7.91	2.04
	7+7+12	22	7.23	1.36	7.68	1.84	8.13	1.99	8.36	2.01	9.04	2.03	9.49	2.03
		25	7.06	1.44	7.51	1.89	7.96	2.04	8.19	2.07	8.87	2.10	9.32	2.12
		32	6.66	1.94	7.11	2.29	7.56	2.40	7.79	2.43	8.47	2.48	8.92	2.53
		35	6.49	2.16	6.94	2.46	7.39	2.55	7.60	2.50	8.30	2.62	8.75	2.68
		40	6.20	2.38	6.66	2.56	7.11	2.60	7.33	2.60	8.01	2.64	8.46	2.70
		43	6.03	2.33	6.49	2.44	6.94	2.43	7.16	2.43	7.84	2.45	8.29	2.51
		46	5.86	2.09	6.31	2.11	6.77	2.06	6.99	2.04	7.67	2.05	8.12	2.09
	9+9+9	22	7.51	1.39	7.98	1.88	8.45	2.03	8.69	2.06	9.39	2.08	9.86	2.08
		25	7.34	1.48	7.81	1.93	8.28	2.08	8.51	2.12	9.22	2.15	9.69	2.17
		32	6.92	1.98	7.39	2.34	7.86	2.46	8.10	2.48	8.80	2.54	9.27	2.59
		35	6.74	2.21	7.21	2.51	7.68	2.60	7.90	2.56	8.62	2.68	9.09	2.74
		40	6.45	2.43	6.92	2.62	7.39	2.66	7.62	2.66	8.33	2.70	8.80	2.76
		43	6.27	2.38	6.74	2.49	7.21	2.49	7.45	2.48	8.15	2.51	8.62	2.56
		46	6.09	2.14	6.56	2.16	7.03	2.11	7.27	2.09	7.97	2.09	8.44	2.14
	7+9+12	22	7.80	1.44	8.29	1.95	8.77	2.11	9.02	2.14	9.75	2.15	10.2	2.16
		25	7.61	1.53	8.10	2.01	8.59	2.16	8.83	2.19	9.57	2.23	10.1	2.25
		32	7.18	2.06	7.67	2.43	8.16	2.55	8.40	2.58	9.14	2.64	9.62	2.68
		35	7.00	2.30	7.49	2.61	7.98	2.70	8.20	2.66	8.95	2.78	9.44	2.84
		40	6.69	2.52	7.18	2.72	7.67	2.75	7.91	2.76	8.64	2.80	9.13	2.86
		43	6.51	2.47	7.00	2.58	7.49	2.58	7.73	2.58	8.46	2.60	8.95	2.66
		46	6.33	2.22	6.81	2.24	7.30	2.19	7.55	2.17	8.28	2.17	8.76	2.22
	9+9+12	22	8.37	1.53	8.89	2.06	9.42	2.24	9.68	2.27	10.5	2.28	11.0	2.29
		25	8.17	1.62	8.70	2.13	9.22	2.29	9.48	2.33	10.3	2.36	10.8	2.39
		32	7.71	2.18	8.23	2.57	8.76	2.70	9.02	2.73	9.80	2.79	10.3	2.85
		35	7.51	2.43	8.04	2.76	8.56	2.86	8.80	2.81	9.61	2.95	10.1	3.01
		40	7.18	2.67	7.71	2.88	8.23	2.92	8.49	2.93	9.28	2.97	9.80	3.04
		43	6.99	2.62	7.51	2.74	8.03	2.73	8.29	2.73	9.08	2.76	9.60	2.82
		46	6.79	2.35	7.31	2.38	7.84	2.32	8.10	2.30	8.88	2.30	9.41	2.36
	7+12+12	22	8.65	1.54	9.20	2.07	9.74	2.25	10.01	2.28	10.8	2.29	11.4	2.30
		25	8.45	1.63	8.99	2.13	9.53	2.30	9.80	2.33	10.6	2.37	11.2	2.40
		32	7.97	2.19	8.51	2.58	9.06	2.71	9.33	2.74	10.14	2.81	10.7	2.86
		35	7.77	2.44	8.31	2.77	8.85	2.87	9.10	2.83	9.93	2.96	10.5	3.02
		40	7.43	2.68	7.97	2.89	8.51	2.93	8.78	2.94	9.59	2.99	10.13	3.05
		43	7.22	2.63	7.77	2.75	8.31	2.75	8.58	2.74	9.39	2.77	9.93	2.83
		46	7.02	2.36	7.56	2.39	8.10	2.33	8.37	2.31	9.18	2.31	9.73	2.37
	7+7+18	22	8.94	1.59	9.50	2.15	10.06	2.32	10.34	2.36	11.2	2.37	11.7	2.38
		25	8.73	1.69	9.29	2.21	9.85	2.38	10.13	2.42	11.0	2.46	11.5	2.48
		32	8.24	2.27	8.80	2.67	9.35	2.81	9.63	2.84	10.47	2.90	11.0	2.96
		35	8.03	2.53	8.58	2.87	9.14	2.98	9.40	2.93	10.26	3.07	10.8	3.13
		40	7.67	2.78	8.23	2.99	8.79	3.03	9.07	3.04	9.91	3.09	10.47	3.16
		43	7.46	2.72	8.02	2.85	8.58	2.84	8.86	2.84	9.70	2.86	10.26	2.93
		46	7.25	2.44	7.81	2.47	8.37	2.41	8.65	2.39	9.49	2.39	10.05	2.45

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	9+12+12	22	9.23	1.62	9.80	2.19	10.38	2.37	10.67	2.40	11.5	2.42	12.1	2.42
		25	9.01	1.72	9.58	2.25	10.16	2.43	10.45	2.46	11.3	2.50	11.9	2.53
		32	8.50	2.31	9.08	2.72	9.65	2.86	9.94	2.89	10.81	2.96	11.4	3.01
		35	8.28	2.58	8.86	2.92	9.44	3.03	9.70	2.98	10.59	3.12	11.2	3.19
		40	7.92	2.83	8.50	3.05	9.07	3.09	9.36	3.10	10.23	3.15	10.80	3.22
		43	7.70	2.77	8.28	2.90	8.85	2.90	9.14	2.89	10.01	2.92	10.59	2.98
		46	7.48	2.49	8.06	2.52	8.64	2.46	8.93	2.44	9.79	2.44	10.37	2.49
	7+9+18	22	9.51	1.70	10.11	2.29	10.70	2.48	11.00	2.51	11.9	2.53	12.5	2.53
		25	9.29	1.80	9.88	2.36	10.48	2.54	10.77	2.58	11.7	2.62	12.3	2.65
		32	8.76	2.42	9.36	2.85	9.95	2.99	10.25	3.03	11.14	3.10	11.7	3.16
		35	8.54	2.70	9.13	3.06	9.73	3.17	10.00	3.12	10.92	3.27	11.5	3.34
		40	8.16	2.96	8.76	3.19	9.35	3.24	9.65	3.24	10.54	3.30	11.14	3.37
		43	7.94	2.90	8.53	3.04	9.13	3.03	9.43	3.03	10.32	3.06	10.91	3.12
		46	7.71	2.60	8.31	2.64	8.90	2.57	9.20	2.55	10.09	2.55	10.69	2.61
	12+12+12	22	10.08	1.83	10.71	2.47	11.34	2.67	11.66	2.71	12.6	2.73	13.2	2.73
		25	9.84	1.94	10.47	2.54	11.10	2.74	11.42	2.78	12.4	2.83	13.0	2.85
		32	9.29	2.61	9.92	3.08	10.55	3.23	10.86	3.26	11.81	3.34	12.4	3.40
		35	9.05	2.91	9.68	3.30	10.31	3.42	10.60	3.37	11.57	3.53	12.2	3.60
		40	8.65	3.20	9.28	3.44	9.91	3.49	10.23	3.50	11.18	3.56	11.81	3.63
		43	8.42	3.13	9.05	3.28	9.68	3.27	9.99	3.26	10.94	3.30	11.57	3.37
		46	8.18	2.81	8.81	2.84	9.44	2.78	9.75	2.75	10.70	2.75	11.33	2.82
	9+9+18	22	10.08	1.83	10.71	2.47	11.34	2.67	11.66	2.71	12.6	2.73	13.2	2.73
		25	9.84	1.94	10.47	2.54	11.10	2.74	11.42	2.78	12.4	2.83	13.0	2.85
		32	9.29	2.61	9.92	3.08	10.55	3.23	10.86	3.26	11.81	3.34	12.4	3.40
		35	9.05	2.91	9.68	3.30	10.31	3.42	10.60	3.37	11.57	3.53	12.2	3.60
		40	8.65	3.20	9.28	3.44	9.91	3.49	10.23	3.50	11.18	3.56	11.81	3.63
		43	8.42	3.13	9.05	3.28	9.68	3.27	9.99	3.26	10.94	3.30	11.57	3.37
		46	8.18	2.81	8.81	2.84	9.44	2.78	9.75	2.75	10.70	2.75	11.33	2.82
	7+12+18	22	10.37	1.91	11.01	2.58	11.66	2.79	11.99	2.83	13.0	2.85	13.6	2.85
		25	10.12	2.02	10.77	2.65	11.42	2.86	11.74	2.90	12.7	2.95	13.4	2.98
		32	9.55	2.72	10.20	3.21	10.85	3.37	11.17	3.40	12.14	3.48	12.8	3.55
		35	9.31	3.03	9.95	3.44	10.60	3.57	10.90	3.51	11.90	3.68	12.5	3.75
		40	8.90	3.33	9.55	3.59	10.19	3.64	10.52	3.65	11.49	3.71	12.14	3.79
		43	8.65	3.26	9.30	3.42	9.95	3.41	10.27	3.40	11.25	3.44	11.89	3.51
		46	8.41	2.93	9.06	2.97	9.71	2.90	10.03	2.87	11.00	2.87	11.65	2.94
	7+7+24	22	10.65	1.94	11.32	2.62	11.98	2.84	12.32	2.88	13.3	2.90	14.0	2.90
		25	10.40	2.06	11.07	2.70	11.73	2.91	12.07	2.95	13.1	3.00	13.7	3.03
		32	9.81	2.77	10.48	3.27	11.15	3.43	11.48	3.47	12.48	3.55	13.1	3.61
		35	9.56	3.09	10.23	3.51	10.89	3.64	11.20	3.57	12.23	3.75	12.9	3.82
		40	9.14	3.39	9.81	3.66	10.48	3.71	10.81	3.72	11.81	3.78	12.47	3.86
		43	8.89	3.32	9.56	3.48	10.22	3.47	10.56	3.47	11.56	3.50	12.22	3.58
		46	8.64	2.98	9.31	3.02	9.97	2.95	10.31	2.92	11.30	2.92	11.97	2.99
	9+12+18	22	10.94	1.97	11.62	2.66	12.31	2.88	12.65	2.92	13.7	2.94	14.4	2.94
		25	10.68	2.09	11.36	2.74	12.05	2.95	12.39	2.99	13.4	3.04	14.1	3.07
		32	10.08	2.81	10.76	3.31	11.44	3.47	11.79	3.51	12.81	3.59	13.5	3.66
		35	9.82	3.13	10.50	3.55	11.19	3.68	11.50	3.62	12.55	3.80	13.2	3.87
		40	9.39	3.44	10.07	3.70	10.76	3.76	11.10	3.77	12.12	3.83	12.81	3.91
		43	9.13	3.37	9.81	3.52	10.50	3.52	10.84	3.51	11.87	3.55	12.55	3.63
		46	8.87	3.02	9.56	3.06	10.24	2.99	10.58	2.96	11.61	2.96	12.29	3.03
	7+9+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	12+12+18	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	9+9+24	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	7+18+18	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+12+24	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	9+18+18	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	9+12+24	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	12+18+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	12+12+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+18+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	9+18+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
4 Units	7+7+7+7	22	7.80	1.44	8.29	1.95	8.77	2.11	9.02	2.14	9.75	2.15	10.2	2.16
		25	7.61	1.53	8.10	2.01	8.59	2.16	8.83	2.19	9.57	2.23	10.1	2.25
		32	7.18	2.06	7.67	2.43	8.16	2.55	8.40	2.58	9.14	2.64	9.62	2.68
		35	7.00	2.30	7.49	2.61	7.98	2.70	8.20	2.66	8.95	2.78	9.44	2.84
		40	6.69	2.52	7.18	2.72	7.67	2.75	7.91	2.76	8.64	2.80	9.13	2.86
		43	6.51	2.47	7.00	2.58	7.49	2.58	7.73	2.58	8.46	2.60	8.95	2.66
		46	6.33	2.22	6.81	2.24	7.30	2.19	7.55	2.17	8.28	2.17	8.76	2.22
	7+7+7+9	22	8.37	1.53	8.89	2.06	9.42	2.24	9.68	2.27	10.5	2.28	11.0	2.29
		25	8.17	1.62	8.70	2.13	9.22	2.29	9.48	2.33	10.3	2.36	10.8	2.39
		32	7.71	2.18	8.23	2.57	8.76	2.70	9.02	2.73	9.80	2.79	10.3	2.85
		35	7.51	2.43	8.04	2.76	8.56	2.86	8.80	2.81	9.61	2.95	10.1	3.01
		40	7.18	2.67	7.71	2.88	8.23	2.92	8.49	2.93	9.28	2.97	9.80	3.04
		43	6.99	2.62	7.51	2.74	8.03	2.73	8.29	2.73	9.08	2.76	9.60	2.82
		46	6.79	2.35	7.31	2.38	7.84	2.32	8.10	2.30	8.88	2.30	9.41	2.36

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 Units	7+7+9+9	22	8.94	1.59	9.50	2.15	10.06	2.32	10.34	2.36	11.2	2.37	11.7	2.38
		25	8.73	1.69	9.29	2.21	9.85	2.38	10.13	2.42	11.0	2.46	11.5	2.48
		32	8.24	2.27	8.80	2.67	9.35	2.81	9.63	2.84	10.47	2.90	11.0	2.96
		35	8.03	2.53	8.58	2.87	9.14	2.98	9.40	2.93	10.26	3.07	10.8	3.13
		40	7.67	2.78	8.23	2.99	8.79	3.03	9.07	3.04	9.91	3.09	10.47	3.16
		43	7.46	2.72	8.02	2.85	8.58	2.84	8.86	2.84	9.70	2.86	10.26	2.93
		46	7.25	2.44	7.81	2.47	8.37	2.41	8.65	2.39	9.49	2.39	10.05	2.45
	7+7+7+12	22	9.23	1.62	9.80	2.19	10.38	2.37	10.67	2.40	11.5	2.42	12.1	2.42
		25	9.01	1.72	9.58	2.25	10.16	2.43	10.45	2.46	11.3	2.50	11.9	2.53
		32	8.50	2.31	9.08	2.72	9.65	2.86	9.94	2.89	10.81	2.96	11.4	3.01
		35	8.28	2.58	8.86	2.92	9.44	3.03	9.70	2.98	10.59	3.12	11.2	3.19
		40	7.92	2.83	8.50	3.05	9.07	3.09	9.36	3.10	10.23	3.15	10.80	3.22
		43	7.70	2.77	8.28	2.90	8.85	2.90	9.14	2.89	10.01	2.92	10.59	2.98
		46	7.48	2.49	8.06	2.52	8.64	2.46	8.93	2.44	9.79	2.44	10.37	2.49
	7+9+9+9	22	9.51	1.70	10.11	2.29	10.70	2.48	11.00	2.51	11.9	2.53	12.5	2.53
		25	9.29	1.80	9.88	2.36	10.48	2.54	10.77	2.58	11.7	2.62	12.3	2.65
		32	8.76	2.42	9.36	2.85	9.95	2.99	10.25	3.03	11.14	3.10	11.7	3.16
		35	8.54	2.70	9.13	3.06	9.73	3.17	10.00	3.12	10.92	3.27	11.5	3.34
		40	8.16	2.96	8.76	3.19	9.35	3.24	9.65	3.24	10.54	3.30	11.14	3.37
		43	7.94	2.90	8.53	3.04	9.13	3.03	9.43	3.03	10.32	3.06	10.91	3.12
		46	7.71	2.60	8.31	2.64	8.90	2.57	9.20	2.55	10.09	2.55	10.69	2.61
	7+7+9+12	22	9.80	1.76	10.41	2.38	11.02	2.57	11.33	2.61	12.2	2.63	12.9	2.63
		25	9.56	1.87	10.18	2.45	10.79	2.64	11.10	2.68	12.0	2.72	12.6	2.75
		32	9.02	2.51	9.64	2.96	10.25	3.11	10.56	3.14	11.48	3.22	12.1	3.28
		35	8.79	2.80	9.41	3.18	10.02	3.30	10.30	3.24	11.24	3.40	11.9	3.46
		40	8.41	3.08	9.02	3.31	9.63	3.36	9.94	3.37	10.86	3.42	11.47	3.50
		43	8.18	3.01	8.79	3.15	9.40	3.15	9.71	3.14	10.63	3.17	11.24	3.24
		46	7.95	2.70	8.56	2.74	9.17	2.67	9.48	2.65	10.40	2.65	11.01	2.71
	9+9+9+9	22	10.08	1.83	10.71	2.47	11.34	2.67	11.66	2.71	12.6	2.73	13.2	2.73
		25	9.84	1.94	10.47	2.54	11.10	2.74	11.42	2.78	12.4	2.83	13.0	2.85
		32	9.29	2.61	9.92	3.08	10.55	3.23	10.86	3.26	11.81	3.34	12.4	3.40
		35	9.05	2.91	9.68	3.30	10.31	3.42	10.60	3.37	11.57	3.53	12.2	3.60
		40	8.65	3.20	9.28	3.44	9.91	3.49	10.23	3.50	11.18	3.56	11.81	3.63
		43	8.42	3.13	9.05	3.28	9.68	3.27	9.99	3.26	10.94	3.30	11.57	3.37
		46	8.18	2.81	8.81	2.84	9.44	2.78	9.75	2.75	10.70	2.75	11.33	2.82
	7+9+9+12	22	10.37	1.91	11.01	2.58	11.66	2.79	11.99	2.83	13.0	2.85	13.6	2.85
		25	10.12	2.02	10.77	2.65	11.42	2.86	11.74	2.90	12.7	2.95	13.4	2.98
		32	9.55	2.72	10.20	3.21	10.85	3.37	11.17	3.40	12.14	3.48	12.8	3.55
		35	9.31	3.03	9.95	3.44	10.60	3.57	10.90	3.51	11.90	3.68	12.5	3.75
		40	8.90	3.33	9.55	3.59	10.19	3.64	10.52	3.65	11.49	3.71	12.14	3.79
		43	8.65	3.26	9.30	3.42	9.95	3.41	10.27	3.40	11.25	3.44	11.89	3.51
		46	8.41	2.93	9.06	2.97	9.71	2.90	10.03	2.87	11.00	2.87	11.65	2.94
	7+7+12+12	22	10.65	1.94	11.32	2.62	11.98	2.84	12.32	2.88	13.3	2.90	14.0	2.90
		25	10.40	2.06	11.07	2.70	11.73	2.91	12.07	2.95	13.1	3.00	13.7	3.03
		32	9.81	2.77	10.48	3.27	11.15	3.43	11.48	3.47	12.48	3.55	13.1	3.61
		35	9.56	3.09	10.23	3.51	10.89	3.64	11.20	3.57	12.23	3.75	12.9	3.82
		40	9.14	3.39	9.81	3.66	10.48	3.71	10.81	3.72	11.81	3.78	12.47	3.86
		43	8.89	3.32	9.56	3.48	10.22	3.47	10.56	3.47	11.56	3.50	12.22	3.58
		46	8.64	2.98	9.31	3.02	9.97	2.95	10.31	2.92	11.30	2.92	11.97	2.99
	9+9+9+12	22	10.94	1.97	11.62	2.66	12.31	2.88	12.65	2.92	13.7	2.94	14.4	2.94
		25	10.68	2.09	11.36	2.74	12.05	2.95	12.39	2.99	13.4	3.04	14.1	3.07
		32	10.08	2.81	10.76	3.31	11.44	3.47	11.79	3.51	12.81	3.59	13.5	3.66
		35	9.82	3.13	10.50	3.55	11.19	3.68	11.50	3.62	12.55	3.80	13.2	3.87
		40	9.39	3.44	10.07	3.70	10.76	3.76	11.10	3.77	12.12	3.83	12.81	3.91
		43	9.13	3.37	9.81	3.52	10.50	3.52	10.84	3.51	11.87	3.55	12.55	3.63
		46	8.87	3.02	9.56	3.06	10.24	2.99	10.58	2.96	11.61	2.96	12.29	3.03
	7+7+7+18	22	10.94	1.97	11.62	2.66	12.31	2.88	12.65	2.92	13.7	2.94	14.4	2.94
		25	10.68	2.09	11.36	2.74	12.05	2.95	12.39	2.99	13.4	3.04	14.1	3.07
		32	10.08	2.81	10.76	3.31	11.44	3.47	11.79	3.51	12.81	3.59	13.5	3.66
		35	9.82	3.13	10.50	3.55	11.19	3.68	11.50	3.62	12.55	3.80	13.2	3.87
		40	9.39	3.44	10.07	3.70	10.76	3.76	11.10	3.77	12.12	3.83	12.81	3.91
		43	9.13	3.37	9.81	3.52	10.50	3.52	10.84	3.51	11.87	3.55	12.55	3.63
		46	8.87	3.02	9.56	3.06	10.24	2.99	10.58	2.96	11.61	2.96	12.29	3.03
	7+9+12+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+7+9+18	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	9+9+12+12	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+12+12+12	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+9+9+18	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+7+12+18	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	9+12+12+12	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	9+9+9+18	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+7+7+24	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+9+12+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+9+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
4 units	12+12+12+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	9+9+12+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+12+12+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+9+9+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+12+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	9+12+12+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	9+9+9+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+9+12+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
5 units	7+7+7+7+7	22	9.80	1.76	10.41	2.38	11.02	2.57	11.33	2.61	12.2	2.63	12.9	2.63
		25	9.56	1.87	10.18	2.45	10.79	2.64	11.10	2.68	12.0	2.72	12.6	2.75
		32	9.02	2.51	9.64	2.96	10.25	3.11	10.56	3.14	11.48	3.22	12.1	3.28
		35	8.79	2.80	9.41	3.18	10.02	3.30	10.30	3.24	11.24	3.40	11.9	3.46
		40	8.41	3.08	9.02	3.31	9.63	3.36	9.94	3.37	10.86	3.42	11.47	3.50
		43	8.18	3.01	8.79	3.15	9.40	3.15	9.71	3.14	10.63	3.17	11.24	3.24
		46	7.95	2.70	8.56	2.74	9.17	2.67	9.48	2.65	10.40	2.65	11.01	2.71
	7+7+7+7+9	22	10.37	1.91	11.01	2.58	11.66	2.79	11.99	2.83	13.0	2.85	13.6	2.85
		25	10.12	2.02	10.77	2.65	11.42	2.86	11.74	2.90	12.7	2.95	13.4	2.98
		32	9.55	2.72	10.20	3.21	10.85	3.37	11.17	3.40	12.14	3.48	12.8	3.55
		35	9.31	3.03	9.95	3.44	10.60	3.57	10.90	3.51	11.90	3.68	12.5	3.75
		40	8.90	3.33	9.55	3.59	10.19	3.64	10.52	3.65	11.49	3.71	12.14	3.79
		43	8.65	3.26	9.30	3.42	9.95	3.41	10.27	3.40	11.25	3.44	11.89	3.51
		46	8.41	2.93	9.06	2.97	9.71	2.90	10.03	2.87	11.00	2.87	11.65	2.94

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5 units	7+7+7+9+9	22	10.94	1.97	11.62	2.66	12.31	2.88	12.65	2.92	13.7	2.94	14.4	2.94
		25	10.68	2.09	11.36	2.74	12.05	2.95	12.39	2.99	13.4	3.04	14.1	3.07
		32	10.08	2.81	10.76	3.31	11.44	3.47	11.79	3.51	12.81	3.59	13.5	3.66
		35	9.82	3.13	10.50	3.55	11.19	3.68	11.50	3.62	12.55	3.80	13.2	3.87
		40	9.39	3.44	10.07	3.70	10.76	3.76	11.10	3.77	12.12	3.83	12.81	3.91
		43	9.13	3.37	9.81	3.52	10.50	3.52	10.84	3.51	11.87	3.55	12.55	3.63
		46	8.87	3.02	9.56	3.06	10.24	2.99	10.58	2.96	11.61	2.96	12.29	3.03
	7+7+7+7+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+9+9+9	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+7+7+9+12	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+9+9+9+9	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+7+9+9+12	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	9+9+9+9+9	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06
	7+9+9+9+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	9+9+9+9+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+7+12+12	22	11.22	1.98	11.92	2.68	12.63	2.90	12.98	2.94	14.0	2.96	14.7	2.96
		25	10.96	2.11	11.66	2.76	12.36	2.97	12.71	3.02	13.8	3.07	14.5	3.09
		32	10.34	2.83	11.04	3.34	11.74	3.50	12.09	3.54	13.15	3.62	13.8	3.69
		35	10.07	3.16	10.78	3.58	11.48	3.71	11.80	3.65	12.88	3.83	13.6	3.90
		40	9.63	3.47	10.33	3.73	11.04	3.79	11.39	3.80	12.44	3.86	13.14	3.94
		43	9.37	3.39	10.07	3.55	10.77	3.55	11.12	3.54	12.18	3.58	12.88	3.65
		46	9.10	3.05	9.80	3.08	10.51	3.01	10.86	2.98	11.91	2.98	12.61	3.06

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
5 units	7+7+7+7+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+9+12+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+7+9+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+9+9+12+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+12+12+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+9+9+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	9+9+9+12+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+7+7+12+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+9+12+12+12	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04
	7+9+9+9+18	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04

Operation	Combination capacity index (kBtu/h)	Outdoor air temp.: (°CDB)	Indoor air temp.: (°CWB)											
			14		16		18		19		22		24	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5 units	7+7+7+7+24	22	11.22	1.97	11.92	2.66	12.63	2.88	12.98	2.92	14.0	2.95	14.7	2.95
		25	10.96	2.09	11.66	2.74	12.36	2.96	12.71	3.00	13.8	3.05	14.5	3.08
		32	10.34	2.81	11.04	3.32	11.74	3.48	12.09	3.52	13.15	3.60	13.8	3.67
		35	10.07	3.14	10.78	3.56	11.48	3.69	11.80	3.63	12.88	3.81	13.6	3.88
		40	9.63	3.45	10.33	3.71	11.04	3.77	11.39	3.78	12.44	3.84	13.14	3.92
		43	9.37	3.38	10.07	3.53	10.77	3.53	11.12	3.52	12.18	3.56	12.88	3.63
		46	9.10	3.03	9.80	3.07	10.51	2.99	10.86	2.97	11.91	2.97	12.61	3.04

Notes:
1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Operation	Combination capacity index	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
1 unit	7	16	1.39	1.91	1.70	2.01	1.96	2.01	2.19	2.01	2.42	2.00	2.53	1.98	2.54	1.96
		18	1.37	1.91	1.69	2.01	1.94	2.01	2.17	2.01	2.41	2.01	2.52	1.99	2.53	1.97
		20	1.37	1.90	1.68	2.01	1.94	2.01	2.16	2.00	2.40	2.00	2.51	1.98	2.52	1.96
		21	1.35	1.90	1.67	2.00	1.92	2.00	2.15	2.00	2.39	2.00	2.50	1.98	2.51	1.96
		22	1.34	1.90	1.65	2.00	1.91	2.00	2.13	2.00	2.37	1.99	2.48	1.97	2.49	1.95
		24	1.28	1.88	1.59	1.98	1.85	1.98	2.07	1.98	2.31	1.98	2.42	1.96	2.43	1.94
	9	16	1.73	1.98	2.13	2.09	2.45	2.09	2.73	2.09	3.03	2.08	3.16	2.06	3.17	2.04
		18	1.72	1.98	2.11	2.09	2.43	2.09	2.71	2.09	3.01	2.09	3.15	2.07	3.16	2.04
		20	1.71	1.98	2.10	2.09	2.42	2.09	2.70	2.08	3.00	2.08	3.14	2.06	3.15	2.04
		21	1.69	1.98	2.09	2.08	2.41	2.08	2.69	2.08	2.99	2.08	3.12	2.06	3.13	2.04
		22	1.67	1.97	2.07	2.08	2.38	2.08	2.67	2.07	2.96	2.07	3.10	2.05	3.11	2.03
		24	1.60	1.96	1.99	2.06	2.31	2.06	2.59	2.06	2.89	2.06	3.03	2.04	3.04	2.02
	12	16	2.37	2.05	2.91	2.16	3.34	2.16	3.73	2.16	4.14	2.15	4.33	2.13	4.34	2.11
		18	2.35	2.05	2.89	2.16	3.32	2.16	3.71	2.16	4.12	2.16	4.30	2.13	4.31	2.11
		20	2.33	2.05	2.88	2.16	3.31	2.16	3.70	2.15	4.10	2.15	4.29	2.13	4.30	2.11
		21	2.31	2.04	2.85	2.15	3.29	2.15	3.68	2.15	4.08	2.15	4.27	2.13	4.28	2.11
		22	2.28	2.04	2.82	2.15	3.25	2.15	3.64	2.14	4.05	2.14	4.24	2.12	4.25	2.10
		24	2.18	2.02	2.72	2.13	3.16	2.13	3.54	2.13	3.95	2.13	4.14	2.10	4.15	2.08
	18	16	3.53	2.48	4.33	2.62	4.98	2.61	5.55	2.61	6.16	2.61	6.44	2.58	6.45	2.56
		18	3.49	2.48	4.30	2.62	4.94	2.62	5.52	2.61	6.13	2.61	6.40	2.59	6.42	2.56
		20	3.47	2.48	4.28	2.61	4.92	2.61	5.50	2.61	6.10	2.60	6.38	2.58	6.40	2.56
		21	3.44	2.47	4.25	2.61	4.89	2.61	5.47	2.60	6.08	2.60	6.35	2.58	6.37	2.55
		22	3.39	2.47	4.20	2.60	4.84	2.60	5.42	2.60	6.03	2.59	6.30	2.57	6.32	2.54
		24	3.25	2.45	4.05	2.58	4.70	2.58	5.27	2.58	5.88	2.58	6.15	2.55	6.17	2.52
	24	16	4.68	2.87	5.75	3.03	6.61	3.03	7.38	3.02	8.18	3.02	8.54	2.99	8.57	2.96
		18	4.64	2.88	5.71	3.03	6.56	3.03	7.33	3.03	8.14	3.02	8.50	2.99	8.52	2.96
		20	4.61	2.87	5.68	3.03	6.53	3.02	7.30	3.02	8.10	3.02	8.47	2.99	8.50	2.96
		21	4.57	2.87	5.64	3.02	6.49	3.02	7.26	3.02	8.07	3.01	8.43	2.98	8.46	2.95
		22	4.51	2.86	5.58	3.01	6.43	3.01	7.20	3.01	8.00	3.00	8.37	2.97	8.39	2.94
		24	4.31	2.83	5.38	2.99	6.23	2.99	7.00	2.98	7.81	2.98	8.17	2.95	8.20	2.92
2 units	7+7	16	2.72	2.13	3.34	2.25	3.83	2.25	4.28	2.25	4.75	2.24	4.96	2.22	4.97	2.20
		18	2.69	2.14	3.31	2.25	3.81	2.25	4.25	2.25	4.72	2.25	4.93	2.22	4.95	2.20
		20	2.68	2.13	3.30	2.25	3.79	2.25	4.24	2.24	4.70	2.24	4.92	2.22	4.93	2.20
		21	2.65	2.13	3.27	2.25	3.77	2.24	4.21	2.24	4.68	2.24	4.89	2.22	4.91	2.19
		22	2.61	2.12	3.24	2.24	3.73	2.24	4.18	2.23	4.64	2.23	4.85	2.21	4.87	2.19
		24	2.50	2.11	3.12	2.22	3.62	2.22	4.06	2.22	4.53	2.22	4.74	2.19	4.76	2.17
	7+9	16	3.12	2.27	3.84	2.39	4.41	2.39	4.92	2.39	5.45	2.38	5.70	2.36	5.71	2.34
		18	3.09	2.27	3.80	2.39	4.37	2.39	4.89	2.39	5.42	2.39	5.67	2.36	5.68	2.34
		20	3.07	2.27	3.79	2.39	4.36	2.39	4.87	2.39	5.40	2.38	5.65	2.36	5.67	2.34
		21	3.05	2.26	3.76	2.39	4.33	2.38	4.84	2.38	5.38	2.38	5.62	2.35	5.64	2.33
		22	3.00	2.26	3.72	2.38	4.29	2.38	4.80	2.37	5.34	2.37	5.58	2.35	5.60	2.32
		24	2.87	2.24	3.59	2.36	4.16	2.36	4.67	2.36	5.21	2.35	5.45	2.33	5.47	2.31
	9+9	16	3.53	2.48	4.33	2.62	4.98	2.61	5.55	2.61	6.16	2.61	6.44	2.58	6.45	2.56
		18	3.49	2.48	4.30	2.62	4.94	2.62	5.52	2.61	6.13	2.61	6.40	2.59	6.42	2.56
		20	3.47	2.48	4.28	2.61	4.92	2.61	5.50	2.61	6.10	2.60	6.38	2.58	6.40	2.56
		21	3.44	2.47	4.25	2.61	4.89	2.61	5.47	2.60	6.08	2.60	6.35	2.58	6.37	2.55
		22	3.39	2.47	4.20	2.60	4.84	2.60	5.42	2.60	6.03	2.59	6.30	2.57	6.32	2.54
		24	3.25	2.45	4.05	2.58	4.70	2.58	5.27	2.58	5.88	2.58	6.15	2.55	6.17	2.52
	7+12	16	3.70	2.60	4.55	2.74	5.22	2.74	5.83	2.74	6.46	2.73	6.75	2.71	6.77	2.68
		18	3.66	2.60	4.51	2.75	5.18	2.74	5.79	2.74	6.43	2.74	6.71	2.71	6.74	2.68
		20	3.64	2.60	4.49	2.74	5.16	2.74	5.77	2.74	6.40	2.73	6.69	2.71	6.71	2.68
		21	3.61	2.59	4.46	2.74	5.13	2.73	5.74	2.73	6.37	2.73	6.66	2.70	6.68	2.67
		22	3.56	2.59	4.41	2.73	5.08	2.73	5.69	2.72	6.32	2.72	6.61	2.69	6.63	2.67
		24	3.41	2.57	4.25	2.71	4.93	2.71	5.53	2.70	6.17	2.70	6.46	2.67	6.48	2.65
	9+12	16	4.11	2.74	5.04	2.89	5.79	2.89	6.47	2.89	7.17	2.88	7.49	2.86	7.51	2.83
		18	4.06	2.75	5.00	2.90	5.75	2.89	6.42	2.89	7.13	2.89	7.45	2.86	7.47	2.83
		20	4.04	2.74	4.98	2.89	5.73	2.89	6.40	2.89	7.10	2.88	7.43	2.85	7.45	2.83
		21	4.01	2.74	4.94	2.89	5.69	2.88	6.37	2.88	7.07	2.88	7.39	2.85	7.41	2.82
		22	3.95	2.73	4.89	2.88	5.64	2.88	6.31	2.87	7.02	2.87	7.33	2.84	7.36	2.81
		24	3.78	2.71	4.72	2.86	5.46	2.85	6.14	2.85	6.84	2.85	7.16	2.82	7.19	2.79
	12+12	16	4.68	2.87	5.75	3.03	6.61	3.03	7.38	3.02	8.18	3.02	8.54	2.99	8.57	2.96
		18	4.64	2.88	5.71	3.03	6.56	3.03	7.33	3.03	8.14	3.02	8.50	2.99	8.52	2.96
		20	4.61	2.87	5.68	3.03	6.53	3.02	7.30	3.02	8.10	3.02	8.47	2.99	8.50	2.96
		21	4.57	2.87	5.64	3.02	6.49	3.02	7.26	3.02	8.07	3.01	8.43	2.98	8.46	2.95
		22	4.51	2.86	5.58	3.01	6.43	3.01	7.20	3.01	8.00	3.00	8.37	2.97	8.39	2.94
		24	4.31	2.83	5.38	2.99	6.23	2.99	7.00	2.98	7.81	2.98	8.17	2.95	8.20	2.92

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
2 units	7+18	16	4.92	2.95	6.04	3.11	6.93	3.11	7.74	3.11	8.59	3.10	8.97	3.07	8.99	3.04
		18	4.87	2.96	5.99	3.12	6.88	3.11	7.69	3.11	8.54	3.11	8.92	3.08	8.95	3.05
		20	4.84	2.95	5.96	3.11	6.86	3.11	7.66	3.10	8.50	3.10	8.89	3.07	8.92	3.04
		21	4.80	2.94	5.92	3.10	6.81	3.10	7.62	3.10	8.47	3.10	8.85	3.06	8.87	3.03
		22	4.73	2.94	5.85	3.10	6.75	3.09	7.55	3.09	8.40	3.09	8.78	3.06	8.81	3.03
		24	4.52	2.91	5.65	3.07	6.54	3.07	7.35	3.07	8.19	3.06	8.58	3.03	8.60	3.00
	9+18	16	5.26	3.19	6.46	3.36	7.42	3.36	8.29	3.36	9.19	3.35	9.60	3.32	9.63	3.29
		18	5.21	3.20	6.41	3.37	7.37	3.37	8.23	3.36	9.14	3.36	9.55	3.33	9.58	3.29
		20	5.18	3.19	6.38	3.36	7.34	3.36	8.20	3.36	9.10	3.35	9.52	3.32	9.55	3.29
		21	5.13	3.18	6.34	3.36	7.30	3.35	8.16	3.35	9.06	3.35	9.47	3.31	9.50	3.28
		22	5.06	3.17	6.26	3.35	7.22	3.34	8.09	3.34	8.99	3.34	9.40	3.30	9.43	3.27
		24	4.84	3.15	6.05	3.32	7.00	3.32	7.87	3.32	8.77	3.31	9.18	3.28	9.21	3.25
	12+18	16	5.84	3.29	7.17	3.47	8.24	3.47	9.20	3.47	10.20	3.46	10.65	3.43	10.69	3.39
		18	5.78	3.30	7.12	3.48	8.18	3.47	9.14	3.47	10.14	3.47	10.60	3.43	10.63	3.40
		20	5.75	3.29	7.08	3.47	8.15	3.47	9.11	3.46	10.10	3.46	10.56	3.43	10.60	3.39
		21	5.70	3.28	7.03	3.46	8.10	3.46	9.06	3.46	10.06	3.45	10.51	3.42	10.55	3.38
		22	5.62	3.28	6.95	3.45	8.02	3.45	8.98	3.45	9.98	3.44	10.43	3.41	10.47	3.38
		24	5.38	3.25	6.71	3.43	7.77	3.42	8.73	3.42	9.74	3.42	10.19	3.38	10.22	3.35
	7+24	16	6.07	3.32	7.46	3.50	8.57	3.50	9.56	3.49	10.61	3.49	11.08	3.45	11.11	3.42
		18	6.01	3.32	7.40	3.50	8.50	3.50	9.50	3.50	10.55	3.49	11.02	3.46	11.05	3.42
		20	5.98	3.32	7.36	3.50	8.47	3.49	9.47	3.49	10.50	3.48	10.98	3.45	11.02	3.42
		21	5.92	3.31	7.31	3.49	8.42	3.49	9.41	3.48	10.46	3.48	10.93	3.45	10.96	3.41
		22	5.84	3.30	7.23	3.48	8.33	3.48	9.33	3.47	10.38	3.47	10.85	3.44	10.88	3.40
		24	5.59	3.27	6.98	3.45	8.08	3.45	9.08	3.45	10.12	3.44	10.59	3.41	10.63	3.38
	9+24	16	6.48	3.40	7.96	3.59	9.14	3.58	10.20	3.58	11.31	3.58	11.82	3.54	11.85	3.51
		18	6.41	3.41	7.89	3.59	9.07	3.59	10.13	3.59	11.25	3.58	11.75	3.55	11.79	3.51
		20	6.38	3.40	7.85	3.59	9.04	3.58	10.10	3.58	11.20	3.57	11.71	3.54	11.75	3.50
		21	6.32	3.39	7.80	3.58	8.98	3.58	10.04	3.57	11.16	3.57	11.66	3.53	11.69	3.50
		22	6.23	3.38	7.71	3.57	8.89	3.57	9.95	3.56	11.07	3.56	11.57	3.52	11.61	3.49
		24	5.96	3.36	7.44	3.54	8.62	3.54	9.68	3.53	10.80	3.53	11.30	3.50	11.34	3.46
	18+18	16	7.05	3.46	8.67	3.65	9.95	3.65	11.11	3.65	12.32	3.64	12.87	3.61	12.91	3.57
		18	6.98	3.47	8.60	3.66	9.88	3.65	11.04	3.65	12.25	3.65	12.80	3.61	12.84	3.57
		20	6.94	3.46	8.56	3.65	9.84	3.65	11.00	3.64	12.20	3.64	12.76	3.60	12.80	3.57
		21	6.88	3.46	8.49	3.64	9.78	3.64	10.94	3.64	12.15	3.63	12.70	3.60	12.74	3.56
		22	6.79	3.45	8.40	3.63	9.68	3.63	10.84	3.63	12.06	3.62	12.60	3.59	12.64	3.55
		24	6.49	3.42	8.10	3.61	9.39	3.60	10.55	3.60	11.76	3.60	12.31	3.56	12.35	3.52
	12+24	16	7.05	3.46	8.67	3.65	9.95	3.65	11.11	3.65	12.32	3.64	12.87	3.61	12.91	3.57
		18	6.98	3.47	8.60	3.66	9.88	3.65	11.04	3.65	12.25	3.65	12.80	3.61	12.84	3.57
		20	6.94	3.46	8.56	3.65	9.84	3.65	11.00	3.64	12.20	3.64	12.76	3.60	12.80	3.57
		21	6.88	3.46	8.49	3.64	9.78	3.64	10.94	3.64	12.15	3.63	12.70	3.60	12.74	3.56
		22	6.79	3.45	8.40	3.63	9.68	3.63	10.84	3.63	12.06	3.62	12.60	3.59	12.64	3.55
		24	6.49	3.42	8.10	3.61	9.39	3.60	10.55	3.60	11.76	3.60	12.31	3.56	12.35	3.52
	18+24	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	24+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
3 units	7+7+7	16	4.11	2.74	5.04	2.89	5.79	2.89	6.47	2.89	7.17	2.88	7.49	2.86	7.51	2.83
		18	4.06	2.75	5.00	2.90	5.75	2.89	6.42	2.89	7.13	2.89	7.45	2.86	7.47	2.83
		20	4.04	2.74	4.98	2.89	5.73	2.89	6.40	2.89	7.10	2.88	7.43	2.85	7.45	2.83
		21	4.01	2.74	4.94	2.89	5.69	2.88	6.37	2.88	7.07	2.88	7.39	2.85	7.41	2.82
		22	3.95	2.73	4.89	2.88	5.64	2.88	6.31	2.87	7.02	2.87	7.33	2.84	7.36	2.81
		24	3.78	2.71	4.72	2.86	5.46	2.85	6.14	2.85	6.84	2.85	7.16	2.82	7.19	2.79
	7+7+9	16	4.51	2.78	5.54	2.93	6.36	2.93	7.10	2.92	7.88	2.92	8.23	2.89	8.25	2.86
		18	4.47	2.78	5.50	2.93	6.32	2.93	7.06	2.93	7.83	2.92	8.18	2.89	8.21	2.87
		20	4.44	2.78	5.47	2.93	6.29	2.92	7.03	2.92	7.80	2.92	8.16	2.89	8.18	2.86
		21	4.40	2.77	5.43	2.92	6.25	2.92	6.99	2.92	7.77	2.91	8.12	2.88	8.14	2.85
		22	4.34	2.76	5.37	2.91	6.19	2.91	6.93	2.91	7.71	2.90	8.06	2.88	8.08	2.85
		24	4.15	2.74	5.18	2.89	6.00	2.89	6.74	2.89	7.52	2.88	7.87	2.85	7.89	2.82
	7+9+9	16	4.92	2.95	6.04	3.11	6.93	3.11	7.74	3.11	8.59	3.10	8.97	3.07	8.99	3.04
		18	4.87	2.96	5.99	3.12	6.88	3.11	7.69	3.11	8.54	3.11	8.92	3.08	8.95	3.05
		20	4.84	2.95	5.96	3.11	6.86	3.11	7.66	3.10	8.50	3.10	8.89	3.07	8.92	3.04
		21	4.80	2.94	5.92	3.10	6.81	3.10	7.62	3.10	8.47	3.10	8.85	3.06	8.87	3.03
		22	4.73	2.94	5.85	3.10	6.75	3.09	7.55	3.09	8.40	3.09	8.78	3.06	8.81	3.03
		24	4.52	2.91	5.65	3.07	6.54	3.07	7.35	3.07	8.19	3.06	8.58	3.03	8.60	3.00

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
3 units	7+7+12	16	5.09	3.11	6.25	3.28	7.18	3.28	8.01	3.27	8.89	3.27	9.28	3.24	9.31	3.20
		18	5.04	3.11	6.20	3.28	7.13	3.28	7.96	3.28	8.84	3.27	9.23	3.24	9.26	3.21
		20	5.01	3.11	6.17	3.28	7.10	3.27	7.93	3.27	8.80	3.26	9.20	3.24	9.23	3.20
		21	4.96	3.10	6.13	3.27	7.05	3.27	7.89	3.26	8.77	3.26	9.16	3.23	9.19	3.20
		22	4.90	3.09	6.06	3.26	6.99	3.26	7.82	3.26	8.70	3.25	9.09	3.22	9.12	3.19
		24	4.68	3.07	5.85	3.24	6.77	3.23	7.61	3.23	8.48	3.23	8.88	3.20	8.91	3.16
	9+9+9	16	5.26	3.19	6.46	3.36	7.42	3.36	8.29	3.36	9.19	3.35	9.60	3.32	9.63	3.29
		18	5.21	3.20	6.41	3.37	7.37	3.37	8.23	3.36	9.14	3.36	9.55	3.33	9.58	3.29
		20	5.18	3.19	6.38	3.36	7.34	3.36	8.20	3.36	9.10	3.35	9.52	3.32	9.55	3.29
		21	5.13	3.18	6.34	3.36	7.30	3.35	8.16	3.35	9.06	3.35	9.47	3.31	9.50	3.28
		22	5.06	3.17	6.26	3.35	7.22	3.34	8.09	3.34	8.99	3.34	9.40	3.30	9.43	3.27
		24	4.84	3.15	6.05	3.32	7.00	3.32	7.87	3.32	8.77	3.31	9.18	3.28	9.21	3.25
	7+9+12	16	5.49	3.26	6.75	3.44	7.75	3.44	8.65	3.43	9.60	3.43	10.02	3.40	10.05	3.36
		18	5.44	3.27	6.69	3.45	7.69	3.44	8.60	3.44	9.54	3.44	9.97	3.40	10.00	3.37
		20	5.41	3.26	6.66	3.44	7.66	3.44	8.57	3.43	9.50	3.43	9.94	3.39	9.97	3.36
		21	5.36	3.26	6.61	3.43	7.62	3.43	8.52	3.43	9.46	3.42	9.89	3.39	9.92	3.35
		22	5.28	3.25	6.54	3.42	7.54	3.42	8.44	3.42	9.39	3.41	9.81	3.38	9.84	3.35
		24	5.06	3.22	6.31	3.40	7.31	3.39	8.21	3.39	9.16	3.39	9.58	3.35	9.61	3.32
	9+9+12	16	5.84	3.29	7.17	3.47	8.24	3.47	9.20	3.47	10.20	3.46	10.65	3.43	10.69	3.39
		18	5.78	3.30	7.12	3.48	8.18	3.47	9.14	3.47	10.14	3.47	10.60	3.43	10.63	3.40
		20	5.75	3.29	7.08	3.47	8.15	3.47	9.11	3.46	10.10	3.46	10.56	3.43	10.60	3.39
		21	5.70	3.28	7.03	3.46	8.10	3.46	9.06	3.46	10.06	3.45	10.51	3.42	10.55	3.38
		22	5.62	3.28	6.95	3.45	8.02	3.45	8.98	3.45	9.98	3.44	10.43	3.41	10.47	3.38
		24	5.38	3.25	6.71	3.43	7.77	3.42	8.73	3.42	9.74	3.42	10.19	3.38	10.22	3.35
	7+12+12	16	6.07	3.32	7.46	3.50	8.57	3.50	9.56	3.49	10.61	3.49	11.08	3.45	11.11	3.42
		18	6.01	3.32	7.40	3.50	8.50	3.50	9.50	3.50	10.55	3.49	11.02	3.46	11.05	3.42
		20	5.98	3.32	7.36	3.50	8.47	3.49	9.47	3.49	10.50	3.48	10.98	3.45	11.02	3.42
		21	5.92	3.31	7.31	3.49	8.42	3.49	9.41	3.48	10.46	3.48	10.93	3.45	10.96	3.41
		22	5.84	3.30	7.23	3.48	8.33	3.48	9.33	3.47	10.38	3.47	10.85	3.44	10.88	3.40
		24	5.59	3.27	6.98	3.45	8.08	3.45	9.08	3.45	10.12	3.44	10.59	3.41	10.63	3.38
	7+7+18	16	6.25	3.35	7.67	3.53	8.81	3.53	9.83	3.53	10.91	3.52	11.39	3.49	11.43	3.45
		18	6.18	3.36	7.61	3.54	8.75	3.53	9.77	3.53	10.85	3.53	11.33	3.49	11.37	3.46
		20	6.15	3.35	7.57	3.53	8.71	3.53	9.74	3.52	10.80	3.52	11.30	3.49	11.33	3.45
		21	6.09	3.34	7.52	3.52	8.66	3.52	9.68	3.52	10.76	3.51	11.24	3.48	11.28	3.44
		22	6.01	3.33	7.43	3.52	8.57	3.51	9.60	3.51	10.67	3.50	11.16	3.47	11.19	3.43
		24	5.75	3.31	7.17	3.49	8.31	3.48	9.34	3.48	10.41	3.48	10.90	3.44	10.93	3.41
	9+12+12	16	6.48	3.40	7.96	3.59	9.14	3.58	10.20	3.58	11.31	3.58	11.82	3.54	11.85	3.51
		18	6.41	3.41	7.89	3.59	9.07	3.59	10.13	3.59	11.25	3.58	11.75	3.55	11.79	3.51
		20	6.38	3.40	7.85	3.59	9.04	3.58	10.10	3.58	11.20	3.57	11.71	3.54	11.75	3.50
		21	6.32	3.39	7.80	3.58	8.98	3.58	10.04	3.57	11.16	3.57	11.66	3.53	11.69	3.50
		22	6.23	3.38	7.71	3.57	8.89	3.57	9.95	3.56	11.07	3.56	11.57	3.52	11.61	3.49
		24	5.96	3.36	7.44	3.54	8.62	3.54	9.68	3.53	10.80	3.53	11.30	3.50	11.34	3.46
	7+9+18	16	6.65	3.43	8.17	3.62	9.38	3.62	10.47	3.61	11.62	3.61	12.13	3.57	12.17	3.54
		18	6.58	3.44	8.10	3.63	9.31	3.62	10.41	3.62	11.55	3.61	12.07	3.58	12.10	3.54
		20	6.55	3.43	8.07	3.62	9.28	3.62	10.37	3.61	11.50	3.60	12.03	3.57	12.06	3.54
		21	6.49	3.43	8.01	3.61	9.22	3.61	10.31	3.60	11.45	3.60	11.97	3.57	12.01	3.53
		22	6.40	3.42	7.92	3.60	9.13	3.60	10.22	3.60	11.36	3.59	11.88	3.56	11.92	3.52
		24	6.12	3.39	7.64	3.57	8.85	3.57	9.94	3.57	11.09	3.56	11.60	3.53	11.64	3.49
	12+12+12	16	7.05	3.46	8.67	3.65	9.95	3.65	11.11	3.65	12.32	3.64	12.87	3.61	12.91	3.57
		18	6.98	3.47	8.60	3.66	9.88	3.65	11.04	3.65	12.25	3.65	12.80	3.61	12.84	3.57
		20	6.94	3.46	8.56	3.65	9.84	3.65	11.00	3.64	12.20	3.64	12.76	3.60	12.80	3.57
		21	6.88	3.46	8.49	3.64	9.78	3.64	10.94	3.64	12.15	3.63	12.70	3.60	12.74	3.56
		22	6.79	3.45	8.40	3.63	9.68	3.63	10.84	3.63	12.06	3.62	12.60	3.59	12.64	3.55
		24	6.49	3.42	8.10	3.61	9.39	3.60	10.55	3.60	11.76	3.60	12.31	3.56	12.35	3.52
	9+9+18	16	7.05	3.46	8.67	3.65	9.95	3.65	11.11	3.65	12.32	3.64	12.87	3.61	12.91	3.57
		18	6.98	3.47	8.60	3.66	9.88	3.65	11.04	3.65	12.25	3.65	12.80	3.61	12.84	3.57
		20	6.94	3.46	8.56	3.65	9.84	3.65	11.00	3.64	12.20	3.64	12.76	3.60	12.80	3.57
		21	6.88	3.46	8.49	3.64	9.78	3.64	10.94	3.64	12.15	3.63	12.70	3.60	12.74	3.56
		22	6.79	3.45	8.40	3.63	9.68	3.63	10.84	3.63	12.06	3.62	12.60	3.59	12.64	3.55
		24	6.49	3.42	8.10	3.61	9.39	3.60	10.55	3.60	11.76	3.60	12.31	3.56	12.35	3.52
	7+12+18	16	7.23	3.47	8.88	3.66	10.20	3.66	11.38	3.65	12.63	3.65	13.19	3.61	13.23	3.58
		18	7.16	3.48	8.81	3.67	10.12	3.66	11.31	3.66	12.55	3.65	13.11	3.62	13.15	3.58
		20	7.12	3.47	8.77	3.66	10.08	3.66	11.27	3.65	12.50	3.64	13.07	3.61	13.11	3.58
		21	7.05	3.46	8.70	3.65	10.02	3.65	11.21	3.64	12.45	3.64	13.01	3.60	13.05	3.57
		22	6.95	3.45	8.60	3.64	9.92	3.64	11.11	3.64	12.35	3.63	12.91	3.59	12.95	3.56
		24	6.65	3.43	8.30	3.61	9.62	3.61	10.81	3.61	12.05	3.60	12.61	3.57	12.65	3.53
	7+7+24	16	7.40	3.48	9.09	3.67	10.44	3.66	11.66	3.66	12.93	3.66	13.50	3.62	13.54	3.58
		18	7.33	3.48	9.02	3.67	10.37	3.67	11.58	3.66	12.86	3.66	13.43	3.62	13.47	3.59
		20	7.29	3.48	8.98	3.67	10.33	3.66	11.54	3.66	12.80	3.65	13.39	3.62	13.43	3.58
		21	7.22	3.47	8.91	3.66	10.26	3.65	11.48	3.65	12.75	3.65	13.32	3.61	13.36	3.57
		22	7.12	3.46	8.81	3.65	10.16	3.64	11.37	3.64	12.65	3.64	13.22	3.60	13.26	3.56
		24	6.81	3.43	8.50	3.62	9.85	3.62	11.07	3.61	12.34	3.61	12.91	3.57	12.95	3.54

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3 units	9+12+18	16	7.63	3.50	9.38	3.69	10.77	3.69	12.02	3.68	13.33	3.68	13.93	3.64	13.97	3.61
		18	7.56	3.51	9.30	3.70	10.69	3.69	11.94	3.69	13.26	3.68	13.85	3.65	13.89	3.61
		20	7.51	3.50	9.26	3.69	10.65	3.69	11.90	3.68	13.20	3.67	13.81	3.64	13.85	3.61
		21	7.45	3.49	9.19	3.68	10.58	3.68	11.83	3.67	13.15	3.67	13.74	3.63	13.78	3.60
		22	7.34	3.48	9.09	3.67	10.48	3.67	11.73	3.66	13.04	3.66	13.64	3.62	13.68	3.59
		24	7.03	3.45	8.77	3.64	10.16	3.64	11.41	3.64	12.73	3.63	13.32	3.60	13.36	3.56
	7+9+24	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	12+12+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	9+9+24	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+18+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+12+24	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	9+18+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	9+12+24	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	12+18+18	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	12+12+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+18+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	9+18+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+7+7+7	16	5.49	3.26	6.75	3.44	7.75	3.44	8.65	3.43	9.60	3.43	10.02	3.40	10.05	3.36
		18	5.44	3.27	6.69	3.45	7.69	3.44	8.60	3.44	9.54	3.44	9.97	3.40	10.00	3.37
		20	5.41	3.26	6.66	3.44	7.66	3.44	8.57	3.43	9.50	3.43	9.94	3.39	9.97	3.36
		21	5.36	3.26	6.61	3.43	7.62	3.43	8.52	3.43	9.46	3.42	9.89	3.39	9.92	3.35
		22	5.28	3.25	6.54	3.42	7.54	3.42	8.44	3.42	9.39	3.41	9.81	3.38	9.84	3.35
		24	5.06	3.22	6.31	3.40	7.31	3.39	8.21	3.39	9.16	3.39	9.58	3.35	9.61	3.32
	7+7+7+9	16	5.84	3.29	7.17	3.47	8.24	3.47	9.20	3.47	10.20	3.46	10.65	3.43	10.69	3.39
		18	5.78	3.30	7.12	3.48	8.18	3.47	9.14	3.47	10.14	3.47	10.60	3.43	10.63	3.40
		20	5.75	3.29	7.08	3.47	8.15	3.47	9.11	3.46	10.10	3.46	10.56	3.43	10.60	3.39
		21	5.70	3.28	7.03	3.46	8.10	3.46	9.06	3.46	10.06	3.45	10.51	3.42	10.55	3.38
		22	5.62	3.28	6.95	3.45	8.02	3.45	8.98	3.45	9.98	3.44	10.43	3.41	10.47	3.38
		24	5.38	3.25	6.71	3.43	7.77	3.42	8.73	3.42	9.74	3.42	10.19	3.38	10.22	3.35
	7+7+9+9	16	6.25	3.35	7.67	3.53	8.81	3.53	9.83	3.53	10.91	3.52	11.39	3.49	11.43	3.45
		18	6.18	3.36	7.61	3.54	8.75	3.53	9.77	3.53	10.85	3.53	11.33	3.49	11.37	3.46
		20	6.15	3.35	7.57	3.53	8.71	3.53	9.74	3.52	10.80	3.52	11.30	3.49	11.33	3.45
		21	6.09	3.34	7.52	3.52	8.66	3.52	9.68	3.52	10.76	3.51	11.24	3.48	11.28	3.44
		22	6.01	3.33	7.43	3.52	8.57	3.51	9.60	3.51	10.67	3.50	11.16	3.47	11.19	3.43
		24	5.75	3.31	7.17	3.49	8.31	3.48	9.34	3.48	10.41	3.48	10.90	3.44	10.93	3.41
	7+7+7+12	16	6.48	3.40	7.96	3.59	9.14	3.58	10.20	3.58	11.31	3.58	11.82	3.54	11.85	3.51
		18	6.41	3.41	7.89	3.59	9.07	3.59	10.13	3.59	11.25	3.58	11.75	3.55	11.79	3.51
		20	6.38	3.40	7.85	3.59	9.04	3.58	10.10	3.58	11.20	3.57	11.71	3.54	11.75	3.50
		21	6.32	3.39	7.80	3.58	8.98	3.58	10.04	3.57	11.16	3.57	11.66	3.53	11.69	3.50
		22	6.23	3.38	7.71	3.57	8.89	3.57	9.95	3.56	11.07	3.56	11.57	3.52	11.61	3.49
		24	5.96	3.36	7.44	3.54	8.62	3.54	9.68	3.53	10.80	3.53	11.30	3.50	11.34	3.46
	7+9+9+9	16	6.65	3.43	8.17	3.62	9.38	3.62	10.47	3.61	11.62	3.61	12.13	3.57	12.17	3.54
		18	6.58	3.44	8.10	3.63	9.31	3.62	10.41	3.62	11.55	3.61	12.07	3.58	12.10	3.54
		20	6.55	3.43	8.07	3.62	9.28	3.62	10.37	3.61	11.50	3.60	12.03	3.57	12.06	3.54
		21	6.49	3.43	8.01	3.61	9.22	3.61	10.31	3.60	11.45	3.60	11.97	3.57	12.01	3.53
		22	6.40	3.42	7.92	3.60	9.13	3.60	10.22	3.60	11.36	3.59	11.88	3.56	11.92	3.52
		24	6.12	3.39	7.64	3.57	8.85	3.57	9.94	3.57	11.09	3.56	11.60	3.53	11.64	3.49
	7+7+9+12	16	6.82	3.44	8.38	3.63	9.63	3.63	10.75	3.62	11.92	3.62	12.45	3.58	12.49	3.55
		18	6.76	3.45	8.31	3.63	9.56	3.63	10.68	3.63	11.85	3.62	12.38	3.59	12.42	3.55
		20	6.72	3.44	8.28	3.63	9.52	3.62	10.64	3.62	11.80	3.61	12.34	3.58	12.38	3.54
		21	6.66	3.43	8.22	3.62	9.46	3.62	10.58	3.61	11.75	3.61	12.28	3.57	12.32	3.54
		22	6.56	3.42	8.12	3.61	9.37	3.61	10.49	3.60	11.66	3.60	12.19	3.56	12.23	3.53
		24	6.28	3.40	7.84	3.58	9.08	3.58	10.20	3.58	11.38	3.57	11.90	3.54	11.94	3.50
	9+9+9+9	16	7.05	3.46	8.67	3.65	9.95	3.65	11.11	3.65	12.32	3.64	12.87	3.61	12.91	3.57
		18	6.98	3.47	8.60	3.66	9.88	3.65	11.04	3.65	12.25	3.65	12.80	3.61	12.84	3.57
		20	6.94	3.46	8.56	3.65	9.84	3.65	11.00	3.64	12.20	3.64	12.76	3.60	12.80	3.57
		21	6.88	3.46	8.49	3.64	9.78	3.64	10.94	3.64	12.15	3.63	12.70	3.60	12.74	3.56
		22	6.79	3.45	8.40	3.63	9.68	3.63	10.84	3.63	12.06	3.62	12.60	3.59	12.64	3.55
		24	6.49	3.42	8.10	3.61	9.39	3.60	10.55	3.60	11.76	3.60	12.31	3.56	12.35	3.52
	7+9+9+12	16	7.23	3.47	8.88	3.66	10.20	3.66	11.38	3.65	12.63	3.65	13.19	3.61	13.23	3.58
		18	7.16	3.48	8.81	3.67	10.12	3.66	11.31	3.66	12.55	3.65	13.11	3.62	13.15	3.58
		20	7.12	3.47	8.77	3.66	10.08	3.66	11.27	3.65	12.50	3.64	13.07	3.61	13.11	3.58
		21	7.05	3.46	8.70	3.65	10.02	3.65	11.21	3.64	12.45	3.64	13.01	3.60	13.05	3.57
		22	6.95	3.45	8.60	3.64	9.92	3.64	11.11	3.64	12.35	3.63	12.91	3.59	12.95	3.56
		24	6.65	3.43	8.30	3.61	9.62	3.61	10.81	3.61	12.05	3.60	12.61	3.57	12.65	3.53
	7+7+12+12	16	7.40	3.48	9.09	3.67	10.44	3.66	11.66	3.66	12.93	3.66	13.50	3.62	13.54	3.58
		18	7.33	3.48	9.02	3.67	10.37	3.67	11.58	3.66	12.86	3.66	13.43	3.62	13.47	3.59
		20	7.29	3.48	8.98	3.67	10.33	3.66	11.54	3.66	12.80	3.65	13.39	3.62	13.43	3.58
		21	7.22	3.47	8.91	3.66	10.26	3.65	11.48	3.65	12.75	3.65	13.32	3.61	13.36	3.57
		22	7.12	3.46	8.81	3.65	10.16	3.64	11.37	3.64	12.65	3.64	13.22	3.60	13.26	3.56
		24	6.81	3.43	8.50	3.62	9.85	3.62	11.07	3.61	12.34	3.61	12.91	3.57	12.95	3.54
	9+9+9+12	16	7.63	3.50	9.38	3.69	10.77	3.69	12.02	3.68	13.33	3.68	13.93	3.64	13.97	3.61
		18	7.56	3.51	9.30	3.70	10.69	3.69	11.94	3.69	13.26	3.68	13.85	3.65	13.89	3.61
		20	7.51	3.50	9.26	3.69	10.65	3.69	11.90	3.68	13.20	3.67	13.81	3.64	13.85	3.61
		21	7.45	3.49	9.19	3.68	10.58	3.68	11.83	3.67	13.15	3.67	13.74	3.63	13.78	3.60
		22	7.34	3.48	9.09	3.67	10.48	3.67	11.73	3.66	13.04	3.66	13.64	3.62	13.68	3.59
		24	7.03	3.45	8.77	3.64	10.16	3.64	11.41	3.64	12.73	3.63	13.32	3.60	13.36	3.56
	7+7+7+18	16	7.63	3.50	9.38	3.69	10.77	3.69	12.02	3.68	13.33	3.68	13.93	3.64	13.97	3.61
		18	7.56	3.51	9.30	3.70	10.69	3.69	11.94	3.69	13.26	3.68	13.85	3.65	13.89	3.61
		20	7.51	3.50	9.26	3.69	10.65	3.69	11.90	3.68	13.20	3.67	13.81	3.64	13.85	3.61
		21	7.45	3.49	9.19	3.68	10.58	3.68	11.83	3.67	13.15	3.67	13.74	3.63	13.78	3.60
		22	7.34	3.48	9.09	3.67	10.48	3.67	11.73	3.66	13.04	3.66	13.64	3.62	13.68	3.59
		24	7.03	3.45	8.77	3.64	10.16	3.64	11.41	3.64	12.73	3.63	13.32	3.60	13.36	3.56
	7+9+12+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+7+9+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	9+9+12+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+12+12+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+9+9+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+7+12+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	9+12+12+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	9+9+9+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+7+7+24	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+9+12+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+7+9+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	12+12+12+12	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	9+9+12+18	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
4 units	7+12+12+18	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+9+9+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+7+12+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	9+12+12+18	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	9+9+9+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+9+12+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
5 units	7+7+7+7+7	16	6.82	3.44	8.38	3.63	9.63	3.63	10.75	3.62	11.92	3.62	12.45	3.58	12.49	3.55
		18	6.76	3.45	8.31	3.63	9.56	3.63	10.68	3.63	11.85	3.62	12.38	3.59	12.42	3.55
		20	6.72	3.44	8.28	3.63	9.52	3.62	10.64	3.62	11.80	3.61	12.34	3.58	12.38	3.54
		21	6.66	3.43	8.22	3.62	9.46	3.62	10.58	3.61	11.75	3.61	12.28	3.57	12.32	3.54
		22	6.56	3.42	8.12	3.61	9.37	3.61	10.49	3.60	11.66	3.60	12.19	3.56	12.23	3.53
		24	6.28	3.40	7.84	3.58	9.08	3.58	10.20	3.58	11.38	3.57	11.90	3.54	11.94	3.50
	7+7+7+7+9	16	7.23	6.33	8.88	6.68	10.20	6.67	11.38	6.66	12.63	6.66	13.19	6.59	13.23	6.52
		18	7.16	6.34	8.81	6.68	10.12	6.68	11.31	6.67	12.55	6.66	13.11	6.60	13.15	6.53
		20	7.12	6.33	8.77	6.67	10.08	6.67	11.27	6.66	12.50	6.64	13.07	6.59	13.11	6.52
		21	7.05	6.31	8.70	6.66	10.02	6.65	11.21	6.65	12.45	6.64	13.01	6.57	13.05	6.51
		22	6.95	6.30	8.60	6.64	9.92	6.63	11.11	6.63	12.35	6.62	12.91	6.55	12.95	6.49
		24	6.65	6.25	8.30	6.59	9.62	6.58	10.81	6.58	12.05	6.57	12.61	6.50	12.65	6.44
	7+7+7+9+9	16	7.63	3.50	9.38	3.69	10.77	3.69	12.02	3.68	13.33	3.68	13.93	3.64	13.97	3.61
		18	7.56	3.51	9.30	3.70	10.69	3.69	11.94	3.69	13.26	3.68	13.85	3.65	13.89	3.61
		20	7.51	3.50	9.26	3.69	10.65	3.69	11.90	3.68	13.20	3.67	13.81	3.64	13.85	3.61
		21	7.45	3.49	9.19	3.68	10.58	3.68	11.83	3.67	13.15	3.67	13.74	3.63	13.78	3.60
		22	7.34	3.48	9.09	3.67	10.48	3.67	11.73	3.66	13.04	3.66	13.64	3.62	13.68	3.59
		24	7.03	3.45	8.77	3.64	10.16	3.64	11.41	3.64	12.73	3.63	13.32	3.60	13.36	3.56
	7+7+7+7+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+7+9+9+9	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+7+7+9+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59

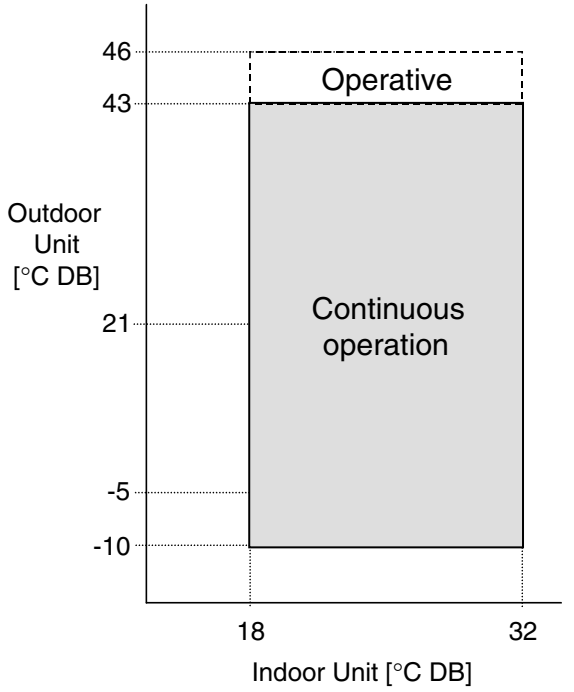
Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5 units	7+9+9+9+9	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+7+9+9+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	9+9+9+9+9	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+9+9+9+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	9+9+9+9+12	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+7+7+12+12	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+7+7+7+18	16	7.81	3.53	9.59	3.72	11.01	3.71	12.29	3.71	13.64	3.71	14.24	3.67	14.28	3.63
		18	7.73	3.53	9.51	3.72	10.93	3.72	12.22	3.71	13.56	3.71	14.16	3.67	14.21	3.64
		20	7.68	3.52	9.47	3.72	10.89	3.71	12.17	3.71	13.50	3.70	14.12	3.67	14.16	3.63
		21	7.62	3.52	9.40	3.71	10.82	3.70	12.10	3.70	13.45	3.70	14.05	3.66	14.09	3.62
		22	7.51	3.51	9.29	3.70	10.72	3.69	12.00	3.69	13.34	3.69	13.95	3.65	13.99	3.61
		24	7.19	3.48	8.97	3.67	10.39	3.67	11.67	3.66	13.02	3.66	13.62	3.62	13.66	3.59
	7+7+9+12+12	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+7+7+9+18	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+9+9+12+12	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+7+12+12+12	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
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		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+7+9+9+18	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
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		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
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		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54

Operation	Combination capacity index (kBtu/h)	Indoor air temp.: (°CDB)	Outdoor air temp.: (°CWB)													
			-15		-10		-5		0		6		10		15	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
			kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
5 units	9+9+9+12+12	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
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		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+7+7+12+18	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
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		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+9+12+12+12	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+9+9+9+18	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
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		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54
	7+7+7+7+24	16	7.81	3.48	9.59	3.67	11.01	3.66	12.29	3.66	13.64	3.66	14.24	3.62	14.28	3.58
		18	7.73	3.48	9.51	3.67	10.93	3.67	12.22	3.66	13.56	3.66	14.16	3.62	14.21	3.59
		20	7.68	3.48	9.47	3.67	10.89	3.66	12.17	3.66	13.50	3.65	14.12	3.62	14.16	3.58
		21	7.62	3.47	9.40	3.66	10.82	3.65	12.10	3.65	13.45	3.65	14.05	3.61	14.09	3.57
		22	7.51	3.46	9.29	3.65	10.72	3.64	12.00	3.64	13.34	3.64	13.95	3.60	13.99	3.56
		24	7.19	3.43	8.97	3.62	10.39	3.62	11.67	3.61	13.02	3.61	13.62	3.57	13.66	3.54

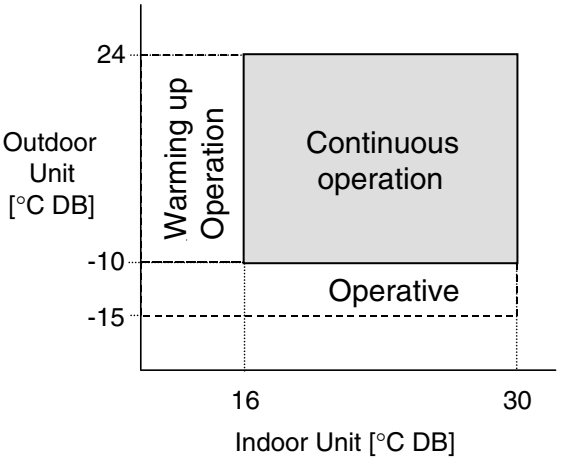
Notes:
1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

2.1.9 Operation range

Cooling



Heating



Operative: Intermittent operation due to the operational conditions (indoor/outdoor temperature, humidity, load etc.) can cause the heating capacity to decrease

2.1.10 Electric characteristics

Unit					Power		Compressor		OFM	
Model	Type	Hz	Voltage	Voltage range	MCA	MOP	MSC	RLA	KW	FLA
A2UW146FA3 [FM15AH UL3]	Inverter	50	220~240	MIN.:198 MAX.:264	7.50	13.5	-	6.0	0.067	0.68
A2UW166FA0 [FM17AH UL0] A2UW166FA1 [FM17AH UL1]					7.50	13.5	-	6.0	0.067	0.68
A3UW186FA0 [FM19AH UE0]					8.75	15.8	-	7.0	0.067	0.68
A3UW216FA3 [FM21AH UE3]					10.1	18.2	-	8.1	0.14	0.61
A4UW246FA3 [FM25AH UE3]					15.5	27.9	-	12.4	0.124	0.73
A4UW276FA3 [FM27AH UE3]					17.0	30.6	-	13.6	0.124	0.73
A5UW306FA3 [FM30AH UE3]					18.3	32.9	-	14.6	0.124	0.73
A5UW406FA3 [FM38AH UH3]					21.2	37.2	-	16.0	0.41*2	0.61*2

Notes :

1. Voltage range
   Voltage supplied to the unit terminals should be within the minimum and maximum range
2. Maximum allowable voltage unbalance between phase is 2 %
3. MCA / MOP
   MCA = (1.25*RLA)+load1+load2
   MOP = (2.25*RLA)+load1+load2
   - Load1 : sum of current for all other motors
   - Load2 : any other load rated 1.0A or more
4. Select wire spec. based on the MCA
5. Select proper circuit breaker as given below
   MCA < Circuit breaker ≤ MOP
6. Recommended circuit breaker is ELCB (Earth Leakage circuit breaker)
7. MSC & RLA are measured as the compressor only test condition.
8. MSC values
9. RLA is measured during each individual compressor test condition.
10. OFM is measured as the outdoor unit test condition

(Example) Selection of proper circuit breaker

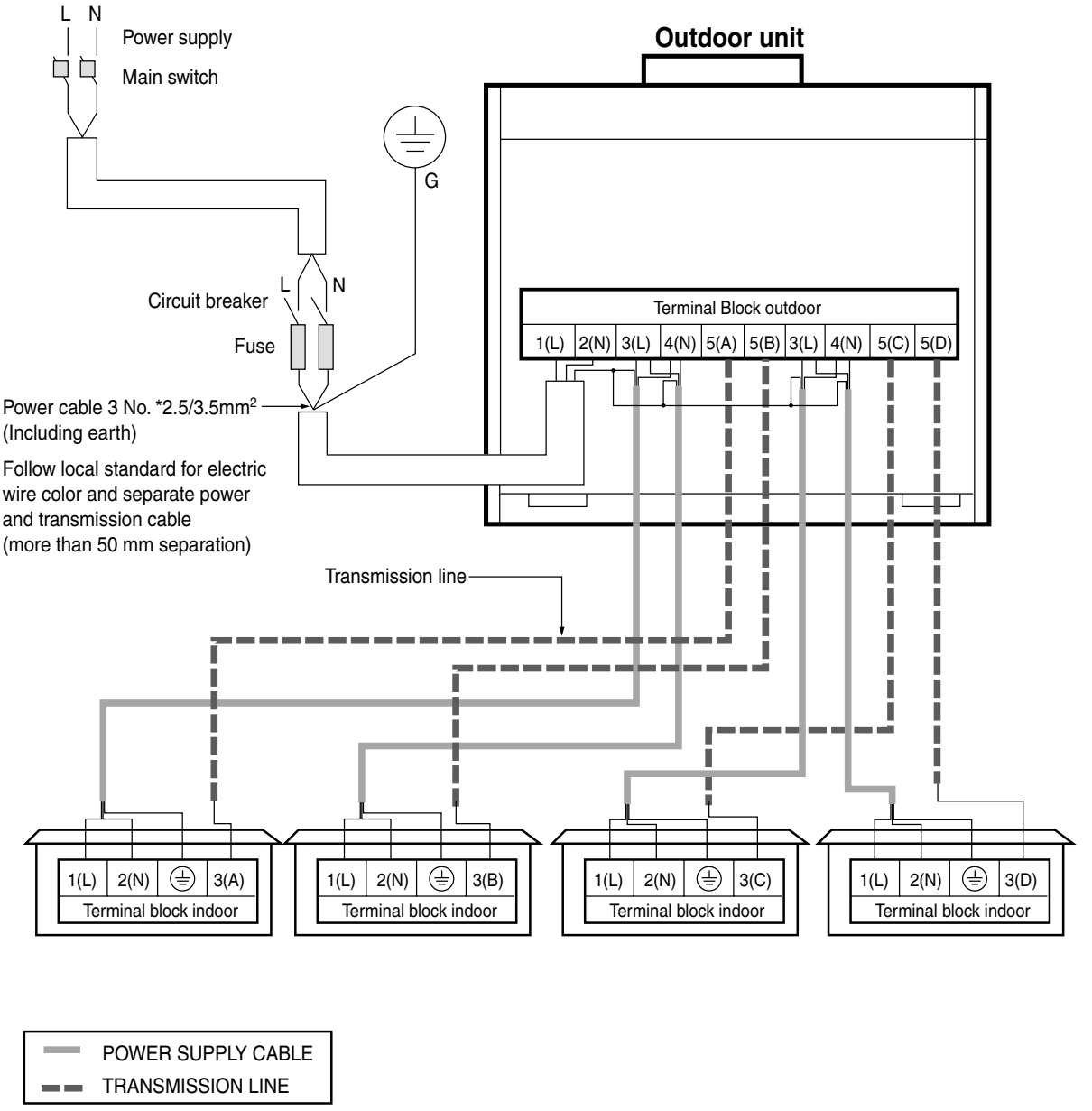
① Model : A2UW166FA0 [FM17AH UL0]

② MCA = (1.25 x RLA) + Load1 + Load2
= (1.25 x 6.0) + 0 + 0 = 7.5 A

③ MOP = (2.25 x RLA) + Load1 + Load2
= (2.25 x 6.0) + 0 + 0 = 13.5 A
→ Finally select circuit breaker 15A

MCA : Minimum Circuit Amperes (A)
MOP : Maximum rating over current protective device
MSC : Maximum Starting Current
RLA : Rated Load Amperes (A)
OFM : Outdoor Fan Motor
kW : Fan Motor rated output (kW)
FLA : Full Load Amperes (A)

2.1.11 Field wiring diagrams

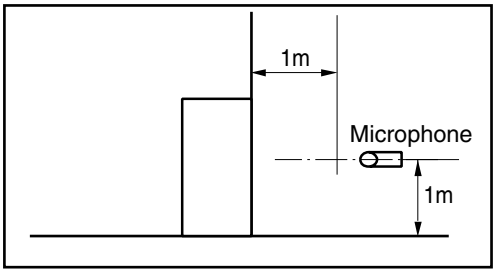


Notes:

1. All wirings, components and materials to be procured on the site should be according to the standard
2. Use copper conductor only
3. Install circuit breaker for safety
4. Unit should be grounded in compliance with the applicable local and national codes
5. Wiring cable size must comply with the applicable local and national code.

2.1.12 Sound levels

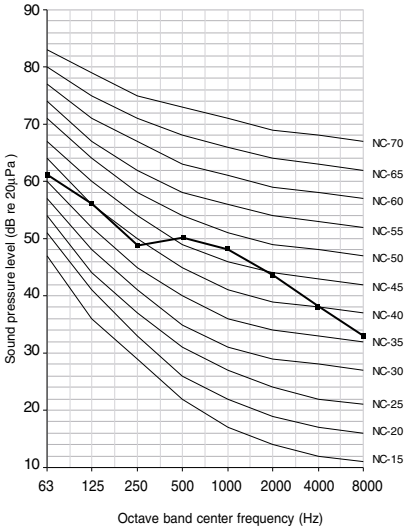
Overall



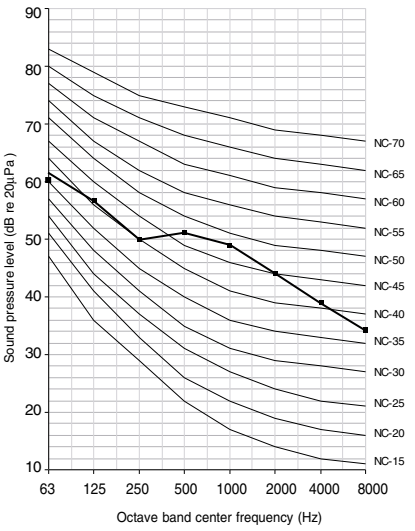
Notes:
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference accoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

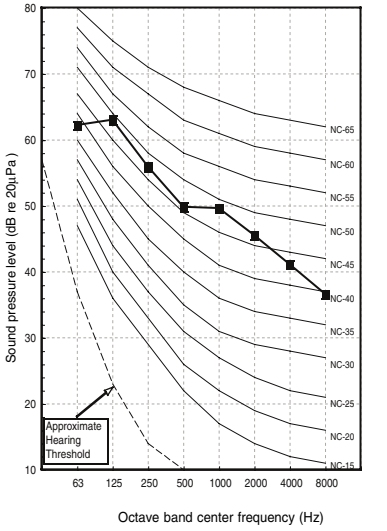
A2UW146FA3 [FM15AH UL3]
A2UW166FA0[FM17AH UL0]
A2UW166FA1[FM17AH UL1]



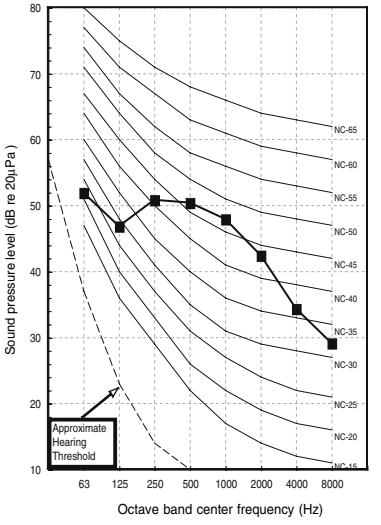
A3UW186FA0[FM19AH UE0]



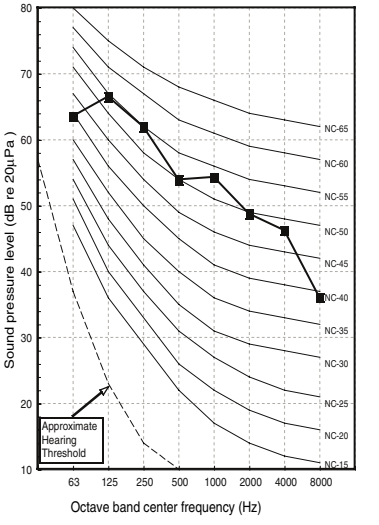
A3UW216FA3[FM21AH UE3]



A4UW246FA3[FM25AH UE3]
A4UW276FA3[FM27AH UE3]
A5UW306FA3[FM30AH UE3]



A5UW406FA3[FM38AH UH3]

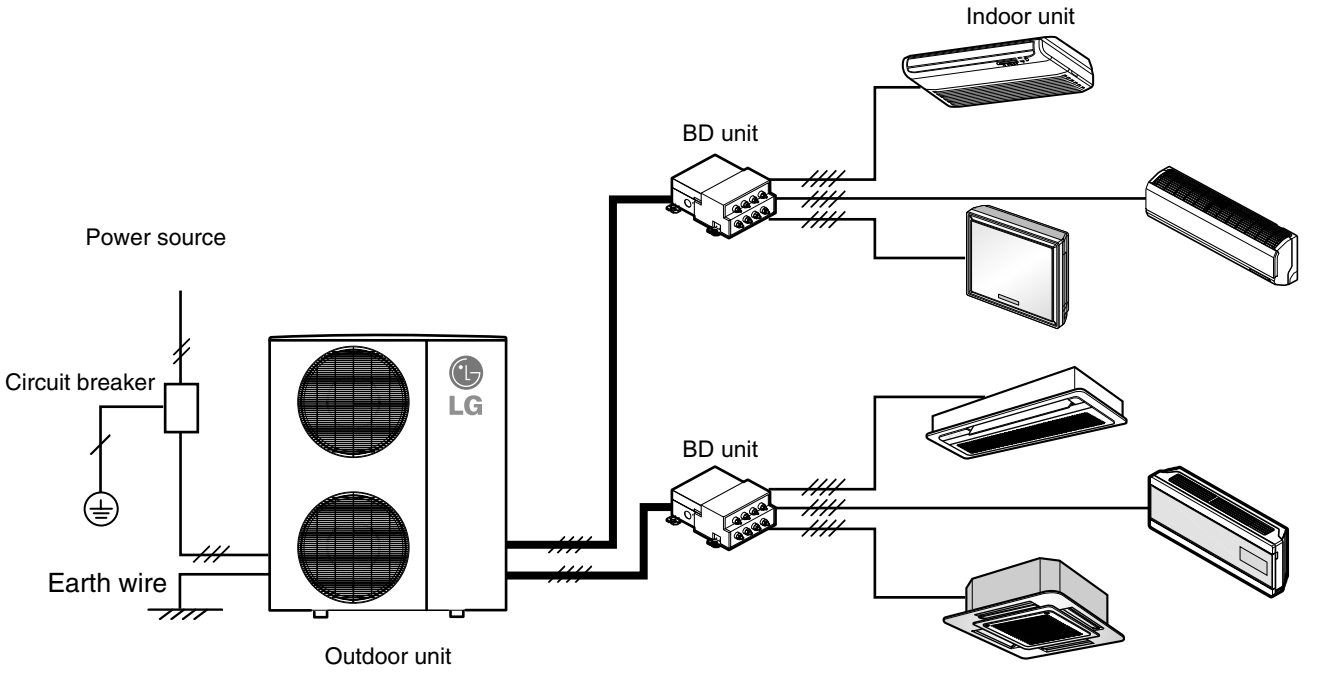


2.2 Distributor type MULTI F DX (1 phase)
2.2.1 Power supply

Type	Outdoor unit	Capacity [kBtu/h(kW)]	Circuit breaker capacity	Power supply
Heat pump	A7UW406FA3[FM40AH UH3]	40(11.7)	30A	1ø, 220-240V, 50Hz
	A8UW486FA3[FM48AH U33]	48(14.1)	40A	
	A9UW566FA3[FM56AH U33]	56(16.4)	40A	

External wiring procedure

- The power supply work is needed only to the outdoor unit. The power supply to the BD unit and the indoor unit is conducted through the transmission wiring. Therefore, the power supply work can be carried out at just one place of the outdoor unit. It will contribute to simplify the work procedure and to save cost.
- Wiring cable size must comply with the applicable local and national code.



2.2.2 List of functions

Category	Function	A7UW406FA3 [FM40AH UH3]	A8UW486FA3 [FM48AH U33]	A9UW566FA3 [FM56AH U33]
Reliability	Defrost / Deicing	O	O	O
	High Pressure Switch	X	X	X
	Low Pressure Switch	O	O	O
	Phase protection	X	X	X
	Restart Delay (3-minutes)	O	O	O
	Self Diagnosis	O	O	O
	Soft Start	O	O	O
	Test Function	X	X	X
Convenience	Auto operation(Artificial intelligence)	O	O	O
	Auto Restart Operation	O	O	O
CAC Network Function	Central control(LGAP)	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI485	PMNFP14A0	PMNFP14A0	PMNFP14A0
Special function kit	Low ambient operation	O(Program logic)	O(Program logic)	O(Program logic)
Others	Thermistor	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

2.2.3 Specifications

Outdoor Unit			A7UW406FA3 [FM40AH UH3]	A8UW486FA3 [FM48AH U33]	A9UW566FA3 [FM56AH U33]
Nominal Capacity (Min~Rated~Max)	Cooling	kW	2.8~11.7~13.5	3.3~15.5~17.0	4.0~16.7~18.52
		Btu/h	9,600~40,000~46,000	11,400~52,800~58,000	13,800~57,000~63,200
	Heating	kW	3.2~13.5~15.0	3.7~16.4~17.29	4.5~17.9~18.75
		Btu/h	11,040~46,000~51,000	12,768~56,000~59,000	15,456~61,000~64,000
Nominal Input (Min~Rated~Max)	Cooling	kW	1.1~3.63~4.65	0.84~4.69~5.35	1.0~4.96~5.65
	Heating	kW	1.4~3.65~4.84	1.30~4.43~5.58	1.25~4.62~5.70
Energy label			A/A	A/A	A/A
Testing Combination			MS07AH N40 * 7EA	MS07AH N40 * 5EA MS09AH N40 * 3EA	MS09AH N40*8EA
Running Current	Cooling	A	6.2~16.0~20.0	3.9~21.1~23.2	4.6~21.7~24.0
	Heating	A	6.9~16.4~20.5	6.9~22.6~25.0	7.4~22.4~26.0
Starting Current	(Cooling/Heating)	A	-	-	-
Power Supply		Ø / V / Hz	1/220~240/50	1/220~240/50	1/220~240/50
Power Supply Cable (outdoor)		No.* mm^2	3*3.5	3*4.0	3*4.0
Power and transmission cable (outdoor to BD)		No.* mm^2	4 x 1.25(Including Earth)	4 x 1.25(Including Earth)	4 x 1.25(Including Earth)
Power and transmission cable (BD to indoor)		No.* mm^2	4 x 0.75(Including Earth)	4 x 0.75(Including Earth)	4 x 0.75(Including Earth)
Dimensions	W*H*D	mm(inch)	900*1165*370(35.4*45.8*14.5)	950*1380*330 (37.4*54.3*12.3)	950*1380*330 (37.4*54.3*13.0)
Net Weight		kg(lbs)	95(209)	108(238)	108(238)
Max. Number of Connectable Indoor Units			7	8	9
Compressor (Inverter)	Type		Twin-Rotary	Twin-Rotary	Twin-Rotary
	Qty x Model		5JD420X	5JD420X	5JD420X
	Motor Type		BLDC	BLDC	BLDC
	Oil Charge volume	cc	1,300	1300	1300
	Oil Type		FV50S	FV50S	FV50S
Compressor (Constant #1)	Type		-	-	-
	Qty x Model		-	-	-
	Motor Type		-	-	-
	Oil Charge volume	cc	-	-	-
	Oil Type		-	-	-
Compressor (Constant #2)	Type		-	-	-
	Qty x Model		-	-	-
	Motor Type		-	-	-
	Oil Charge volume	cc	-	-	-
	Oil Type		-	-	-
Refrigerant	Charge (at 5m)	g(oz)	4,400(155)	4800(169.3)	4800(169.3)
	Type		R410A	R410A	R410A
	Control		E.E.V	E.E.V	E.E.V
Heat Exchanger	Rows x Column x FPI		2R x 50C x 18	2R x 64C x 17	2R x 64C x 17
	Defrosting Method		Reversing cycle	Reversing cycle	Reversing cycle
Fan	Capacitor	µF/Vac	6 / 370		
	Drive		Direct	Direct Drive	DC
	Discharge direction	Side / Top	Side	Side	Side
	Air Flow Rate	CMM(CFM)	53(1872) x 2	60(2,119) x 2	60(2,119) x 2
Noise Level(H/L)	Sound Pressure at 1m	dB(A)+3	58	58	59
Piping connections	Liquid(Ø)	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas(Ø)	mm(inch)	19.05(3/4)	19.05(3/4)	19.05(3/4)
Max. Interunit Piping Length	Total Piping(Main+Total Branch)	m	100	135	145
	Main Piping	m	50	55	55
	Total Branch Piping	m	50	80	90
	Each Branch Piping	m	15	15	15
Max. Elevation	Indoor Unit~Outdoor Unit	m	30	30	30
	Indoor Unit~Indoor Unit	m	15	15	15

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Due to our policy of innovation some specifications may be changed without notification.
3. At least two indoor units should be connected.
4. Minimum combination capacity rate should be more than 40%
5. Wiring cable size must comply with the applicable local and national code.

Conversion Formula	
kW	= Btu/h × 0.0002931
CFM	= CMM × 35.3

BD unit			PMBD3620	PMBD3630	PMBD3640
Connectable indoor units	Number of indoor units		1~2	1~3	1~4
	Capacity	Btu/h	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k
Power source		(Ø, Hz, V)	1, 50, 220~240	1, 50, 220~240	1, 50, 220~240
Power consumption		W	10	10	10
Running current		A	0.05	0.05	0.05
Dimension	W*H*D	mm(inch)	302*143*252(11.9*5.6*9.9)	302*143*252(11.9*5.6*9.9)	302*143*252(11.9*5.6*9.9)
Net weight		kg	4.8	4.9	5
Connecting cable	Direction indoor unit	No.* mm^2	4*0.75 (including earth)	4*0.75 (including earth)	4*0.75 (including earth)
	Direction outdoor unit	No.* mm^2	4*1.25 (including earth)	4*1.25 (including earth)	4*1.25 (including earth)
Piping connection (To outdoor unit)	Liquid (Ø)	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas (Ø)	mm(inch)	19.05(3/4)	19.05(3/4)	19.05(3/4)
Piping connection (To indoor unit)	Liquid (Ø)	mm(inch)	6.35(1/4)*2EA	6.35(1/4)*3EA	6.35(1/4)*4EA
	Gas (Ø)	mm(inch)	9.52(3/8)*2EA	9.52(3/8)*3EA	9.52(3/8)*4EA
Accessories	Hanger (Bracket)	EA	4	4	4
	Screw	EA	8	8	8
	Manual	EA	1	1	1

BD unit			PMBD7220	PMBD7230
Connectable indoor units	Number of indoor units		1~2	1~3
	Capacity	Btu/h	18k/24k/30k/36k	18k/24k/30k/36k
Power source		(Ø, Hz, V)	1, 50, 220~240	1, 50, 220~240
Power consumption		W	10	10
Running current		A	0.05	0.05
Dimension	W*H*D	mm(inch)	302*143*252(11.9*5.6*9.9)	302*143*252(11.9*5.6*9.9)
Net weight		kg	5	5
Connecting cable	Direction indoor unit	No.* mm^2	4*0.75 (including earth)	4*0.75 (including earth)
	Direction outdoor unit	No.* mm^2	4*1.25 (including earth)	4*1.25 (including earth)
Piping connection (To outdoor unit)	Liquid (Ø)	mm(inch)	9.52(3/8)	9.52(3/8)
	Gas (Ø)	mm(inch)	19.05(3/4)	19.05(3/4)
Piping connection (To indoor unit)	Liquid (Ø)	mm(inch)	6.35(1/4)*2EA	6.35(1/4)*3EA
	Gas (Ø)	mm(inch)	12.7(1/2)*2EA	12.7(1/2)*3EA
Accessories	Hanger (Bracket)	EA	4	4
	Screw	EA	8	8
	Manual	EA	1	1

Note :

1. BD unit or Indoor Unit Max. Height <--> BD unit or Indoor Unit Min. Height : Max.10m
   Set up the BD unit and Indoor Unit in 15m.
2. The piping connection must be suit the piping sizes of the indoor unit which will be connected.
   (If need, use the connector which is included in the indoor unit)
3. The BD should be installed inside the building.
4. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

2.2.4 Combination table

The individual indoor unit capacity can be calculated as follows depending on the total connected capacity of all indoor units.

$$\text{Individual indoor unit combinational capacity } [Q_{idu(combi)}] = \text{Outdoor unit rated capacity } [Q_{odu(rated)}] \times \frac{\text{Individual indoor unit rated capacity } [Q_{idu(rated)}]}{\text{Total connected indoor unit rated capacity } [\sum Q_{idu(rated)}]}$$

Example)
- Outdoor unit model : A7UW406FA3[FM40AH UH3]
- Total indoor units combination : 7k + 7k + 7k + 7k + 9k + 9k
- Each indoor unit combinational capacity?

- $Q_{odu(rated)}$: 40 kBtu/h
- $\sum Q_{idu(rated)}$: 46 kBtu/h

$$\therefore Q_{idu(combi)} : [7k] = 40 \times \frac{7}{46} = \mathbf{6.1k\ But/h}$$

$$Q_{idu(combi)} : [9k] = 40 \times \frac{9}{46} = \mathbf{7.8k\ But/h}$$

Models : A7UW406FA3[FM40AH UH3]

[Cooling capacity]

Total indoor unit capacity (kBtu/h)	Cooling capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
16	9,600	2.8	16,000	4.7	18,400	5.4	1,038	1,730	2,140
18	10,800	3.2	18,000	5.3	20,700	6.1	1,107	1,845	2,280
19	11,400	3.3	19,000	5.6	21,850	6.4	1,136	1,894	2,360
21	12,600	3.7	21,000	6.2	24,150	7.1	1,244	2,074	2,575
23	13,800	4.0	23,000	6.7	26,450	7.7	1,317	2,195	2,708
24	14,400	4.2	24,000	7.0	27,600	8.1	1,420	2,366	2,960
25	15,000	4.4	25,000	7.3	28,750	8.4	1,459	2,432	3,024
26	15,600	4.6	26,000	7.6	29,900	8.8	1,501	2,502	3,140
27	16,200	4.7	27,000	7.9	31,050	9.1	1,536	2,560	3,190
28	16,800	4.9	28,000	8.2	32,200	9.4	1,593	2,655	3,310
30	18,000	5.3	30,000	8.8	34,500	10.1	1,688	2,814	3,487
31	18,600	5.4	31,000	9.1	35,650	10.4	1,696	2,826	3,524
32	19,200	5.6	32,000	9.4	36,800	10.8	1,755	2,925	3,640
33	19,800	5.8	33,000	9.7	37,950	11.1	1,788	2,980	3,712
34	20,400	6.0	34,000	10.0	39,100	11.5	1,872	3,120	3,820
35	21,000	6.2	35,000	10.3	40,250	11.8	1,944	3,240	4,068
36	21,600	6.3	36,000	10.5	41,400	12.1	2,020	3,366	4,232
37	22,200	6.5	37,000	10.8	42,550	12.5	2,106	3,510	4,410
38	22,800	6.7	38,000	11.1	43,700	12.8	2,144	3,574	4,500
39	23,400	6.9	39,000	11.4	44,850	13.1	2,173	3,621	4,570
40	24,000	7.0	40,000	11.7	45,000	13.5	2,178	3,630	4,652
41	24,000	7.0	40,000	11.7	45,000	13.5	2,190	3,650	4,652
42	24,000	7.0	40,000	11.7	45,000	13.5	2,190	3,650	4,652
43	24,000	7.0	40,000	11.7	46,000	13.5	2,190	3,650	4,652
44	24,000	7.0	40,000	11.7	46,000	13.5	2,190	3,650	4,652
45	24,000	7.0	40,000	11.7	46,000	13.5	2,190	3,650	4,652
46	24,000	7.0	40,000	11.7	46,000	13.5	2,178	3,630	4,652
47	24,000	7.0	40,000	11.7	46,000	13.5	2,178	3,630	4,652
48	24,000	7.0	40,000	11.7	46,000	13.5	2,178	3,630	4,652
49	24,000	7.0	40,000	11.7	46,000	13.5	2,178	3,630	4,652
50	24,000	7.0	40,000	11.7	46,000	13.5	2,178	3,630	4,652
51	24,000	7.0	40,000	11.7	46,000	13.5	2,178	3,630	4,652
52	24,000	7.0	40,000	11.7	46,000	13.5	2,178	3,630	4,652

Note :
1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 16~52 kBtu/h(40%~130%)
5. At least two indoor units should be connected.

[Heating capacity]

Total indoor unit capacity (kBtu/h)	Heating capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
16	11,040	3.2	18,400	5.4	20,424	6.0	1,428	2,380	2,642
18	12,420	3.6	20,700	6.1	22,977	6.7	1,562	2,604	2,860
19	13,110	3.8	21,850	6.4	24,254	7.1	1,638	2,730	3,004
21	14,490	4.2	24,150	7.1	26,807	7.9	1,728	2,880	3,292
23	15,870	4.6	26,450	7.7	29,360	8.6	1,749	2,915	3,346
24	16,560	4.9	27,600	8.1	30,636	9.0	1,809	3,015	3,412
25	17,250	5.1	28,750	8.4	31,913	9.4	1,859	3,098	3,540
26	17,940	5.3	29,900	8.8	33,189	9.7	1,958	3,264	3,705
27	18,630	5.5	31,050	9.1	34,466	10.1	2,009	3,349	3,818
28	19,320	5.7	32,200	9.4	35,742	10.5	2,055	3,425	3,980
30	20,700	6.1	34,500	10.1	38,295	11.2	2,074	3,456	4,165
31	21,390	6.3	35,650	10.4	39,572	11.6	2,090	3,483	4,234
32	22,080	6.5	36,800	10.8	40,848	12.0	2,110	3,517	4,312
33	22,770	6.7	37,950	11.1	42,125	12.3	2,143	3,571	4,464
34	23,460	6.9	39,100	11.5	43,401	12.7	2,162	3,604	4,585
35	24,150	7.1	40,250	11.8	44,678	13.1	2,167	3,612	4,606
36	24,840	7.3	41,400	12.1	45,954	13.5	2,182	3,636	4,655
37	25,530	7.5	42,550	12.5	47,231	13.8	2,186	3,644	4,745
38	26,220	7.7	43,700	12.8	48,507	14.2	2,190	3,650	4,770
39	26,910	7.9	44,850	13.1	49,784	14.6	2,204	3,674	4,811
40	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
41	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
42	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
43	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
44	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
45	27,600	8.1	46,000	13.5	50,000	14.7	2,220	3,700	4,843
46	27,600	8.1	46,000	13.5	51,000	14.9	2,220	3,700	4,843
47	27,600	8.1	46,000	13.5	51,000	14.9	2,190	3,650	4,843
48	27,600	8.1	46,000	13.5	51,000	14.9	2,190	3,650	4,843
49	27,600	8.1	46,000	13.5	51,000	14.9	2,190	3,650	4,843
50	27,600	8.1	46,000	13.5	51,000	14.9	2,190	3,650	4,843
51	27,600	8.1	46,000	13.5	51,000	14.9	2,190	3,650	4,843
52	27,600	8.1	46,000	13.5	51,000	14.9	2,190	3,650	4,843

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 16~52 kBtu/h(40%~130%)
5. At least two indoor units should be connected.

Models : A8UW486FA3[FM48AH U33]

[Cooling capacity]

Total indoor unit capacity (kBtu/h)	Cooling capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
19	11,400	3.3	19,000	5.6	20,900	6.1	841	1,401	1,611
20	12,000	3.5	20,000	5.9	22,000	6.4	883	1,472	1,693
21	12,600	3.7	21,000	6.2	23,100	6.8	926	1,543	1,774
22	13,200	3.9	22,000	6.4	24,200	7.1	968	1,614	1,856
23	13,800	4.0	23,000	6.7	25,300	7.4	1,011	1,684	1,937
24	14,400	4.2	24,000	7.0	26,400	7.7	1,053	1,755	2,019
25	15,000	4.4	25,000	7.3	27,500	8.1	1,096	1,826	2,100
26	15,600	4.6	26,000	7.6	28,560	8.4	1,161	1,935	2,225
27	16,200	4.7	27,000	7.9	29,610	8.7	1,227	2,044	2,351
28	16,800	4.9	28,000	8.2	30,670	9.0	1,292	2,153	2,476
29	17,400	5.1	29,000	8.5	31,720	9.3	1,357	2,262	2,602
30	18,000	5.3	30,000	8.8	32,780	9.6	1,423	2,372	2,727
31	18,600	5.5	31,000	9.1	33,830	9.9	1,488	2,481	2,853
32	19,200	5.6	32,000	9.4	34,890	10.2	1,554	2,590	2,978
33	19,800	5.8	33,000	9.7	35,940	10.5	1,619	2,699	3,104
34	20,400	6.0	34,000	10.0	37,000	10.8	1,685	2,808	3,229
35	21,000	6.2	35,000	10.3	38,050	11.2	1,750	2,917	3,355
36	21,600	6.3	36,000	10.5	39,600	11.6	1,816	3,026	3,480
37	22,200	6.5	37,000	10.8	40,700	11.9	1,859	3,099	3,564
38	22,800	6.7	38,000	11.1	41,800	12.2	1,903	3,172	3,648
39	23,400	6.9	39,000	11.4	42,900	12.6	1,947	3,245	3,732
40	24,000	7.0	40,000	11.7	44,000	12.9	1,991	3,318	3,816
41	24,600	7.2	41,000	12.0	46,100	13.5	2,035	3,391	3,900
42	25,200	7.4	42,000	12.3	46,850	13.7	2,121	3,536	4,066
43	25,800	7.6	43,000	12.6	47,590	13.9	2,208	3,680	4,232
44	26,400	7.7	44,000	12.9	48,340	14.2	2,295	3,824	4,398
45	27,000	7.9	45,000	13.2	49,080	14.4	2,381	3,969	4,564
46	27,600	8.1	46,000	13.5	49,830	14.6	2,468	4,113	4,730
47	28,200	8.3	47,000	13.8	50,570	14.8	2,554	4,257	4,896
48	28,800	8.4	48,000	14.1	52,800	15.5	2,712	4,520	5,062
49	29,400	8.6	48,343	14.2	53,177	15.6	2,712	4,520	5,062
50	30,000	8.8	48,686	14.3	53,554	15.7	2,720	4,533	5,077
51	30,600	9.0	49,029	14.4	53,931	15.8	2,728	4,546	5,077
52	31,200	9.1	49,372	14.5	54,308	15.9	2,735	4,559	5,106
53	31,800	9.3	49,715	14.6	54,685	16.0	2,743	4,572	5,121
54	32,400	9.5	50,058	14.7	55,062	16.1	2,751	4,585	5,135
55	33,000	9.7	50,401	14.8	55,439	16.2	2,759	4,598	5,150
56	33,600	9.8	50,744	14.9	55,816	16.4	2,767	4,611	5,164
57	34,200	10.0	51,087	15.0	56,193	16.5	2,774	4,624	5,179
58	34,800	10.2	51,430	15.1	56,570	16.6	2,782	4,637	5,350
59	35,400	10.4	51,773	15.2	56,947	16.7	2,790	4,650	5,350
60	36,000	10.5	52,116	15.3	57,324	16.8	2,798	4,663	5,350
61	36,600	10.7	52,459	15.4	57,701	16.9	2,806	4,676	5,350
62	37,200	10.9	52,800	15.5	58,080	17.0	2,813	4,689	5,350
63	37,200	10.9	52,800	15.5	58,080	17.0	2,813	4,689	5,350

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 19~63 kBtu/h(40%~130%)
5. At least two indoor units should be connected.

[Heating capacity]

Total indoor unit capacity (kBtu/h)	Heating capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
19	12,768	3.7	21280	6.2	22897	6.7	1,301	2,168	2,494
20	13,440	3.9	22400	6.6	24014	7.0	1,350	2,250	2,588
21	14,112	4.1	23520	6.9	25131	7.4	1,399	2,332	2,681
22	14,784	4.3	24640	7.2	26249	7.7	1,448	2,413	2,775
23	15,456	4.5	25760	7.5	27366	8.0	1,497	2,495	2,869
24	16,128	4.7	26880	7.9	28483	8.3	1,546	2,576	2,963
25	16,800	4.9	28000	8.2	29600	8.7	1,643	2,739	3,150
26	17,472	5.1	29120	8.5	30869	9.0	1,696	2,826	3,250
27	18,144	5.3	30240	8.9	32138	9.4	1,748	2,913	3,350
28	18,816	5.5	31360	9.2	33407	9.8	1,800	3,000	3,450
29	19,488	5.7	32480	9.5	34676	10.2	1,852	3,087	3,550
30	20,160	5.9	33600	9.8	35945	10.5	1,904	3,174	3,650
31	20,832	6.1	34720	10.2	37215	10.9	1,957	3,261	3,750
32	21,504	6.3	35840	10.5	38484	11.3	2,009	3,348	3,850
33	22,176	6.5	36960	10.8	39753	11.6	2,061	3,435	3,950
34	22,848	6.7	38080	11.2	41022	12.0	2,113	3,522	4,050
35	23,520	6.9	39200	11.5	42291	12.4	2,165	3,609	4,150
36	24,192	7.1	40320	11.8	43560	12.8	2,217	3,696	4,250
37	24,864	7.3	41440	12.1	44648	13.1	2,264	3,774	4,340
38	25,536	7.5	42560	12.5	45736	13.4	2,306	3,843	4,420
39	26,208	7.7	43680	12.8	46824	13.7	2,347	3,911	4,498
40	26,880	7.9	44800	13.1	47912	14.0	2,386	3,977	4,573
41	27,552	8.1	45920	13.5	49000	14.4	2,452	4,087	4,700
42	28,224	8.3	47040	13.8	50484	14.8	2,473	4,122	4,740
43	28,896	8.5	48160	14.1	51968	15.2	2,508	4,181	4,808
44	29,568	8.7	49280	14.4	53452	15.7	2,544	4,239	4,875
45	30,240	8.9	50400	14.8	54936	16.1	2,579	4,298	4,943
46	30,912	9.1	51520	15.1	56420	16.5	2,614	4,357	5,011
47	31,584	9.3	52640	15.4	57904	17.0	2,650	4,416	5,078
48	28,800	8.4	54000	15.8	56000	16.4	2,685	4,475	5,146
49	29,400	8.6	54143	15.9	56214	16.5	2,720	4,534	5,214
50	30,000	8.8	54286	15.9	56428	16.5	2,756	4,593	5,282
51	30,600	9.0	54429	15.9	56642	16.6	2,791	4,652	5,349
52	31,200	9.1	54572	16.0	56856	16.7	2,826	4,710	5,417
53	31,800	9.3	54715	16.0	57070	16.7	2,847	4,745	5,457
54	32,400	9.5	54858	16.1	57284	16.8	2,911	4,852	5,580
55	33,000	9.7	55001	16.1	57498	16.8	2,922	4,870	5,600
56	33,600	9.8	55144	16.2	57712	16.9	2,736	4,560	5,400
57	34,200	10.0	55287	16.2	57926	17.0	2,736	4,560	5,340
58	34,800	10.2	55430	16.2	58140	17.0	2,736	4,560	5,340
59	35,400	10.4	55573	16.3	58354	17.1	2,736	4,560	5,340
60	36,000	10.5	55716	16.3	58568	17.2	2,739	4,565	5,340
61	36,600	10.7	55859	16.4	58782	17.2	2,655	4,425	5,340
62	37,200	10.9	56000	16.4	59000	17.3	2,658	4,430	5,340
63	37,200	10.9	56,000	16.4	59,000	17.3	2,658	4,430	5,340

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 19~63 kBtu/h(40%~130%)
5. At least two indoor units should be connected.

Models : A9UW566FA3[FM56AH U33]

[Cooling capacity]

Total indoor unit capacity (kBtu/h)	Cooling capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
23	13,800	4.0	23,000	6.7	25,300	7.4	1011	1684	1937
24	14,400	4.2	24,000	7.0	26,400	7.7	1053	1755	2019
25	15,000	4.4	25,000	7.3	28,000	8.2	1096	1826	2100
26	15,600	4.6	26,000	7.6	29,060	8.5	1161	1935	2225
27	16,200	4.7	27,000	7.9	30,110	8.8	1227	2044	2351
28	16,800	4.9	28,000	8.2	31,170	9.1	1292	2153	2476
29	17,400	5.1	29,000	8.5	32,220	9.4	1357	2262	2602
30	18,000	5.3	30,000	8.8	33,280	9.8	1423	2372	2727
31	18,600	5.5	31,000	9.1	34,330	10.1	1488	2481	2853
32	19,200	5.6	32,000	9.4	35,390	10.4	1554	2590	2978
33	19,800	5.8	33,000	9.7	36,440	10.7	1619	2699	3104
34	20,400	6.0	34,000	10.0	37,500	11.0	1685	2808	3229
35	21,000	6.2	35,000	10.3	38,550	11.3	1750	2917	3355
36	21,600	6.3	36,000	10.5	39,600	11.6	1816	3026	3480
37	22,200	6.5	37,000	10.8	40,700	11.9	1859	3099	3564
38	22,800	6.7	38,000	11.1	41,800	12.2	1903	3172	3648
39	23,400	6.9	39,000	11.4	42,900	12.6	1947	3245	3732
40	24,000	7.0	40,000	11.7	44,000	12.9	1991	3318	3816
41	24,600	7.2	41,000	12.0	46,100	13.5	2035	3391	3900
42	25,200	7.4	42,000	12.3	46,850	13.7	2083	3472	3993
43	25,800	7.6	43,000	12.6	47,590	13.9	2132	3553	4086
44	26,400	7.7	44,000	12.9	48,340	14.2	2180	3634	4179
45	27,000	7.9	45,000	13.2	49,080	14.4	2229	3714	4271
46	27,600	8.1	46,000	13.5	49,830	14.6	2277	3795	4364
47	28,200	8.3	47,000	13.8	50,570	14.8	2325	3876	4457
48	28,800	8.4	48,000	14.1	51,320	15.0	2374	3957	4550
49	29,400	8.6	48,625	14.2	52,060	15.3	2422	4037	4643
50	30,000	8.8	49,250	14.4	52,810	15.5	2471	4118	4736
51	30,600	9.0	49,875	14.6	53,550	15.7	2519	4199	4829
52	31,200	9.1	50,500	14.8	54,300	15.9	2568	4280	4921
53	31,800	9.3	51,125	15.0	55,050	16.1	2616	4360	5014
54	32,400	9.5	51,750	15.2	55,800	16.4	2713	4522	5200
55	33,000	9.7	52,375	15.3	56,850	16.7	2817	4696	5400
56	33,600	9.8	53,000	15.5	57,900	17.0	2896	4826	5550
57	34,200	10.0	53,236	15.6	58,900	17.3	2896	4826	5650
58	34,800	10.2	53,472	15.7	59,170	17.3	2896	4826	5650
59	35,400	10.4	53,708	15.7	59,440	17.4	2946	4910	5650
60	36,000	10.5	53,944	15.8	59,710	17.5	2946	4910	5650
61	36,600	10.7	54,180	15.9	59,980	17.6	2946	4910	5650
62	37,200	10.9	54,416	15.9	60,250	17.7	2946	4910	5650
63	37,800	11.1	54,652	16.0	60,520	17.7	2946	4910	5650
64	38,400	11.3	54,888	16.1	60,790	17.8	2946	4910	5650
65	39,000	11.4	55,124	16.2	61,060	17.9	2946	4910	5650
66	39,600	11.6	55,360	16.2	61,330	18.0	2946	4910	5650
67	40,200	11.8	55,596	16.3	61,600	18.1	2977	4961	5650
68	40,800	12.0	55,832	16.4	61,870	18.1	2977	4961	5650
69	41,400	12.1	56,068	16.4	62,140	18.2	2977	4961	5650
70	42,000	12.3	56,304	16.5	62,410	18.3	2977	4961	5650
71	42,600	12.5	56,540	16.6	62,680	18.4	2977	4961	5650
72	43,200	12.7	56,776	16.6	62,950	18.4	2977	4961	5650
73	43,800	12.8	57,012	16.7	63,200	18.5	2977	4961	5650

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 23~73 Btu/h(40%~130%)
5. At least two indoor units should be connected.

[Heating capacity]

Total indoor unit capacity (kBtu/h)	Heating capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
23	15,456	4.5	25,760	7.5	27365	8.0	1497	2495	2869
24	16,128	4.7	26,880	7.9	28482	8.3	1546	2576	2963
25	16,800	4.9	28,000	8.2	29600	8.7	1643	2739	3150
26	17,472	5.1	29,120	8.5	30869	9.0	1696	2826	3250
27	18,144	5.3	30,240	8.9	32138	9.4	1743	2906	3342
28	18,816	5.5	31,360	9.2	33407	9.8	1791	2986	3433
29	19,488	5.7	32,480	9.5	34676	10.2	1839	3065	3525
30	20,160	5.9	33,600	9.8	35945	10.5	1887	3145	3617
31	20,832	6.1	34,720	10.2	37214	10.9	1935	3225	3708
32	21,504	6.3	35,840	10.5	38483	11.3	1983	3304	3800
33	22,176	6.5	36,960	10.8	39752	11.6	2030	3384	3892
34	22,848	6.7	38,080	11.2	41021	12.0	2078	3464	3983
35	23,520	6.9	39,200	11.5	42290	12.4	2126	3543	4075
36	24,192	7.1	40,320	11.8	43560	12.8	2217	3696	4250
37	24,864	7.3	41,440	12.1	44648	13.1	2264	3774	4340
38	25,536	7.5	42,560	12.5	45736	13.4	2311	3852	4430
39	26,208	7.7	43,680	12.8	46824	13.7	2358	3930	4520
40	26,880	7.9	44,800	13.1	47912	14.0	2405	4009	4610
41	27,552	8.1	45,920	13.5	49000	14.4	2452	4087	4700
42	28,224	8.3	47,040	13.8	50286	14.7	2487	4146	4768
43	28,896	8.5	48,160	14.1	51572	15.1	2523	4205	4835
44	29,568	8.7	49,280	14.4	52858	15.5	2558	4264	4903
45	30,240	8.9	50,400	14.8	54144	15.9	2593	4322	4971
46	30,912	9.1	51,520	15.1	55430	16.2	2629	4381	5038
47	31,584	9.3	52,640	15.4	56716	16.6	2664	4440	5106
48	28,800	8.4	53,000	15.5	58000	17.0	2699	4499	5174
49	29,400	8.6	53,500	15.7	58292	17.1	2735	4558	5242
50	30,000	8.8	54,000	15.8	58584	17.2	2770	4617	5309
51	30,600	9.0	54,500	16.0	58876	17.3	2805	4676	5377
52	31,200	9.1	55,000	16.1	59168	17.3	2841	4734	5445
53	31,800	9.3	55,500	16.3	59460	17.4	2876	4793	5512
54	32,400	9.5	56,000	16.4	59750	17.5	2911	4852	5580
55	33,000	9.7	56,500	16.6	60375	17.7	2817	4696	5400
56	33,600	9.8	57,000	16.7	61000	17.9	2736	4560	5340
57	34,200	10.0	57,236	16.8	61176	17.9	2736	4560	5340
58	34,800	10.2	57,472	16.8	61353	18.0	2736	4560	5371
59	35,400	10.4	57,708	16.9	61529	18.0	2736	4560	5402
60	36,000	10.5	57,944	17.0	61706	18.1	2739	4565	5433
61	36,600	10.7	58,180	17.0	61882	18.1	2742	4570	5464
62	37,200	10.9	58,416	17.1	62059	18.2	2745	4575	5495
63	37,800	11.1	58,652	17.2	62235	18.2	2748	4580	5526
64	38,400	11.3	58,888	17.3	62412	18.3	2751	4585	5557
65	39,000	11.4	59,124	17.3	62588	18.3	2754	4590	5588
66	39,600	11.6	59,360	17.4	62765	18.4	2757	4595	5650
67	40,200	11.8	59,596	17.5	62941	18.4	2757	4595	5650
68	40,800	12.0	59,832	17.5	63118	18.5	2757	4595	5650
69	41,400	12.1	60,068	17.6	63294	18.5	2760	4600	5650
70	42,000	12.3	60,304	17.7	63471	18.6	2763	4605	5650
71	42,600	12.5	60,540	17.7	63647	18.7	2766	4610	5650
72	43,200	12.7	60,776	17.8	63824	18.7	2769	4615	5700
73	43,800	12.8	61,012	17.9	64000	18.8	2772	4620	5700

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 23~73 Btu/h(40%~130%)
5. At least two indoor units should be connected.

2.2.5 Dimensions

1) Outdoor units

OUTDOOR UNIT

A7UW406FA3[FM40AH UH3]

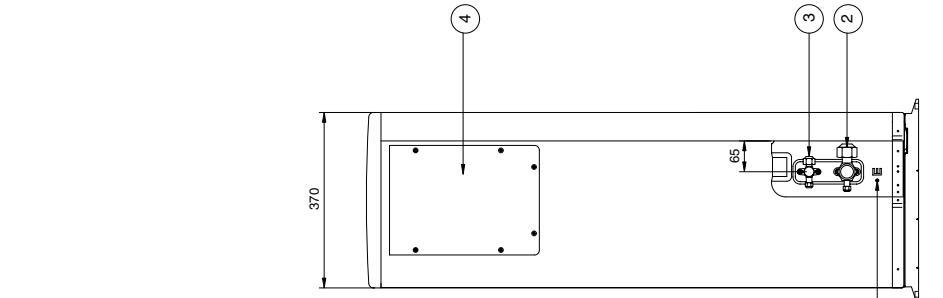
No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	

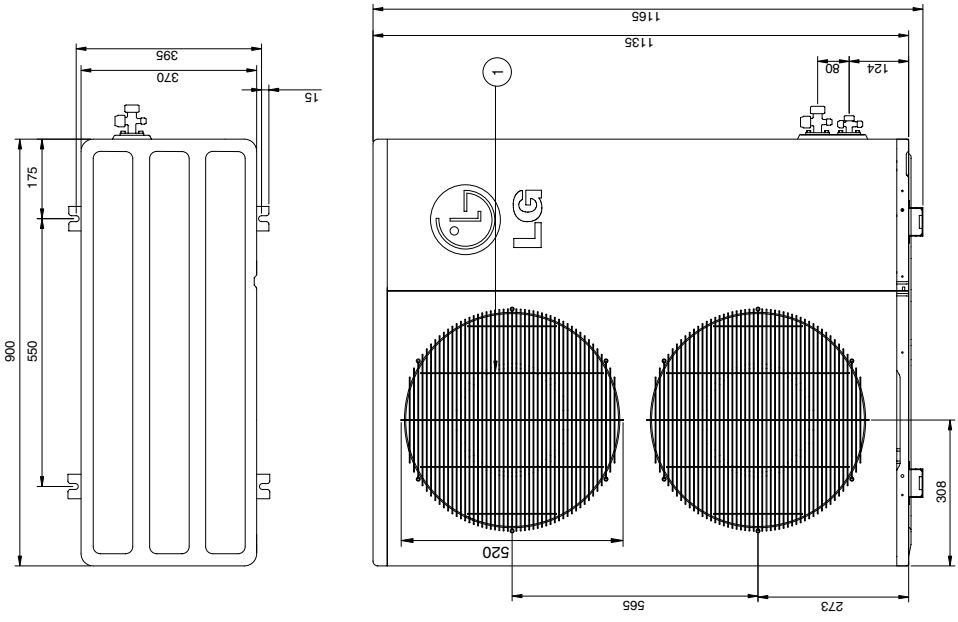
▣ Technical Specification

		Ø/V/Hz	1/ 220~240 / 50
Power supply			
Cooling Capacity		kW	11.7
		Btu/h	40,000
Heating Capacity		kW	13.5
		Btu/h	46,000
Piping Connections	Liquid(Ø)	mm(inch)	9.52(3/8)
	Gas(Ø)	mm(inch)	19.05(3/4)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.





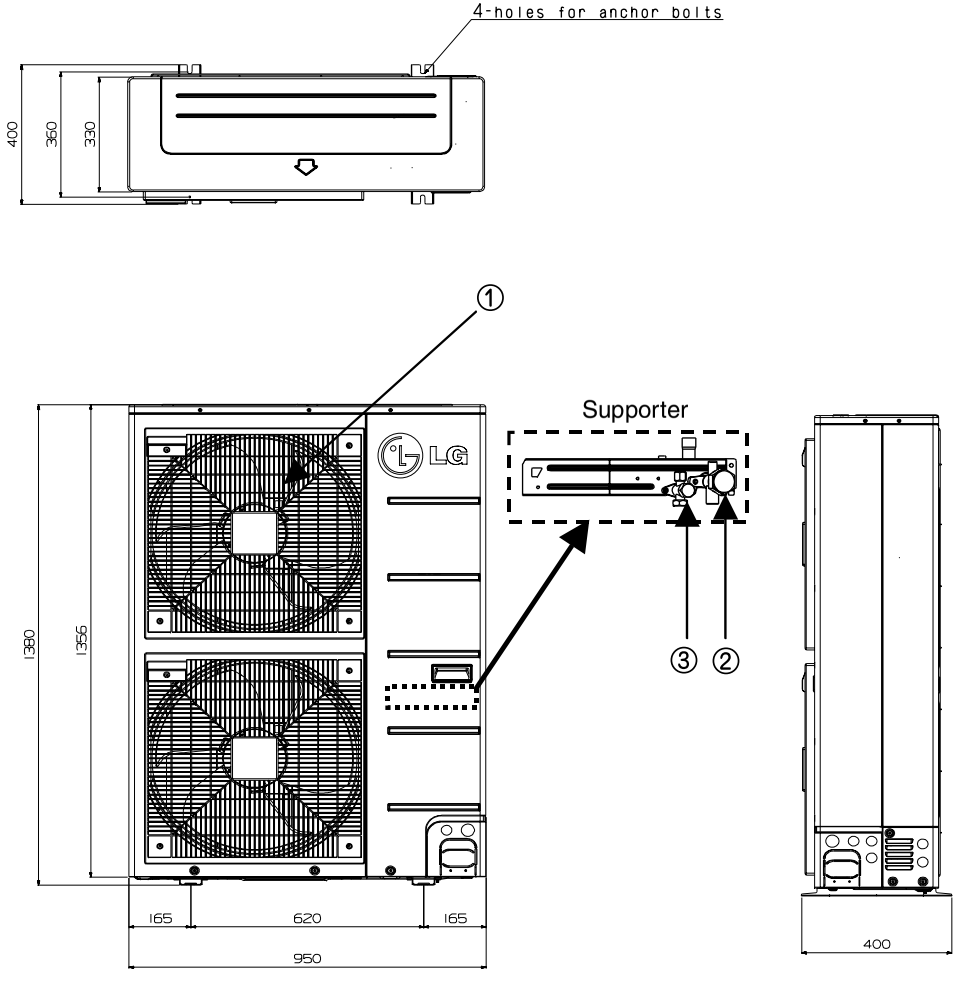
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: UH

OUTDOOR UNIT

A8UW486FA3[FM48AH U33]



No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	15.5
		Btu/h	52,800
Heating Capacity		kW	16.4
		Btu/h	56,000
Piping Connections	Liquid(Ø)	mm(inch)	9.52(3/8)
	Gas(Ø)	mm(inch)	19.05(3/4)

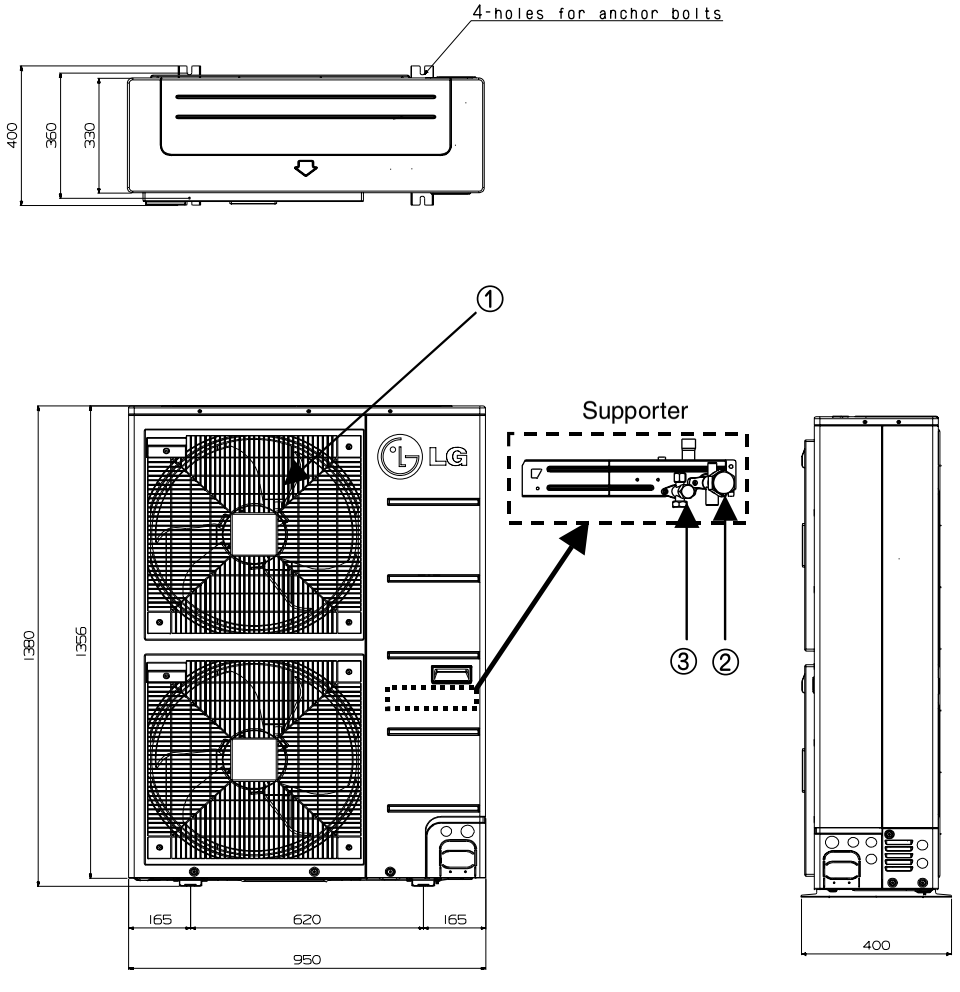
▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

LG Electronics
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641-713, Korea
www.lge.com/airconditioner
CHASSIS CODE: U3

OUTDOOR UNIT

A9UW566FA3[FM56AH U33]



No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	

▣ Technical Specification

Power supply		Ø /V/Hz	1/ 220~240 / 50
Cooling Capacity		kW	16.7
		Btu/h	57,000
Heating Capacity		kW	17.9
		Btu/h	61,000
Piping Connections	Liquid(Ø)	mm(inch)	9.52(3/8)
	Gas(Ø)	mm(inch)	19.05(3/4)

▣ Note

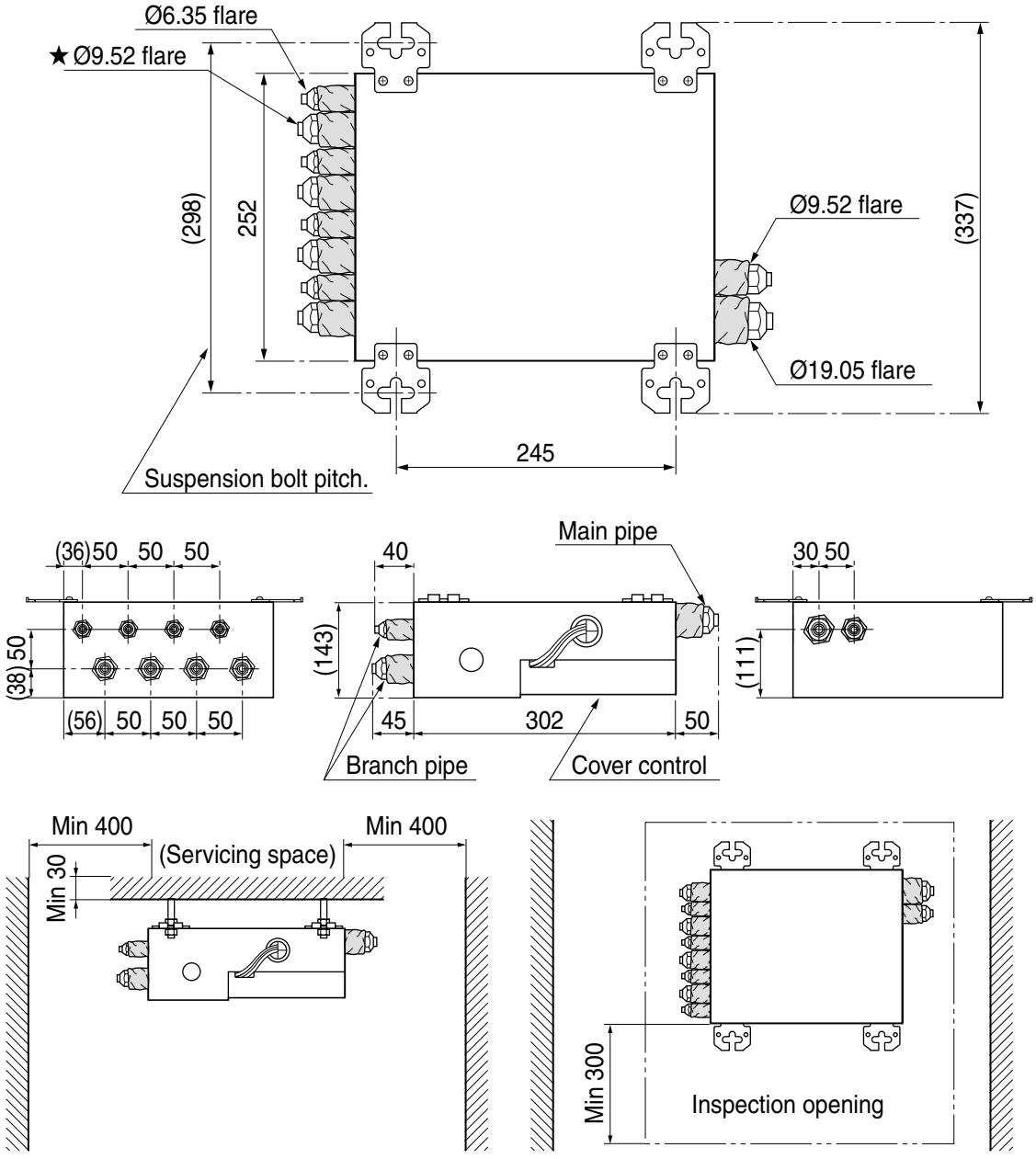
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

LG Electronics
76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: U3

2) BD unit

Models : PMBD3620, PMBD3630, PMBD3640, PMBD7230, PMBD7220



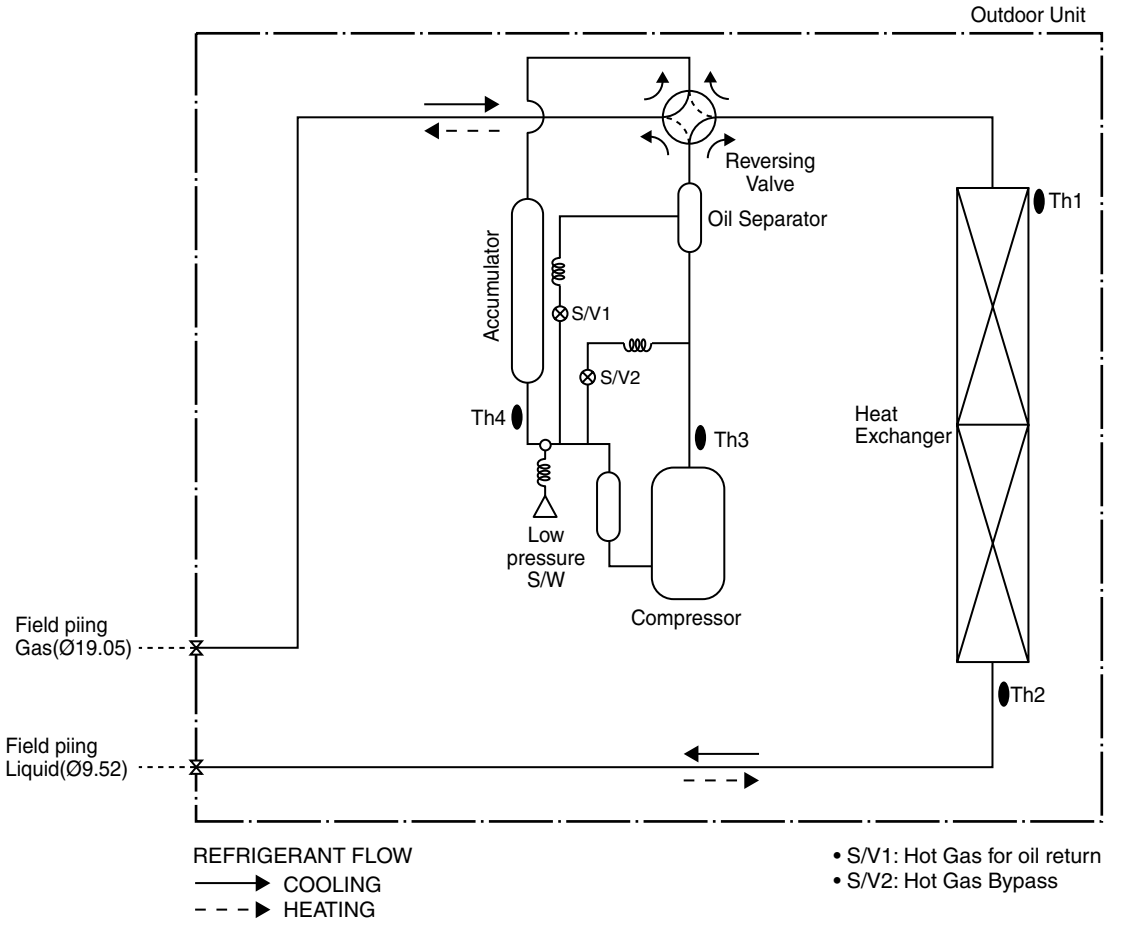
BD unit			PMBD3620	PMBD3630	PMBD3640	PMBD7230	PMBD7220
Connectable indoor units	Number of indoor unit		1~2units	1~3units	1~4units	1~3units	1~2units
	Capacity	kW	2.1/2.6/3.5/5.3/7.0	2.1/2.6/3.5/5.3/7.0	2.1/2.6/3.5/5.3/7.0	5.3/7.0/8.8	
		Btu/h	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k	18k/24k/30k/36k	

Note
1.★: PMBD7230 ➔ Ø12.7 x 3EA
PMBD7220 ➔ Ø12.7 x 2EA

2.2.6 Piping diagrams

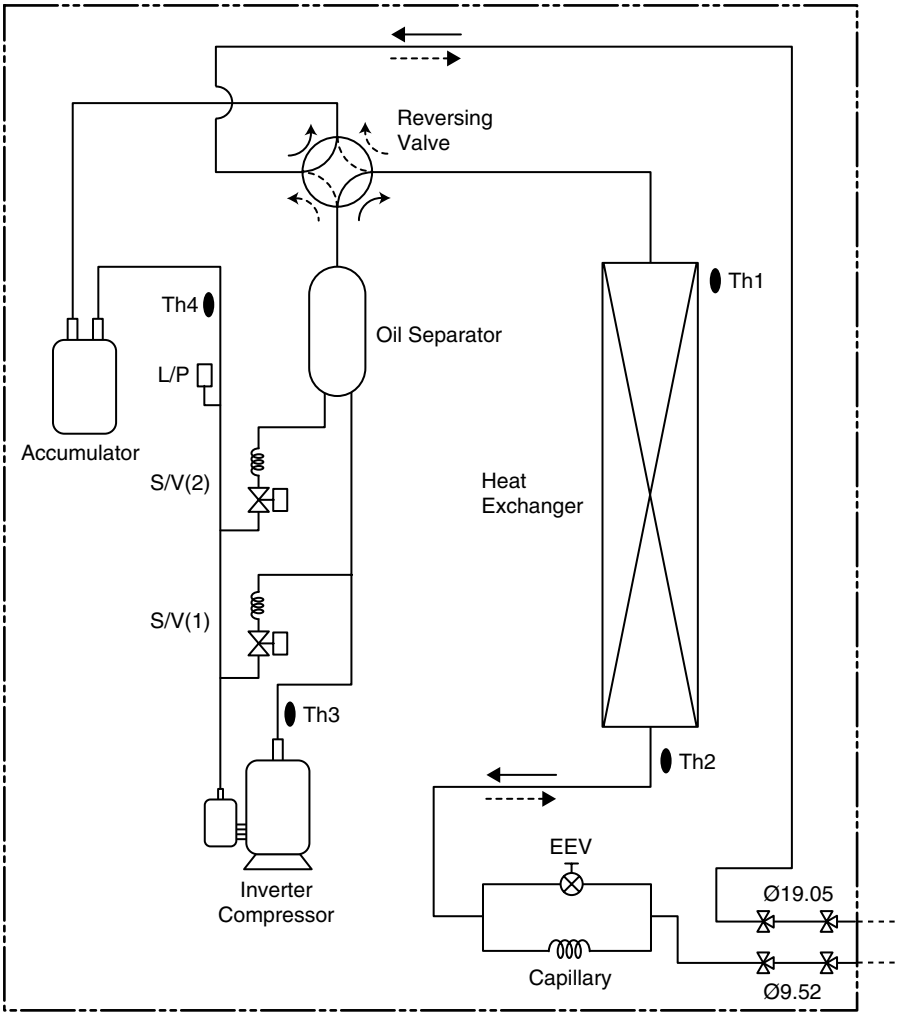
1) Outdoor unit

Models : A7UW406FA3[FM40AH UH3]



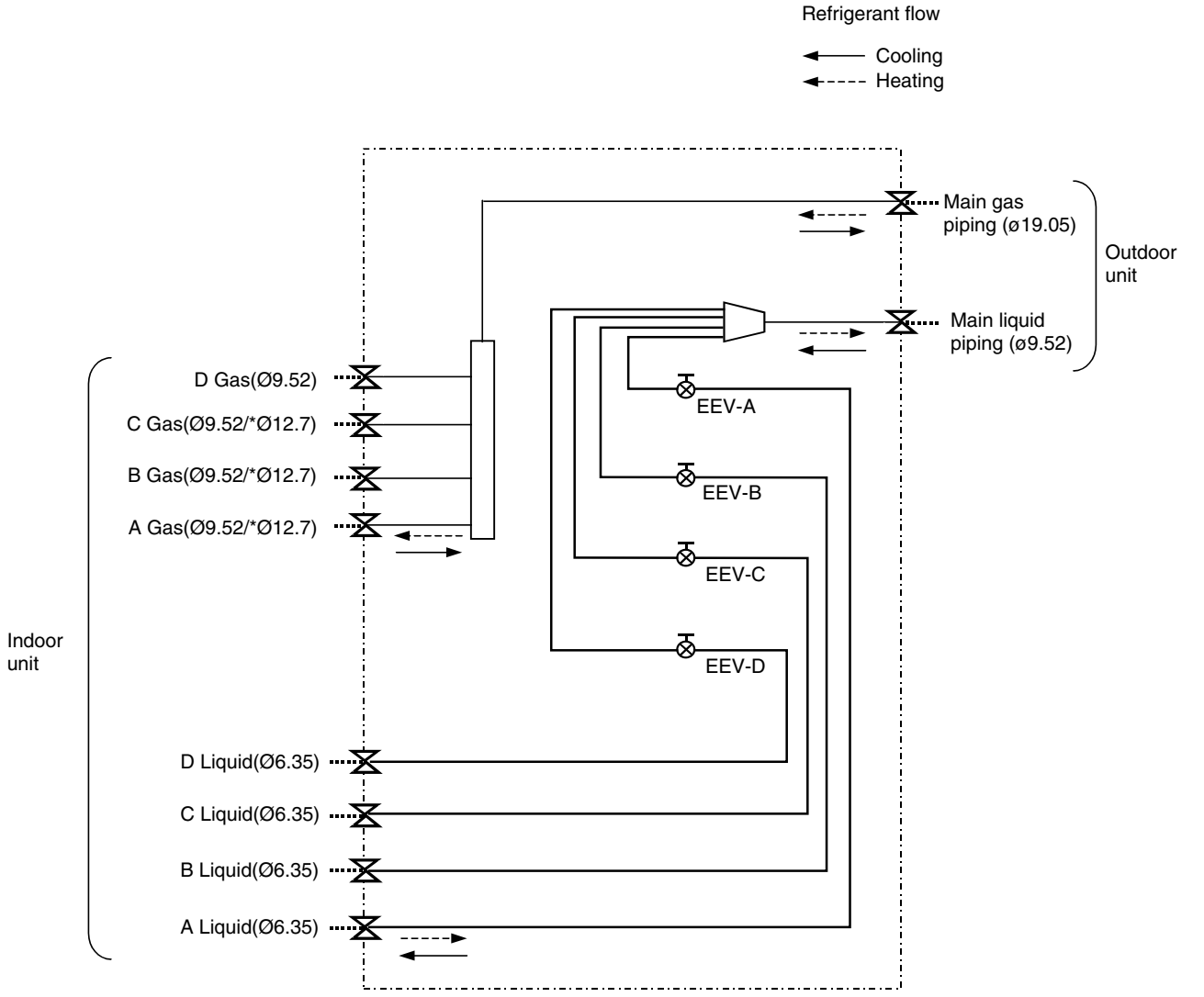
LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

Models : A8UW486FA3[FM48AH U33], A9UW566FA3[FM56AH U33]



LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH1
Th2	Thermistor for condensing temperature	CN_TH1
Th3	Thermistor for discharge pipe temperature	CN_TH2
Th4	Thermistor for suction pipe temperature	CN_TH2
S/V(1)	Solenoid Valve for Hotgas	CN_HOT GAS
S/V(2)	Solenoid Valve for Oil Separator	CN_OIL/S
L/P	Low Pressure Switch	CN_L/PRESS

2) BD Unit

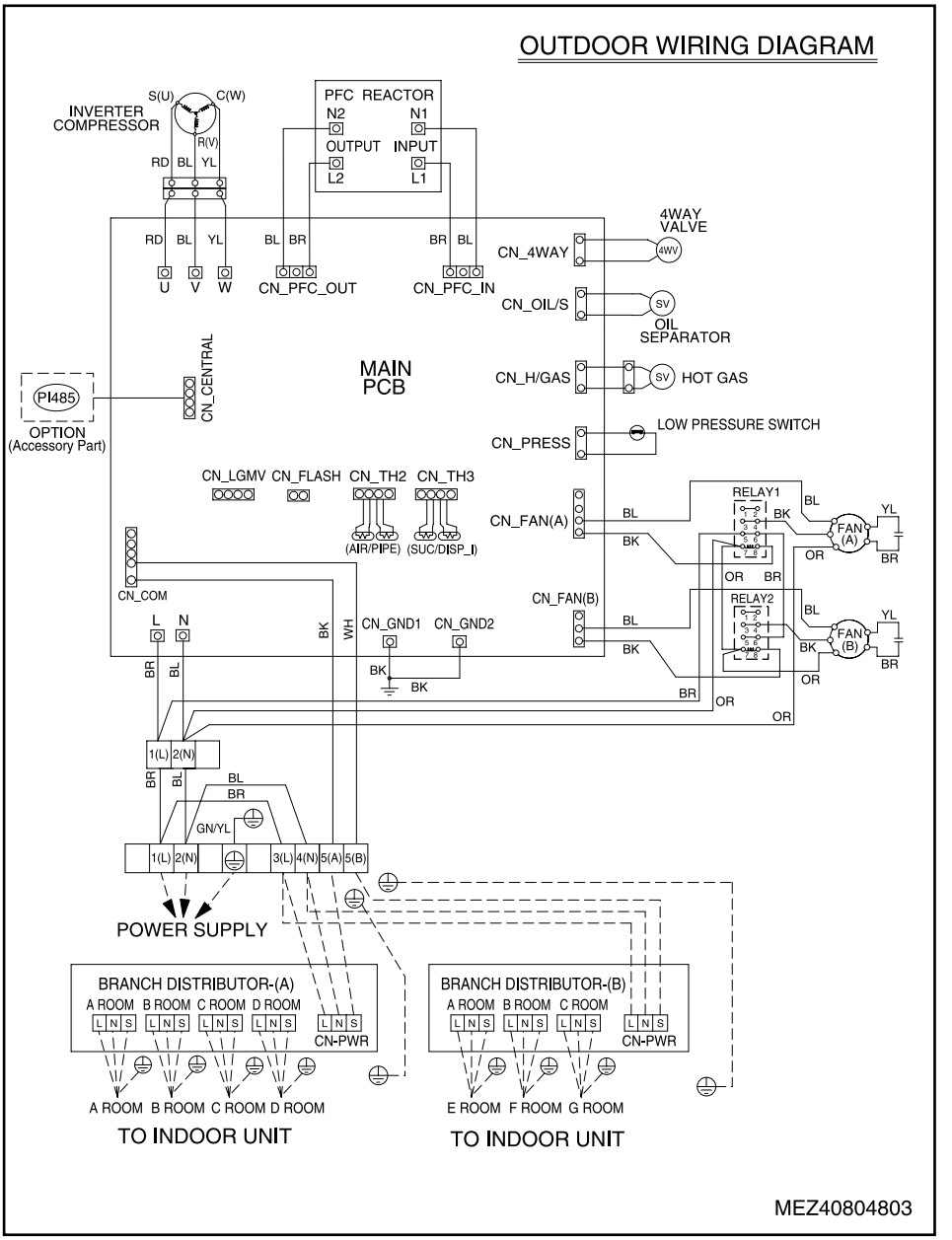


Notes;
1. Flare connection for the field piping connection
2. Use the connector if the pipe size is not matched when connecting indoor unit.
3. E.E.V.: Electronic Expansion Valve
4. * : For PMBD7230, PMBD7220
5. PMBD3620, PMBD7220 : A, B
   PMBD3630, PMBD7230 : A, B, C
   PMBD3640 : A, B, C, D

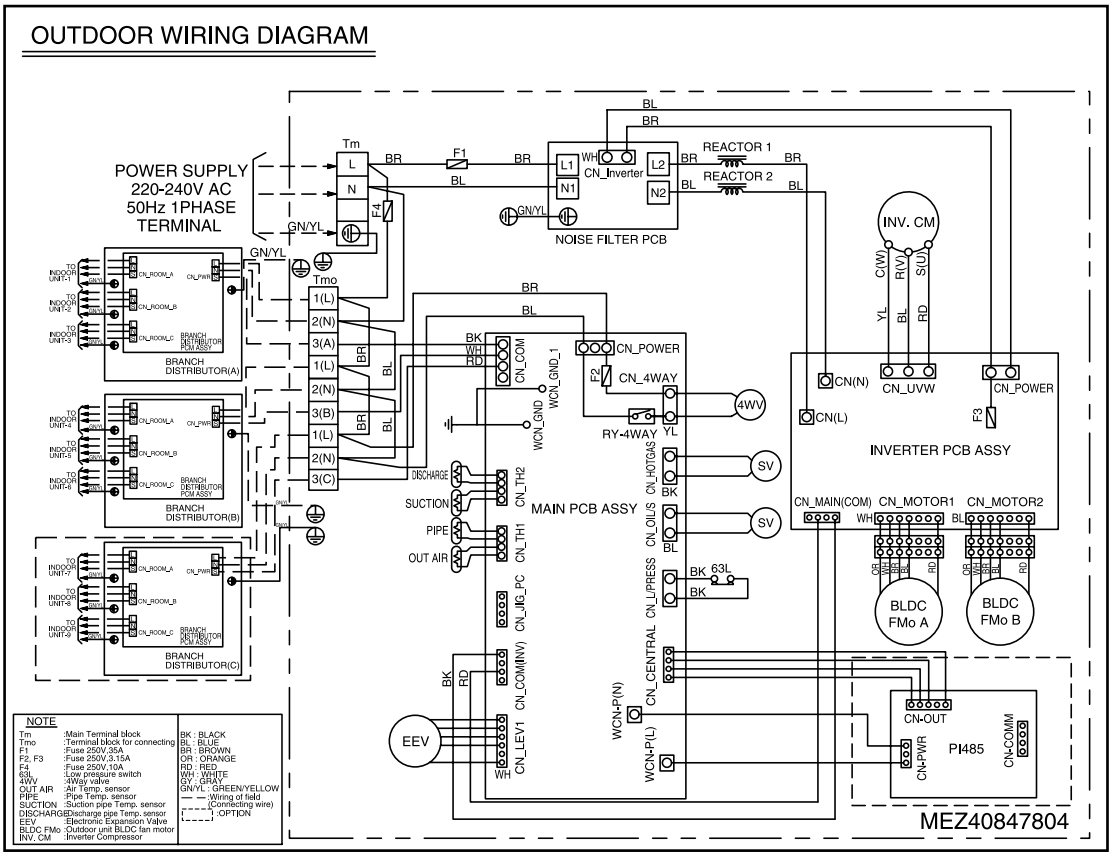
2.2.7 Wiring diagrams

1) Outdoor unit

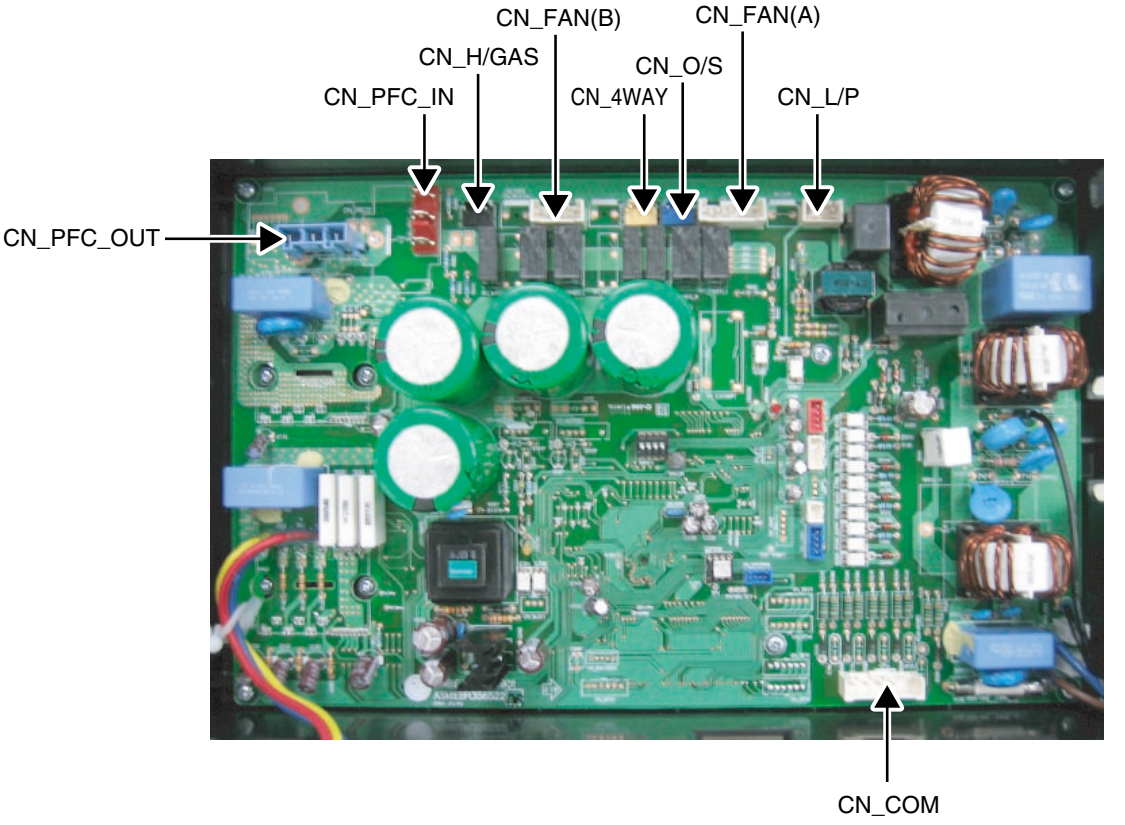
Models : A7UW406FA3[FM40AH UH3]



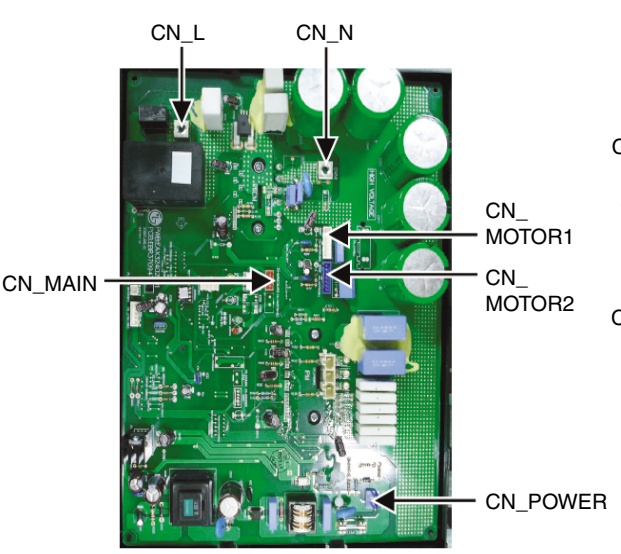
Models : A8UW486FA3[FM48AH U33], A9UW566FA3[FM56AH U33]

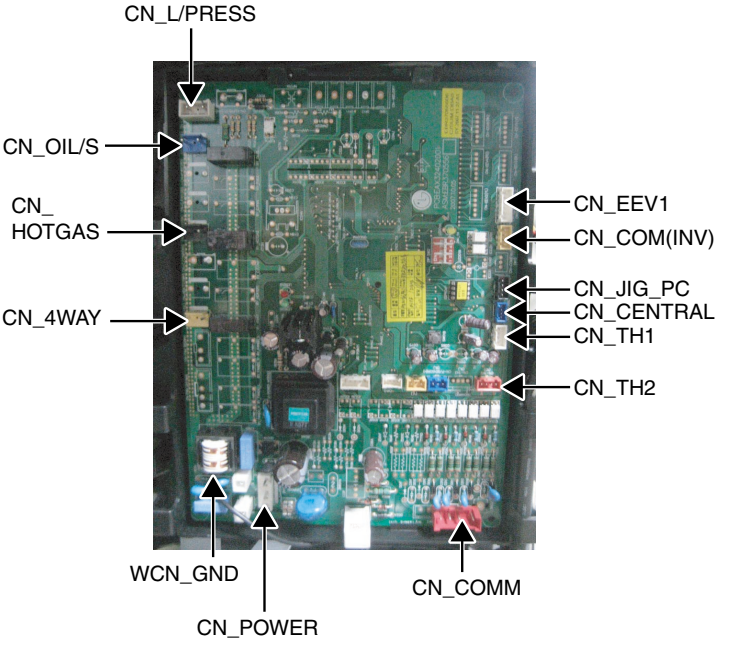


Models : UH series



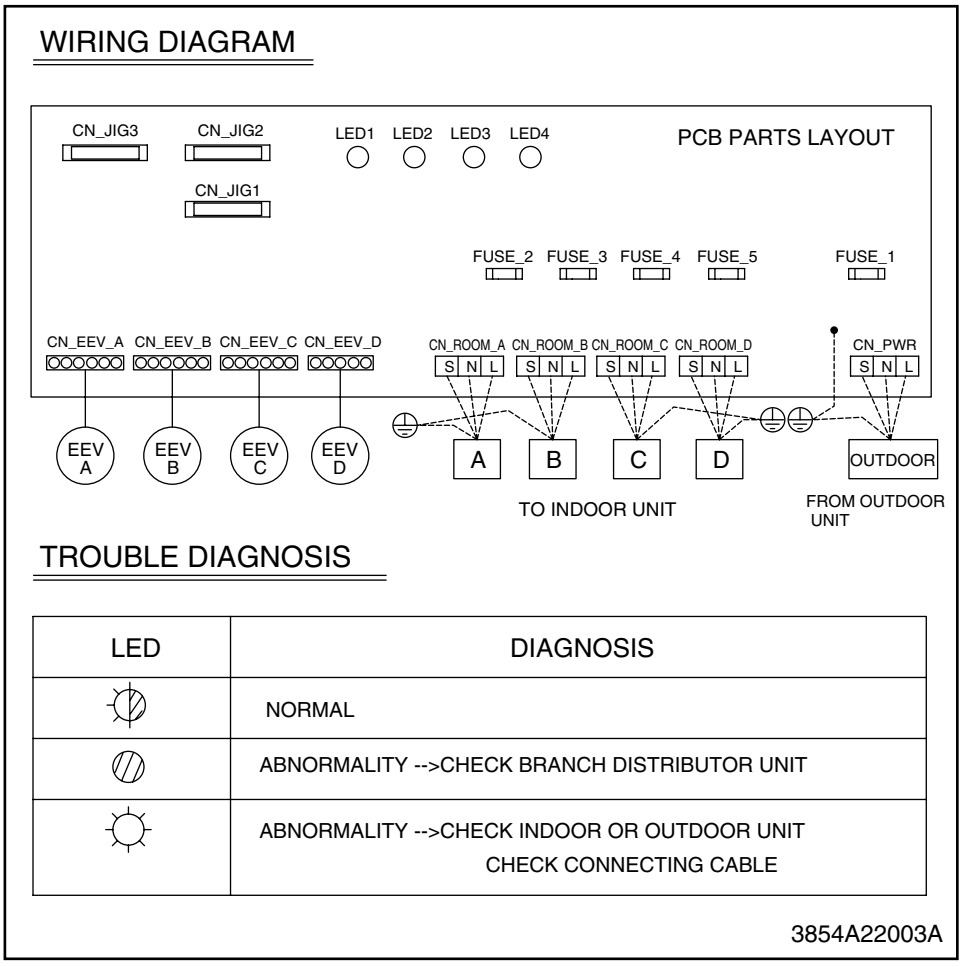
Models : U3 series





3) BD Unit

Models : PMBD3620, PMBD3630, PMBD3640, PMBD7230, PMBD7220



TROUBLE DIAGNOSIS

LED	DIAGNOSIS
	NORMAL
	ABNORMALITY -->CHECK BRANCH DISTRIBUTOR UNIT
	ABNORMALITY -->CHECK INDOOR OR OUTDOOR UNIT CHECK CONNECTING CABLE

3854A22003A

Notes;

1. 'PMBD3620', 'PMBD7220' unit : "A, B" parts available.
2. 'PMBD3630', 'PMBD7230' unit : "A, B, C" parts available.
3. 'PMBD3640' unit : "A, B, C, D" parts available.

2.2.8 Capacity tables

Models : A7UW406FA3[FM40AH UH3]

[Cooling capacity]

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
52 (130%)	10	12.4	2.28	12.9	2.30	13.6	2.31	14.0	2.32	14.2	2.33	15.1	2.34	15.8	2.36
	12	12.1	2.32	12.7	2.34	13.3	2.36	13.7	2.37	13.9	2.37	14.8	2.39	15.5	2.41
	14	11.9	2.39	12.5	2.42	13.1	2.43	13.5	2.44	13.6	2.45	14.5	2.47	15.2	2.49
	16	11.7	2.49	12.3	2.51	12.9	2.53	13.3	2.54	13.5	2.55	14.3	2.57	15.0	2.59
	18	11.6	2.68	12.1	2.70	12.8	2.72	13.1	2.73	13.3	2.73	14.2	2.75	14.8	2.77
	20	11.4	2.74	12.0	2.77	12.6	2.79	13.0	2.79	13.2	2.80	14.0	2.82	14.7	2.84
	21	11.3	2.81	11.9	2.84	12.6	2.86	12.9	2.87	13.1	2.87	14.0	2.89	14.6	2.91
	23	11.2	2.96	11.8	2.98	12.5	3.00	12.8	3.01	13.0	3.02	13.9	3.04	14.5	3.06
	25	11.1	3.11	11.7	3.13	12.3	3.15	12.7	3.16	12.8	3.16	13.7	3.18	14.4	3.20
	27	10.9	3.25	11.5	3.27	12.2	3.29	12.5	3.29	12.7	3.30	13.6	3.32	14.3	3.34
	29	10.8	3.37	11.4	3.39	12.0	3.41	12.4	3.42	12.5	3.42	13.4	3.44	14.1	3.46
	31	10.6	3.48	11.2	3.50	11.8	3.51	12.2	3.52	12.4	3.52	13.3	3.54	13.9	3.56
	33	10.4	3.56	10.9	3.58	11.6	3.59	12.0	3.59	12.1	3.60	13.0	3.61	13.7	3.63
	35	10.1	3.60	10.7	3.62	11.3	3.63	11.7	3.63	11.9	3.63	12.7	3.64	13.4	3.66
	37	9.77	3.60	10.3	3.61	11.0	3.62	11.4	3.62	11.5	3.62	12.4	3.63	13.1	3.65
	39	9.39	3.55	9.96	3.56	10.6	3.57	11.0	3.57	11.1	3.57	12.0	3.57	12.7	3.58
	41	8.96	3.45	9.52	3.45	10.2	3.46	10.5	3.46	10.7	3.46	11.6	3.46	12.2	3.47
	43	8.47	3.28	9.02	3.29	9.66	3.29	10.0	3.28	10.2	3.28	11.0	3.28	11.7	3.29
	46	7.61	2.93	8.14	2.93	8.76	2.92	9.09	2.92	9.26	2.91	10.1	2.91	10.7	2.91
48 (120%)	10	12.4	2.27	12.9	2.29	13.6	2.30	14.0	2.31	14.1	2.31	15.0	2.33	15.7	2.35
	12	12.1	2.31	12.7	2.33	13.3	2.34	13.7	2.35	13.9	2.36	14.7	2.38	15.4	2.39
	14	11.9	2.38	12.4	2.40	13.1	2.42	13.4	2.43	13.6	2.43	14.5	2.45	15.2	2.47
	16	11.7	2.48	12.2	2.50	12.9	2.51	13.3	2.52	13.4	2.53	14.3	2.55	15.0	2.57
	18	11.5	2.59	12.1	2.61	12.7	2.63	13.1	2.64	13.3	2.65	14.2	2.67	14.8	2.69
	20	11.4	2.72	12.0	2.74	12.6	2.77	13.0	2.78	13.1	2.78	14.0	2.80	14.7	2.82
	21	11.3	2.79	11.9	2.81	12.5	2.84	12.9	2.85	13.1	2.85	14.0	2.88	14.6	2.89
	23	11.2	2.94	11.8	2.96	12.4	2.98	12.8	2.99	12.9	3.00	13.8	3.02	14.5	3.04
	25	11.1	3.09	11.6	3.11	12.3	3.13	12.6	3.14	12.8	3.14	13.7	3.17	14.4	3.18
	27	10.9	3.23	11.5	3.25	12.2	3.27	12.5	3.28	12.7	3.28	13.6	3.30	14.2	3.32
	29	10.8	3.36	11.3	3.37	12.0	3.39	12.3	3.40	12.5	3.41	13.4	3.43	14.1	3.45
	31	10.6	3.47	11.2	3.48	11.8	3.50	12.2	3.51	12.3	3.51	13.2	3.53	13.9	3.55
	33	10.4	3.55	10.9	3.56	11.6	3.58	11.9	3.59	12.1	3.59	13.0	3.61	13.7	3.62
	35	10.1	3.60	10.7	3.61	11.3	3.62	11.7	3.63	11.9	3.63	12.7	3.65	13.4	3.66
	37	9.79	3.60	10.4	3.62	11.0	3.63	11.4	3.63	11.5	3.63	12.4	3.65	13.1	3.66
	39	9.42	3.56	9.99	3.57	10.6	3.58	11.0	3.58	11.2	3.59	12.0	3.60	12.7	3.60
	41	9.01	3.47	9.57	3.48	10.2	3.48	10.6	3.48	10.7	3.48	11.6	3.49	12.3	3.49
	43	8.53	3.32	9.08	3.32	9.72	3.32	10.1	3.33	10.2	3.33	11.1	3.33	11.7	3.33
	46	7.70	2.98	8.23	2.98	8.85	2.98	9.18	2.98	9.35	2.98	10.2	2.97	10.8	2.97
44 (110%)	10	12.3	2.27	12.9	2.29	13.6	2.31	13.9	2.31	14.1	2.32	15.0	2.34	15.7	2.35
	12	12.1	2.31	12.6	2.33	13.3	2.35	13.6	2.36	13.8	2.36	14.7	2.38	15.4	2.40
	14	11.8	2.38	12.4	2.40	13.1	2.42	13.4	2.43	13.6	2.43	14.5	2.46	15.2	2.47
	16	11.7	2.48	12.2	2.50	12.9	2.52	13.2	2.53	13.4	2.53	14.3	2.55	15.0	2.57
	18	11.5	2.59	12.1	2.61	12.7	2.63	13.1	2.64	13.2	2.65	14.1	2.67	14.8	2.69
	20	11.4	2.73	11.9	2.75	12.6	2.77	12.9	2.78	13.1	2.78	14.0	2.81	14.6	2.82
	21	11.3	2.80	11.9	2.82	12.5	2.84	12.9	2.85	13.0	2.85	13.9	2.88	14.6	2.89
	23	11.2	2.94	11.7	2.96	12.4	2.98	12.7	2.99	12.9	3.00	13.8	3.02	14.5	3.04
	25	11.0	3.09	11.6	3.11	12.3	3.13	12.6	3.14	12.8	3.14	13.7	3.17	14.3	3.18
	27	10.9	3.23	11.5	3.25	12.1	3.27	12.5	3.28	12.7	3.28	13.5	3.31	14.2	3.32
	29	10.7	3.36	11.3	3.38	12.0	3.40	12.3	3.41	12.5	3.41	13.4	3.43	14.1	3.45
	31	10.6	3.48	11.1	3.49	11.8	3.51	12.1	3.52	12.3	3.52	13.2	3.54	13.9	3.56
	33	10.3	3.56	10.9	3.58	11.6	3.59	11.9	3.60	12.1	3.60	13.0	3.62	13.7	3.64
	35	10.1	3.62	10.7	3.63	11.3	3.64	11.7	3.65	11.9	3.65	12.7	3.67	13.4	3.68
	37	9.80	3.63	10.4	3.64	11.0	3.65	11.4	3.66	11.6	3.66	12.4	3.68	13.1	3.68
	39	9.45	3.60	10.0	3.61	10.7	3.62	11.0	3.62	11.2	3.62	12.1	3.63	12.7	3.64
	41	9.05	3.52	9.61	3.53	10.3	3.53	10.6	3.53	10.8	3.53	11.6	3.54	12.3	3.55
	43	8.59	3.38	9.15	3.38	9.78	3.39	10.1	3.39	10.3	3.39	11.2	3.39	11.8	3.39
	46	7.79	3.07	8.33	3.06	8.95	3.06	9.28	3.06	9.45	3.06	10.3	3.06	10.9	3.05
40 (100%)	10	12.3	2.22	12.8	2.23	13.5	2.25	13.8	2.25	14.0	2.26	14.9	2.28	15.5	2.29
	12	12.0	2.27	12.6	2.28	13.2	2.30	13.6	2.31	13.8	2.31	14.7	2.33	15.3	2.35
	14	11.8	2.34	12.4	2.36	13.0	2.38	13.4	2.38	13.6	2.39	14.4	2.41	15.1	2.43
	16	11.6	2.43	12.2	2.45	12.9	2.47	13.2	2.48	13.4	2.48	14.3	2.51	14.9	2.52
	18	11.5	2.54	12.0	2.56	12.7	2.58	13.0	2.59	13.2	2.60	14.1	2.62	14.8	2.64
	20	11.3	2.66	11.9	2.68	12.5	2.70	12.9	2.71	13.1	2.72	13.9	2.74	14.6	2.76
	21	11.2	2.73	11.8	2.75	12.5	2.77	12.8	2.78	13.0	2.78	13.9	2.81	14.5	2.82
	23	11.1	2.86	11.7	2.88	12.3	2.90	12.7	2.91	12.8	2.92	13.7	2.94	14.4	2.96
	25	10.9	3.00	11.5	3.02	12.2	3.04	12.5	3.05	12.7	3.05	13.6	3.08	14.2	3.09
	27	10.8	3.13	11.4	3.15	12.0	3.17	12.4	3.18	12.5	3.19	13.4	3.21	14.1	3.23

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
40 (100%)	29	10.6	3.26	11.2	3.28	11.9	3.30	12.2	3.31	12.4	3.32	13.3	3.34	14.0	3.35
	31	10.5	3.39	11.1	3.40	11.7	3.42	12.1	3.43	12.2	3.44	13.1	3.46	13.8	3.47
	33	10.3	3.50	10.9	3.51	11.5	3.53	11.9	3.54	12.1	3.54	12.9	3.56	13.6	3.58
	35	10.1	3.59	10.7	3.61	11.4	3.62	11.7	3.63	11.9	3.63	12.8	3.65	13.4	3.67
	37	9.93	3.67	10.5	3.68	11.1	3.69	11.5	3.70	11.7	3.70	12.5	3.72	13.2	3.73
	39	9.69	3.72	10.3	3.73	10.9	3.74	11.2	3.75	11.4	3.75	12.3	3.77	13.0	3.78
	41	9.42	3.74	9.98	3.75	10.6	3.76	11.0	3.77	11.2	3.77	12.0	3.78	12.7	3.79
	43	9.12	3.74	9.68	3.75	10.3	3.75	10.7	3.76	10.8	3.76	11.7	3.77	12.4	3.78
	46	8.60	3.66	9.15	3.67	9.80	3.67	10.1	3.67	10.3	3.68	11.2	3.68	11.8	3.68
36 (90%)	10	11.0	2.04	11.5	2.05	12.0	2.07	12.4	2.08	12.5	2.08	13.3	2.10	13.9	2.11
	12	10.8	2.12	11.3	2.14	11.9	2.15	12.2	2.16	12.4	2.17	13.2	2.19	13.8	2.20
	14	10.7	2.21	11.2	2.23	11.8	2.25	12.1	2.26	12.2	2.26	13.0	2.28	13.6	2.30
	16	10.5	2.31	11.0	2.33	11.6	2.35	11.9	2.36	12.1	2.36	12.9	2.38	13.5	2.40
	18	10.4	2.42	10.9	2.44	11.5	2.46	11.8	2.46	11.9	2.47	12.8	2.49	13.4	2.50
	20	10.2	2.53	10.7	2.55	11.3	2.56	11.6	2.57	11.8	2.58	12.6	2.60	13.2	2.61
	21	10.1	2.58	10.6	2.60	11.2	2.62	11.6	2.63	11.7	2.63	12.5	2.65	13.1	2.67
	23	9.97	2.69	10.5	2.71	11.1	2.73	11.4	2.74	11.6	2.74	12.4	2.76	13.0	2.78
	25	9.82	2.80	10.3	2.82	10.9	2.84	11.2	2.85	11.4	2.85	12.2	2.87	12.8	2.89
	27	9.67	2.91	10.2	2.93	10.8	2.94	11.1	2.95	11.2	2.96	12.0	2.98	12.6	2.99
	29	9.52	3.01	10.0	3.03	10.6	3.05	10.9	3.06	11.1	3.06	11.9	3.08	12.5	3.10
	31	9.37	3.12	9.88	3.13	10.5	3.15	10.8	3.16	10.9	3.16	11.7	3.18	12.3	3.20
	33	9.22	3.22	9.73	3.24	10.3	3.25	10.6	3.26	10.8	3.27	11.6	3.29	12.2	3.30
	35	9.08	3.32	9.59	3.34	10.2	3.36	10.5	3.37	10.6	3.37	11.4	3.39	12.0	3.41
	37	8.94	3.43	9.44	3.45	10.0	3.46	10.3	3.47	10.5	3.48	11.3	3.50	11.9	3.51
	39	8.79	3.54	9.30	3.55	9.88	3.57	10.2	3.58	10.3	3.58	11.1	3.61	11.7	3.62
	41	8.64	3.65	9.15	3.66	9.74	3.68	10.0	3.69	10.2	3.70	11.0	3.72	11.6	3.73
	43	8.48	3.76	8.99	3.78	9.59	3.79	9.90	3.80	10.1	3.81	10.9	3.83	11.5	3.85
	46	8.22	3.92	8.74	3.94	9.34	3.95	9.66	3.96	9.82	3.97	10.6	3.99	11.2	4.01
32 (80%)	10	9.82	1.77	10.3	1.79	10.8	1.80	11.1	1.81	11.2	1.81	11.9	1.82	12.4	1.83
	12	9.69	1.84	10.1	1.86	10.7	1.87	10.9	1.88	11.1	1.88	11.8	1.90	12.3	1.91
	14	9.55	1.92	10.0	1.94	10.5	1.95	10.8	1.96	11.0	1.96	11.7	1.98	12.2	1.99
	16	9.41	2.01	9.87	2.03	10.4	2.04	10.7	2.05	10.8	2.05	11.5	2.07	12.1	2.08
	18	9.27	2.10	9.74	2.12	10.3	2.13	10.6	2.14	10.7	2.14	11.4	2.16	12.0	2.17
	20	9.13	2.20	9.60	2.21	10.1	2.23	10.4	2.24	10.6	2.24	11.3	2.26	11.8	2.27
	21	9.07	2.24	9.53	2.26	10.1	2.28	10.3	2.28	10.5	2.29	11.2	2.30	11.7	2.32
	23	8.93	2.34	9.39	2.36	9.92	2.37	10.2	2.38	10.3	2.38	11.1	2.40	11.6	2.41
	25	8.79	2.43	9.25	2.45	9.78	2.46	10.1	2.47	10.2	2.48	10.9	2.49	11.5	2.51
	27	8.65	2.53	9.11	2.54	9.64	2.56	9.92	2.56	10.1	2.57	10.8	2.58	11.3	2.60
	29	8.52	2.62	8.98	2.63	9.50	2.65	9.78	2.66	9.93	2.66	10.6	2.68	11.2	2.69
	31	8.39	2.71	8.84	2.72	9.37	2.74	9.65	2.75	9.79	2.75	10.5	2.77	11.0	2.78
	33	8.26	2.80	8.71	2.81	9.24	2.83	9.51	2.83	9.65	2.84	10.4	2.86	10.9	2.87
	35	8.13	2.89	8.58	2.90	9.10	2.92	9.38	2.93	9.52	2.93	10.2	2.95	10.8	2.96
	37	8.00	2.98	8.45	2.99	8.97	3.01	9.25	3.02	9.39	3.02	10.1	3.04	10.6	3.05
	39	7.87	3.07	8.32	3.09	8.85	3.10	9.12	3.11	9.27	3.11	9.97	3.13	10.5	3.15
	41	7.73	3.17	8.19	3.18	8.72	3.20	8.99	3.21	9.14	3.21	9.84	3.23	10.4	3.24
	43	7.59	3.27	8.05	3.28	8.58	3.30	8.86	3.30	9.01	3.31	9.72	3.33	10.3	3.34
	46	7.36	3.41	7.82	3.42	8.36	3.44	8.65	3.44	8.79	3.45	9.52	3.47	10.1	3.48
28 (70%)	10	8.56	1.61	8.95	1.62	9.41	1.63	9.65	1.64	9.77	1.64	10.4	1.66	10.8	1.67
	12	8.45	1.67	8.85	1.69	9.31	1.70	9.55	1.71	9.67	1.71	10.3	1.72	10.8	1.73
	14	8.33	1.75	8.73	1.76	9.20	1.77	9.44	1.78	9.56	1.78	10.2	1.80	10.7	1.81
	16	8.21	1.83	8.61	1.84	9.08	1.85	9.33	1.86	9.45	1.86	10.1	1.88	10.5	1.89
	18	8.09	1.91	8.49	1.92	8.96	1.94	9.21	1.94	9.33	1.95	9.96	1.96	10.4	1.97
	20	7.97	2.00	8.37	2.01	8.84	2.02	9.09	2.03	9.21	2.03	9.84	2.05	10.3	2.06
	21	7.91	2.04	8.31	2.05	8.78	2.07	9.03	2.07	9.15	2.08	9.78	2.09	10.2	2.10
	23	7.79	2.13	8.19	2.14	8.66	2.15	8.90	2.16	9.03	2.16	9.65	2.18	10.1	2.19
	25	7.67	2.21	8.07	2.22	8.53	2.24	8.78	2.24	8.90	2.25	9.53	2.26	10.0	2.28
	27	7.55	2.30	7.95	2.31	8.41	2.32	8.66	2.33	8.78	2.33	9.40	2.35	9.87	2.36
	29	7.43	2.38	7.83	2.39	8.29	2.40	8.54	2.41	8.66	2.41	9.28	2.43	9.75	2.44
	31	7.32	2.46	7.71	2.47	8.17	2.49	8.42	2.49	8.54	2.50	9.16	2.51	9.62	2.52
	33	7.20	2.54	7.60	2.55	8.06	2.57	8.30	2.57	8.42	2.58	9.04	2.59	9.50	2.60
	35	7.09	2.62	7.49	2.64	7.94	2.65	8.18	2.66	8.31	2.66	8.92	2.67	9.38	2.69
	37	6.98	2.71	7.37	2.72	7.83	2.73	8.07	2.74	8.19	2.74	8.81	2.76	9.27	2.77
	39	6.86	2.79	7.26	2.80	7.72	2.82	7.96	2.82	8.08	2.83	8.70	2.84	9.16	2.86
	41	6.75	2.88	7.14	2.89	7.60	2.90	7.85	2.91	7.97	2.91	8.59	2.93	9.05	2.95
	43	6.62	2.97	7.02	2.98	7.49	2.99	7.73	3.00	7.86	3.00	8.48	3.02	8.95	3.03
	46	6.42	3.09	6.83	3.10	7.30	3.12	7.55	3.13	7.67	3.13	8.30	3.15	8.78	3.16
24 (60%)	10	7.31	1.43	7.65	1.44	8.03	1.45	8.24	1.46	8.34	1.46	8.86	1.48	9.25	1.49
	12	7.21	1.49	7.55	1.50	7.94	1.51	8.15	1.52	8.26	1.52	8.78	1.54	9.18	1.55
	14	7.11	1.56	7.46	1.57	7.85	1.58	8.06	1.59	8.16	1.59	8.69	1.60	9.09	1.61
	16	7.01	1.63	7.35	1.64	7.75	1.65	7.96	1.66	8.07	1.66	8.60	1.67	9.00	1.69
	18	6.91	1.70	7.25	1.71	7.65	1.73	7.86	1.73	7.97	1.73	8.50	1.75	8.90	1.76
	20	6.80	1.78	7.15	1.79	7.55	1.80	7.76	1.81	7.86	1.81	8.40	1.83	8.80	1.84

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
24 (60%)	21	6.75	1.82	7.10	1.83	7.49	1.84	7.70	1.85	7.81	1.85	8.34	1.86	8.75	1.88
	23	6.65	1.90	6.99	1.91	7.39	1.92	7.60	1.92	7.71	1.93	8.24	1.94	8.64	1.95
	25	6.54	1.97	6.89	1.98	7.28	1.99	7.49	2.00	7.60	2.00	8.13	2.02	8.53	2.03
	27	6.44	2.05	6.79	2.06	7.18	2.07	7.39	2.07	7.50	2.08	8.03	2.09	8.43	2.10
	29	6.34	2.12	6.69	2.13	7.08	2.14	7.29	2.15	7.39	2.15	7.92	2.16	8.32	2.17
	31	6.25	2.19	6.59	2.20	6.98	2.22	7.18	2.22	7.29	2.22	7.82	2.24	8.21	2.25
	33	6.15	2.27	6.49	2.28	6.88	2.29	7.08	2.29	7.19	2.30	7.71	2.31	8.11	2.32
	35	6.05	2.34	6.39	2.35	6.78	2.36	6.99	2.37	7.09	2.37	7.62	2.38	8.01	2.39
	37	5.96	2.41	6.29	2.42	6.68	2.43	6.89	2.44	6.99	2.44	7.52	2.46	7.91	2.47
	39	5.86	2.49	6.20	2.50	6.59	2.51	6.79	2.52	6.90	2.52	7.42	2.53	7.82	2.55
	41	5.76	2.56	6.10	2.58	6.49	2.59	6.70	2.59	6.80	2.60	7.33	2.61	7.73	2.62
	43	5.65	2.64	6.00	2.65	6.39	2.67	6.60	2.67	6.71	2.68	7.24	2.69	7.64	2.70
	46	5.48	2.75	5.83	2.77	6.23	2.78	6.44	2.79	6.55	2.79	7.09	2.81	7.50	2.82
19 (50%)	10	5.85	1.15	6.12	1.16	6.42	1.16	6.59	1.17	6.67	1.17	7.09	1.18	7.40	1.18
	12	5.77	1.19	6.04	1.20	6.35	1.21	6.52	1.22	6.60	1.22	7.02	1.23	7.34	1.24
	14	5.69	1.25	5.96	1.26	6.28	1.27	6.45	1.27	6.53	1.27	6.95	1.28	7.28	1.29
	16	5.61	1.30	5.88	1.31	6.20	1.32	6.37	1.33	6.45	1.33	6.88	1.34	7.20	1.35
	18	5.52	1.36	5.80	1.37	6.12	1.38	6.29	1.39	6.37	1.39	6.80	1.40	7.12	1.41
	20	5.44	1.42	5.72	1.43	6.04	1.44	6.21	1.45	6.29	1.45	6.72	1.46	7.04	1.47
	21	5.40	1.45	5.68	1.46	5.99	1.47	6.16	1.48	6.25	1.48	6.68	1.50	7.00	1.50
	23	5.32	1.51	5.59	1.52	5.91	1.54	6.08	1.54	6.16	1.54	6.59	1.56	6.92	1.57
	25	5.24	1.57	5.51	1.58	5.83	1.60	6.00	1.60	6.08	1.60	6.51	1.62	6.83	1.62
	27	5.16	1.63	5.43	1.64	5.74	1.65	5.91	1.66	6.00	1.66	6.42	1.67	6.74	1.68
	29	5.08	1.69	5.35	1.70	5.66	1.71	5.83	1.72	5.91	1.72	6.34	1.73	6.66	1.74
	31	5.00	1.75	5.27	1.76	5.58	1.77	5.75	1.78	5.83	1.78	6.25	1.79	6.57	1.80
	33	4.92	1.81	5.19	1.82	5.50	1.83	5.67	1.83	5.75	1.84	6.17	1.85	6.49	1.85
	35	4.84	1.87	5.11	1.88	5.42	1.89	5.59	1.89	5.67	1.90	6.09	1.91	6.41	1.91
	37	4.77	1.94	5.04	1.95	5.35	1.95	5.51	1.96	5.60	1.96	6.01	1.97	6.33	1.97
	39	4.69	2.00	4.96	2.01	5.27	2.02	5.44	2.02	5.52	2.02	5.94	2.03	6.26	2.04
	41	4.61	2.08	4.88	2.08	5.19	2.09	5.36	2.09	5.44	2.09	5.86	2.10	6.18	2.10
	43	4.52	2.15	4.80	2.15	5.11	2.16	5.28	2.16	5.37	2.16	5.79	2.16	6.11	2.17
	46	4.39	2.26	4.66	2.26	4.98	2.26	5.15	2.26	5.24	2.26	5.67	2.27	6.00	2.27
16 (40%)	10	4.91	1.05	5.13	1.06	5.39	1.06	5.53	1.07	5.60	1.07	5.95	1.08	6.21	1.08
	12	4.84	1.09	5.07	1.10	5.33	1.11	5.47	1.11	5.54	1.11	5.90	1.12	6.16	1.13
	14	4.78	1.14	5.01	1.15	5.27	1.16	5.41	1.16	5.48	1.16	5.84	1.17	6.11	1.18
	16	4.71	1.19	4.94	1.20	5.20	1.21	5.34	1.21	5.42	1.22	5.77	1.23	6.05	1.23
	18	4.64	1.24	4.87	1.25	5.14	1.26	5.28	1.27	5.35	1.27	5.71	1.28	5.98	1.29
	20	4.57	1.30	4.80	1.31	5.07	1.32	5.21	1.32	5.28	1.33	5.64	1.34	5.91	1.35
	21	4.53	1.33	4.76	1.34	5.03	1.35	5.17	1.35	5.24	1.35	5.60	1.37	5.88	1.37
	23	4.46	1.38	4.69	1.39	4.96	1.40	5.10	1.41	5.17	1.41	5.53	1.42	5.80	1.43
	25	4.39	1.44	4.63	1.45	4.89	1.46	5.03	1.46	5.10	1.46	5.46	1.48	5.73	1.48
	27	4.33	1.49	4.56	1.50	4.82	1.51	4.96	1.52	5.03	1.52	5.39	1.53	5.66	1.54
	29	4.26	1.55	4.49	1.56	4.75	1.56	4.89	1.57	4.96	1.57	5.32	1.58	5.59	1.59
	31	4.19	1.60	4.42	1.61	4.68	1.62	4.82	1.62	4.89	1.62	5.25	1.63	5.52	1.64
	33	4.13	1.65	4.36	1.66	4.62	1.67	4.76	1.68	4.83	1.68	5.18	1.69	5.45	1.69
	35	4.06	1.71	4.29	1.72	4.55	1.73	4.69	1.73	4.76	1.73	5.11	1.74	5.38	1.75
	37	4.00	1.77	4.23	1.78	4.49	1.78	4.63	1.79	4.70	1.79	5.05	1.80	5.31	1.80
	39	3.93	1.83	4.16	1.84	4.42	1.84	4.56	1.85	4.63	1.85	4.98	1.85	5.25	1.86
	41	3.87	1.90	4.10	1.90	4.36	1.91	4.50	1.91	4.57	1.91	4.92	1.91	5.19	1.92
	43	3.80	1.96	4.03	1.97	4.29	1.97	4.43	1.97	4.50	1.97	4.86	1.98	5.13	1.98
	46	3.68	2.06	3.91	2.06	4.18	2.07	4.33	2.07	4.40	2.07	4.76	2.07	5.03	2.07

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating Capacity]

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
52 (130%)	-15.0	8.51	2.98	8.42	3.01	8.36	3.06	8.33	3.09	8.32	3.13	8.29	3.20
	-13.0	8.57	2.91	8.51	2.96	8.48	3.02	8.47	3.06	8.46	3.10	8.45	3.18
	-11.0	8.80	2.89	8.77	2.95	8.75	3.02	8.75	3.06	8.75	3.11	8.75	3.19
	-10.0	8.97	2.89	8.95	2.96	8.94	3.04	8.94	3.08	8.94	3.12	8.94	3.21
	-9.1	9.15	2.90	9.13	2.98	9.13	3.06	9.13	3.10	9.14	3.14	9.14	3.23
	-7.6	9.49	2.93	9.49	3.01	9.49	3.10	9.50	3.14	9.50	3.19	9.50	3.28
	-5.6	10.0	3.00	10.0	3.08	10.0	3.17	10.1	3.22	10.1	3.27	10.0	3.36
	-3.7	10.6	3.07	10.6	3.16	10.6	3.25	10.6	3.30	10.6	3.35	10.6	3.45
	-0.7	11.6	3.21	11.6	3.30	11.6	3.39	11.6	3.44	11.5	3.49	11.5	3.59
	0.0	11.8	3.24	11.8	3.33	11.8	3.43	11.8	3.48	11.8	3.52	11.7	3.62
	1.0	12.1	3.29	12.1	3.38	12.1	3.47	12.1	3.52	12.1	3.57	12.0	3.66
	2.2	12.5	3.34	12.5	3.43	12.5	3.53	12.4	3.57	12.4	3.62	12.3	3.71
	4.1	13.1	3.41	13.1	3.51	13.0	3.60	13.0	3.64	12.9	3.68	12.8	3.77
	6.0	13.7	3.48	13.6	3.56	13.5	3.65	13.4	3.69	13.4	3.73	13.2	3.81
	7.9	14.1	3.52	14.0	3.60	13.9	3.68	13.8	3.72	13.7	3.75	13.5	3.82
	9.8	14.5	3.53	14.4	3.61	14.2	3.68	14.1	3.71	14.0	3.74	13.7	3.80
	11.8	14.8	3.51	14.6	3.58	14.4	3.64	14.2	3.66	14.1	3.69	13.8	3.73
	13.7	14.9	3.45	14.7	3.50	14.4	3.55	14.2	3.57	14.1	3.59	13.7	3.61
	15.0	14.9	3.38	14.6	3.43	14.3	3.46	14.1	3.48	13.9	3.49	13.5	3.50
	18.0	14.5	3.12	14.1	3.14	13.7	3.16	13.4	3.16	13.2	3.15	12.6	3.13
48 (120%)	-15.0	8.52	2.98	8.43	3.02	8.37	3.07	8.35	3.10	8.34	3.13	8.32	3.21
	-13.0	8.58	2.91	8.52	2.97	8.49	3.03	8.48	3.07	8.47	3.11	8.47	3.19
	-11.0	8.81	2.89	8.78	2.96	8.77	3.03	8.76	3.07	8.76	3.11	8.77	3.20
	-10.0	8.97	2.90	8.96	2.97	8.95	3.05	8.95	3.09	8.96	3.13	8.96	3.22
	-9.1	9.15	2.91	9.15	2.99	9.15	3.07	9.15	3.11	9.15	3.15	9.15	3.24
	-7.6	9.51	2.94	9.51	3.02	9.51	3.11	9.52	3.15	9.52	3.20	9.52	3.29
	-5.6	10.1	3.01	10.1	3.09	10.1	3.18	10.1	3.23	10.1	3.28	10.1	3.37
	-3.7	10.6	3.09	10.7	3.18	10.7	3.27	10.7	3.31	10.6	3.36	10.6	3.45
	-0.7	11.6	3.22	11.6	3.32	11.6	3.41	11.6	3.45	11.6	3.50	11.5	3.59
	0.0	11.9	3.26	11.9	3.35	11.8	3.44	11.8	3.49	11.8	3.53	11.7	3.62
	1.0	12.2	3.30	12.2	3.39	12.1	3.49	12.1	3.53	12.1	3.57	12.0	3.66
	2.2	12.6	3.35	12.6	3.45	12.5	3.54	12.5	3.58	12.4	3.62	12.3	3.70
	4.1	13.2	3.43	13.1	3.52	13.0	3.60	13.0	3.64	12.9	3.68	12.8	3.75
	6.0	13.7	3.49	13.6	3.57	13.5	3.65	13.4	3.69	13.3	3.72	13.1	3.78
	7.9	14.1	3.52	14.0	3.60	13.9	3.67	13.8	3.70	13.7	3.73	13.4	3.78
	9.8	14.5	3.53	14.3	3.60	14.1	3.66	14.0	3.69	13.8	3.71	13.5	3.75
	11.8	14.7	3.49	14.5	3.56	14.2	3.60	14.1	3.62	13.9	3.64	13.5	3.66
	13.7	14.8	3.42	14.5	3.47	14.2	3.50	14.0	3.52	13.8	3.53	13.3	3.53
	15.0	14.7	3.34	14.4	3.38	14.0	3.41	13.8	3.41	13.5	3.42	13.0	3.41
	18.0	14.2	3.06	13.8	3.08	13.2	3.07	13.0	3.07	12.6	3.06	12.0	3.02
44 (110%)	-15.0	8.53	3.02	8.46	3.07	8.42	3.13	8.40	3.16	8.39	3.20	8.37	3.28
	-13.0	8.60	2.96	8.57	3.02	8.54	3.09	8.53	3.13	8.53	3.17	8.53	3.25
	-11.0	8.85	2.95	8.83	3.02	8.83	3.10	8.82	3.14	8.82	3.18	8.82	3.27
	-10.0	9.03	2.96	9.02	3.03	9.02	3.11	9.02	3.15	9.02	3.20	9.02	3.29
	-9.1	9.21	2.97	9.21	3.05	9.21	3.13	9.21	3.18	9.21	3.22	9.21	3.31
	-7.6	9.58	3.01	9.58	3.09	9.59	3.18	9.59	3.22	9.58	3.27	9.57	3.36
	-5.6	10.1	3.08	10.1	3.17	10.1	3.25	10.1	3.30	10.1	3.34	10.1	3.44
	-3.7	10.7	3.16	10.7	3.25	10.7	3.34	10.7	3.38	10.7	3.43	10.7	3.52
	-0.7	11.7	3.30	11.7	3.39	11.7	3.48	11.7	3.52	11.6	3.56	11.5	3.64
	0.0	12.0	3.33	12.0	3.42	11.9	3.51	11.9	3.55	11.8	3.59	11.7	3.67
	1.0	12.3	3.38	12.3	3.47	12.2	3.55	12.2	3.59	12.1	3.63	12.0	3.71
	2.2	12.7	3.43	12.6	3.52	12.6	3.60	12.5	3.64	12.4	3.68	12.3	3.75
	4.1	13.3	3.50	13.2	3.58	13.1	3.66	13.0	3.70	12.9	3.73	12.7	3.79
	6.0	13.8	3.56	13.7	3.63	13.5	3.70	13.4	3.73	13.3	3.76	13.0	3.81
	7.9	14.2	3.58	14.0	3.65	13.8	3.71	13.7	3.74	13.6	3.76	13.2	3.80
	9.8	14.5	3.58	14.3	3.64	14.0	3.69	13.9	3.71	13.7	3.73	13.3	3.76
	11.8	14.7	3.54	14.4	3.59	14.1	3.62	13.9	3.64	13.7	3.65	13.2	3.66
	13.7	14.7	3.45	14.3	3.49	13.9	3.51	13.7	3.52	13.5	3.52	12.9	3.52
	15.0	14.6	3.36	14.2	3.39	13.7	3.40	13.5	3.40	13.2	3.40	12.6	3.39
	18.0	13.9	3.06	13.5	3.06	12.9	3.05	12.6	3.04	12.2	3.02	11.5	2.98
40 (100%)	-15.0	8.53	3.02	8.44	3.06	8.39	3.12	8.37	3.15	8.35	3.18	8.33	3.26
	-13.0	8.58	2.95	8.53	3.01	8.50	3.08	8.49	3.11	8.48	3.15	8.48	3.24
	-11.0	8.81	2.94	8.78	3.01	8.77	3.08	8.77	3.12	8.77	3.16	8.77	3.25
	-10.0	8.97	2.94	8.96	3.02	8.96	3.09	8.96	3.14	8.96	3.18	8.96	3.27
	-9.1	9.15	2.96	9.15	3.03	9.15	3.11	9.15	3.16	9.16	3.20	9.16	3.29
	-7.6	9.51	2.99	9.51	3.07	9.52	3.16	9.52	3.20	9.52	3.25	9.52	3.34
	-5.6	10.1	3.06	10.1	3.14	10.1	3.23	10.1	3.28	10.1	3.33	10.1	3.42
	-3.7	10.7	3.14	10.7	3.23	10.7	3.32	10.7	3.36	10.7	3.41	10.6	3.50
	-0.7	11.7	3.28	11.7	3.37	11.6	3.46	11.6	3.51	11.6	3.55	11.5	3.64
	0.0	11.9	3.31	11.9	3.40	11.9	3.49	11.8	3.54	11.8	3.58	11.7	3.67

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
40 (100%)	1.0	12.2	3.36	12.2	3.45	12.2	3.54	12.1	3.58	12.1	3.62	12.0	3.71
	2.2	12.6	3.41	12.6	3.50	12.5	3.59	12.5	3.63	12.4	3.67	12.3	3.75
	4.1	13.2	3.48	13.1	3.57	13.1	3.65	13.0	3.69	12.9	3.73	12.7	3.80
	6.0	13.7	3.54	13.6	3.62	13.5	3.70	13.4	3.73	13.3	3.77	13.1	3.83
	7.9	14.2	3.57	14.0	3.65	13.8	3.72	13.7	3.75	13.6	3.78	13.3	3.82
	9.8	14.5	3.58	14.3	3.65	14.1	3.70	13.9	3.73	13.8	3.75	13.4	3.78
	11.8	14.7	3.54	14.4	3.60	14.1	3.64	14.0	3.66	13.8	3.67	13.3	3.69
	13.7	14.7	3.46	14.4	3.51	14.0	3.54	13.8	3.55	13.6	3.55	13.1	3.56
	15.0	14.6	3.38	14.2	3.41	13.8	3.43	13.6	3.44	13.3	3.44	12.8	3.43
	18.0	14.0	3.08	13.5	3.10	13.0	3.09	12.7	3.08	12.3	3.07	11.6	3.03
36 (90%)	-15.0	7.56	2.94	7.50	2.98	7.46	3.04	7.45	3.07	7.43	3.10	7.41	3.17
	-13.0	7.73	2.92	7.69	2.98	7.66	3.04	7.65	3.08	7.65	3.11	7.63	3.19
	-11.0	8.01	2.93	7.98	2.99	7.96	3.07	7.96	3.10	7.96	3.15	7.95	3.23
	-10.0	8.18	2.94	8.16	3.01	8.15	3.09	8.14	3.13	8.14	3.17	8.13	3.26
	-9.1	8.35	2.96	8.33	3.03	8.33	3.11	8.32	3.15	8.32	3.19	8.32	3.28
	-7.6	8.67	2.99	8.66	3.06	8.65	3.15	8.65	3.19	8.65	3.24	8.64	3.33
	-5.6	9.15	3.04	9.14	3.12	9.13	3.21	9.13	3.26	9.12	3.30	9.11	3.40
	-3.7	9.63	3.10	9.62	3.19	9.61	3.28	9.61	3.32	9.60	3.37	9.58	3.47
	-0.7	10.4	3.21	10.4	3.30	10.4	3.39	10.4	3.44	10.4	3.49	10.3	3.59
	0.0	10.6	3.23	10.6	3.32	10.6	3.42	10.6	3.47	10.6	3.52	10.5	3.62
	1.0	10.9	3.27	10.9	3.36	10.8	3.46	10.8	3.50	10.8	3.55	10.8	3.65
	2.2	11.2	3.32	11.2	3.41	11.1	3.50	11.1	3.55	11.1	3.60	11.1	3.70
	4.1	11.7	3.39	11.7	3.48	11.6	3.57	11.6	3.62	11.6	3.67	11.5	3.77
	6.0	12.2	3.45	12.2	3.54	12.1	3.64	12.1	3.68	12.0	3.73	12.0	3.83
	7.9	12.7	3.52	12.6	3.60	12.5	3.70	12.5	3.74	12.5	3.79	12.4	3.88
	9.8	13.1	3.57	13.1	3.66	13.0	3.75	12.9	3.79	12.9	3.84	12.8	3.92
	11.8	13.6	3.62	13.5	3.70	13.4	3.79	13.3	3.83	13.3	3.87	13.1	3.95
	13.7	14.0	3.65	13.9	3.73	13.7	3.80	13.6	3.84	13.5	3.88	13.3	3.95
	15.0	14.2	3.65	14.1	3.72	13.9	3.80	13.8	3.83	13.7	3.86	13.4	3.92
	18.0	14.6	3.59	14.4	3.65	14.1	3.69	13.9	3.71	13.7	3.73	13.3	3.76
32 (80%)	-15.0	6.65	2.80	6.65	2.86	6.65	2.93	6.65	2.97	6.65	3.00	6.65	3.08
	-13.0	6.95	2.85	6.94	2.92	6.94	2.99	6.93	3.02	6.93	3.06	6.93	3.15
	-11.0	7.29	2.90	7.28	2.97	7.27	3.04	7.27	3.08	7.26	3.12	7.25	3.21
	-10.0	7.48	2.93	7.47	3.00	7.46	3.07	7.45	3.11	7.44	3.15	7.43	3.24
	-9.1	7.66	2.95	7.65	3.02	7.63	3.10	7.62	3.14	7.61	3.18	7.60	3.26
	-7.6	7.97	2.99	7.95	3.06	7.93	3.14	7.92	3.18	7.91	3.22	7.89	3.31
	-5.6	8.41	3.04	8.38	3.12	8.35	3.19	8.33	3.23	8.32	3.28	8.29	3.37
	-3.7	8.83	3.09	8.79	3.17	8.75	3.24	8.73	3.29	8.71	3.33	8.68	3.42
	-0.7	9.49	3.16	9.44	3.24	9.38	3.32	9.36	3.36	9.34	3.41	9.29	3.50
	0.0	9.64	3.18	9.58	3.26	9.53	3.34	9.50	3.38	9.48	3.43	9.44	3.52
	1.0	9.85	3.21	9.79	3.29	9.74	3.37	9.71	3.41	9.69	3.45	9.64	3.55
	2.2	10.1	3.24	10.0	3.32	9.99	3.40	9.96	3.44	9.94	3.49	9.90	3.58
	4.1	10.5	3.29	10.4	3.37	10.4	3.45	10.4	3.50	10.3	3.55	10.3	3.65
	6.0	10.9	3.34	10.9	3.43	10.8	3.52	10.8	3.56	10.8	3.61	10.7	3.72
	7.9	11.3	3.40	11.3	3.49	11.2	3.59	11.2	3.64	11.2	3.69	11.2	3.80
	9.8	11.8	3.48	11.7	3.57	11.7	3.67	11.7	3.73	11.7	3.78	11.7	3.90
	11.8	12.3	3.56	12.3	3.66	12.2	3.77	12.2	3.83	12.2	3.88	12.2	4.00
	13.7	12.8	3.65	12.8	3.75	12.8	3.86	12.7	3.92	12.7	3.98	12.7	4.10
	15.0	13.2	3.70	13.2	3.81	13.1	3.92	13.1	3.98	13.1	4.04	13.0	4.15
	18.0	14.0	3.79	13.9	3.90	13.8	4.00	13.8	4.05	13.7	4.09	13.4	4.18
28 (70%)	-15.0	5.79	2.73	5.79	2.79	5.79	2.85	5.79	2.89	5.79	2.92	5.79	3.00
	-13.0	6.05	2.78	6.04	2.84	6.04	2.91	6.03	2.95	6.03	2.99	6.03	3.06
	-11.0	6.35	2.83	6.34	2.89	6.33	2.97	6.32	3.00	6.32	3.04	6.31	3.12
	-10.0	6.51	2.85	6.50	2.92	6.49	2.99	6.48	3.03	6.48	3.07	6.47	3.15
	-9.1	6.67	2.87	6.66	2.94	6.64	3.02	6.63	3.06	6.63	3.10	6.61	3.18
	-7.6	6.94	2.91	6.92	2.98	6.90	3.06	6.89	3.10	6.88	3.14	6.86	3.22
	-5.6	7.32	2.96	7.30	3.03	7.27	3.11	7.25	3.15	7.24	3.19	7.21	3.28
	-3.7	7.69	3.01	7.65	3.08	7.62	3.16	7.60	3.20	7.58	3.24	7.55	3.33
	-0.7	8.26	3.08	8.21	3.16	8.17	3.24	8.14	3.28	8.12	3.32	8.09	3.41
	0.0	8.39	3.10	8.34	3.17	8.29	3.25	8.27	3.30	8.25	3.34	8.21	3.43
	1.0	8.57	3.12	8.52	3.20	8.47	3.28	8.45	3.32	8.43	3.37	8.39	3.46
	2.2	8.79	3.15	8.74	3.23	8.69	3.31	8.67	3.35	8.65	3.40	8.61	3.49
	4.1	9.14	3.20	9.09	3.28	9.04	3.36	9.02	3.41	9.00	3.46	8.97	3.55
	6.0	9.49	3.26	9.44	3.34	9.40	3.43	9.38	3.47	9.37	3.52	9.34	3.62
	7.9	9.86	3.32	9.82	3.40	9.78	3.50	9.77	3.54	9.76	3.60	9.74	3.70
	9.8	10.3	3.39	10.2	3.48	10.2	3.58	10.2	3.63	10.2	3.68	10.2	3.80
	11.8	10.7	3.47	10.7	3.57	10.7	3.67	10.6	3.73	10.6	3.78	10.6	3.90
	13.7	11.2	3.56	11.1	3.66	11.1	3.76	11.1	3.82	11.1	3.88	11.0	3.99
	15.0	11.5	3.61	11.5	3.71	11.4	3.82	11.4	3.88	11.4	3.93	11.3	4.04
	18.0	12.2	3.70	12.1	3.80	12.0	3.90	12.0	3.94	11.9	3.99	11.7	4.08
24 (60%)	-15.0	4.99	2.40	4.99	2.45	4.99	2.51	4.99	2.54	4.99	2.58	4.99	2.65
	-13.0	5.21	2.45	5.21	2.50	5.20	2.56	5.20	2.59	5.20	2.63	5.20	2.70
	-11.0	5.47	2.49	5.46	2.55	5.45	2.61	5.45	2.64	5.45	2.68	5.44	2.75

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
24 (60%)	-10.0	5.61	2.51	5.60	2.57	5.59	2.63	5.59	2.67	5.58	2.70	5.57	2.78
	-9.1	5.75	2.53	5.74	2.59	5.72	2.66	5.72	2.69	5.71	2.73	5.70	2.80
	-7.6	5.98	2.56	5.97	2.62	5.95	2.69	5.94	2.73	5.93	2.76	5.92	2.84
	-5.6	6.31	2.61	6.29	2.67	6.26	2.74	6.25	2.77	6.24	2.81	6.22	2.89
	-3.7	6.62	2.65	6.60	2.71	6.56	2.78	6.55	2.82	6.53	2.86	6.51	2.93
	-0.7	7.12	2.71	7.08	2.78	7.04	2.85	7.02	2.89	7.00	2.92	6.97	3.00
	0.0	7.23	2.73	7.19	2.79	7.15	2.86	7.13	2.90	7.11	2.94	7.08	3.02
	1.0	7.39	2.75	7.35	2.82	7.30	2.89	7.28	2.92	7.26	2.96	7.23	3.04
	2.2	7.58	2.78	7.53	2.84	7.49	2.91	7.47	2.95	7.45	2.99	7.42	3.07
	4.1	7.88	2.82	7.83	2.89	7.79	2.96	7.77	3.00	7.75	3.04	7.73	3.13
	6.0	8.18	2.86	8.14	2.94	8.10	3.02	8.08	3.06	8.07	3.10	8.05	3.19
	7.9	8.50	2.92	8.46	2.99	8.43	3.08	8.42	3.12	8.41	3.17	8.39	3.26
	9.8	8.84	2.98	8.81	3.06	8.78	3.15	8.77	3.19	8.77	3.24	8.75	3.34
	11.8	9.23	3.05	9.20	3.14	9.18	3.23	9.17	3.28	9.16	3.33	9.15	3.43
	13.7	9.62	3.13	9.60	3.22	9.57	3.31	9.56	3.36	9.55	3.41	9.51	3.51
	15.0	9.90	3.18	9.87	3.27	9.84	3.37	9.82	3.41	9.80	3.46	9.74	3.56
	18.0	10.5	3.26	10.5	3.35	10.4	3.43	10.3	3.47	10.3	3.51	10.1	3.59
19 (50%)	-15.0	3.94	2.17	3.94	2.22	3.94	2.27	3.94	2.30	3.94	2.32	3.94	2.39
	-13.0	4.12	2.21	4.11	2.26	4.11	2.31	4.10	2.34	4.10	2.37	4.10	2.44
	-11.0	4.32	2.25	4.31	2.30	4.30	2.36	4.30	2.39	4.30	2.42	4.29	2.49
	-10.0	4.43	2.27	4.42	2.32	4.41	2.38	4.41	2.41	4.41	2.44	4.40	2.51
	-9.1	4.54	2.28	4.53	2.34	4.52	2.40	4.51	2.43	4.51	2.46	4.50	2.53
	-7.6	4.72	2.31	4.71	2.37	4.69	2.43	4.69	2.46	4.68	2.49	4.67	2.56
	-5.6	4.98	2.35	4.96	2.41	4.94	2.47	4.93	2.50	4.92	2.54	4.91	2.61
	-3.7	5.23	2.39	5.20	2.45	5.18	2.51	5.17	2.54	5.16	2.58	5.14	2.65
	-0.7	5.61	2.45	5.58	2.51	5.55	2.57	5.54	2.61	5.53	2.64	5.50	2.71
	0.0	5.70	2.46	5.67	2.52	5.64	2.59	5.63	2.62	5.61	2.66	5.59	2.73
	1.0	5.83	2.48	5.80	2.54	5.76	2.61	5.75	2.64	5.74	2.68	5.71	2.75
	2.2	5.98	2.50	5.94	2.57	5.91	2.63	5.90	2.67	5.89	2.70	5.87	2.78
	4.1	6.22	2.54	6.18	2.61	6.15	2.68	6.14	2.71	6.13	2.75	6.11	2.83
	6.0	6.46	2.59	6.43	2.66	6.40	2.73	6.39	2.77	6.38	2.81	6.37	2.89
	7.9	6.71	2.64	6.69	2.71	6.66	2.79	6.66	2.83	6.65	2.87	6.65	2.96
	9.8	6.99	2.70	6.96	2.78	6.95	2.86	6.94	2.90	6.94	2.94	6.94	3.04
	11.8	7.30	2.77	7.28	2.85	7.27	2.94	7.27	2.98	7.26	3.03	7.26	3.12
	13.7	7.61	2.84	7.60	2.93	7.59	3.01	7.58	3.06	7.57	3.11	7.55	3.20
	15.0	7.84	2.88	7.82	2.97	7.81	3.06	7.79	3.11	7.78	3.15	7.74	3.25
	18.0	8.34	2.96	8.30	3.05	8.24	3.13	8.20	3.17	8.15	3.20	8.02	3.28
16 (40%)	-15.0	3.33	1.90	3.33	1.94	3.33	1.99	3.33	2.01	3.33	2.03	3.33	2.09
	-13.0	3.48	1.93	3.48	1.98	3.47	2.03	3.47	2.05	3.47	2.08	3.47	2.13
	-11.0	3.65	1.97	3.65	2.01	3.64	2.06	3.64	2.09	3.64	2.12	3.64	2.18
	-10.0	3.75	1.98	3.74	2.03	3.74	2.08	3.73	2.11	3.73	2.14	3.72	2.20
	-9.1	3.84	2.00	3.83	2.05	3.82	2.10	3.82	2.13	3.81	2.15	3.81	2.21
	-7.6	4.00	2.03	3.99	2.08	3.98	2.13	3.97	2.15	3.96	2.18	3.95	2.24
	-5.6	4.22	2.06	4.20	2.11	4.19	2.17	4.18	2.19	4.17	2.22	4.15	2.28
	-3.7	4.43	2.10	4.41	2.15	4.39	2.20	4.38	2.23	4.36	2.26	4.34	2.32
	-0.7	4.76	2.15	4.73	2.20	4.70	2.25	4.69	2.28	4.67	2.31	4.65	2.37
	0.0	4.84	2.16	4.81	2.21	4.77	2.27	4.76	2.29	4.75	2.32	4.72	2.38
	1.0	4.94	2.18	4.91	2.23	4.88	2.28	4.86	2.31	4.85	2.34	4.82	2.40
	2.2	5.07	2.20	5.03	2.25	5.00	2.30	4.99	2.33	4.97	2.36	4.95	2.42
	4.1	5.27	2.23	5.23	2.28	5.20	2.34	5.18	2.37	5.17	2.40	5.15	2.47
	6.0	5.47	2.26	5.43	2.32	5.40	2.38	5.39	2.41	5.37	2.44	5.36	2.51
	7.9	5.67	2.31	5.64	2.37	5.61	2.43	5.60	2.46	5.59	2.49	5.58	2.56
	9.8	5.89	2.35	5.87	2.42	5.84	2.48	5.83	2.51	5.82	2.55	5.81	2.62
	11.8	6.14	2.41	6.12	2.47	6.10	2.54	6.09	2.58	6.08	2.61	6.06	2.69
	13.7	6.40	2.46	6.37	2.53	6.35	2.60	6.34	2.64	6.32	2.67	6.29	2.75
	15.0	6.57	2.49	6.55	2.57	6.52	2.64	6.50	2.67	6.48	2.71	6.44	2.78
	18.0	6.97	2.55	6.92	2.62	6.86	2.68	6.82	2.71	6.77	2.74	6.65	2.80

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A8UW486FA3[FM48AH U33]

[Cooling capacity]

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
63 (130%)	10	16.4	2.94	17.2	2.97	18.1	2.99	18.6	3.00	18.8	3.00	20.0	3.03	20.9	3.05
	12	16.1	3.00	16.8	3.02	17.7	3.05	18.2	3.06	18.4	3.06	19.6	3.09	20.5	3.11
	14	15.8	3.09	16.5	3.12	17.4	3.14	17.9	3.15	18.1	3.16	19.3	3.19	20.2	3.21
	16	15.5	3.22	16.3	3.25	17.2	3.27	17.6	3.28	17.9	3.29	19.0	3.32	19.9	3.34
	18	15.3	3.46	16.1	3.49	17.0	3.51	17.4	3.52	17.7	3.53	18.8	3.56	19.7	3.58
	20	15.2	3.54	15.9	3.57	16.8	3.60	17.2	3.61	17.5	3.62	18.6	3.64	19.5	3.67
	21	15.1	3.64	15.8	3.67	16.7	3.69	17.2	3.70	17.4	3.71	18.6	3.74	19.4	3.76
	23	14.9	3.82	15.7	3.85	16.5	3.88	17.0	3.89	17.2	3.89	18.4	3.92	19.3	3.95
	25	14.7	4.01	15.5	4.04	16.4	4.07	16.8	4.08	17.1	4.08	18.2	4.11	19.1	4.14
	27	14.5	4.19	15.3	4.22	16.2	4.24	16.6	4.25	16.9	4.26	18.0	4.29	18.9	4.31
	29	14.3	4.36	15.1	4.39	16.0	4.41	16.4	4.41	16.7	4.42	17.8	4.44	18.7	4.47
	31	14.1	4.49	14.8	4.52	15.7	4.54	16.2	4.55	16.4	4.55	17.6	4.57	18.5	4.60
	33	13.8	4.60	14.5	4.62	15.4	4.63	15.9	4.64	16.1	4.64	17.3	4.66	18.2	4.69
	35	13.4	4.65	14.2	4.67	15.0	4.68	15.5	4.69	15.7	4.69	16.9	4.71	17.8	4.73
	37	13.0	4.65	13.7	4.67	14.6	4.68	15.1	4.68	15.3	4.68	16.5	4.69	17.4	4.71
	39	12.5	4.59	13.2	4.60	14.1	4.61	14.6	4.61	14.8	4.61	16.0	4.62	16.8	4.63
	41	11.9	4.45	12.6	4.46	13.5	4.46	14.0	4.46	14.2	4.46	15.4	4.47	16.2	4.48
	43	11.2	4.24	12.0	4.25	12.8	4.25	13.3	4.24	13.5	4.24	14.6	4.24	15.5	4.25
	46	10.1	3.78	10.8	3.78	11.6	3.77	12.1	3.77	12.3	3.77	13.4	3.76	14.3	3.76
58 (120%)	10	16.0	2.90	16.7	2.92	17.6	2.94	18.0	2.95	18.3	2.96	19.4	2.98	20.3	3.00
	12	15.6	2.95	16.4	2.97	17.2	2.99	17.7	3.01	17.9	3.01	19.1	3.04	19.9	3.06
	14	15.3	3.04	16.1	3.06	16.9	3.09	17.4	3.10	17.6	3.10	18.8	3.13	19.6	3.15
	16	15.1	3.16	15.8	3.19	16.7	3.21	17.1	3.22	17.4	3.23	18.5	3.26	19.4	3.28
	18	14.9	3.31	15.6	3.34	16.5	3.36	16.9	3.38	17.2	3.38	18.3	3.41	19.2	3.43
	20	14.7	3.48	15.5	3.51	16.3	3.53	16.8	3.55	17.0	3.55	18.1	3.58	19.0	3.61
	21	14.6	3.57	15.4	3.60	16.2	3.62	16.7	3.64	16.9	3.64	18.0	3.67	18.9	3.70
	23	14.5	3.76	15.2	3.78	16.1	3.81	16.5	3.82	16.7	3.83	17.9	3.86	18.7	3.88
	25	14.3	3.94	15.0	3.97	15.9	3.99	16.3	4.01	16.6	4.01	17.7	4.04	18.6	4.07
	27	14.1	4.12	14.9	4.15	15.7	4.17	16.2	4.18	16.4	4.19	17.5	4.22	18.4	4.24
	29	13.9	4.29	14.7	4.31	15.5	4.33	16.0	4.35	16.2	4.35	17.3	4.38	18.2	4.40
	31	13.7	4.43	14.4	4.45	15.3	4.47	15.7	4.48	16.0	4.49	17.1	4.51	18.0	4.53
	33	13.4	4.53	14.1	4.55	15.0	4.57	15.4	4.58	15.7	4.59	16.8	4.61	17.7	4.63
	35	13.1	4.59	13.8	4.61	14.6	4.63	15.1	4.64	15.3	4.64	16.5	4.66	17.3	4.68
	37	12.7	4.60	13.4	4.62	14.2	4.63	14.7	4.64	14.9	4.64	16.1	4.66	16.9	4.67
	39	12.2	4.55	12.9	4.56	13.8	4.57	14.2	4.58	14.4	4.58	15.6	4.59	16.4	4.60
	41	11.6	4.43	12.4	4.44	13.2	4.45	13.7	4.45	13.9	4.45	15.0	4.46	15.9	4.46
	43	11.0	4.24	11.7	4.24	12.6	4.25	13.0	4.25	13.2	4.25	14.3	4.25	15.2	4.25
	46	10.0	3.81	10.6	3.81	11.4	3.80	11.9	3.80	12.1	3.80	13.2	3.80	14.0	3.79
53 (110%)	10	15.4	2.85	16.1	2.87	17.0	2.89	17.4	2.90	17.6	2.90	18.8	2.93	19.6	2.95
	12	15.1	2.90	15.8	2.92	16.6	2.94	17.1	2.95	17.3	2.96	18.4	2.98	19.2	3.00
	14	14.8	2.98	15.5	3.01	16.3	3.03	16.8	3.04	17.0	3.05	18.1	3.08	18.9	3.10
	16	14.6	3.10	15.3	3.13	16.1	3.15	16.5	3.16	16.8	3.17	17.9	3.20	18.7	3.22
	18	14.4	3.25	15.1	3.27	15.9	3.30	16.3	3.31	16.6	3.32	17.7	3.35	18.5	3.37
	20	14.2	3.41	14.9	3.44	15.7	3.47	16.2	3.48	16.4	3.48	17.5	3.51	18.3	3.54
	21	14.1	3.50	14.8	3.53	15.6	3.55	16.1	3.57	16.3	3.57	17.4	3.60	18.2	3.63
	23	14.0	3.68	14.7	3.71	15.5	3.73	15.9	3.75	16.1	3.75	17.3	3.78	18.1	3.81
	25	13.8	3.87	14.5	3.89	15.3	3.92	15.8	3.93	16.0	3.94	17.1	3.97	17.9	3.99
	27	13.6	4.05	14.3	4.07	15.2	4.10	15.6	4.11	15.8	4.11	16.9	4.14	17.8	4.16
	29	13.4	4.21	14.1	4.23	15.0	4.26	15.4	4.27	15.6	4.27	16.7	4.30	17.6	4.32
	31	13.2	4.35	13.9	4.37	14.7	4.39	15.2	4.41	15.4	4.41	16.5	4.44	17.4	4.46
	33	12.9	4.46	13.7	4.48	14.5	4.50	14.9	4.51	15.1	4.51	16.2	4.54	17.1	4.55
	35	12.6	4.53	13.3	4.55	14.2	4.56	14.6	4.57	14.8	4.58	15.9	4.60	16.8	4.61
	37	12.3	4.55	13.0	4.56	13.8	4.58	14.2	4.58	14.4	4.59	15.5	4.60	16.4	4.62
	39	11.8	4.51	12.5	4.52	13.3	4.53	13.8	4.54	14.0	4.54	15.1	4.55	15.9	4.56
	41	11.3	4.41	12.0	4.42	12.8	4.42	13.3	4.43	13.5	4.43	14.6	4.43	15.4	4.44
	43	10.7	4.24	11.4	4.24	12.2	4.24	12.7	4.24	12.9	4.24	13.9	4.25	14.8	4.25
	46	9.7	3.84	10.4	3.84	11.2	3.83	11.6	3.83	11.8	3.83	12.9	3.83	13.7	3.83
48 (100%)	10	14.8	2.76	15.5	2.78	16.2	2.80	16.7	2.81	16.9	2.81	17.9	2.83	18.7	2.85
	12	14.5	2.82	15.2	2.84	16.0	2.86	16.4	2.87	16.6	2.88	17.7	2.90	18.5	2.92
	14	14.2	2.91	14.9	2.94	15.7	2.96	16.1	2.97	16.3	2.97	17.4	3.00	18.2	3.02
	16	14.0	3.03	14.7	3.05	15.5	3.08	15.9	3.09	16.1	3.09	17.2	3.12	18.0	3.14
	18	13.8	3.17	14.5	3.19	15.3	3.21	15.7	3.23	15.9	3.23	17.0	3.26	17.8	3.28
	20	13.6	3.32	14.3	3.34	15.1	3.37	15.5	3.38	15.7	3.38	16.8	3.41	17.6	3.44
	21	13.5	3.40	14.2	3.42	15.0	3.45	15.4	3.46	15.6	3.47	16.7	3.50	17.5	3.52
	23	13.4	3.56	14.0	3.59	14.8	3.61	15.3	3.63	15.5	3.63	16.5	3.66	17.3	3.68
	25	13.2	3.73	13.9	3.76	14.7	3.78	15.1	3.79	15.3	3.80	16.4	3.83	17.2	3.85
	27	13.0	3.90	13.7	3.93	14.5	3.95	14.9	3.96	15.1	3.97	16.2	4.00	17.0	4.02

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
48 (100%)	29	12.8	4.06	13.5	4.09	14.3	4.11	14.7	4.12	14.9	4.13	16.0	4.16	16.8	4.18
	31	12.6	4.22	13.3	4.24	14.1	4.26	14.5	4.27	14.8	4.28	15.8	4.30	16.6	4.32
	33	12.4	4.35	13.1	4.37	13.9	4.40	14.3	4.41	14.5	4.41	15.6	4.44	16.4	4.46
	35	12.2	4.47	12.9	4.49	13.7	4.51	14.1	4.52	14.3	4.52	15.4	4.55	16.2	4.57
	37	12.0	4.57	12.6	4.58	13.4	4.60	13.8	4.61	14.1	4.61	15.1	4.63	15.9	4.65
	39	11.7	4.63	12.4	4.64	13.1	4.66	13.6	4.67	13.8	4.67	14.8	4.69	15.6	4.70
	41	11.4	4.66	12.0	4.67	12.8	4.69	13.2	4.69	13.4	4.70	14.5	4.71	15.3	4.72
	43	11.0	4.65	11.7	4.66	12.4	4.67	12.9	4.68	13.1	4.68	14.1	4.69	14.9	4.70
	46	10.4	4.56	11.0	4.57	11.8	4.57	12.2	4.57	12.4	4.58	13.5	4.58	14.3	4.59
43 (90%)	10	13.2	2.23	13.8	2.25	14.5	2.26	14.9	2.27	15.0	2.27	16.0	2.29	16.7	2.31
	12	13.0	2.32	13.6	2.34	14.3	2.36	14.7	2.36	14.9	2.37	15.8	2.39	16.6	2.40
	14	12.8	2.42	13.4	2.44	14.2	2.46	14.5	2.47	14.7	2.47	15.7	2.49	16.4	2.51
	16	12.6	2.53	13.3	2.55	14.0	2.57	14.4	2.58	14.5	2.58	15.5	2.60	16.2	2.62
	18	12.5	2.65	13.1	2.67	13.8	2.68	14.2	2.69	14.4	2.70	15.3	2.72	16.1	2.74
	20	12.3	2.77	12.9	2.78	13.6	2.80	14.0	2.81	14.2	2.82	15.1	2.84	15.9	2.86
	21	12.2	2.83	12.8	2.84	13.5	2.86	13.9	2.87	14.1	2.88	15.0	2.90	15.8	2.92
	23	12.0	2.95	12.6	2.96	13.3	2.98	13.7	2.99	13.9	3.00	14.9	3.02	15.6	3.04
	25	11.8	3.06	12.4	3.08	13.1	3.10	13.5	3.11	13.7	3.12	14.7	3.14	15.4	3.15
	27	11.6	3.18	12.2	3.20	12.9	3.22	13.3	3.23	13.5	3.23	14.5	3.25	15.2	3.27
	29	11.4	3.30	12.1	3.31	12.8	3.33	13.1	3.34	13.3	3.35	14.3	3.37	15.0	3.38
	31	11.3	3.41	11.9	3.43	12.6	3.45	13.0	3.45	13.1	3.46	14.1	3.48	14.8	3.50
	33	11.1	3.52	11.7	3.54	12.4	3.56	12.8	3.57	13.0	3.57	13.9	3.59	14.6	3.61
	35	10.9	3.63	11.5	3.65	12.2	3.67	12.6	3.68	12.8	3.68	13.7	3.71	14.4	3.72
	37	10.7	3.75	11.4	3.77	12.1	3.79	12.4	3.80	12.6	3.80	13.6	3.82	14.3	3.84
	39	10.6	3.87	11.2	3.89	11.9	3.90	12.3	3.91	12.4	3.92	13.4	3.94	14.1	3.96
	41	10.4	3.99	11.0	4.01	11.7	4.03	12.1	4.04	12.3	4.04	13.2	4.06	13.9	4.08
	43	10.2	4.11	10.8	4.13	11.5	4.15	11.9	4.16	12.1	4.16	13.1	4.19	13.8	4.20
	46	9.9	4.29	10.5	4.30	11.2	4.32	11.6	4.33	11.8	4.34	12.8	4.36	13.5	4.38
38 (80%)	10	11.6	1.92	12.1	1.94	12.8	1.95	13.1	1.96	13.3	1.96	14.1	1.98	14.7	1.99
	12	11.5	2.00	12.0	2.01	12.6	2.03	12.9	2.04	13.1	2.04	14.0	2.06	14.6	2.07
	14	11.3	2.09	11.8	2.10	12.5	2.12	12.8	2.13	13.0	2.13	13.8	2.15	14.4	2.16
	16	11.1	2.18	11.7	2.20	12.3	2.21	12.6	2.22	12.8	2.23	13.7	2.24	14.3	2.26
	18	11.0	2.28	11.5	2.30	12.2	2.31	12.5	2.32	12.7	2.33	13.5	2.34	14.1	2.36
	20	10.8	2.38	11.4	2.40	12.0	2.42	12.3	2.42	12.5	2.43	13.3	2.45	14.0	2.46
	21	10.7	2.43	11.3	2.45	11.9	2.47	12.2	2.48	12.4	2.48	13.3	2.50	13.9	2.51
	23	10.6	2.54	11.1	2.55	11.7	2.57	12.1	2.58	12.2	2.58	13.1	2.60	13.7	2.62
	25	10.4	2.64	10.9	2.66	11.6	2.67	11.9	2.68	12.1	2.68	12.9	2.70	13.6	2.72
	27	10.2	2.74	10.8	2.76	11.4	2.77	11.7	2.78	11.9	2.78	12.8	2.80	13.4	2.82
	29	10.1	2.84	10.6	2.86	11.2	2.87	11.6	2.88	11.7	2.88	12.6	2.90	13.2	2.92
	31	9.9	2.94	10.5	2.95	11.1	2.97	11.4	2.98	11.6	2.98	12.4	3.00	13.0	3.01
	33	9.8	3.03	10.3	3.05	10.9	3.07	11.3	3.07	11.4	3.08	12.3	3.10	12.9	3.11
	35	9.6	3.13	10.2	3.15	10.8	3.16	11.1	3.17	11.3	3.18	12.1	3.19	12.7	3.21
	37	9.5	3.23	10.0	3.25	10.6	3.26	10.9	3.27	11.1	3.28	11.9	3.29	12.6	3.31
	39	9.3	3.33	9.8	3.35	10.5	3.37	10.8	3.37	11.0	3.38	11.8	3.40	12.4	3.41
	41	9.2	3.44	9.7	3.45	10.3	3.47	10.6	3.48	10.8	3.48	11.6	3.50	12.3	3.52
	43	9.0	3.54	9.5	3.56	10.2	3.58	10.5	3.58	10.7	3.59	11.5	3.61	12.1	3.62
	46	8.7	3.69	9.3	3.71	9.9	3.73	10.2	3.73	10.4	3.74	11.3	3.76	11.9	3.77
34 (70%)	10	10.5	1.70	10.9	1.71	11.5	1.73	11.8	1.73	11.9	1.74	12.7	1.75	13.2	1.76
	12	10.3	1.77	10.8	1.78	11.4	1.80	11.7	1.80	11.8	1.81	12.6	1.82	13.1	1.83
	14	10.2	1.85	10.7	1.86	11.2	1.88	11.5	1.88	11.7	1.89	12.4	1.90	13.0	1.91
	16	10.0	1.93	10.5	1.94	11.1	1.96	11.4	1.97	11.5	1.97	12.3	1.99	12.9	2.00
	18	9.9	2.02	10.4	2.03	10.9	2.05	11.3	2.06	11.4	2.06	12.2	2.08	12.7	2.09
	20	9.7	2.11	10.2	2.12	10.8	2.14	11.1	2.15	11.3	2.15	12.0	2.17	12.6	2.18
	21	9.7	2.16	10.2	2.17	10.7	2.18	11.0	2.19	11.2	2.20	11.9	2.21	12.5	2.23
	23	9.5	2.25	10.0	2.26	10.6	2.28	10.9	2.28	11.0	2.29	11.8	2.30	12.4	2.32
	25	9.4	2.34	9.9	2.35	10.4	2.37	10.7	2.37	10.9	2.38	11.6	2.39	12.2	2.41
	27	9.2	2.43	9.7	2.44	10.3	2.46	10.6	2.46	10.7	2.47	11.5	2.48	12.1	2.49
	29	9.1	2.52	9.6	2.53	10.1	2.54	10.4	2.55	10.6	2.55	11.3	2.57	11.9	2.58
	31	8.9	2.60	9.4	2.61	10.0	2.63	10.3	2.64	10.4	2.64	11.2	2.66	11.8	2.67
	33	8.8	2.69	9.3	2.70	9.8	2.71	10.1	2.72	10.3	2.72	11.0	2.74	11.6	2.75
	35	8.7	2.77	9.1	2.79	9.7	2.80	10.0	2.81	10.2	2.81	10.9	2.83	11.5	2.84
	37	8.5	2.86	9.0	2.88	9.6	2.89	9.9	2.90	10.0	2.90	10.8	2.92	11.3	2.93
	39	8.4	2.95	8.9	2.97	9.4	2.98	9.7	2.99	9.9	2.99	10.6	3.01	11.2	3.02
	41	8.25	3.04	8.7	3.06	9.3	3.07	9.6	3.08	9.7	3.08	10.5	3.10	11.1	3.11
	43	8.09	3.14	8.6	3.15	9.1	3.16	9.4	3.17	9.6	3.18	10.4	3.19	10.9	3.21
	46	7.84	3.27	8.3	3.28	8.9	3.30	9.2	3.31	9.4	3.31	10.1	3.33	10.7	3.34
29 (60%)	10	8.9	1.37	9.3	1.38	9.8	1.39	10.0	1.40	10.1	1.40	10.8	1.41	11.3	1.42
	12	8.8	1.42	9.2	1.44	9.7	1.45	9.9	1.45	10.0	1.46	10.7	1.47	11.2	1.48
	14	8.7	1.49	9.1	1.50	9.6	1.51	9.8	1.52	9.9	1.52	10.6	1.53	11.1	1.54
	16	8.5	1.56	8.9	1.57	9.4	1.58	9.7	1.58	9.8	1.59	10.5	1.60	11.0	1.61
	18	8.4	1.63	8.8	1.64	9.3	1.65	9.6	1.66	9.7	1.66	10.3	1.67	10.8	1.68
	20	8.28	1.70	8.7	1.71	9.2	1.72	9.4	1.73	9.6	1.73	10.2	1.75	10.7	1.76

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
29 (60%)	21	8.21	1.74	8.6	1.75	9.1	1.76	9.4	1.77	9.5	1.77	10.2	1.78	10.6	1.79
	23	8.09	1.81	8.5	1.82	9.0	1.83	9.2	1.84	9.4	1.84	10.0	1.86	10.5	1.87
	25	7.96	1.89	8.4	1.90	8.9	1.91	9.1	1.91	9.2	1.91	9.9	1.93	10.4	1.94
	27	7.84	1.96	8.26	1.97	8.7	1.98	9.0	1.98	9.1	1.99	9.8	2.00	10.3	2.01
	29	7.72	2.03	8.13	2.04	8.6	2.05	8.9	2.05	9.0	2.06	9.6	2.07	10.1	2.08
	31	7.60	2.10	8.01	2.11	8.5	2.12	8.7	2.12	8.9	2.13	9.5	2.14	10.0	2.15
	33	7.48	2.17	7.89	2.18	8.4	2.19	8.6	2.19	8.7	2.19	9.4	2.21	9.9	2.22
	35	7.36	2.24	7.78	2.25	8.25	2.26	8.5	2.26	8.6	2.26	9.3	2.28	9.7	2.29
	37	7.25	2.31	7.66	2.32	8.13	2.33	8.4	2.33	8.5	2.34	9.1	2.35	9.6	2.36
	39	7.13	2.38	7.54	2.39	8.01	2.40	8.27	2.41	8.4	2.41	9.0	2.42	9.5	2.43
	41	7.01	2.45	7.42	2.46	7.90	2.47	8.15	2.48	8.28	2.48	8.9	2.50	9.4	2.51
	43	6.88	2.52	7.29	2.54	7.78	2.55	8.03	2.56	8.16	2.56	8.8	2.57	9.3	2.59
	46	6.67	2.63	7.09	2.64	7.58	2.66	7.84	2.66	7.97	2.67	8.6	2.68	9.1	2.69
24 (50%)	10	7.32	1.06	7.66	1.07	8.05	1.08	8.25	1.08	8.4	1.08	8.9	1.09	9.3	1.10
	12	7.23	1.11	7.57	1.12	7.96	1.12	8.17	1.13	8.27	1.13	8.8	1.14	9.2	1.15
	14	7.13	1.15	7.47	1.16	7.86	1.17	8.07	1.18	8.18	1.18	8.7	1.19	9.1	1.20
	16	7.02	1.21	7.37	1.22	7.77	1.23	7.98	1.23	8.08	1.23	8.6	1.24	9.0	1.25
	18	6.92	1.26	7.27	1.27	7.66	1.28	7.88	1.29	7.98	1.29	8.5	1.30	8.9	1.31
	20	6.82	1.32	7.16	1.33	7.56	1.34	7.77	1.34	7.88	1.35	8.4	1.36	8.8	1.37
	21	6.76	1.35	7.11	1.36	7.51	1.37	7.72	1.37	7.83	1.37	8.4	1.39	8.8	1.39
	23	6.66	1.40	7.01	1.41	7.40	1.42	7.61	1.43	7.72	1.43	8.26	1.44	8.7	1.45
	25	6.56	1.46	6.90	1.47	7.30	1.48	7.51	1.48	7.62	1.49	8.15	1.50	8.6	1.51
	27	6.46	1.51	6.80	1.52	7.19	1.53	7.40	1.54	7.51	1.54	8.04	1.55	8.4	1.56
	29	6.36	1.57	6.70	1.58	7.09	1.59	7.30	1.59	7.41	1.59	7.93	1.60	8.3	1.61
	31	6.26	1.62	6.60	1.63	6.99	1.64	7.20	1.65	7.30	1.65	7.83	1.66	8.23	1.67
	33	6.16	1.68	6.50	1.69	6.89	1.70	7.10	1.70	7.20	1.70	7.73	1.71	8.13	1.72
	35	6.06	1.74	6.40	1.74	6.79	1.75	7.00	1.76	7.11	1.76	7.63	1.77	8.03	1.77
	37	5.97	1.79	6.31	1.80	6.70	1.81	6.90	1.81	7.01	1.81	7.53	1.82	7.93	1.83
	39	5.87	1.86	6.21	1.86	6.60	1.87	6.81	1.87	6.91	1.87	7.44	1.88	7.83	1.89
	41	5.77	1.92	6.11	1.93	6.50	1.93	6.71	1.94	6.82	1.94	7.34	1.94	7.74	1.95
	43	5.67	1.99	6.01	2.00	6.40	2.00	6.61	2.00	6.72	2.00	7.25	2.01	7.65	2.01
	46	5.49	2.09	5.84	2.09	6.24	2.10	6.46	2.10	6.56	2.10	7.10	2.10	7.51	2.10
19 (40%)	10	5.86	0.85	6.13	0.85	6.44	0.86	6.60	0.86	6.68	0.87	7.10	0.87	7.41	0.88
	12	5.78	0.88	6.05	0.89	6.37	0.90	6.53	0.90	6.62	0.90	7.04	0.91	7.36	0.91
	14	5.70	0.92	5.98	0.93	6.29	0.94	6.46	0.94	6.54	0.94	6.97	0.95	7.29	0.96
	16	5.62	0.96	5.90	0.97	6.21	0.98	6.38	0.98	6.47	0.98	6.89	0.99	7.22	1.00
	18	5.54	1.01	5.81	1.02	6.13	1.02	6.30	1.03	6.39	1.03	6.81	1.04	7.14	1.04
	20	5.45	1.05	5.73	1.06	6.05	1.07	6.22	1.07	6.30	1.07	6.73	1.08	7.06	1.09
	21	5.41	1.07	5.69	1.08	6.01	1.09	6.18	1.09	6.26	1.10	6.69	1.11	7.01	1.11
	23	5.33	1.12	5.60	1.13	5.92	1.14	6.09	1.14	6.18	1.14	6.60	1.15	6.93	1.16
	25	5.25	1.16	5.52	1.17	5.84	1.18	6.01	1.18	6.09	1.19	6.52	1.20	6.84	1.20
	27	5.17	1.21	5.44	1.22	5.76	1.22	5.92	1.23	6.01	1.23	6.43	1.24	6.75	1.25
	29	5.09	1.25	5.36	1.26	5.67	1.27	5.84	1.27	5.92	1.27	6.35	1.28	6.67	1.29
	31	5.01	1.30	5.28	1.30	5.59	1.31	5.76	1.31	5.84	1.32	6.26	1.32	6.58	1.33
	33	4.93	1.34	5.20	1.35	5.51	1.35	5.68	1.36	5.76	1.36	6.18	1.37	6.50	1.37
	35	4.85	1.39	5.12	1.39	5.43	1.40	5.60	1.40	5.68	1.40	6.10	1.41	6.42	1.41
	37	4.78	1.43	5.05	1.44	5.36	1.44	5.52	1.45	5.61	1.45	6.03	1.45	6.34	1.46
	39	4.70	1.48	4.97	1.49	5.28	1.49	5.45	1.50	5.53	1.50	5.95	1.50	6.27	1.51
	41	4.62	1.54	4.89	1.54	5.20	1.54	5.37	1.55	5.45	1.55	5.88	1.55	6.19	1.55
	43	4.53	1.59	4.81	1.59	5.12	1.60	5.29	1.60	5.38	1.60	5.80	1.60	6.12	1.60
	46	4.39	1.67	4.67	1.67	4.99	1.67	5.16	1.67	5.25	1.67	5.68	1.68	6.01	1.68

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
63 (130%)	-15.0	10.3	3.61	10.2	3.66	10.2	3.72	10.1	3.76	10.1	3.79	10.1	3.88
	-13.0	10.4	3.53	10.3	3.59	10.3	3.67	10.3	3.71	10.3	3.76	10.3	3.86
	-11.0	10.7	3.51	10.7	3.58	10.6	3.67	10.6	3.72	10.6	3.77	10.6	3.87
	-10.0	10.9	3.51	10.9	3.59	10.9	3.69	10.9	3.74	10.9	3.79	10.9	3.90
	-9.1	11.1	3.52	11.1	3.61	11.1	3.71	11.1	3.76	11.1	3.81	11.1	3.93
	-7.6	11.5	3.56	11.5	3.66	11.5	3.76	11.5	3.81	11.5	3.87	11.5	3.98
	-5.6	12.2	3.64	12.2	3.74	12.2	3.85	12.2	3.91	12.2	3.96	12.2	4.08
	-3.7	12.9	3.73	12.9	3.83	12.9	3.95	12.9	4.01	12.9	4.07	12.9	4.18
	-0.7	14.1	3.89	14.1	4.00	14.1	4.12	14.0	4.18	14.0	4.24	14.0	4.35
	0.0	14.4	3.93	14.3	4.04	14.3	4.16	14.3	4.22	14.3	4.28	14.2	4.39
	1.0	14.8	3.99	14.7	4.10	14.7	4.22	14.7	4.27	14.7	4.33	14.6	4.44
	2.2	15.2	4.05	15.2	4.16	15.2	4.28	15.1	4.34	15.1	4.39	15.0	4.50
	4.1	15.9	4.14	15.9	4.25	15.8	4.37	15.8	4.42	15.7	4.47	15.6	4.57
	6.0	16.6	4.22	16.5	4.33	16.4	4.43	16.3	4.48	16.3	4.53	16.1	4.62
	7.9	17.2	4.27	17.0	4.37	16.9	4.47	16.8	4.51	16.7	4.56	16.4	4.63
	9.8	17.6	4.29	17.5	4.38	17.2	4.46	17.1	4.50	17.0	4.54	16.7	4.61
	11.8	18.0	4.26	17.7	4.34	17.5	4.41	17.3	4.45	17.1	4.48	16.7	4.52
	13.7	18.1	4.18	17.8	4.25	17.5	4.31	17.3	4.34	17.1	4.36	16.6	4.39
	15.0	18.1	4.10	17.7	4.16	17.4	4.21	17.1	4.22	16.9	4.24	16.3	4.25
	18.0	17.6	3.79	17.2	3.82	16.6	3.83	16.3	3.83	16.0	3.83	15.3	3.80
58 (120%)	-15.0	10.2	3.72	10.1	3.77	10.0	3.84	10.0	3.87	10.0	3.92	9.98	4.01
	-13.0	10.3	3.64	10.2	3.71	10.2	3.79	10.2	3.83	10.2	3.88	10.2	3.98
	-11.0	10.6	3.62	10.5	3.70	10.5	3.79	10.5	3.84	10.5	3.89	10.5	4.00
	-10.0	10.8	3.62	10.8	3.71	10.7	3.81	10.7	3.86	10.7	3.91	10.7	4.02
	-9.1	11.0	3.64	11.0	3.73	11.0	3.83	11.0	3.88	11.0	3.94	11.0	4.05
	-7.6	11.4	3.68	11.4	3.78	11.4	3.88	11.4	3.94	11.4	4.00	11.4	4.11
	-5.6	12.1	3.76	12.1	3.87	12.1	3.98	12.1	4.03	12.1	4.09	12.1	4.21
	-3.7	12.8	3.85	12.8	3.97	12.8	4.08	12.8	4.14	12.8	4.20	12.7	4.31
	-0.7	14.0	4.03	14.0	4.14	13.9	4.26	13.9	4.32	13.9	4.37	13.8	4.48
	0.0	14.2	4.07	14.2	4.18	14.2	4.30	14.2	4.35	14.1	4.41	14.0	4.52
	1.0	14.6	4.13	14.6	4.24	14.6	4.35	14.5	4.41	14.5	4.46	14.4	4.57
	2.2	15.1	4.19	15.1	4.31	15.0	4.42	15.0	4.47	14.9	4.52	14.8	4.62
	4.1	15.8	4.28	15.7	4.40	15.6	4.50	15.6	4.55	15.5	4.60	15.3	4.69
	6.0	16.4	4.36	16.3	4.46	16.2	4.56	16.1	4.61	16.0	4.65	15.7	4.73
	7.9	17.0	4.40	16.8	4.50	16.6	4.59	16.5	4.63	16.4	4.66	16.1	4.73
	9.8	17.4	4.41	17.2	4.50	16.9	4.57	16.8	4.60	16.6	4.63	16.2	4.68
	11.8	17.6	4.37	17.4	4.44	17.1	4.50	16.9	4.53	16.7	4.55	16.2	4.58
	13.7	17.7	4.27	17.4	4.33	17.0	4.38	16.8	4.39	16.5	4.41	15.9	4.41
	15.0	17.6	4.17	17.3	4.22	16.8	4.26	16.5	4.26	16.2	4.27	15.6	4.26
	18.0	17.0	3.82	16.5	3.84	15.9	3.84	15.5	3.83	15.2	3.82	14.3	3.77
53 (110%)	-15.0	10.1	3.87	10.0	3.94	9.97	4.01	9.95	4.05	9.94	4.10	9.92	4.20
	-13.0	10.2	3.80	10.2	3.88	10.1	3.97	10.1	4.01	10.1	4.06	10.1	4.17
	-11.0	10.5	3.78	10.5	3.87	10.5	3.97	10.5	4.02	10.5	4.08	10.5	4.19
	-10.0	10.7	3.79	10.7	3.89	10.7	3.99	10.7	4.05	10.7	4.10	10.7	4.22
	-9.1	10.9	3.81	10.9	3.91	10.9	4.02	10.9	4.07	10.9	4.13	10.9	4.25
	-7.6	11.3	3.86	11.4	3.96	11.4	4.07	11.4	4.13	11.4	4.19	11.3	4.31
	-5.6	12.0	3.95	12.0	4.06	12.0	4.17	12.0	4.23	12.0	4.29	12.0	4.41
	-3.7	12.7	4.05	12.7	4.17	12.7	4.28	12.7	4.34	12.7	4.39	12.6	4.51
	-0.7	13.9	4.23	13.9	4.35	13.8	4.46	13.8	4.51	13.8	4.57	13.7	4.67
	0.0	14.2	4.27	14.2	4.39	14.1	4.50	14.1	4.55	14.0	4.61	13.9	4.71
	1.0	14.6	4.33	14.5	4.45	14.5	4.55	14.4	4.61	14.4	4.66	14.2	4.76
	2.2	15.0	4.40	15.0	4.51	14.9	4.61	14.8	4.66	14.7	4.71	14.6	4.81
	4.1	15.7	4.49	15.6	4.60	15.5	4.69	15.4	4.74	15.3	4.78	15.1	4.86
	6.0	16.3	4.56	16.2	4.66	16.0	4.75	15.9	4.78	15.8	4.82	15.4	4.89
	7.9	16.8	4.60	16.6	4.68	16.4	4.76	16.2	4.79	16.1	4.82	15.7	4.88
	9.8	17.2	4.59	16.9	4.67	16.6	4.73	16.4	4.76	16.2	4.78	15.8	4.82
	11.8	17.4	4.54	17.1	4.60	16.7	4.64	16.5	4.66	16.2	4.68	15.7	4.69
	13.7	17.4	4.42	17.0	4.47	16.5	4.50	16.3	4.51	16.0	4.51	15.3	4.51
	15.0	17.3	4.31	16.8	4.35	16.3	4.36	16.0	4.36	15.7	4.36	15.0	4.34
	18.0	16.5	3.92	15.9	3.93	15.3	3.91	14.9	3.90	14.5	3.87	13.6	3.82
48 (100%)	-15.0	9.98	3.65	9.88	3.70	9.82	3.77	9.79	3.81	9.77	3.85	9.75	3.94
	-13.0	10.0	3.57	9.98	3.64	9.95	3.72	9.94	3.77	9.93	3.81	9.92	3.92
	-11.0	10.3	3.55	10.3	3.64	10.3	3.73	10.3	3.77	10.3	3.82	10.3	3.93
	-10.0	10.5	3.56	10.5	3.65	10.5	3.74	10.5	3.79	10.5	3.85	10.5	3.96
	-9.1	10.7	3.57	10.7	3.67	10.7	3.77	10.7	3.82	10.7	3.87	10.7	3.98
	-7.6	11.1	3.62	11.1	3.72	11.1	3.82	11.1	3.87	11.1	3.93	11.1	4.04
	-5.6	11.8	3.70	11.8	3.80	11.8	3.91	11.8	3.97	11.8	4.02	11.8	4.14
	-3.7	12.5	3.79	12.5	3.90	12.5	4.01	12.5	4.07	12.5	4.13	12.4	4.24
	-0.7	13.6	3.96	13.6	4.08	13.6	4.19	13.6	4.24	13.6	4.29	13.5	4.40
	0.0	13.9	4.00	13.9	4.12	13.9	4.23	13.8	4.28	13.8	4.33	13.7	4.44

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
48 (100%)	1.0	14.3	4.06	14.3	4.17	14.2	4.28	14.2	4.33	14.1	4.38	14.0	4.48
	2.2	14.8	4.12	14.7	4.23	14.7	4.34	14.6	4.39	14.5	4.44	14.4	4.53
	4.1	15.4	4.21	15.4	4.32	15.3	4.42	15.2	4.47	15.1	4.51	14.9	4.60
	6.0	16.1	4.28	16.0	4.38	15.8	4.48	15.7	4.52	15.6	4.56	15.3	4.63
	7.9	16.6	4.32	16.4	4.42	16.2	4.50	16.1	4.53	15.9	4.57	15.6	4.63
	9.8	16.9	4.33	16.7	4.41	16.5	4.48	16.3	4.51	16.1	4.53	15.7	4.58
	11.8	17.2	4.28	16.9	4.35	16.5	4.40	16.3	4.43	16.1	4.44	15.6	4.47
	13.7	17.2	4.18	16.8	4.24	16.4	4.28	16.2	4.29	15.9	4.30	15.3	4.30
	15.0	17.1	4.08	16.7	4.13	16.2	4.15	15.9	4.16	15.6	4.16	14.9	4.15
	18.0	16.3	3.73	15.8	3.74	15.2	3.74	14.8	3.73	14.4	3.71	13.6	3.66
43 (90%)	-15.0	8.81	3.38	8.74	3.43	8.69	3.49	8.68	3.53	8.66	3.56	8.63	3.64
	-13.0	9.01	3.36	8.96	3.43	8.93	3.50	8.92	3.54	8.91	3.58	8.90	3.67
	-11.0	9.33	3.37	9.30	3.44	9.28	3.53	9.27	3.57	9.27	3.62	9.26	3.72
	-10.0	9.53	3.38	9.51	3.46	9.49	3.55	9.49	3.59	9.49	3.64	9.48	3.75
	-9.1	9.73	3.40	9.71	3.48	9.70	3.57	9.70	3.62	9.70	3.67	9.69	3.77
	-7.6	10.1	3.43	10.1	3.52	10.1	3.62	10.1	3.67	10.1	3.72	10.1	3.83
	-5.6	10.7	3.50	10.6	3.59	10.6	3.69	10.6	3.74	10.6	3.80	10.6	3.91
	-3.7	11.2	3.57	11.2	3.67	11.2	3.77	11.2	3.82	11.2	3.88	11.2	3.99
	-0.7	12.2	3.69	12.1	3.79	12.1	3.90	12.1	3.95	12.1	4.01	12.1	4.13
	0.0	12.4	3.72	12.4	3.82	12.3	3.93	12.3	3.99	12.3	4.04	12.3	4.16
	1.0	12.7	3.76	12.7	3.87	12.6	3.97	12.6	4.03	12.6	4.09	12.6	4.20
	2.2	13.1	3.81	13.0	3.92	13.0	4.03	13.0	4.08	13.0	4.14	12.9	4.25
	4.1	13.7	3.89	13.6	4.00	13.6	4.11	13.5	4.16	13.5	4.22	13.4	4.33
	6.0	14.2	3.97	14.2	4.07	14.1	4.18	14.1	4.24	14.0	4.29	13.9	4.40
	7.9	14.8	4.04	14.7	4.15	14.6	4.25	14.6	4.30	14.5	4.36	14.4	4.46
	9.8	15.3	4.11	15.2	4.21	15.1	4.31	15.1	4.36	15.0	4.41	14.9	4.51
	11.8	15.9	4.16	15.7	4.26	15.6	4.35	15.5	4.40	15.4	4.45	15.3	4.54
	13.7	16.3	4.19	16.2	4.28	16.0	4.37	15.9	4.41	15.8	4.46	15.5	4.54
	15.0	16.6	4.20	16.4	4.28	16.2	4.36	16.1	4.40	15.9	4.44	15.6	4.51
	18.0	17.0	4.13	16.7	4.19	16.4	4.25	16.2	4.27	16.0	4.29	15.5	4.32
38 (80%)	-15.0	7.70	3.06	7.70	3.13	7.70	3.20	7.69	3.24	7.70	3.28	7.70	3.37
	-13.0	8.04	3.12	8.03	3.19	8.03	3.27	8.02	3.31	8.02	3.35	8.02	3.44
	-11.0	8.44	3.17	8.43	3.25	8.42	3.33	8.41	3.37	8.40	3.41	8.40	3.51
	-10.0	8.66	3.20	8.65	3.28	8.63	3.36	8.62	3.40	8.61	3.44	8.60	3.54
	-9.1	8.87	3.22	8.85	3.30	8.83	3.38	8.82	3.43	8.81	3.47	8.79	3.57
	-7.6	9.23	3.26	9.21	3.35	9.18	3.43	9.17	3.47	9.15	3.52	9.13	3.62
	-5.6	9.73	3.32	9.70	3.40	9.66	3.49	9.65	3.53	9.63	3.58	9.59	3.68
	-3.7	10.2	3.38	10.2	3.46	10.1	3.55	10.1	3.59	10.1	3.64	10.0	3.74
	-0.7	11.0	3.46	10.9	3.54	10.9	3.63	10.8	3.68	10.8	3.72	10.8	3.82
	0.0	11.2	3.48	11.1	3.56	11.0	3.65	11.0	3.70	11.0	3.74	10.9	3.85
	1.0	11.4	3.50	11.3	3.59	11.3	3.68	11.2	3.73	11.2	3.77	11.2	3.88
	2.2	11.7	3.54	11.6	3.62	11.6	3.71	11.5	3.76	11.5	3.81	11.5	3.92
	4.1	12.2	3.59	12.1	3.68	12.0	3.77	12.0	3.82	12.0	3.87	11.9	3.99
	6.0	12.6	3.65	12.6	3.75	12.5	3.84	12.5	3.89	12.5	3.95	12.4	4.06
	7.9	13.1	3.72	13.1	3.82	13.0	3.92	13.0	3.98	13.0	4.03	13.0	4.16
	9.8	13.6	3.80	13.6	3.90	13.6	4.01	13.5	4.07	13.5	4.13	13.5	4.26
	11.8	14.2	3.89	14.2	4.00	14.2	4.12	14.2	4.18	14.1	4.24	14.1	4.37
	13.7	14.9	3.98	14.8	4.10	14.8	4.22	14.8	4.28	14.7	4.35	14.7	4.48
	15.0	15.3	4.05	15.2	4.17	15.2	4.29	15.2	4.35	15.1	4.41	15.0	4.54
	18.0	16.2	4.14	16.1	4.26	16.0	4.37	15.9	4.42	15.8	4.47	15.6	4.57
34 (70%)	-15.0	6.90	2.81	6.90	2.87	6.89	2.93	6.89	2.97	6.89	3.01	6.90	3.09
	-13.0	7.21	2.86	7.20	2.92	7.19	2.99	7.19	3.03	7.19	3.07	7.18	3.15
	-11.0	7.56	2.91	7.55	2.98	7.54	3.05	7.53	3.09	7.53	3.13	7.52	3.21
	-10.0	7.76	2.93	7.75	3.00	7.73	3.08	7.72	3.12	7.72	3.16	7.71	3.24
	-9.1	7.95	2.95	7.93	3.03	7.91	3.10	7.90	3.14	7.89	3.18	7.88	3.27
	-7.6	8.27	2.99	8.25	3.07	8.23	3.14	8.21	3.19	8.20	3.23	8.18	3.31
	-5.6	8.72	3.04	8.69	3.12	8.66	3.20	8.64	3.24	8.62	3.28	8.59	3.37
	-3.7	9.16	3.09	9.12	3.17	9.08	3.25	9.05	3.29	9.03	3.34	9.00	3.43
	-0.7	9.84	3.17	9.79	3.25	9.73	3.33	9.70	3.37	9.68	3.42	9.63	3.51
	0.0	10.0	3.19	9.94	3.26	9.88	3.35	9.85	3.39	9.83	3.43	9.78	3.53
	1.0	10.2	3.21	10.2	3.29	10.1	3.37	10.1	3.42	10.0	3.46	10.0	3.56
	2.2	10.5	3.24	10.4	3.32	10.4	3.40	10.3	3.45	10.3	3.49	10.3	3.59
	4.1	10.9	3.29	10.8	3.37	10.8	3.46	10.7	3.51	10.7	3.55	10.7	3.65
	6.0	11.3	3.35	11.3	3.43	11.2	3.52	11.2	3.57	11.2	3.62	11.1	3.73
	7.9	11.8	3.41	11.7	3.50	11.7	3.59	11.6	3.65	11.6	3.70	11.6	3.81
	9.8	12.2	3.48	12.2	3.58	12.1	3.68	12.1	3.73	12.1	3.79	12.1	3.90
	11.8	12.8	3.57	12.7	3.67	12.7	3.78	12.7	3.83	12.7	3.89	12.6	4.01
	13.7	13.3	3.66	13.3	3.76	13.2	3.87	13.2	3.93	13.2	3.99	13.2	4.10
	15.0	13.7	3.71	13.7	3.82	13.6	3.93	13.6	3.99	13.6	4.04	13.5	4.16
	18.0	14.5	3.80	14.5	3.91	14.3	4.01	14.3	4.05	14.2	4.10	13.9	4.19
29 (60%)	-15.0	5.85	2.46	5.85	2.51	5.85	2.57	5.85	2.60	5.85	2.64	5.85	2.71
	-13.0	6.11	2.51	6.11	2.56	6.10	2.62	6.10	2.66	6.10	2.69	6.10	2.77
	-11.0	6.42	2.55	6.41	2.61	6.40	2.67	6.39	2.71	6.39	2.74	6.38	2.82

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
29 (60%)	-10.0	6.58	2.57	6.57	2.63	6.56	2.70	6.55	2.73	6.55	2.77	6.54	2.85
	-9.1	6.74	2.59	6.73	2.65	6.71	2.72	6.70	2.75	6.70	2.79	6.68	2.87
	-7.6	7.01	2.62	7.00	2.69	6.98	2.76	6.97	2.79	6.96	2.83	6.94	2.91
	-5.6	7.40	2.67	7.37	2.73	7.35	2.80	7.33	2.84	7.32	2.88	7.29	2.96
	-3.7	7.77	2.71	7.73	2.78	7.70	2.85	7.68	2.89	7.66	2.92	7.63	3.00
	-0.7	8.35	2.78	8.30	2.85	8.25	2.92	8.23	2.95	8.21	2.99	8.17	3.07
	0.0	8.48	2.79	8.43	2.86	8.38	2.93	8.36	2.97	8.34	3.01	8.30	3.09
	1.0	8.67	2.82	8.61	2.88	8.57	2.96	8.54	2.99	8.52	3.03	8.48	3.12
	2.2	8.89	2.84	8.84	2.91	8.78	2.98	8.76	3.02	8.74	3.06	8.70	3.15
	4.1	9.24	2.89	9.19	2.96	9.14	3.03	9.11	3.07	9.09	3.11	9.06	3.20
	6.0	9.60	2.93	9.54	3.01	9.50	3.09	9.48	3.13	9.47	3.17	9.44	3.27
	7.9	9.97	2.99	9.92	3.07	9.89	3.15	9.87	3.20	9.86	3.24	9.84	3.34
	9.8	10.4	3.05	10.3	3.13	10.3	3.22	10.3	3.27	10.3	3.32	10.3	3.42
	11.8	10.8	3.13	10.8	3.22	10.8	3.31	10.8	3.36	10.7	3.41	10.7	3.51
	13.7	11.3	3.20	11.3	3.30	11.2	3.39	11.2	3.44	11.2	3.49	11.2	3.60
	15.0	11.6	3.25	11.6	3.35	11.5	3.45	11.5	3.50	11.5	3.54	11.4	3.65
	18.0	12.3	3.33	12.3	3.43	12.2	3.51	12.1	3.56	12.0	3.60	11.8	3.68
24 (50%)	-15.0	4.87	2.05	4.86	2.09	4.86	2.14	4.86	2.17	4.86	2.19	4.86	2.25
	-13.0	5.08	2.09	5.07	2.13	5.07	2.18	5.07	2.21	5.06	2.24	5.06	2.30
	-11.0	5.33	2.12	5.32	2.17	5.31	2.22	5.31	2.25	5.31	2.28	5.30	2.34
	-10.0	5.47	2.14	5.46	2.19	5.45	2.24	5.44	2.27	5.44	2.30	5.43	2.37
	-9.1	5.60	2.16	5.59	2.21	5.57	2.26	5.57	2.29	5.56	2.32	5.55	2.39
	-7.6	5.83	2.18	5.81	2.24	5.80	2.29	5.79	2.32	5.78	2.35	5.76	2.42
	-5.6	6.14	2.22	6.12	2.28	6.10	2.33	6.09	2.36	6.08	2.39	6.06	2.46
	-3.7	6.45	2.26	6.42	2.31	6.39	2.37	6.38	2.40	6.37	2.43	6.34	2.50
	-0.7	6.93	2.31	6.89	2.37	6.86	2.43	6.84	2.46	6.82	2.49	6.79	2.56
	0.0	7.04	2.32	7.00	2.38	6.96	2.44	6.95	2.47	6.93	2.51	6.90	2.58
	1.0	7.19	2.34	7.15	2.40	7.12	2.46	7.10	2.49	7.08	2.53	7.05	2.60
	2.2	7.38	2.36	7.34	2.42	7.30	2.49	7.28	2.52	7.27	2.55	7.24	2.63
	4.1	7.67	2.40	7.63	2.46	7.59	2.53	7.58	2.56	7.56	2.60	7.54	2.67
	6.0	7.97	2.44	7.93	2.51	7.90	2.58	7.89	2.61	7.88	2.65	7.86	2.73
	7.9	8.29	2.49	8.25	2.56	8.23	2.63	8.22	2.67	8.21	2.71	8.20	2.79
	9.8	8.62	2.54	8.60	2.62	8.58	2.70	8.57	2.74	8.57	2.78	8.56	2.87
	11.8	9.01	2.61	8.99	2.69	8.97	2.77	8.97	2.81	8.96	2.86	8.96	2.95
	13.7	9.40	2.68	9.38	2.76	9.37	2.84	9.36	2.89	9.35	2.93	9.32	3.02
	15.0	9.68	2.72	9.66	2.81	9.63	2.89	9.62	2.93	9.60	2.98	9.55	3.06
	18.0	10.3	2.79	10.2	2.88	10.2	2.95	10.1	2.99	10.1	3.02	9.90	3.09
19 (40%)	-15.0	3.82	1.73	3.82	1.77	3.82	1.81	3.82	1.83	3.82	1.85	3.83	1.90
	-13.0	3.99	1.76	3.99	1.80	3.99	1.84	3.99	1.87	3.99	1.89	3.99	1.94
	-11.0	4.19	1.79	4.19	1.83	4.18	1.88	4.18	1.90	4.18	1.93	4.17	1.98
	-10.0	4.30	1.81	4.30	1.85	4.29	1.90	4.29	1.92	4.28	1.95	4.28	2.00
	-9.1	4.41	1.82	4.40	1.87	4.39	1.91	4.39	1.94	4.38	1.96	4.37	2.02
	-7.6	4.59	1.84	4.58	1.89	4.56	1.94	4.56	1.96	4.55	1.99	4.54	2.04
	-5.6	4.84	1.88	4.83	1.93	4.81	1.97	4.80	2.00	4.79	2.02	4.77	2.08
	-3.7	5.09	1.91	5.06	1.96	5.04	2.00	5.02	2.03	5.01	2.05	4.99	2.11
	-0.7	5.46	1.96	5.43	2.01	5.40	2.05	5.38	2.08	5.37	2.10	5.34	2.16
	0.0	5.55	1.97	5.52	2.02	5.48	2.06	5.46	2.09	5.45	2.11	5.42	2.17
	1.0	5.67	1.98	5.64	2.03	5.60	2.08	5.58	2.10	5.57	2.13	5.54	2.19
	2.2	5.82	2.00	5.78	2.05	5.74	2.10	5.72	2.12	5.71	2.15	5.68	2.21
	4.1	6.05	2.03	6.01	2.08	5.97	2.13	5.95	2.16	5.93	2.18	5.91	2.25
	6.0	6.28	2.06	6.24	2.12	6.20	2.17	6.18	2.20	6.17	2.22	6.15	2.29
	7.9	6.52	2.10	6.48	2.16	6.44	2.21	6.43	2.24	6.42	2.27	6.40	2.34
	9.8	6.77	2.14	6.74	2.20	6.71	2.26	6.69	2.29	6.68	2.32	6.67	2.39
	11.8	7.05	2.19	7.03	2.25	7.00	2.31	6.99	2.35	6.98	2.38	6.96	2.45
	13.7	7.34	2.24	7.32	2.30	7.29	2.37	7.27	2.40	7.26	2.43	7.23	2.51
	15.0	7.55	2.27	7.52	2.34	7.48	2.40	7.47	2.43	7.44	2.47	7.39	2.54
	18.0	8.00	2.32	7.95	2.38	7.87	2.44	7.83	2.47	7.77	2.50	7.64	2.55

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A9UW566FA3[FM56AH U33]

[Cooling capacity]

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
73 (130%)	10	17.7	3.11	18.5	3.14	19.5	3.16	20.0	3.17	20.2	3.18	21.5	3.20	22.5	3.23
	12	17.3	3.17	18.1	3.20	19.1	3.22	19.6	3.23	19.8	3.24	21.1	3.27	22.1	3.29
	14	17.0	3.27	17.8	3.30	18.8	3.33	19.3	3.34	19.5	3.34	20.8	3.37	21.7	3.40
	16	16.7	3.40	17.6	3.44	18.5	3.46	19.0	3.47	19.2	3.48	20.5	3.51	21.5	3.54
	18	16.5	3.66	17.3	3.69	18.3	3.71	18.8	3.73	19.0	3.73	20.3	3.76	21.2	3.79
	20	16.3	3.75	17.1	3.78	18.1	3.81	18.6	3.82	18.8	3.83	20.1	3.86	21.0	3.89
	21	16.2	3.85	17.0	3.88	18.0	3.90	18.5	3.92	18.7	3.92	20.0	3.95	20.9	3.98
	23	16.0	4.05	16.9	4.08	17.8	4.10	18.3	4.11	18.6	4.12	19.8	4.15	20.8	4.18
	25	15.9	4.25	16.7	4.28	17.6	4.30	18.1	4.31	18.4	4.32	19.6	4.35	20.6	4.38
	27	15.7	4.44	16.5	4.47	17.4	4.49	17.9	4.50	18.2	4.51	19.4	4.53	20.4	4.56
	29	15.4	4.61	16.2	4.64	17.2	4.66	17.7	4.67	17.9	4.68	19.2	4.70	20.2	4.73
	31	15.1	4.76	16.0	4.78	16.9	4.80	17.4	4.81	17.7	4.81	18.9	4.84	19.9	4.86
	33	14.8	4.86	15.6	4.89	16.6	4.90	17.1	4.91	17.3	4.91	18.6	4.93	19.6	4.96
	35	14.4	4.92	15.3	4.94	16.2	4.96	16.7	4.96	17.0	4.96	18.2	4.98	19.2	5.00
	37	14.0	4.92	14.8	4.94	15.7	4.95	16.2	4.95	16.5	4.95	17.8	4.97	18.7	4.98
	39	13.4	4.85	14.2	4.87	15.2	4.87	15.7	4.87	15.9	4.88	17.2	4.88	18.2	4.90
	41	12.8	4.71	13.6	4.72	14.5	4.72	15.0	4.72	15.3	4.72	16.5	4.72	17.5	4.74
	43	12.1	4.49	12.9	4.49	13.8	4.49	14.3	4.49	14.5	4.49	15.8	4.49	16.7	4.49
	46	10.9	4.00	11.6	4.00	12.5	3.99	13.0	3.99	13.2	3.98	14.4	3.97	15.4	3.98
67 (120%)	10	17.2	3.10	18.0	3.13	19.0	3.15	19.5	3.16	19.7	3.16	21.0	3.19	21.9	3.21
	12	16.9	3.16	17.7	3.18	18.6	3.20	19.1	3.22	19.3	3.22	20.6	3.25	21.5	3.27
	14	16.6	3.25	17.4	3.28	18.3	3.30	18.8	3.32	19.0	3.32	20.3	3.35	21.2	3.37
	16	16.3	3.38	17.1	3.41	18.0	3.44	18.5	3.45	18.7	3.46	20.0	3.49	20.9	3.51
	18	16.1	3.54	16.9	3.57	17.8	3.60	18.3	3.61	18.5	3.62	19.8	3.65	20.7	3.67
	20	15.9	3.72	16.7	3.75	17.6	3.78	18.1	3.79	18.3	3.80	19.6	3.83	20.5	3.86
	21	15.8	3.82	16.6	3.85	17.5	3.88	18.0	3.89	18.2	3.90	19.5	3.93	20.4	3.95
	23	15.6	4.02	16.4	4.05	17.3	4.07	17.8	4.09	18.1	4.09	19.3	4.13	20.2	4.15
	25	15.4	4.22	16.2	4.24	17.2	4.27	17.6	4.29	17.9	4.29	19.1	4.33	20.1	4.35
	27	15.2	4.41	16.0	4.44	17.0	4.46	17.5	4.48	17.7	4.48	18.9	4.52	19.9	4.54
	29	15.0	4.59	15.8	4.61	16.7	4.64	17.2	4.65	17.5	4.66	18.7	4.69	19.7	4.71
	31	14.8	4.74	15.6	4.76	16.5	4.78	17.0	4.79	17.2	4.80	18.5	4.83	19.4	4.85
	33	14.5	4.85	15.3	4.87	16.2	4.89	16.7	4.90	16.9	4.91	18.2	4.93	19.1	4.95
	35	14.1	4.92	14.9	4.93	15.8	4.95	16.3	4.96	16.5	4.97	17.8	4.99	18.7	5.00
	37	13.7	4.93	14.5	4.94	15.4	4.96	15.9	4.96	16.1	4.97	17.3	4.98	18.3	5.00
	39	13.2	4.87	13.9	4.88	14.9	4.89	15.3	4.90	15.6	4.90	16.8	4.91	17.7	4.92
	41	12.6	4.74	13.4	4.75	14.3	4.76	14.7	4.76	15.0	4.76	16.2	4.77	17.1	4.78
	43	11.9	4.54	12.7	4.54	13.6	4.54	14.0	4.54	14.3	4.55	15.5	4.55	16.4	4.55
	46	10.7	4.08	11.5	4.07	12.4	4.07	12.8	4.07	13.0	4.07	14.2	4.06	15.1	4.06
62 (110%)	10	16.8	3.06	17.6	3.08	18.5	3.10	19.0	3.11	19.2	3.12	20.4	3.15	21.4	3.16
	12	16.4	3.11	17.2	3.13	18.1	3.16	18.6	3.17	18.8	3.18	20.0	3.20	21.0	3.22
	14	16.1	3.20	16.9	3.23	17.8	3.26	18.3	3.27	18.5	3.27	19.7	3.30	20.6	3.32
	16	15.9	3.33	16.6	3.36	17.5	3.39	18.0	3.40	18.3	3.40	19.5	3.44	20.4	3.46
	18	15.7	3.49	16.4	3.52	17.3	3.54	17.8	3.56	18.0	3.56	19.2	3.60	20.1	3.62
	20	15.5	3.67	16.2	3.69	17.1	3.72	17.6	3.73	17.8	3.74	19.0	3.77	19.9	3.80
	21	15.4	3.76	16.2	3.79	17.0	3.82	17.5	3.83	17.8	3.84	19.0	3.87	19.9	3.89
	23	15.2	3.96	16.0	3.98	16.9	4.01	17.3	4.02	17.6	4.03	18.8	4.06	19.7	4.09
	25	15.0	4.15	15.8	4.18	16.7	4.21	17.2	4.22	17.4	4.23	18.6	4.26	19.5	4.28
	27	14.8	4.35	15.6	4.37	16.5	4.40	17.0	4.41	17.2	4.42	18.4	4.45	19.3	4.47
	29	14.6	4.52	15.4	4.55	16.3	4.57	16.8	4.58	17.0	4.59	18.2	4.62	19.1	4.64
	31	14.4	4.68	15.2	4.70	16.1	4.72	16.5	4.73	16.8	4.74	18.0	4.76	18.9	4.78
	33	14.1	4.79	14.9	4.81	15.8	4.83	16.2	4.84	16.5	4.85	17.7	4.87	18.6	4.89
	35	13.7	4.87	14.5	4.88	15.4	4.90	15.9	4.91	16.1	4.91	17.3	4.94	18.3	4.95
	37	13.3	4.89	14.1	4.90	15.0	4.92	15.5	4.92	15.7	4.93	16.9	4.94	17.8	4.96
	39	12.9	4.85	13.6	4.86	14.5	4.87	15.0	4.87	15.2	4.88	16.4	4.89	17.3	4.90
	41	12.3	4.74	13.1	4.74	14.0	4.75	14.4	4.75	14.7	4.75	15.9	4.76	16.8	4.77
	43	11.7	4.55	12.5	4.55	13.3	4.56	13.8	4.56	14.0	4.56	15.2	4.56	16.1	4.56
	46	10.6	4.13	11.3	4.12	12.2	4.12	12.6	4.12	12.9	4.12	14.0	4.11	14.9	4.11
56 (100%)	10	16.2	2.95	17.0	2.97	17.9	2.99	18.3	3.00	18.6	3.00	19.7	3.03	20.6	3.04
	12	15.9	3.01	16.7	3.04	17.6	3.06	18.0	3.07	18.2	3.07	19.4	3.10	20.3	3.12
	14	15.7	3.11	16.4	3.13	17.3	3.16	17.7	3.17	18.0	3.18	19.1	3.20	20.0	3.22
	16	15.4	3.24	16.2	3.26	17.0	3.28	17.5	3.30	17.7	3.30	18.9	3.33	19.8	3.35
	18	15.2	3.38	15.9	3.41	16.8	3.43	17.3	3.44	17.5	3.45	18.7	3.48	19.6	3.50
	20	15.0	3.54	15.7	3.57	16.6	3.59	17.1	3.61	17.3	3.61	18.5	3.65	19.3	3.67
	21	14.9	3.63	15.6	3.65	16.5	3.68	17.0	3.69	17.2	3.70	18.4	3.73	19.3	3.75
	23	14.7	3.81	15.4	3.83	16.3	3.86	16.8	3.87	17.0	3.88	18.2	3.91	19.1	3.93
	25	14.5	3.99	15.2	4.01	16.1	4.04	16.6	4.05	16.8	4.06	18.0	4.09	18.9	4.11
	27	14.3	4.17	15.1	4.19	15.9	4.22	16.4	4.23	16.6	4.24	17.8	4.27	18.7	4.29

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
56 (100%)	29	14.1	4.34	14.9	4.36	15.7	4.39	16.2	4.40	16.4	4.41	17.6	4.44	18.5	4.46
	31	13.9	4.50	14.7	4.53	15.5	4.55	16.0	4.56	16.2	4.57	17.4	4.60	18.3	4.62
	33	13.7	4.65	14.4	4.67	15.3	4.69	15.8	4.70	16.0	4.71	17.2	4.74	18.0	4.76
	35	13.4	4.77	14.2	4.79	15.0	4.82	15.5	4.83	15.7	4.83	16.9	4.86	17.8	4.87
	37	13.1	4.87	13.9	4.89	14.8	4.91	15.2	4.92	15.5	4.93	16.6	4.95	17.5	4.96
	39	12.8	4.94	13.6	4.96	14.4	4.98	14.9	4.98	15.1	4.99	16.3	5.01	17.2	5.02
	41	12.5	4.98	13.2	4.99	14.1	5.00	14.5	5.01	14.8	5.01	15.9	5.03	16.8	5.04
	43	12.1	4.97	12.8	4.98	13.7	4.99	14.1	5.00	14.4	5.00	15.5	5.01	16.4	5.02
	46	11.4	4.87	12.1	4.88	13.0	4.88	13.4	4.88	13.7	4.89	14.8	4.89	15.7	4.90
50 (90%)	10	15.1	2.49	15.8	2.51	16.6	2.53	17.0	2.54	17.2	2.55	18.3	2.57	19.1	2.58
	12	14.9	2.60	15.6	2.62	16.4	2.64	16.8	2.65	17.0	2.65	18.1	2.67	18.9	2.69
	14	14.7	2.71	15.4	2.73	16.2	2.75	16.6	2.76	16.8	2.77	17.9	2.79	18.7	2.81
	16	14.4	2.83	15.2	2.85	16.0	2.87	16.4	2.88	16.6	2.89	17.7	2.91	18.6	2.93
	18	14.2	2.96	14.9	2.98	15.8	3.00	16.2	3.01	16.4	3.02	17.5	3.04	18.4	3.06
	20	14.0	3.09	14.7	3.12	15.6	3.14	16.0	3.15	16.2	3.15	17.3	3.18	18.1	3.20
	21	13.9	3.16	14.6	3.18	15.4	3.20	15.9	3.21	16.1	3.22	17.2	3.25	18.0	3.26
	23	13.7	3.30	14.4	3.32	15.2	3.34	15.7	3.35	15.9	3.35	17.0	3.38	17.8	3.40
	25	13.5	3.43	14.2	3.45	15.0	3.47	15.4	3.48	15.7	3.49	16.8	3.51	17.6	3.53
	27	13.3	3.56	14.0	3.58	14.8	3.60	15.2	3.61	15.4	3.62	16.5	3.64	17.4	3.66
	29	13.1	3.69	13.8	3.71	14.6	3.73	15.0	3.74	15.2	3.74	16.3	3.77	17.1	3.79
	31	12.9	3.81	13.6	3.83	14.4	3.86	14.8	3.87	15.0	3.87	16.1	3.89	16.9	3.91
	33	12.7	3.94	13.4	3.96	14.2	3.98	14.6	3.99	14.8	4.00	15.9	4.02	16.7	4.04
	35	12.5	4.07	13.2	4.09	14.0	4.11	14.4	4.12	14.6	4.12	15.7	4.15	16.5	4.17
	37	12.3	4.20	13.0	4.22	13.8	4.24	14.2	4.25	14.4	4.25	15.5	4.28	16.3	4.30
	39	12.1	4.33	12.8	4.35	13.6	4.37	14.0	4.38	14.2	4.39	15.3	4.41	16.1	4.43
	41	11.9	4.46	12.6	4.48	13.4	4.50	13.8	4.52	14.0	4.52	15.1	4.55	15.9	4.57
	43	11.7	4.60	12.4	4.62	13.2	4.64	13.6	4.65	13.8	4.66	14.9	4.68	15.7	4.70
	46	11.3	4.80	12.0	4.82	12.8	4.84	13.3	4.85	13.5	4.85	14.6	4.88	15.4	4.90
45 (80%)	10	13.8	2.25	14.4	2.27	15.2	2.28	15.6	2.29	15.8	2.30	16.7	2.31	17.5	2.33
	12	13.6	2.34	14.3	2.36	15.0	2.38	15.4	2.39	15.6	2.39	16.6	2.41	17.3	2.42
	14	13.4	2.44	14.1	2.46	14.8	2.48	15.2	2.49	15.4	2.49	16.4	2.51	17.2	2.53
	16	13.2	2.55	13.9	2.57	14.6	2.59	15.0	2.60	15.2	2.61	16.2	2.63	17.0	2.64
	18	13.0	2.67	13.7	2.69	14.5	2.71	14.8	2.72	15.1	2.72	16.1	2.74	16.8	2.76
	20	12.9	2.79	13.5	2.81	14.3	2.83	14.7	2.84	14.9	2.84	15.9	2.86	16.6	2.88
	21	12.8	2.85	13.4	2.87	14.2	2.89	14.6	2.90	14.8	2.90	15.8	2.93	16.5	2.94
	23	12.6	2.97	13.2	2.99	14.0	3.01	14.4	3.02	14.6	3.02	15.6	3.05	16.3	3.06
	25	12.4	3.09	13.0	3.11	13.8	3.13	14.2	3.14	14.4	3.14	15.4	3.17	16.1	3.18
	27	12.2	3.21	12.8	3.23	13.6	3.25	14.0	3.26	14.2	3.26	15.2	3.28	15.9	3.30
	29	12.0	3.32	12.6	3.34	13.4	3.36	13.8	3.37	14.0	3.38	15.0	3.40	15.7	3.41
	31	11.8	3.44	12.4	3.46	13.2	3.48	13.6	3.49	13.8	3.49	14.8	3.51	15.5	3.53
	33	11.6	3.55	12.3	3.57	13.0	3.59	13.4	3.60	13.6	3.60	14.6	3.63	15.3	3.64
	35	11.4	3.67	12.1	3.69	12.8	3.70	13.2	3.71	13.4	3.72	14.4	3.74	15.1	3.76
	37	11.3	3.78	11.9	3.80	12.6	3.82	13.0	3.83	13.2	3.84	14.2	3.86	15.0	3.87
	39	11.1	3.90	11.7	3.92	12.4	3.94	12.8	3.95	13.0	3.96	14.0	3.98	14.8	4.00
	41	10.9	4.02	11.5	4.04	12.3	4.06	12.7	4.07	12.9	4.08	13.9	4.10	14.6	4.12
	43	10.7	4.15	11.3	4.17	12.1	4.19	12.5	4.20	12.7	4.20	13.7	4.22	14.4	4.24
	46	10.4	4.32	11.0	4.34	11.8	4.36	12.2	4.37	12.4	4.38	13.4	4.40	14.2	4.42
39 (70%)	10	11.9	1.96	12.5	1.98	13.1	1.99	13.4	2.00	13.6	2.01	14.5	2.02	15.1	2.04
	12	11.8	2.04	12.3	2.06	13.0	2.08	13.3	2.08	13.5	2.09	14.3	2.11	15.0	2.12
	14	11.6	2.13	12.2	2.15	12.8	2.17	13.1	2.18	13.3	2.18	14.2	2.20	14.8	2.21
	16	11.4	2.23	12.0	2.25	12.6	2.26	13.0	2.27	13.2	2.28	14.0	2.30	14.7	2.31
	18	11.3	2.33	11.8	2.35	12.5	2.37	12.8	2.38	13.0	2.38	13.9	2.40	14.5	2.41
	20	11.1	2.44	11.7	2.45	12.3	2.47	12.7	2.48	12.8	2.48	13.7	2.50	14.4	2.52
	21	11.0	2.49	11.6	2.51	12.2	2.52	12.6	2.53	12.7	2.54	13.6	2.56	14.3	2.57
	23	10.8	2.60	11.4	2.61	12.1	2.63	12.4	2.64	12.6	2.64	13.4	2.66	14.1	2.68
	25	10.7	2.70	11.2	2.72	11.9	2.73	12.2	2.74	12.4	2.75	13.3	2.77	13.9	2.78
	27	10.5	2.81	11.1	2.82	11.7	2.84	12.1	2.85	12.2	2.85	13.1	2.87	13.8	2.88
	29	10.4	2.91	10.9	2.92	11.5	2.94	11.9	2.95	12.1	2.95	12.9	2.97	13.6	2.98
	31	10.2	3.01	10.7	3.02	11.4	3.04	11.7	3.05	11.9	3.05	12.8	3.07	13.4	3.08
	33	10.0	3.11	10.6	3.12	11.2	3.14	11.6	3.15	11.7	3.15	12.6	3.17	13.2	3.18
	35	9.9	3.21	10.4	3.22	11.1	3.24	11.4	3.25	11.6	3.25	12.4	3.27	13.1	3.28
	37	9.7	3.31	10.3	3.32	10.9	3.34	11.2	3.35	11.4	3.35	12.3	3.37	12.9	3.39
	39	9.6	3.41	10.1	3.43	10.7	3.44	11.1	3.45	11.3	3.46	12.1	3.48	12.8	3.49
	41	9.4	3.52	10.0	3.53	10.6	3.55	10.9	3.56	11.1	3.56	12.0	3.58	12.6	3.60
	43	9.2	3.62	9.8	3.64	10.4	3.66	10.8	3.67	10.9	3.67	11.8	3.69	12.5	3.71
	46	8.9	3.78	9.5	3.79	10.2	3.81	10.5	3.82	10.7	3.82	11.6	3.85	12.2	3.86
34 (60%)	10	10.5	1.70	10.9	1.71	11.5	1.73	11.8	1.73	11.9	1.74	12.7	1.75	13.2	1.77
	12	10.3	1.77	10.8	1.78	11.4	1.80	11.7	1.80	11.8	1.81	12.6	1.82	13.1	1.84
	14	10.2	1.85	10.7	1.86	11.2	1.87	11.5	1.88	11.7	1.89	12.4	1.90	13.0	1.92
	16	10.0	1.93	10.5	1.95	11.1	1.96	11.4	1.97	11.5	1.97	12.3	1.99	12.9	2.00
	18	9.9	2.02	10.4	2.03	10.9	2.05	11.2	2.06	11.4	2.06	12.2	2.08	12.7	2.09
	20	9.7	2.11	10.2	2.13	10.8	2.14	11.1	2.15	11.3	2.15	12.0	2.17	12.6	2.18

Combination kW(%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
34 (60%)	21	9.7	2.16	10.2	2.17	10.7	2.19	11.0	2.19	11.2	2.20	11.9	2.21	12.5	2.23
	23	9.5	2.25	10.0	2.26	10.6	2.28	10.9	2.28	11.0	2.29	11.8	2.30	12.4	2.32
	25	9.4	2.34	9.9	2.35	10.4	2.37	10.7	2.37	10.9	2.38	11.6	2.39	12.2	2.41
	27	9.2	2.43	9.7	2.44	10.3	2.46	10.6	2.46	10.7	2.47	11.5	2.48	12.1	2.49
	29	9.1	2.52	9.6	2.53	10.1	2.54	10.4	2.55	10.6	2.55	11.3	2.57	11.9	2.58
	31	8.9	2.60	9.4	2.62	10.0	2.63	10.3	2.64	10.4	2.64	11.2	2.65	11.8	2.67
	33	8.8	2.69	9.3	2.70	9.8	2.71	10.1	2.72	10.3	2.72	11.0	2.74	11.6	2.75
	35	8.7	2.77	9.1	2.79	9.7	2.80	10.0	2.81	10.2	2.81	10.9	2.83	11.5	2.84
	37	8.5	2.86	9.0	2.88	9.6	2.89	9.9	2.90	10.0	2.90	10.8	2.92	11.3	2.93
	39	8.4	2.95	8.9	2.97	9.4	2.98	9.7	2.99	9.9	2.99	10.6	3.01	11.2	3.02
	41	8.2	3.04	8.7	3.06	9.3	3.07	9.6	3.08	9.7	3.08	10.5	3.10	11.1	3.11
	43	8.1	3.13	8.6	3.15	9.1	3.16	9.4	3.17	9.6	3.18	10.4	3.19	10.9	3.21
	46	7.8	3.27	8.3	3.28	8.9	3.30	9.2	3.31	9.4	3.31	10.1	3.33	10.7	3.34
28 (50%)	10	8.6	1.30	9.0	1.31	9.4	1.32	9.7	1.33	9.8	1.33	10.4	1.34	10.9	1.35
	12	8.5	1.36	8.9	1.37	9.3	1.38	9.6	1.38	9.7	1.39	10.3	1.40	10.8	1.41
	14	8.3	1.42	8.8	1.43	9.2	1.44	9.5	1.45	9.6	1.45	10.2	1.46	10.7	1.47
	16	8.2	1.48	8.6	1.49	9.1	1.50	9.3	1.51	9.5	1.51	10.1	1.53	10.6	1.54
	18	8.1	1.55	8.5	1.56	9.0	1.57	9.2	1.58	9.4	1.58	10.0	1.60	10.5	1.61
	20	8.0	1.62	8.4	1.63	8.9	1.64	9.1	1.65	9.2	1.65	9.9	1.66	10.3	1.68
	21	7.9	1.65	8.3	1.66	8.8	1.68	9.0	1.68	9.2	1.69	9.8	1.70	10.3	1.71
	23	7.8	1.72	8.2	1.73	8.7	1.75	8.9	1.75	9.0	1.75	9.7	1.77	10.1	1.78
	25	7.7	1.79	8.1	1.80	8.5	1.81	8.8	1.82	8.9	1.82	9.5	1.84	10.0	1.85
	27	7.6	1.86	8.0	1.87	8.4	1.88	8.7	1.89	8.8	1.89	9.4	1.90	9.9	1.91
	29	7.45	1.92	7.8	1.94	8.3	1.95	8.6	1.95	8.7	1.96	9.3	1.97	9.8	1.98
	31	7.33	1.99	7.7	2.00	8.2	2.01	8.4	2.02	8.6	2.02	9.2	2.03	9.6	2.04
	33	7.22	2.06	7.6	2.07	8.1	2.08	8.3	2.08	8.4	2.09	9.1	2.10	9.5	2.11
	35	7.10	2.13	7.50	2.14	8.0	2.15	8.2	2.15	8.3	2.16	8.9	2.17	9.4	2.17
	37	6.99	2.20	7.39	2.21	7.8	2.22	8.1	2.22	8.2	2.23	8.8	2.24	9.3	2.24
	39	6.88	2.28	7.28	2.29	7.7	2.29	8.0	2.30	8.1	2.30	8.7	2.31	9.2	2.31
	41	6.76	2.36	7.16	2.37	7.6	2.37	7.9	2.37	8.0	2.38	8.6	2.38	9.1	2.39
	43	6.64	2.44	7.04	2.45	7.50	2.45	7.7	2.45	7.9	2.46	8.5	2.46	9.0	2.46
	46	6.44	2.57	6.84	2.57	7.31	2.57	7.6	2.57	7.7	2.57	8.3	2.58	8.8	2.58
23 (40%)	10	7.01	1.02	7.33	1.03	7.7	1.03	7.9	1.04	8.0	1.04	8.5	1.05	8.9	1.05
	12	6.92	1.06	7.24	1.07	7.6	1.08	7.8	1.08	7.9	1.08	8.4	1.09	8.8	1.10
	14	6.82	1.11	7.15	1.12	7.53	1.13	7.7	1.13	7.8	1.13	8.3	1.14	8.7	1.15
	16	6.72	1.16	7.05	1.17	7.43	1.18	7.6	1.18	7.7	1.18	8.2	1.19	8.6	1.20
	18	6.62	1.21	6.95	1.22	7.34	1.23	7.54	1.23	7.6	1.24	8.2	1.25	8.5	1.26
	20	6.52	1.26	6.86	1.27	7.24	1.28	7.44	1.29	7.54	1.29	8.1	1.30	8.4	1.31
	21	6.47	1.29	6.81	1.30	7.19	1.31	7.39	1.32	7.49	1.32	8.0	1.33	8.4	1.34
	23	6.37	1.35	6.71	1.36	7.09	1.37	7.29	1.37	7.39	1.37	7.9	1.38	8.3	1.39
	25	6.28	1.40	6.61	1.41	6.99	1.42	7.19	1.42	7.29	1.43	7.8	1.44	8.2	1.44
	27	6.18	1.45	6.51	1.46	6.89	1.47	7.09	1.48	7.19	1.48	7.7	1.49	8.1	1.50
	29	6.08	1.50	6.41	1.51	6.79	1.52	6.99	1.53	7.09	1.53	7.6	1.54	8.0	1.55
	31	5.99	1.56	6.32	1.57	6.69	1.57	6.89	1.58	6.99	1.58	7.49	1.59	7.9	1.60
	33	5.90	1.61	6.22	1.62	6.60	1.63	6.79	1.63	6.89	1.63	7.40	1.64	7.8	1.65
	35	5.80	1.67	6.13	1.67	6.50	1.68	6.70	1.68	6.80	1.69	7.30	1.69	7.7	1.70
	37	5.71	1.72	6.04	1.73	6.41	1.74	6.61	1.74	6.71	1.74	7.21	1.75	7.6	1.75
	39	5.62	1.78	5.94	1.79	6.32	1.79	6.52	1.80	6.62	1.80	7.12	1.80	7.50	1.81
	41	5.52	1.85	5.85	1.85	6.23	1.86	6.42	1.86	6.53	1.86	7.03	1.86	7.41	1.87
	43	5.42	1.91	5.75	1.91	6.13	1.92	6.33	1.92	6.43	1.92	6.94	1.92	7.32	1.93
	46	5.26	2.01	5.59	2.01	5.97	2.01	6.18	2.01	6.28	2.01	6.80	2.01	7.19	2.02

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating Capacity]

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
73 (130%)	-15.0	11.3	3.77	11.2	3.81	11.1	3.88	11.1	3.92	11.0	3.96	11.0	4.05
	-13.0	11.4	3.68	11.3	3.75	11.2	3.83	11.2	3.87	11.2	3.92	11.2	4.02
	-11.0	11.7	3.66	11.6	3.74	11.6	3.83	11.6	3.88	11.6	3.93	11.6	4.04
	-10.0	11.9	3.66	11.9	3.75	11.9	3.85	11.9	3.90	11.9	3.95	11.9	4.07
	-9.1	12.1	3.68	12.1	3.77	12.1	3.87	12.1	3.92	12.1	3.98	12.1	4.09
	-7.6	12.6	3.71	12.6	3.81	12.6	3.92	12.6	3.98	12.6	4.04	12.6	4.16
	-5.6	13.3	3.79	13.3	3.90	13.3	4.01	13.3	4.07	13.3	4.13	13.3	4.26
	-3.7	14.1	3.89	14.1	4.00	14.1	4.12	14.1	4.18	14.1	4.24	14.1	4.36
	-0.7	15.4	4.06	15.4	4.18	15.3	4.30	15.3	4.36	15.3	4.42	15.3	4.54
	0.0	15.7	4.10	15.7	4.22	15.6	4.34	15.6	4.40	15.6	4.46	15.5	4.58
	1.0	16.1	4.16	16.1	4.28	16.1	4.40	16.0	4.46	16.0	4.52	15.9	4.63
	2.2	16.6	4.23	16.6	4.34	16.5	4.46	16.5	4.52	16.5	4.58	16.3	4.69
	4.1	17.4	4.32	17.3	4.44	17.3	4.55	17.2	4.61	17.1	4.66	17.0	4.77
	6.0	18.1	4.40	18.0	4.51	17.9	4.62	17.8	4.67	17.7	4.72	17.5	4.82
	7.9	18.7	4.45	18.6	4.56	18.4	4.66	18.3	4.71	18.2	4.75	18.0	4.83
	9.8	19.2	4.47	19.0	4.57	18.8	4.66	18.7	4.70	18.6	4.74	18.2	4.81
	11.8	19.6	4.44	19.3	4.53	19.1	4.60	18.9	4.64	18.7	4.67	18.3	4.72
	13.7	19.7	4.36	19.4	4.43	19.1	4.50	18.9	4.52	18.6	4.54	18.1	4.57
	15.0	19.7	4.28	19.4	4.34	18.9	4.39	18.7	4.40	18.4	4.42	17.8	4.43
	18.0	19.2	3.95	18.7	3.98	18.1	4.00	17.8	4.00	17.5	3.99	16.6	3.96
67 (120%)	-15.0	11.0	3.75	10.9	3.80	10.9	3.87	10.8	3.90	10.8	3.95	10.8	4.04
	-13.0	11.1	3.67	11.0	3.74	11.0	3.82	11.0	3.86	11.0	3.91	11.0	4.01
	-11.0	11.4	3.64	11.4	3.73	11.4	3.82	11.4	3.87	11.4	3.92	11.4	4.03
	-10.0	11.6	3.65	11.6	3.74	11.6	3.84	11.6	3.89	11.6	3.94	11.6	4.06
	-9.1	11.9	3.66	11.9	3.76	11.9	3.86	11.9	3.91	11.9	3.97	11.9	4.08
	-7.6	12.3	3.71	12.3	3.81	12.3	3.91	12.3	3.97	12.3	4.03	12.3	4.14
	-5.6	13.0	3.79	13.0	3.90	13.1	4.01	13.1	4.07	13.1	4.12	13.0	4.24
	-3.7	13.8	3.88	13.8	4.00	13.8	4.11	13.8	4.17	13.8	4.23	13.8	4.35
	-0.7	15.1	4.06	15.1	4.17	15.1	4.29	15.0	4.35	15.0	4.41	14.9	4.52
	0.0	15.4	4.10	15.4	4.22	15.3	4.33	15.3	4.39	15.3	4.44	15.2	4.55
	1.0	15.8	4.16	15.8	4.27	15.7	4.39	15.7	4.44	15.7	4.50	15.5	4.60
	2.2	16.3	4.22	16.3	4.34	16.2	4.45	16.2	4.50	16.1	4.56	15.9	4.66
	4.1	17.1	4.32	17.0	4.43	16.9	4.54	16.8	4.59	16.7	4.63	16.5	4.73
	6.0	17.8	4.39	17.7	4.50	17.5	4.60	17.4	4.64	17.3	4.68	17.0	4.76
	7.9	18.3	4.43	18.2	4.53	18.0	4.62	17.8	4.66	17.7	4.70	17.3	4.76
	9.8	18.8	4.44	18.6	4.53	18.3	4.61	18.1	4.64	17.9	4.67	17.5	4.72
	11.8	19.1	4.40	18.8	4.48	18.4	4.54	18.2	4.56	18.0	4.58	17.5	4.61
	13.7	19.1	4.31	18.8	4.37	18.3	4.41	18.1	4.43	17.8	4.44	17.2	4.45
	15.0	19.0	4.21	18.6	4.26	18.1	4.29	17.9	4.30	17.6	4.30	16.9	4.29
	18.0	18.4	3.85	17.8	3.87	17.2	3.87	16.8	3.86	16.4	3.85	15.5	3.80
62 (110%)	-15.0	10.8	3.73	10.7	3.79	10.7	3.87	10.6	3.91	10.6	3.95	10.6	4.05
	-13.0	10.9	3.66	10.8	3.74	10.8	3.82	10.8	3.87	10.8	3.92	10.8	4.02
	-11.0	11.2	3.65	11.2	3.74	11.2	3.83	11.2	3.88	11.2	3.93	11.2	4.04
	-10.0	11.4	3.66	11.4	3.75	11.4	3.85	11.4	3.90	11.4	3.95	11.4	4.07
	-9.1	11.7	3.68	11.7	3.77	11.7	3.87	11.7	3.93	11.7	3.98	11.7	4.09
	-7.6	12.1	3.72	12.1	3.82	12.1	3.93	12.1	3.98	12.1	4.04	12.1	4.15
	-5.6	12.8	3.81	12.9	3.91	12.9	4.02	12.9	4.08	12.8	4.13	12.8	4.25
	-3.7	13.6	3.91	13.6	4.02	13.6	4.13	13.6	4.18	13.6	4.24	13.5	4.35
	-0.7	14.9	4.08	14.8	4.19	14.8	4.30	14.8	4.35	14.7	4.40	14.6	4.51
	0.0	15.2	4.12	15.1	4.23	15.1	4.34	15.0	4.39	15.0	4.44	14.8	4.54
	1.0	15.6	4.18	15.5	4.29	15.5	4.39	15.4	4.44	15.3	4.49	15.2	4.59
	2.2	16.1	4.24	16.0	4.35	15.9	4.45	15.8	4.50	15.8	4.54	15.6	4.63
	4.1	16.8	4.33	16.7	4.43	16.6	4.53	16.5	4.57	16.4	4.61	16.1	4.69
	6.0	17.5	4.40	17.3	4.49	17.1	4.58	17.0	4.61	16.8	4.65	16.5	4.72
	7.9	18.0	4.43	17.8	4.52	17.5	4.59	17.4	4.62	17.2	4.65	16.8	4.70
	9.8	18.4	4.43	18.1	4.50	17.8	4.56	17.6	4.59	17.4	4.61	16.9	4.64
	11.8	18.6	4.37	18.2	4.43	17.8	4.48	17.6	4.49	17.3	4.51	16.7	4.52
	13.7	18.6	4.27	18.2	4.31	17.7	4.34	17.4	4.35	17.1	4.35	16.4	4.35
	15.0	18.5	4.16	18.0	4.19	17.4	4.21	17.1	4.21	16.8	4.20	16.0	4.19
	18.0	17.7	3.78	17.0	3.79	16.3	3.77	15.9	3.76	15.5	3.74	14.6	3.68
56 (100%)	-15.0	10.6	3.72	10.4	3.77	10.4	3.84	10.4	3.88	10.3	3.92	10.3	4.02
	-13.0	10.6	3.64	10.6	3.71	10.5	3.79	10.5	3.84	10.5	3.89	10.5	3.99
	-11.0	10.9	3.62	10.9	3.70	10.8	3.80	10.8	3.85	10.8	3.90	10.9	4.01
	-10.0	11.1	3.63	11.1	3.72	11.1	3.81	11.1	3.87	11.1	3.92	11.1	4.03
	-9.1	11.3	3.64	11.3	3.74	11.3	3.84	11.3	3.89	11.3	3.95	11.3	4.06
	-7.6	11.8	3.68	11.8	3.79	11.8	3.89	11.8	3.95	11.8	4.00	11.8	4.12
	-5.6	12.4	3.77	12.5	3.88	12.5	3.99	12.5	4.04	12.5	4.10	12.4	4.22
	-3.7	13.2	3.86	13.2	3.98	13.2	4.09	13.2	4.15	13.2	4.20	13.1	4.32
	-0.7	14.4	4.04	14.4	4.15	14.4	4.27	14.4	4.32	14.3	4.38	14.2	4.48
	0.0	14.7	4.08	14.7	4.19	14.7	4.31	14.6	4.36	14.6	4.41	14.5	4.52

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
56 (100%)	1.0	15.1	4.14	15.1	4.25	15.0	4.36	15.0	4.41	15.0	4.47	14.8	4.57
	2.2	15.6	4.20	15.6	4.31	15.5	4.42	15.4	4.47	15.4	4.52	15.2	4.62
	4.1	16.3	4.29	16.3	4.40	16.1	4.50	16.1	4.55	16.0	4.60	15.7	4.68
	6.0	17.0	4.36	16.9	4.47	16.7	4.56	16.6	4.60	16.5	4.64	16.2	4.72
	7.9	17.5	4.40	17.4	4.50	17.1	4.58	17.0	4.62	16.8	4.65	16.5	4.71
	9.8	17.9	4.41	17.7	4.49	17.4	4.56	17.2	4.59	17.0	4.62	16.6	4.66
	11.8	18.1	4.36	17.9	4.43	17.5	4.49	17.3	4.51	17.0	4.53	16.5	4.55
	13.7	18.1	4.26	17.8	4.32	17.3	4.36	17.1	4.37	16.8	4.38	16.2	4.38
	15.0	18.0	4.16	17.6	4.21	17.1	4.23	16.8	4.24	16.5	4.24	15.8	4.23
	18.0	17.3	3.80	16.7	3.82	16.0	3.81	15.7	3.80	15.3	3.78	14.4	3.73
50 (90%)	-15.0	9.87	3.73	9.80	3.79	9.74	3.86	9.72	3.89	9.70	3.93	9.68	4.02
	-13.0	10.1	3.71	10.0	3.78	10.0	3.86	10.0	3.91	9.98	3.95	9.97	4.05
	-11.0	10.5	3.72	10.4	3.80	10.4	3.89	10.4	3.94	10.4	3.99	10.4	4.10
	-10.0	10.7	3.73	10.7	3.82	10.6	3.92	10.6	3.97	10.6	4.02	10.6	4.14
	-9.1	10.9	3.75	10.9	3.84	10.9	3.94	10.9	4.00	10.9	4.05	10.9	4.17
	-7.6	11.3	3.79	11.3	3.89	11.3	4.00	11.3	4.05	11.3	4.11	11.3	4.23
	-5.6	11.9	3.86	11.9	3.97	11.9	4.08	11.9	4.13	11.9	4.19	11.9	4.32
	-3.7	12.6	3.94	12.6	4.05	12.5	4.16	12.5	4.22	12.5	4.28	12.5	4.41
	-0.7	13.6	4.07	13.6	4.19	13.6	4.31	13.6	4.37	13.5	4.43	13.5	4.56
	0.0	13.9	4.11	13.8	4.22	13.8	4.34	13.8	4.40	13.8	4.46	13.7	4.59
	1.0	14.2	4.15	14.2	4.27	14.2	4.39	14.1	4.45	14.1	4.51	14.1	4.64
	2.2	14.6	4.21	14.6	4.33	14.6	4.45	14.5	4.51	14.5	4.57	14.5	4.70
	4.1	15.3	4.30	15.2	4.41	15.2	4.53	15.2	4.59	15.1	4.66	15.1	4.78
	6.0	15.9	4.38	15.9	4.50	15.8	4.62	15.8	4.68	15.7	4.74	15.6	4.86
	7.9	16.6	4.46	16.5	4.58	16.4	4.69	16.3	4.75	16.3	4.81	16.2	4.93
	9.8	17.2	4.54	17.1	4.65	16.9	4.76	16.9	4.81	16.8	4.87	16.7	4.98
	11.8	17.8	4.60	17.6	4.70	17.5	4.81	17.4	4.86	17.3	4.91	17.1	5.02
	13.7	18.3	4.63	18.1	4.73	17.9	4.83	17.8	4.88	17.7	4.92	17.4	5.01
	15.0	18.6	4.64	18.4	4.73	18.1	4.82	18.0	4.86	17.9	4.90	17.5	4.98
	18.0	19.1	4.56	18.8	4.63	18.4	4.69	18.2	4.71	17.9	4.74	17.4	4.77
45 (80%)	-15.0	9.12	3.44	9.11	3.52	9.11	3.60	9.11	3.64	9.11	3.69	9.12	3.79
	-13.0	9.52	3.51	9.51	3.59	9.50	3.67	9.50	3.72	9.50	3.76	9.49	3.87
	-11.0	10.0	3.57	9.98	3.65	9.96	3.74	9.96	3.79	9.95	3.84	9.94	3.94
	-10.0	10.3	3.60	10.2	3.68	10.2	3.77	10.2	3.82	10.2	3.87	10.2	3.98
	-9.1	10.5	3.62	10.5	3.71	10.5	3.81	10.4	3.85	10.4	3.90	10.4	4.01
	-7.6	10.9	3.67	10.9	3.76	10.9	3.86	10.9	3.91	10.8	3.96	10.8	4.07
	-5.6	11.5	3.74	11.5	3.83	11.4	3.92	11.4	3.97	11.4	4.03	11.4	4.14
	-3.7	12.1	3.80	12.0	3.89	12.0	3.99	12.0	4.04	11.9	4.09	11.9	4.20
	-0.7	13.0	3.89	12.9	3.99	12.9	4.08	12.8	4.13	12.8	4.19	12.7	4.30
	0.0	13.2	3.91	13.1	4.01	13.1	4.11	13.0	4.16	13.0	4.21	12.9	4.33
	1.0	13.5	3.94	13.4	4.04	13.3	4.14	13.3	4.19	13.3	4.24	13.2	4.36
	2.2	13.8	3.98	13.8	4.08	13.7	4.18	13.6	4.23	13.6	4.29	13.6	4.40
	4.1	14.4	4.04	14.3	4.14	14.2	4.25	14.2	4.30	14.2	4.36	14.1	4.48
	6.0	15.0	4.11	14.9	4.21	14.8	4.32	14.8	4.38	14.7	4.44	14.7	4.57
	7.9	15.5	4.18	15.5	4.29	15.4	4.41	15.4	4.47	15.4	4.54	15.3	4.67
	9.8	16.2	4.27	16.1	4.39	16.0	4.51	16.0	4.58	16.0	4.65	16.0	4.79
	11.8	16.9	4.38	16.8	4.50	16.8	4.63	16.8	4.70	16.7	4.77	16.7	4.92
	13.7	17.6	4.48	17.5	4.61	17.5	4.75	17.5	4.82	17.4	4.89	17.4	5.04
	15.0	18.1	4.55	18.0	4.69	18.0	4.82	17.9	4.89	17.9	4.96	17.8	5.10
	18.0	19.2	4.66	19.1	4.79	19.0	4.91	18.9	4.97	18.7	5.03	18.4	5.14
39 (70%)	-15.0	7.88	3.13	7.88	3.20	7.88	3.27	7.88	3.31	7.88	3.36	7.88	3.44
	-13.0	8.24	3.19	8.23	3.26	8.22	3.34	8.22	3.38	8.21	3.43	8.21	3.52
	-11.0	8.64	3.24	8.63	3.32	8.62	3.40	8.61	3.45	8.60	3.49	8.60	3.59
	-10.0	8.87	3.27	8.85	3.35	8.84	3.43	8.83	3.48	8.82	3.52	8.81	3.62
	-9.1	9.08	3.30	9.06	3.38	9.04	3.46	9.03	3.51	9.02	3.55	9.00	3.65
	-7.6	9.45	3.34	9.43	3.42	9.40	3.51	9.39	3.55	9.37	3.60	9.35	3.70
	-5.6	9.97	3.40	9.93	3.48	9.90	3.57	9.88	3.62	9.86	3.66	9.82	3.76
	-3.7	10.5	3.45	10.4	3.54	10.4	3.63	10.3	3.67	10.3	3.72	10.3	3.82
	-0.7	11.2	3.54	11.2	3.62	11.1	3.71	11.1	3.76	11.1	3.81	11.0	3.91
	0.0	11.4	3.56	11.4	3.64	11.3	3.73	11.3	3.78	11.2	3.83	11.2	3.94
	1.0	11.7	3.58	11.6	3.67	11.5	3.76	11.5	3.81	11.5	3.86	11.4	3.97
	2.2	12.0	3.62	11.9	3.71	11.8	3.80	11.8	3.85	11.8	3.90	11.7	4.01
	4.1	12.4	3.67	12.4	3.76	12.3	3.86	12.3	3.91	12.3	3.97	12.2	4.08
	6.0	12.9	3.74	12.9	3.83	12.8	3.93	12.8	3.98	12.8	4.04	12.7	4.16
	7.9	13.4	3.81	13.4	3.90	13.3	4.01	13.3	4.07	13.3	4.13	13.3	4.25
	9.8	14.0	3.89	13.9	3.99	13.9	4.10	13.9	4.16	13.9	4.23	13.8	4.36
	11.8	14.6	3.98	14.5	4.09	14.5	4.21	14.5	4.27	14.5	4.34	14.5	4.47
	13.7	15.2	4.08	15.2	4.20	15.1	4.32	15.1	4.38	15.1	4.45	15.0	4.58
	15.0	15.6	4.14	15.6	4.26	15.6	4.38	15.5	4.45	15.5	4.51	15.4	4.64
	18.0	16.6	4.24	16.5	4.36	16.4	4.47	16.3	4.52	16.2	4.58	15.9	4.68
34 (60%)	-15.0	6.90	2.76	6.90	2.82	6.90	2.89	6.90	2.92	6.90	2.96	6.90	3.04
	-13.0	7.21	2.81	7.20	2.87	7.19	2.94	7.19	2.98	7.19	3.02	7.19	3.10
	-11.0	7.56	2.86	7.55	2.93	7.54	3.00	7.54	3.04	7.53	3.08	7.52	3.16

Combination (%)	Outdoor Air Temp.: (°CDB)	Indoor Air Temp.: (°CWB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
34 (60%)	-10.0	7.76	2.88	7.75	2.95	7.73	3.03	7.73	3.07	7.72	3.11	7.71	3.19
	-9.1	7.95	2.91	7.93	2.98	7.91	3.05	7.90	3.09	7.90	3.13	7.88	3.22
	-7.6	8.27	2.94	8.25	3.02	8.23	3.09	8.21	3.13	8.20	3.17	8.18	3.26
	-5.6	8.72	3.00	8.69	3.07	8.66	3.15	8.64	3.19	8.63	3.23	8.59	3.32
	-3.7	9.16	3.04	9.12	3.12	9.08	3.20	9.06	3.24	9.04	3.28	9.00	3.37
	-0.7	9.84	3.12	9.79	3.19	9.73	3.27	9.71	3.32	9.68	3.36	9.64	3.45
	0.0	10.0	3.14	9.94	3.21	9.88	3.29	9.86	3.33	9.83	3.38	9.79	3.47
	1.0	10.2	3.16	10.2	3.24	10.1	3.32	10.1	3.36	10.0	3.40	10.0	3.50
	2.2	10.5	3.19	10.4	3.27	10.4	3.35	10.3	3.39	10.3	3.44	10.3	3.53
	4.1	10.9	3.24	10.8	3.32	10.8	3.40	10.7	3.45	10.7	3.49	10.7	3.59
	6.0	11.3	3.29	11.3	3.37	11.2	3.46	11.2	3.51	11.2	3.56	11.1	3.67
	7.9	11.8	3.35	11.7	3.44	11.7	3.54	11.6	3.59	11.6	3.64	11.6	3.75
	9.8	12.2	3.42	12.2	3.52	12.1	3.62	12.1	3.67	12.1	3.72	12.1	3.84
	11.8	12.8	3.51	12.7	3.61	12.7	3.71	12.7	3.77	12.7	3.83	12.6	3.94
	13.7	13.3	3.60	13.3	3.70	13.2	3.81	13.2	3.86	13.2	3.92	13.2	4.04
	15.0	13.7	3.65	13.7	3.76	13.6	3.87	13.6	3.92	13.6	3.98	13.5	4.09
	18.0	14.5	3.74	14.5	3.84	14.3	3.94	14.3	3.99	14.2	4.04	13.9	4.12
29 (50%)	-15.0	5.67	2.38	5.66	2.43	5.66	2.48	5.66	2.51	5.66	2.54	5.66	2.61
	-13.0	5.92	2.42	5.91	2.47	5.90	2.53	5.90	2.56	5.90	2.59	5.90	2.67
	-11.0	6.21	2.46	6.20	2.52	6.19	2.58	6.18	2.61	6.18	2.64	6.17	2.72
	-10.0	6.37	2.48	6.36	2.54	6.34	2.60	6.34	2.63	6.33	2.67	6.32	2.74
	-9.1	6.52	2.50	6.51	2.56	6.49	2.62	6.48	2.66	6.48	2.69	6.47	2.77
	-7.6	6.79	2.53	6.77	2.59	6.75	2.66	6.74	2.69	6.73	2.73	6.71	2.80
	-5.6	7.15	2.57	7.13	2.64	7.10	2.70	7.09	2.74	7.08	2.77	7.05	2.85
	-3.7	7.51	2.61	7.48	2.68	7.45	2.75	7.43	2.78	7.41	2.82	7.39	2.90
	-0.7	8.07	2.68	8.03	2.75	7.98	2.82	7.96	2.85	7.95	2.89	7.91	2.97
	0.0	8.20	2.69	8.15	2.76	8.11	2.83	8.09	2.87	8.07	2.90	8.04	2.99
	1.0	8.38	2.71	8.33	2.78	8.29	2.85	8.27	2.89	8.25	2.93	8.22	3.01
	2.2	8.59	2.74	8.55	2.81	8.50	2.88	8.48	2.92	8.46	2.96	8.43	3.04
	4.1	8.94	2.78	8.89	2.86	8.84	2.93	8.82	2.97	8.81	3.01	8.79	3.10
	6.0	9.28	2.83	9.24	2.91	9.20	2.99	9.19	3.03	9.17	3.07	9.16	3.16
	7.9	9.65	2.89	9.61	2.97	9.58	3.05	9.57	3.09	9.56	3.14	9.55	3.24
	9.8	10.0	2.95	10.0	3.04	9.99	3.12	9.98	3.17	9.98	3.22	9.97	3.32
	11.8	10.5	3.03	10.5	3.12	10.4	3.21	10.4	3.26	10.4	3.31	10.4	3.42
	13.7	10.9	3.10	10.9	3.20	10.9	3.30	10.9	3.35	10.9	3.40	10.9	3.50
	15.0	11.3	3.15	11.2	3.25	11.2	3.35	11.2	3.40	11.2	3.45	11.1	3.55
	18.0	12.0	3.24	11.9	3.33	11.8	3.42	11.8	3.46	11.7	3.51	11.5	3.58
23 (40%)	-15.0	4.62	1.99	4.62	2.03	4.62	2.08	4.63	2.11	4.63	2.13	4.63	2.19
	-13.0	4.83	2.02	4.83	2.07	4.83	2.12	4.82	2.15	4.82	2.18	4.82	2.24
	-11.0	5.07	2.06	5.07	2.11	5.06	2.16	5.06	2.19	5.05	2.22	5.05	2.28
	-10.0	5.21	2.08	5.20	2.13	5.19	2.18	5.18	2.21	5.18	2.24	5.17	2.30
	-9.1	5.33	2.09	5.32	2.15	5.31	2.20	5.30	2.23	5.30	2.26	5.29	2.32
	-7.6	5.55	2.12	5.54	2.18	5.52	2.23	5.51	2.26	5.50	2.29	5.49	2.35
	-5.6	5.86	2.16	5.84	2.22	5.81	2.27	5.80	2.30	5.79	2.33	5.77	2.39
	-3.7	6.15	2.20	6.13	2.25	6.09	2.31	6.08	2.34	6.06	2.36	6.03	2.43
	-0.7	6.61	2.25	6.57	2.31	6.53	2.36	6.51	2.39	6.49	2.42	6.46	2.48
	0.0	6.72	2.26	6.67	2.32	6.63	2.37	6.61	2.40	6.59	2.43	6.56	2.50
	1.0	6.86	2.28	6.82	2.34	6.77	2.39	6.75	2.42	6.73	2.45	6.70	2.52
	2.2	7.04	2.30	6.99	2.36	6.95	2.42	6.92	2.44	6.90	2.47	6.87	2.54
	4.1	7.31	2.34	7.27	2.40	7.22	2.45	7.20	2.48	7.18	2.51	7.15	2.58
	6.0	7.59	2.37	7.54	2.43	7.50	2.50	7.48	2.53	7.46	2.56	7.44	2.63
	7.9	7.88	2.42	7.84	2.48	7.80	2.54	7.78	2.58	7.77	2.61	7.75	2.69
	9.8	8.19	2.46	8.15	2.53	8.11	2.60	8.10	2.63	8.09	2.67	8.07	2.75
	11.8	8.53	2.52	8.50	2.59	8.47	2.66	8.45	2.70	8.44	2.74	8.42	2.82
	13.7	8.88	2.58	8.85	2.65	8.82	2.73	8.80	2.76	8.78	2.80	8.74	2.88
	15.0	9.13	2.62	9.09	2.69	9.05	2.76	9.03	2.80	9.01	2.84	8.94	2.92
	18.0	9.68	2.67	9.61	2.74	9.52	2.81	9.47	2.84	9.40	2.87	9.24	2.93

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

2.2.9 Capacity coefficient factor

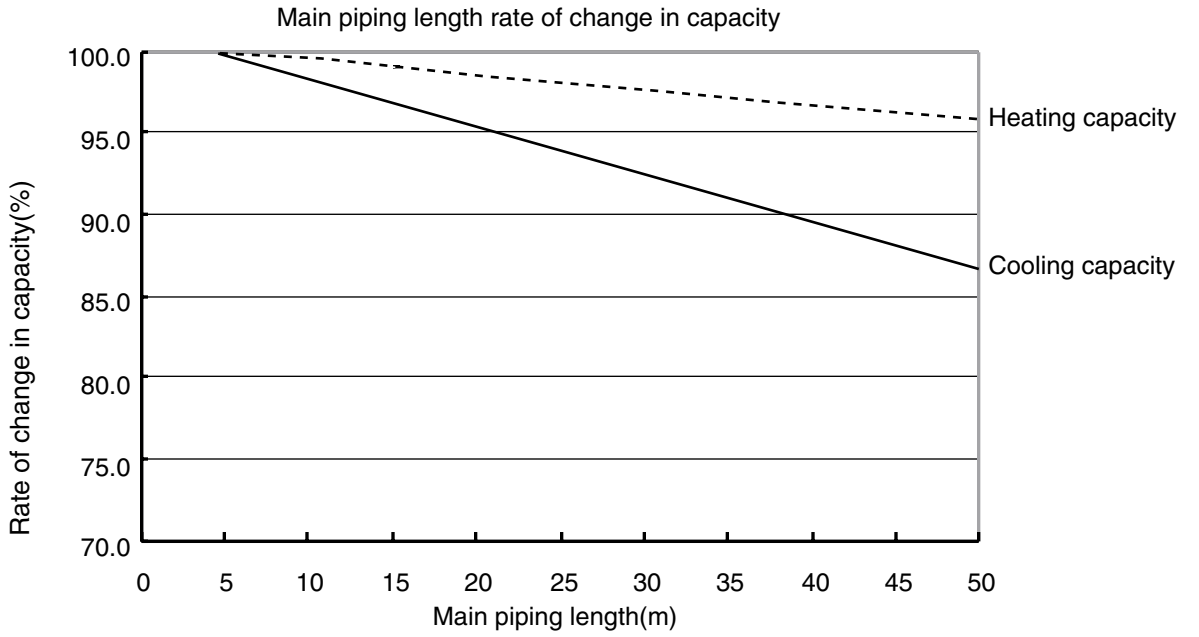
1) Rate of change in capacity due to the main piping length

Rate of change in cooling capacity

Main piping length(m)	5	10	15	20	25	30	35	40	45	50
Rate of change in cooling capacity(%)	100.0	98.8	97.3	95.8	94.3	92.8	91.3	89.8	88.3	86.8

Rate of change in heating capacity

Main piping length(m)	5	10	15	20	25	30	35	40	45	50
Rate of change in heating capacity(%)	100.0	99.6	99.2	98.7	98.3	97.8	97.4	96.9	96.5	96.0



2) Rate of change in capacity due to the branch piping length

7k Btu/h(2.1 kW) models

Piping length(m)	Rate of change in capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	98.0	99.5
15	96.0	98.9

9k Btu/h(2.6 kW) models

Piping length(m)	Rate of change in capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	97.5	98.8
15	95.0	97.5

12k Btu/h(3.5 kW) models

Piping length(m)	Rate of change in capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	97.0	98.3
15	94.0	96.5

18k Btu/h(5.3 kW) models

Piping length(m)	Rate of change in capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	98.3	99.5
15	96.5	99.0

24k Btu/h(7.0 kW) models

Piping length(m)	Rate of change in capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	97.8	99.2
15	95.5	98.4

3) Calculation of actual system capacity

① Outdoor unit rated capacity

$Q_{odu(rated)}$ [from specification table]

② Outdoor unit capacity at Ti, To temperature.

$Q_{odu(Ti, To)}$ [from capacity table]

③ Outdoor unit capacity coefficient factor

$F_{(Ti, To)} = Q_{odu(Ti, To)} / Q_{odu(rated)}$

④ Piping correction factor [from capacity coefficient factor table]

$F_{main\ (length, elevation)}$ for main piping length or elevation

$F_{branch\ (length, elevation)}$ for branch piping length or elevation

⑤ Individual indoor unit combinational capacity

$Q_{idu\ (combi)} = Q_{odu(rated)} \times Q_{idu(rated)} / Q_{idu(rated\text{-}total)}$

⑥ Individual indoor unit actual capacity

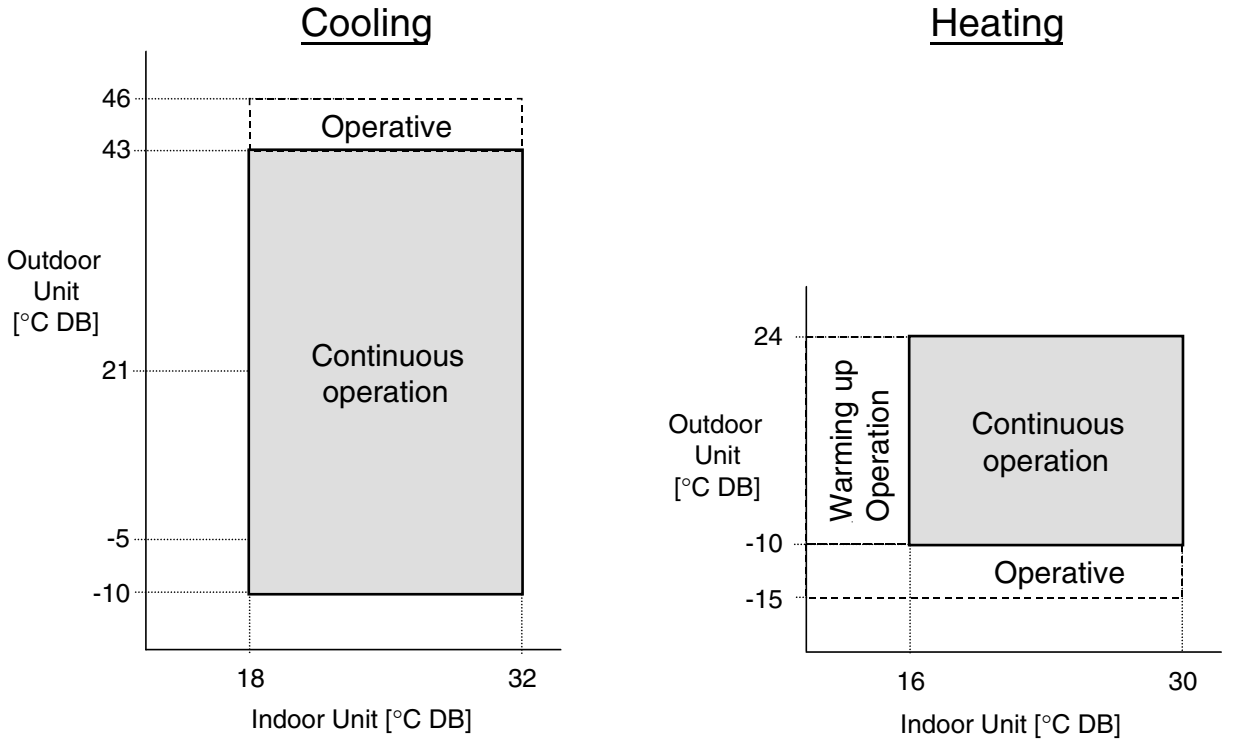
$Q_{idu\ (actual)} = Q_{odu(combi)} \times F_{(Ti, To)} \times F_{main\ (length, elevation)} \times F_{branch\ (length, elevation)}$

Example)

- Outdoor unit model : A7UW406FA3[FM40AH UH3]
- Total indoor units combination : 7k(A room) + 7k .... + 9k
- Outdoor temperature : 39°CDB
- Indoor temperature : 19.5°CWB (A room)
- Main piping length (O/D to BD) : 40m
- Branch piping length (BD to I/D) : 10m (A room)
- Indoor unit actual cooling capacity in A room?
  - $Q_{odu\ (rated)}$: **11.7 kW**
  - $Q_{odu\ (Ti, To)}$:
    1) Combination ratio : $Q_{odu\ (rated\ -\ total)}$ / $Q_{odu\ (rated)}$ = **115%**
    2) From capacity table at T_i, T_o
       110% : 11.4 kW
       120% : 11.4 kW
       ∴ $Q_{odu\ (Ti, To)}$ = **115%**
  - $F_{(Ti, To)}$: 11.4 kW / 11.7 kW = **97%**
  - $F_{main\ (length, elevation)}$ = **89.8%** (40m)
  - $F_{branch\ (length, elevation)}$ = **96.0%** (7k, 10m)
  - $Q_{idu(combi)}$ [7k] = $40k \times \frac{7k}{46k}$ = 6.1 kbtu/h

    ∴ $Q_{idu(actual)}$ [7k] = 6.1k x 0.97 x 0.898 x 0.96
    = 5.05 k Btu/h

2.2.10 Operation range



Operative: Intermittent operation due to the operational conditions (indoor/outdoor temperature, humidity, load etc.) can cause the heating capacity to decrease

NOTE

For A7UW406FA3 outdoor unit,
operative range: -10°C ~ - 5°C
continuous operation range : - 5°C ~ 24°C

2.2.11 Electrical characteristics

Unit					Power		Compressor		OFM	
Model	**Type**	**Hz**	**Voltage**	**Voltage range**	**MCA**	**MOP**	**MSC**	**RLA**	**KW**	**FLA**
A7UW406FA3[FM40AH UH3]	Multi Inverter	50	220~240	MIN.:198 MAX.:264	21.2	37.2	-	16.0	0.41*2	0.61*2
A8UW486FA3[FM48AH U33]					27.1	47.6	-	20.5	0.124*2	0.73*2
A9UW566FA3[FM56AH U33]					28.6	50.3	-	21.7	0.124*2	0.73*2

Notes :

1. Voltage range
   Voltage supplied to the unit terminals should be within the minimum and maximum range
2. Maximum allowable voltage unbalance between phase is 2 %
3. MCA / MOP
   MCA = (1.25*RLA)+load1+load2
   MOP = (2.25*RLA)+load1+load2
   - Load1 : sum of current for all other motors
   - Load2 : any other load rated 1.0A or more
4. Select wire spec. based on the MCA
5. Select proper circuit breaker as given below
   MCA < Circuit breaker ≤ MOP
6. Recommended circuit breaker is ELCB (Earth Leakage circuit breaker)
7. MSC & RLA are measured as the compressor only test condition.
8. MSC values
9. RLA is measured during each individual compressor test condition.
10. OFM is measured as the outdoor unit test condition

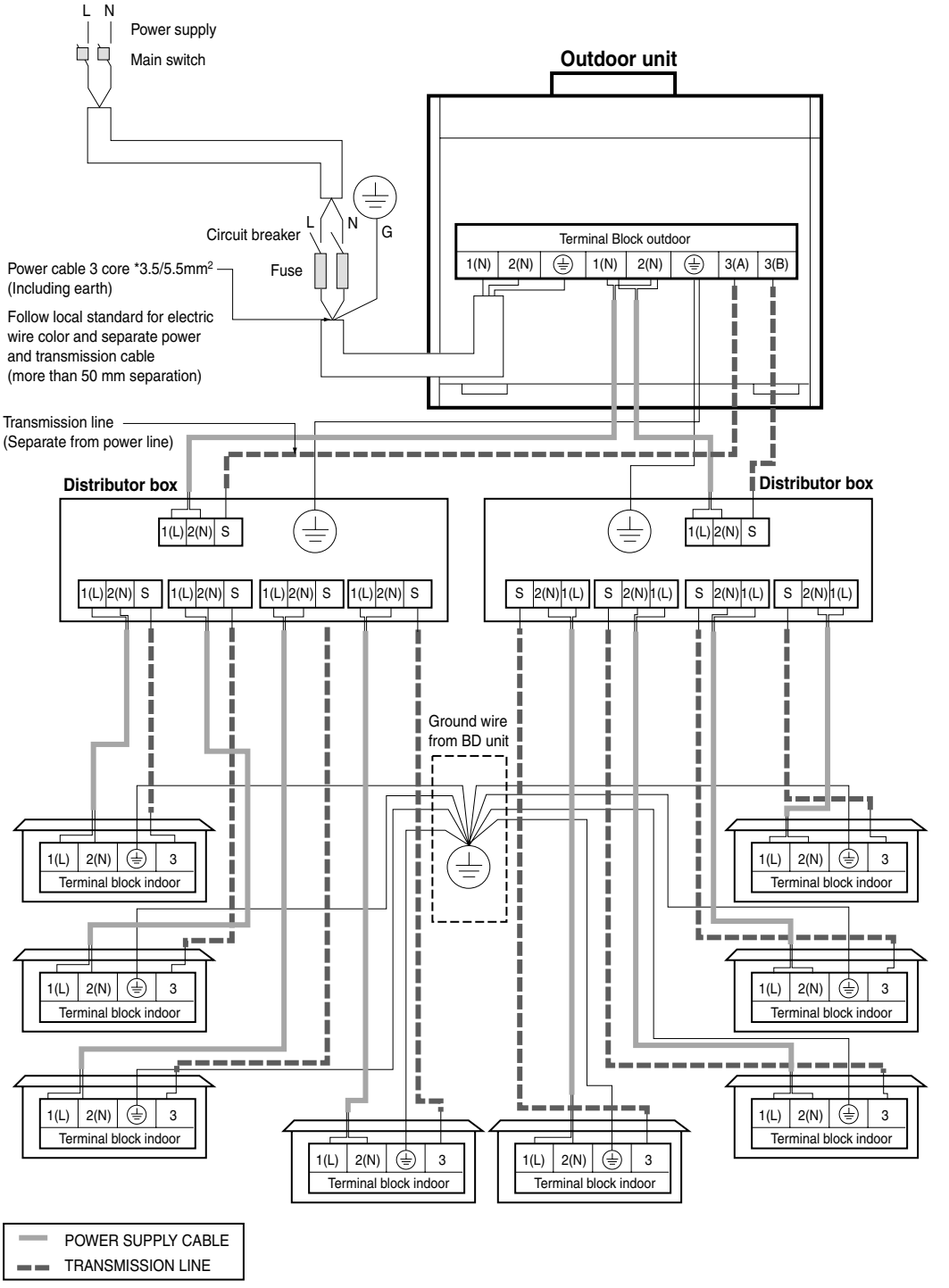
(Example) Selection of proper circuit breaker

① Model : A7UW406FA3[FM40AH UH3]
② MCA = (1.25 x RLA) + Load1 + Load2
= (1.25 x 16.0) + 0 + (0.61 x 2) = 21.2 A
③ MOP = (2.25 x RLA) + Load1 + Load2
= (2.25 x 16.0) + 0 + (0.61 x 2) = 37.2 A
→ Finally select circuit breaker 30A

MCA : Minimum Circuit Amperes (A)
MOP : Maximum rating over current protective device
MSC : Maximum Starting Current
RLA : Rated Load Amperes (A)
OFM : Outdoor Fan Motor
kW : Fan Motor rated output (kW)
FLA : Full Load Amperes (A)

2.2.12 Field wiring diagram

Models : A7UW/A8UW/A9UW

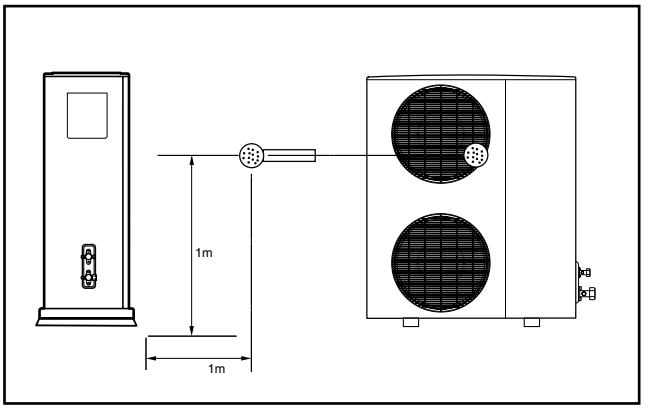


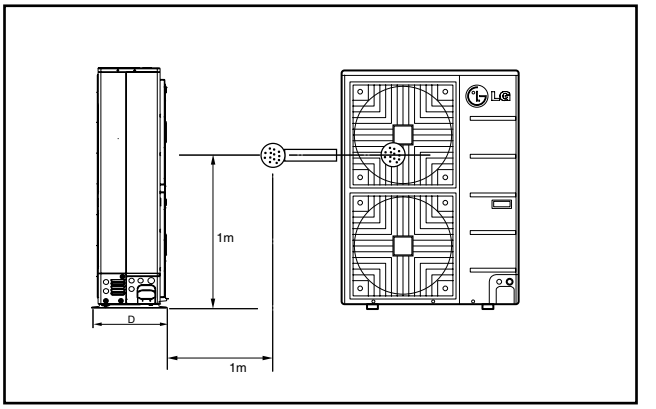
Notes:

1. All wiring, component and materials to be procured on the site should be according to the standard
2. Use copper conductor only
3. Install circuit breaker for safety
4. Unit should be grounded in compliance with the applicable local and national codes
5. Wiring cable size must comply with the applicable local and national code.

2.2.13 Sound levels

Overall



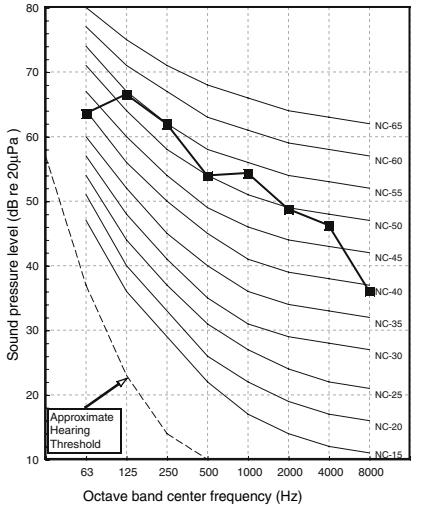


Notes:

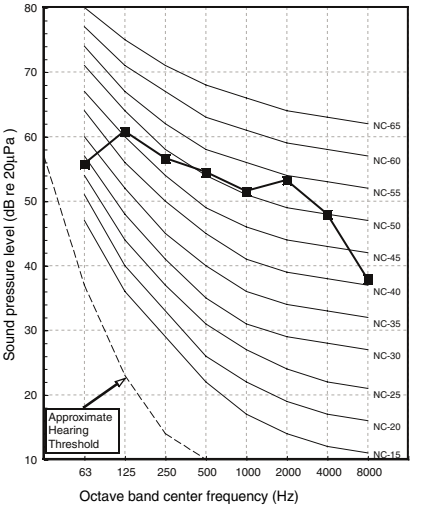
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition
- Data is valid at nominal operation condition
- Reference accoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Sound pressure level

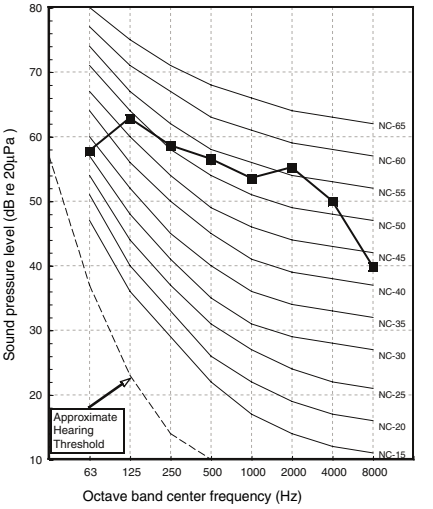
A7UW406FA3 [FM40AH UH3]



A8UW486FA3 [FM48AH U33]



A9UW566FA3 [FM56AH U33]



2.2.14 Accessories

Standard accessories

• Installation manual

Optional accessories

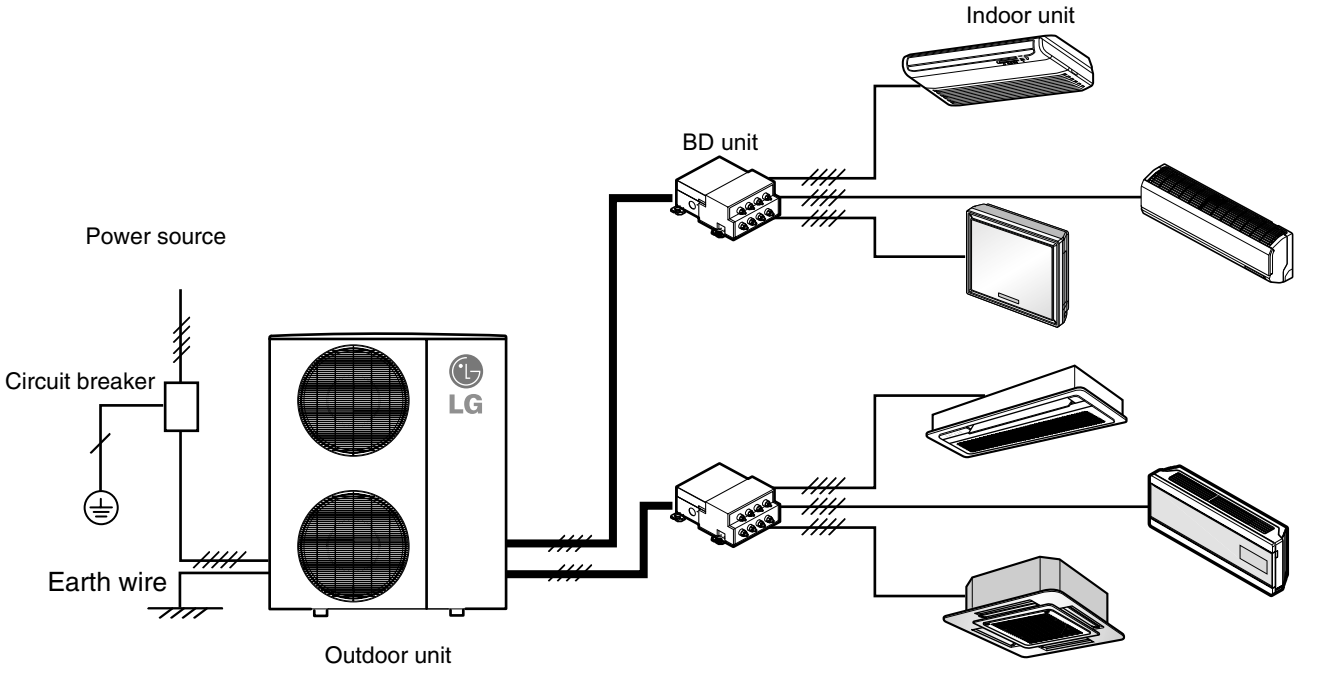
No.	Name	Model name
1	BD unit	PMBD3620, PMBD7220 (For 2 indoor units)
		PMBD3630, PMBD7230 (For 3 indoor units)
		PMBD3640 (For 4 indoor units)

2.3 Distributor type MULTI FD X (3 phase)
2.3.1 Power supply

Type	Outdoor unit	Capacity [kBtu/h(kW)]	Circuit breaker capacity	Power supply
Heat pump	A6UW368FA0 [FM37AH UE0]	33(9.7)	20A	3ø, 380-415V, 50Hz
	A7UW428FA3 [FM41AH U33]	46(13.5)		
	A8UW488FA3 [FM49AH U33]	53(15.5)		
	A9UW548FA3 [FM57AH U33]	57(16.7)		

External wiring procedure

- The power supply work is needed only to the outdoor unit. The power supply to the BD unit and the indoor unit is conducted through the transmission wiring. Therefore, the power supply work can be carried out at just one place of the outdoor unit. It will contribute to simplify the work procedure and to save cost.
- Wiring cable size must comply with the applicable local and national code.



2.3.2 List of functions

Category	Function	A6UW368FA0 [FM37AH UE0]	A7UW428FA3 [FM41AH U33]	A8UW488FA3 [FM49AH U33]	A9UW548FA3 [FM57AH U33]
Reliability	Defrost / Deicing	O	O	O	O
	High Pressure Switch	O	O	O	O
	Low Pressure Switch	O	O	O	O
	Phase protection	O	O	O	O
	Restart Delay (3-minutes)	O	O	O	O
	Self Diagnosis	O	O	O	O
	Soft Start	O	O	O	O
	Test Function	O	O	O	O
Convenience	Auto operation(Artificial intelligence)	O	O	O	O
	Auto Restart Operation	O	O	O	O
CAC Network Function	Central control(LGAP)	O	O	O	O
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00
	PI485	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0
Others	Thermistor	-	-	-	-

O : Applied X : Not applied – : No relation

Option : Model name & price are different according to options, and assembled in factory with main unit.

Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

2.3.3 Specifications

Outdoor Unit			A6UW368FA0 [FM37AH UE0]	A7UW428FA3 [FM41AH U33]
Nominal Capacity (Min~Rated~Max)	Cooling	kW	6.33~9.67~10.8	2.8~13.5~14.1
		Btu/h	21,600~33,000~37,000	9,600~46,000~48,000
	Heating	kW	6.68~11.1~12.3	3.2~14.1~15.2
		Btu/h	22,800~38,000~42,000	10,752~48,000~52,000
Nominal Input (Min~Rated~Max)	Cooling	kW	1.80~3.00~3.45	0.8~4.0~4.9
	Heating	kW	1.83~3.05~3.51	0.89~3.9~5.1
Energy label			A/A	A/A
Testing Combination			MS07AH N40 * 6EA	MS07AH N40 * 7EA

Running Current	Cooling	A	3.4-5.4-6.0	1.5~7.2~8.1
	Heating	A	3.5-5.4-6.1	1.7~7.5~8.0
Starting Current	(Cooling/Heating)	A	4.8	-
Power Supply		Ø / V / Hz	3 / 380~415 / 50	3/380~415/50
Power Supply Cable (outdoor)		No.* mm^2	5*2.5	5*2.5
Power and transmission cable (outdoor to BD)		No.* mm^2	4*1.25 (Including Earth)	4*1.25(Including Earth)
Power and transmission cable (BD to indoor)		No.* mm^2	4*0.75 (Including Earth)	4*0.75(Including Earth)

Dimensions	W*H*D	mm(inch)	870*1,038*320 (34.3*40.9*12.6)	950*1380*330 (37.4*54.3*12.3)
Net Weight		kg(lbs)	80(176)	108(238.0)
Max. Number of Connectable Indoor Units			6	7
Compressor (Inverter)	Type		Twin rotary	Twin-Rotary
	Qty x Model		1 x 5KD240X	5JD420Z
	Motor Type		BLDC	BLDC
	Oil Charge volume	cc	900	1,300
	Oil Type		FV50S	FV50S
Refrigerant	Charge (at 5m)	g(oz)	2,800(98.8)	4,800(169.3)
	Type		R410A	R410A
	Control		EEV	EEV
Heat Exchanger	Rows x Column x FPI		2R x 48C x 18	2R x 64C x 17
	Defrosting Method		Reversing cycle	Reversing cycle
Fan	Capacitor	µF/Vac	-	-
	Drive		Direct Drive	Direct Drive
	Discharge direction	Side / Top	Side	Side
	Air Flow Rate	CMM(CFM)	32(1,130) x 2	60(2,119) x 2
Noise Level(H/L)	Sound Pressure at 1m	dB(A)±3	51/47	58
Piping connections	Liquid(Ø)	mm(inch)	6.35(1/4)	9.52(3/8)
	Gas(Ø)		15.88(5/8)	19.05(3/4)
Max. Interunit Piping Length	Total Piping(Main+Total Branch)	m	100	125
	Main Piping	m	40	55
	Total Branch Piping	m	60	70
	Each Branch Piping	m	20	15
Max. Elevation Difference	Indoor Unit~Outdoor Unit	m	30	30
	Indoor Unit~Indoor Unit	m	15	15

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Due to our policy of innovation some specifications may be changed without notification.
3. At least two indoor units should be connected.
4. Minimum combination capacity rate should be more than 40%
5. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

Outdoor Unit			A8UW488FA3 [FM49AH U33]	A9UW548FA3 [FM57AH U33]
Nominal Capacity (Min~Rated~Max)	Cooling	kW	3.3~15.5~17.0	4.0~16.7~18.52
		Btu/h	11,400~52,800~58,000	13,800~57,000~63,200
	Heating	kW	3.7~16.4~17.29	4.5~17.87~18.75
		Btu/h	12,768~56,000~59,000	15,456~61,000~64,000
Nominal Input (Min~Rated~Max)	Cooling	kW	0.94~4.6~5.4	1.0~4.91~5.7
	Heating	kW	1.13~4.45~5.2	1.49~4.55~5.65
Energy label			A/A	A/A
Testing Combination			MS07AH N40 * 5EA MS09AH N40 * 3EA	MS09AH N40*8EA

Running Current	Cooling	A	1.8~8.0~8.4	2.3~8.1~9.1
	Heating	A	2.1~7.5~8.3	2.5~8.0~8.7
Starting Current	(Cooling/Heating)	A	-	-
Power Supply		Ø / V / Hz	3/380~415/50	3/380~415/50
Power Supply Cable (outdoor)		No.* mm^2	5*2.5	5*2.5
Power and transmission cable (outdoor to BD)		No.* mm^2	4*1.25(Including Earth)	4*1.25(Including Earth)
Power and transmission cable (BD to indoor)		No.* mm^2	4*0.75(Including Earth)	4*0.75(Including Earth)

Dimensions	W*H*D	mm(inch)	950*1,380*330 (37.4*54.3*12.3)	950*1,380*330 (37.4*54.3*12.3)
Net Weight		kg(lbs)	108(238.0)	108(238.0)
Max. Number of Connectable Indoor Units			8	9
Compressor (Inverter)	Type		Twin-Rotary	Twin-Rotary
	Qty x Model		5JD420Z	5JD420Z
	Motor Type		BLDC	BLDC
	Oil Charge volume	cc	1,300	1,300
	Oil Type		FV50S	FV50S
Refrigerant	Charge (at 5m)	g(oz)	4,800(169.3)	4,800(169.3)
	Type		R410A	R410A
	Control		EEV	EEV
Heat Exchanger	Rows x Column x FPI		2R x 64C x 17	2R x 64C x 17
	Defrosting Method		Reversing cycle	Reversing cycle
Fan	Capacitor	µF/Vac	-	-
	Drive		Direct Drive	Direct Drive
	Discharge direction	Side / Top	Side	Side
	Air Flow Rate	CMM(CFM)	60(2,119) x 2	60(2,119) x 2
Noise Level(H/L)	Sound Pressure at 1m	dB(A)±3	58	59
Piping connections	Liquid(Ø)	mm(inch)	9.52(3/8)	9.52(3/8)
	Gas(Ø)		19.05(3/4)	19.05(3/4)
Max. Interunit Piping Length	Total Piping(Main+Total Branch)	m	135	145
	Main Piping	m	55	55
	Total Branch Piping	m	80	90
	Each Branch Piping	m	15	15
Max. Elevation Difference	Indoor Unit~Outdoor Unit	m	30	30
	Indoor Unit~Indoor Unit	m	15	15

Note :

1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27°C(80.6°F) DB /19°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB /24°C(75.2°F) WB
   Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
   - Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
   Piping Length - Interconnecting Piping Length 7.5m
   - Level Difference of Zero.
2. Due to our policy of innovation some specifications may be changed without notification.
3. At least two indoor units should be connected.
4. Minimum combination capacity rate should be more than 40%
5. Wiring cable size must comply with the applicable local and national code.

Conversion Formula	
kW	= Btu/h × 0.0002931
CFM	= CMM × 35.3

BD unit			PMBD3620	PMBD3630
Connectable indoor units	Number of indoor units		1~2	1~3
	Capacity	Btu/h	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k
Power source		(Ø, Hz, V)	1, 50, 220~240	1, 50, 220~240
Power consumption		W	10	10
Running current		A	0.05	0.05
Dimension	W*H*D	mm(inch)	302*143*252(11.9*5.6*9.9)	302*143*252(11.9*5.6*9.9)
Net weight		kg	4.8	4.9
Connecting cable	Direction indoor unit	No.* mm^2	4*0.75 (including earth)	4*0.75 (including earth)
	Direction outdoor unit	No.* mm^2	4*1.25 (including earth)	4*1.25 (including earth)
Piping connection	Liquid (Ø)	mm(inch)	9.52(3/8)	9.52(3/8)
(To outdoor unit)	Gas (Ø)	mm(inch)	19.05(3/4)	19.05(3/4)
Piping connection	Liquid (Ø)	mm(inch)	6.35(1/4)*2EA	6.35(1/4)*3EA
(To indoor unit)	Gas (Ø)	mm(inch)	9.52(3/8)*2EA	9.52(3/8)*3EA
Accessories	Hanger (Bracket)	EA	4	4
	Screw	EA	8	8
	Manual	EA	1	1

BD unit			PMBD3640	PMBD7230
Connectable indoor units	Number of indoor units		1~4	1~3
	Capacity	Btu/h	7k/9k/12k/18k/24k	18k/24k/30k/36k
Power source		(Ø, Hz, V)	1, 50, 220~240	1, 50, 220~240
Power consumption		W	10	10
Running current		A	0.05	0.05
Dimension	W*H*D	mm(inch)	302*143*252(11.9*5.6*9.9)	302*143*252(11.9*5.6*9.9)
Net weight		kg	5	5
Connecting cable	Direction indoor unit	No.* mm^2	4*0.75 (including earth)	4*0.75 (including earth)
	Direction outdoor unit	No.* mm^2	4*1.25 (including earth)	4*1.25 (including earth)
Piping connection	Liquid (Ø)	mm(inch)	9.52(3/8)	9.52(3/8)
(To outdoor unit)	Gas (Ø)	mm(inch)	19.05(3/4)	19.05(3/4)
Piping connection	Liquid (Ø)	mm(inch)	6.35(1/4)*4EA	6.35(1/4)*3EA
(To indoor unit)	Gas (Ø)	mm(inch)	9.52(3/8)*4EA	12.7(1/2)*3EA
Accessories	Hanger (Bracket)	EA	4	4
	Screw	EA	8	8
	Manual	EA	1	1

Note :

1. BD unit or Indoor Unit Max. Height <--> BD unit or Indoor Unit Min. Height : Max.10m
   Set up the BD unit and Indoor Unit in 15m.
2. The piping connection must be suit the piping sizes of the indoor unit which will be connected.
   (If need, use the connector which is included in the indoor unit)
3. The BD should be installed inside the building.
5. Wiring cable size must comply with the applicable local and national code.

Conversion Formula
kW = Btu/h × 0.0002931
CFM = CMM × 35.3

2.3.4 Combination table

The individual indoor unit capacity can be calculated as follows depending on the total connected capacity of all indoor units.

$$\text{Individual indoor unit combinational capacity } [Q_{idu(combi)}] = \text{Outdoor unit rated capacity } [Q_{odu(rated)}] \times \frac{\text{Individual indoor unit rated capacity } [Q_{idu(rated)}]}{\text{Total connected indoor unit rated capacity } [\sum Q_{idu(rated)}]}$$

Example)
- Outdoor unit model : A6UW368FA0[FM37AH UE0]
- Total indoor units combination : 7k + 9k + 9k + 9k + 9k
- Each indoor unit combinational capacity?

- $Q_{odu(rated)}$: 33 kBtu/h
- $\sum Q_{idu(rated)}$: 43 kBtu/h

$$\therefore Q_{idu(combi)} : [7k] = 33 \times \frac{7}{43} = \mathbf{5.4k\ But/h}$$

$$Q_{idu(combi)} : [9k] = 33 \times \frac{9}{43} = \mathbf{6.9k\ But/h}$$

Models : A6UW368FA0[FM37AH UE0]

[Cooling capacity]

Total indoor unit capacity (kBtu/h)	Cooling capacity						Input (W)		
	Min		Rating		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
16	9,600	2.8	16,000	4.7	17,600	5.2	800	1,333	1,533
18	10,800	3.2	18,000	5.3	19,800	5.8	900	1,500	1,725
19	11,400	3.3	19,000	5.6	20,900	6.1	950	1,583	1,821
21	12,600	3.7	21,000	6.2	23,100	6.8	1,050	1,750	2,013
23	13,800	4.0	23,000	6.7	25,300	7.4	1,150	1,917	2,204
24	14,400	4.2	24,000	7.0	26,400	7.7	1,200	2,000	2,300
25	15,000	4.4	25,000	7.3	27,500	8.1	1,250	2,083	2,396
26	15,600	4.6	26,000	7.6	28,600	8.4	1,300	2,167	2,492
27	16,200	4.7	27,000	7.9	29,700	8.7	1,350	2,250	2,588
28	16,800	4.9	28,000	8.2	30,800	9.0	1,400	2,333	2,683
30	18,000	5.3	30,000	8.8	33,000	9.7	1,500	2,500	2,875
31	18,300	5.4	30,500	8.9	33,550	9.8	1,550	2,583	2,971
32	18,600	5.5	31,000	9.1	34,100	10.0	1,600	2,667	3,067
33	18,900	5.5	31,500	9.2	34,650	10.2	1,650	2,750	3,163
34	19,200	5.6	32,000	9.4	35,200	10.3	1,700	2,833	3,258
35	19,500	5.7	32,500	9.5	35,750	10.5	1,750	2,917	3,354
36	21,600	6.3	33,000	9.7	37,000	10.8	1,800	3,000	3,450
37	22,200	6.5	33,942	9.9	37,336	10.9	1,807	3,012	3,464
38	22,800	6.7	34,507	10.1	37,958	11.1	1,811	3,019	3,472
39	23,400	6.9	34,884	10.2	38,373	11.2	1,814	3,024	3,477
40	24,000	7.0	35,239	10.3	38,763	11.4	1,819	3,032	3,486
41	24,600	7.2	35,565	10.4	39,121	11.5	1,823	3,038	3,494
42	25,200	7.4	35,594	10.4	39,153	11.5	1,824	3,040	3,496
43	25,800	7.6	35,947	10.5	39,542	11.6	1,831	3,051	3,509
44	26,400	7.7	36,167	10.6	39,784	11.7	1,835	3,059	3,518
45	27,000	7.9	36,167	10.6	39,784	11.7	1,835	3,059	3,518
46	27,600	8.1	36,300	10.6	39,930	11.7	1,838	3,063	3,523

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 16~46 Btu/h(40%~130%)
5. At least two indoor units should be connected.

[Heating capacity]

Total indoor unit capacity (kBtu/h)	Heating capacity						Input (W)		
	Min		Rating		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
16	10,750	3.2	17,920	5.3	19,710	5.8	813	1,356	1,559
18	12,100	3.5	20,160	5.9	22,180	6.5	915	1,525	1,754
19	12,770	3.7	21,280	6.2	23,410	6.9	966	1,610	1,851
21	14,110	4.1	23,520	6.9	25,870	7.6	1,068	1,779	2,046
23	15,460	4.5	25,760	7.5	28,340	8.3	1,169	1,949	2,241
24	16,130	4.7	26,880	7.9	29,570	8.7	1,220	2,033	2,338
25	16,800	4.9	28,000	8.2	30,800	9.0	1,271	2,118	2,436
26	17,470	5.1	29,120	8.5	32,030	9.4	1,322	2,203	2,533
27	18,140	5.3	30,240	8.9	33,260	9.7	1,373	2,288	2,631
28	18,820	5.5	31,360	9.2	34,500	10.1	1,423	2,372	2,728
30	20,160	5.9	33,600	9.8	36,960	10.8	1,525	2,542	2,923
31	20,830	6.1	34,720	10.2	38,190	11.2	1,576	2,626	3,020
32	21,500	6.3	35,840	10.5	39,420	11.6	1,627	2,711	3,118
33	21,510	6.3	35,850	10.5	39,440	11.6	1,678	2,796	3,215
34	22,050	6.5	36,750	10.8	40,420	11.8	1,728	2,881	3,313
35	22,580	6.6	37,630	11.0	41,400	12.1	1,779	2,965	3,410
36	22,800	6.7	38,000	11.1	42,000	12.3	1,830	3,050	3,508
37	23,150	6.8	38,580	11.3	42,430	12.4	1,822	3,037	3,493
38	23,350	6.8	38,920	11.4	42,810	12.5	1,818	3,030	3,484
39	23,490	6.9	39,150	11.5	43,070	12.6	1,815	3,025	3,478
40	23,560	6.9	39,270	11.5	43,190	12.7	1,800	3,000	3,449
41	23,640	6.9	39,410	11.5	43,350	12.7	1,790	2,983	3,430
42	23,630	6.9	39,380	11.5	43,320	12.7	1,785	2,974	3,421
43	23,770	7.0	39,610	11.6	43,570	12.8	1,762	2,937	3,377
44	23,850	7.0	39,740	11.6	43,720	12.8	1,747	2,911	3,348
45	23,860	7.0	39,770	11.7	43,740	12.8	1,742	2,904	3,339
46	23,910	7.0	39,840	11.7	43,830	12.8	1,739	2,899	3,334

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 16~46 Btu/h(40%~130%)
5. At least two indoor units should be connected.

Models : A7UW428FA3[FM41AH U33]

[Cooling capacity]

Total indoor unit capacity (kBtu/h)	Cooling capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
16	9,600	2.8	16,000	4.7	17,600	5.2	796	1,327	1,526
18	10,800	3.2	18,000	5.3	19,800	5.8	893	1,489	1,712
19	11,400	3.3	19,000	5.6	20,900	6.1	943	1,572	1,807
21	12,600	3.7	21,000	6.2	23,100	6.8	1,042	1,737	1,998
23	13,800	4.0	23,000	6.7	25,300	7.4	1,011	1,684	1,937
24	14,400	4.2	24,000	7.0	26,400	7.7	1,053	1,755	2,019
25	15,000	4.4	25,000	7.3	27,500	8.1	1,096	1,826	2,100
26	15,600	4.6	26,000	7.6	28,600	8.4	1,161	1,935	2,225
27	16,200	4.7	27,000	7.9	29,700	8.7	1,227	2,044	2,351
28	16,800	4.9	28,000	8.2	30,800	9.0	1,292	2,153	2,476
29	17,400	5.1	29,000	8.5	31,900	9.3	1,357	2,262	2,602
30	18,000	5.3	30,000	8.8	33,000	9.7	1,423	2,372	2,727
31	18,600	5.5	31,000	9.1	34,100	10.0	1,488	2,481	2,853
32	19,200	5.6	32,000	9.4	35,200	10.3	1,554	2,590	2,978
33	19,800	5.8	33,000	9.7	36,300	10.6	1,619	2,699	3,104
34	20,400	6.0	34,000	10.0	37,400	11.0	1,685	2,808	3,229
35	21,000	6.2	35,000	10.3	38,500	11.3	1,750	2,917	3,355
36	21,600	6.3	36,000	10.5	39,600	11.6	1,816	3,026	3,480
37	22,200	6.5	37,000	10.8	40,700	11.9	1,859	3,099	3,564
38	22,800	6.7	38,000	11.1	41,800	12.2	1,903	3,172	3,648
39	23,400	6.9	39,000	11.4	42,900	12.6	1,947	3,245	3,732
40	24,000	7.0	40,000	11.7	44,000	12.9	1,991	3,318	3,816
41	24,600	7.2	41,000	12.0	45,100	13.2	2,035	3,391	3,900
42	25,200	7.4	42,000	12.3	46,000	13.5	2,083	3,472	3,993
43	25,400	7.4	42,333	12.4	46,167	13.5	2,132	3,553	4,086
44	25,600	7.5	42,667	12.5	46,333	13.6	2,180	3,634	4,179
45	25,800	7.6	43,000	12.6	46,500	13.6	2,229	3,714	4,271
46	26,000	7.6	43,333	12.7	46,667	13.7	2,277	3,795	4,364
47	26,200	7.7	43,667	12.8	46,833	13.7	2,325	3,876	4,457
48	26,400	7.7	44,000	12.9	47,000	13.8	2,370	3,950	4,550
49	26,600	7.8	44,333	13.0	47,167	13.8	2,418	4,030	4,643
50	26,800	7.9	44,667	13.1	47,333	13.9	2,400	4,000	4,736
51	27,000	7.9	45,000	13.2	47,500	13.9	2,400	4,000	4,829
52	27,200	8.0	45,333	13.3	47,667	14.0	2,400	4,000	4,900
53	27,400	8.0	45,667	13.4	47,833	14.0	2,400	4,000	4,900
54	27,600	8.1	46,000	13.5	48,000	14.1	2,400	4,000	4,900

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 16~54 Btu/h(40%~130%)
5. At least two indoor units should be connected.

[Heating capacity]

Total indoor unit capacity (kBtu/h)	Heating capacity						Input (W)		
	Min		Rating		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
16	10,752	3	17,920	5	19,533	6	887	1,478	1,700
18	11,880	3	19,800	6	21,582	6	975	1,625	1,868
19	12,540	4	20,900	6	22,781	7	1,029	1,715	1,972
21	13,860	4	23,100	7	25,179	7	1,137	1,896	2,180
23	15,180	4	25,300	7	27,577	8	1,355	2,259	2,869
24	15,840	5	26,400	8	28,776	8	1,400	2,333	2,963
25	16,500	5	27,500	8	29,975	9	1,488	2,480	3,150
26	17,160	5	28,600	8	31,174	9	1,535	2,559	3,250
27	17,820	5	29,700	9	32,373	9	1,579	2,631	3,342
28	18,480	5	30,800	9	33,572	10	1,622	2,703	3,433
29	19,140	6	31,900	9	34,771	10	1,665	2,776	3,525
30	19,800	6	33,000	10	35,970	11	1,709	2,848	3,617
31	20,460	6	34,100	10	37,169	11	1,752	2,920	3,708
32	21,120	6	35,200	10	38,368	11	1,795	2,992	3,800
33	21,780	6	36,300	11	39,567	12	1,839	3,064	3,892
34	22,440	7	37,400	11	40,766	12	1,882	3,136	3,983
35	23,100	7	38,500	11	41,965	12	1,925	3,209	4,075
36	23,760	7	39,600	12	43,164	13	2,008	3,346	4,250
37	24,420	7	40,700	12	44,363	13	2,050	3,417	4,340
38	25,080	7	41,800	12	45,562	13	2,093	3,488	4,430
39	25,740	8	42,900	13	46,761	14	2,135	3,559	4,520
40	26,400	8	44,000	13	47,960	14	2,178	3,630	4,610
41	27,060	8	45,100	13	49,159	14	2,220	3,701	4,700
42	27,600	8	46,000	13	50,000	15	2,235	3,725	4,731
43	27,700	8	46,167	14	50,167	15	2,250	3,749	4,762
44	27,800	8	46,333	14	50,333	15	2,264	3,773	4,792
45	27,900	8	46,500	14	50,500	15	2,279	3,798	4,823
46	28,000	8	46,667	14	50,667	15	2,293	3,822	4,854
47	28,100	8	46,833	14	50,833	15	2,308	3,846	4,885
48	28,200	8	47,000	14	51,000	15	2,322	3,870	4,915
49	28,300	8	47,167	14	51,167	15	2,340	3,900	5,100
50	28,400	8	47,333	14	51,333	15	2,340	3,900	5,100
51	28,500	8	47,500	14	51,500	15	2,340	3,900	5,100
52	28,600	8	47,667	14	51,667	15	2,340	3,900	5,100
53	28,700	8	47,833	14	51,833	15	2,340	3,900	5,100
54	28,800	8	48,000	14	52,000	15	2,340	3,900	5,100

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 16~54 Btu/h(40%~130%)
5. At least two indoor units should be connected.

Models : A8UW488FA3[FM49AH U33]

[Cooling capacity]

Total indoor unit capacity (kBtu/h)	Cooling capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
19	11,400	3	19,000	6	20,900	6	943	1,572	1,807
21	12,600	4	21,000	6	23,100	7	1,042	1,737	1,998
23	13,800	4	23,000	7	25,300	7	1,011	1,684	1,937
24	14,400	4	24,000	7	26,400	8	1,053	1,755	2,019
25	15,000	4	25,000	7	27,500	8	1,096	1,826	2,100
26	15,600	5	26,000	8	28,600	8	1,161	1,935	2,225
27	16,200	5	27,000	8	29,700	9	1,227	2,044	2,351
28	16,800	5	28,000	8	30,800	9	1,292	2,153	2,476
29	17,400	5	29,000	8	31,900	9	1,357	2,262	2,602
30	18,000	5	30,000	9	33,000	10	1,423	2,372	2,727
31	18,600	5	31,000	9	34,100	10	1,488	2,481	2,853
32	19,200	6	32,000	9	35,200	10	1,554	2,590	2,978
33	19,800	6	33,000	10	36,300	11	1,619	2,699	3,104
34	20,400	6	34,000	10	37,400	11	1,685	2,808	3,229
35	21,000	6	35,000	10	38,500	11	1,750	2,917	3,355
36	21,600	6	36,000	11	39,600	12	1,816	3,026	3,480
37	22,200	7	37,000	11	40,700	12	1,859	3,099	3,564
38	22,800	7	38,000	11	41,800	12	1,903	3,172	3,648
39	23,400	7	39,000	11	42,900	13	1,947	3,245	3,732
40	24,000	7	40,000	12	44,000	13	1,991	3,318	3,816
41	24,600	7	41,000	12	45,100	13	2,035	3,391	3,900
42	25,200	7	42,000	12	46,000	13	2,083	3,472	3,993
43	25,800	8	43,000	13	47,300	14	2,132	3,553	4,086
44	26,400	8	44,000	13	48,400	14	2,180	3,634	4,179
45	27,000	8	45,000	13	49,500	15	2,229	3,714	4,271
46	27,600	8	46,000	13	50,600	15	2,277	3,795	4,364
47	28,200	8	47,000	14	51,700	15	2,325	3,876	4,457
48	28,800	8	48,000	14	52,800	15	2,374	3,957	4,550
49	29,006	8	48,343	14	53,171	16	2,422	4,037	4,643
50	29,211	9	48,686	14	53,543	16	2,471	4,118	4,736
51	29,417	9	49,029	14	53,914	16	2,519	4,199	4,829
52	29,623	9	49,371	14	54,286	16	2,568	4,280	4,921
53	29,829	9	49,714	15	54,657	16	2,616	4,360	5,014
54	30,034	9	50,057	15	55,029	16	2,713	4,522	5,200
55	30,240	9	50,400	15	55,400	16	2,760	4,600	5,300
56	30,446	9	50,743	15	55,771	16	2,760	4,600	5,400
57	30,651	9	51,086	15	56,143	16	2,760	4,600	5,400
58	30,857	9	51,429	15	56,514	17	2,760	4,600	5,400
59	31,063	9	51,771	15	56,886	17	2,760	4,600	5,400
60	31,269	9	52,114	15	57,257	17	2,760	4,600	5,400
61	31,474	9	52,457	15	57,629	17	2,760	4,600	5,400
62	31,680	9	52,800	15	58,000	17	2,760	4,600	5,400
63	31,680	9	52,800	15	58,000	17	2,760	4,600	5,400

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 19~63 Btu/h(40%~130%)
5. At least two indoor units should be connected.

[Heating capacity]

Total indoor unit capacity (kBtu/h)	Heating capacity						Input (W)		
	Min		Rating		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
19	12,540	4	20,900	6	22,781	7	1,136	1,894	2,178
21	13,860	4	23,100	7	25,179	7	1,256	2,093	2,407
23	15,180	4	25,300	7	27,577	8	1,497	2,495	2,869
24	15,840	5	26,400	8	28,776	8	1,546	2,576	2,963
25	16,500	5	27,500	8	29,975	9	1,643	2,739	3,150
26	17,160	5	28,600	8	31,174	9	1,696	2,826	3,250
27	17,820	5	29,700	9	32,373	9	1,743	2,906	3,342
28	18,480	5	30,800	9	33,572	10	1,791	2,986	3,433
29	19,140	6	31,900	9	34,771	10	1,839	3,065	3,525
30	19,800	6	33,000	10	35,970	11	1,887	3,145	3,617
31	20,460	6	34,100	10	37,169	11	1,935	3,225	3,708
32	21,120	6	35,200	10	38,368	11	1,983	3,304	3,800
33	21,780	6	36,300	11	39,567	12	2,030	3,384	3,892
34	22,440	7	37,400	11	40,766	12	2,078	3,464	3,983
35	23,100	7	38,500	11	41,965	12	2,126	3,543	4,075
36	23,760	7	39,600	12	43,164	13	2,217	3,696	4,250
37	24,420	7	40,700	12	44,363	13	2,264	3,774	4,340
38	25,080	7	41,800	12	45,562	13	2,311	3,852	4,430
39	25,740	8	42,900	13	46,761	14	2,358	3,930	4,520
40	26,400	8	44,000	13	47,960	14	2,405	4,009	4,610
41	27,060	8	45,100	13	49,159	14	2,452	4,087	4,700
42	27,600	8	46,000	13	50,000	15	2,474	4,123	4,742
43	28,400	8	47,333	14	51,000	15	2,496	4,159	4,783
44	29,200	9	48,667	14	52,000	15	2,517	4,195	4,825
45	30,000	9	50,000	15	53,000	16	2,539	4,231	4,866
46	30,800	9	51,333	15	54,000	16	2,561	4,268	4,908
47	31,600	9	52,667	15	55,000	16	2,582	4,304	4,949
48	32,400	9	54,000	16	56,000	16	2,604	4,340	4,991
49	32,486	10	54,143	16	56,214	16	2,700	4,500	5,240
50	32,571	10	54,286	16	56,429	17	2,700	4,500	5,240
51	32,657	10	54,429	16	56,643	17	2,700	4,500	5,240
52	32,743	10	54,571	16	56,857	17	2,700	4,500	5,240
53	32,829	10	54,714	16	57,071	17	2,700	4,500	5,240
54	32,914	10	54,857	16	57,286	17	2,700	4,500	5,240
55	33,000	10	55,000	16	57,500	17	2,670	4,450	5,200
56	33,086	10	55,143	16	57,714	17	2,670	4,450	5,200
57	33,171	10	55,286	16	57,929	17	2,670	4,450	5,200
58	33,257	10	55,429	16	58,143	17	2,670	4,450	5,200
59	33,343	10	55,571	16	58,357	17	2,670	4,450	5,200
60	33,429	10	55,714	16	58,571	17	2,670	4,450	5,200
61	33,514	10	55,857	16	58,786	17	2,670	4,450	5,200
62	33,600	10	56,000	16	59,000	17	2,670	4,450	5,200
63	33,600	10	56,000	16	59,000	17	2,670	4,450	5,200

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 19~63 Btu/h(40%~130%)
5. At least two indoor units should be connected.

Models : A9UW548FA3[FM57AH U33]

[Cooling capacity]

Total indoor unit capacity (kBtu/h)	Cooling capacity						Input (W)		
	Min		Rated		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
23	13,800	4	23,000	7	25,300	7	1,011	1,684	1,937
24	14,400	4	24,000	7	26,400	8	1,053	1,755	2,019
25	15,000	4	25,000	7	27,500	8	1,096	1,826	2,100
26	15,600	5	26,000	8	28,600	8	1,161	1,935	2,225
27	16,200	5	27,000	8	29,700	9	1,227	2,044	2,351
28	16,800	5	28,000	8	30,800	9	1,292	2,153	2,476
29	17,400	5	29,000	8	31,900	9	1,357	2,262	2,602
30	18,000	5	30,000	9	33,000	10	1,423	2,372	2,727
31	18,600	5	31,000	9	34,100	10	1,488	2,481	2,853
32	19,200	6	32,000	9	35,200	10	1,554	2,590	2,978
33	19,800	6	33,000	10	36,300	11	1,619	2,699	3,104
34	20,400	6	34,000	10	37,400	11	1,685	2,808	3,229
35	21,000	6	35,000	10	38,500	11	1,750	2,917	3,355
36	21,600	6	36,000	11	39,600	12	1,816	3,026	3,480
37	22,200	7	37,000	11	40,700	12	1,859	3,099	3,564
38	22,800	7	38,000	11	41,800	12	1,903	3,172	3,648
39	23,400	7	39,000	11	42,900	13	1,947	3,245	3,732
40	24,000	7	40,000	12	44,000	13	1,991	3,318	3,816
41	24,600	7	41,000	12	45,100	13	2,035	3,391	3,900
42	25,200	7	42,000	12	46,000	13	2,083	3,472	3,993
43	25,800	8	43,000	13	47,300	14	2,132	3,553	4,086
44	26,400	8	44,000	13	48,400	14	2,180	3,634	4,179
45	27,000	8	45,000	13	49,500	15	2,229	3,714	4,271
46	27,600	8	46,000	13	50,600	15	2,277	3,795	4,364
47	28,200	8	47,000	14	51,700	15	2,325	3,876	4,457
48	28,800	8	48,000	14	52,800	15	2,374	3,957	4,550
49	29,300	9	48,833	14	53,650	16	2,422	4,037	4,643
50	29,800	9	49,667	15	54,500	16	2,471	4,118	4,736
51	30,300	9	50,500	15	55,350	16	2,519	4,199	4,829
52	30,800	9	51,333	15	56,200	16	2,568	4,280	4,921
53	31,300	9	52,167	15	57,050	17	2,616	4,360	5,014
54	31,800	9	53,000	16	57,900	17	2,713	4,522	5,200
55	31,950	9	53,250	16	58,231	17	2,817	4,696	5,400
56	32,100	9	53,500	16	58,563	17	2,896	4,826	5,550
57	32,250	9	53,750	16	58,894	17	2,896	4,826	5,650
58	32,400	9	54,000	16	59,225	17	2,896	4,826	5,650
59	32,550	10	54,250	16	59,556	17	2,946	4,910	5,650
60	32,700	10	54,500	16	59,888	18	2,946	4,910	5,650
61	32,850	10	54,750	16	60,219	18	2,946	4,910	5,650
62	33,000	10	55,000	16	60,550	18	2,946	4,910	5,650
63	33,150	10	55,250	16	60,881	18	2,946	4,910	5,650
64	33,300	10	55,500	16	61,213	18	2,946	4,910	5,650
65	33,450	10	55,750	16	61,544	18	2,946	4,910	5,650
66	33,600	10	56,000	16	61,875	18	2,946	4,910	5,650
67	33,750	10	56,250	16	62,206	18	2,946	4,910	5,650
68	33,900	10	56,500	17	62,538	18	2,946	4,910	5,650
69	34,050	10	56,750	17	62,869	18	2,946	4,910	5,650
70	34,200	10	57,000	17	63,200	19	2,946	4,910	5,650
71	34,200	10	57,000	17	63,200	19	2,946	4,910	5,650
72	34,200	10	57,000	17	63,200	19	2,946	4,910	5,650
73	34,200	10	57,000	17	63,200	19	2,946	4,910	5,650

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 23~73 Btu/h(40%~130%)
5. At least two indoor units should be connected.

[Heating capacity]

Total indoor unit capacity (kBtu/h)	Heating capacity						Input (W)		
	Min		Rating		Max				
	Btu/h	kW	Btu/h	kW	Btu/h	kW	Min	Rated	Max
23	15,180	4	25,300	7	27,577	8	1,497	2,495	2,869
24	15,840	5	26,400	8	28,776	8	1,546	2,576	2,963
25	16,500	5	27,500	8	29,975	9	1,643	2,739	3,150
26	17,160	5	28,600	8	31,174	9	1,696	2,826	3,250
27	17,820	5	29,700	9	32,373	9	1,743	2,906	3,342
28	18,480	5	30,800	9	33,572	10	1,791	2,986	3,433
29	19,140	6	31,900	9	34,771	10	1,839	3,065	3,525
30	19,800	6	33,000	10	35,970	11	1,887	3,145	3,617
31	20,460	6	34,100	10	37,169	11	1,935	3,225	3,708
32	21,120	6	35,200	10	38,368	11	1,983	3,304	3,800
33	21,780	6	36,300	11	39,567	12	2,030	3,384	3,892
34	22,440	7	37,400	11	40,766	12	2,078	3,464	3,983
35	23,100	7	38,500	11	41,965	12	2,126	3,543	4,075
36	23,760	7	39,600	12	43,164	13	2,217	3,696	4,250
37	24,420	7	40,700	12	44,363	13	2,264	3,774	4,340
38	25,080	7	41,800	12	45,562	13	2,311	3,852	4,430
39	25,740	8	42,900	13	46,761	14	2,358	3,930	4,520
40	26,400	8	44,000	13	47,960	14	2,405	4,009	4,610
41	27,060	8	45,100	13	49,159	14	2,452	4,087	4,700
42	27,600	8	46,000	13	50,000	15	2,487	4,146	4,768
43	28,400	8	47,333	14	51,000	15	2,523	4,205	4,835
44	29,200	9	48,667	14	52,000	15	2,558	4,264	4,903
45	30,000	9	50,000	15	53,000	16	2,593	4,322	4,971
46	30,800	9	51,333	15	54,000	16	2,629	4,381	5,038
47	31,600	9	52,667	15	55,000	16	2,664	4,440	5,106
48	32,400	9	54,000	16	56,000	16	2,699	4,499	5,174
49	32,700	10	54,500	16	56,833	17	2,735	4,558	5,242
50	33,000	10	55,000	16	57,667	17	2,770	4,617	5,309
51	33,300	10	55,500	16	58,500	17	2,805	4,676	5,377
52	33,600	10	56,000	16	59,333	17	2,841	4,734	5,445
53	33,900	10	56,500	17	60,167	18	2,876	4,793	5,512
54	34,200	10	57,000	17	61,000	18	2,911	4,852	5,580
55	34,326	10	57,211	17	61,158	18	2,911	4,852	5,400
56	34,453	10	57,421	17	61,316	18	2,911	4,852	5,340
57	34,579	10	57,632	17	61,474	18	2,911	4,852	5,340
58	34,705	10	57,842	17	61,632	18	2,736	4,560	5,371
59	34,832	10	58,053	17	61,789	18	2,736	4,560	5,402
60	34,958	10	58,263	17	61,947	18	2,736	4,560	5,433
61	35,084	10	58,474	17	62,105	18	2,736	4,560	5,464
62	35,211	10	58,684	17	62,263	18	2,730	4,550	5,650
63	35,337	10	58,895	17	62,421	18	2,730	4,550	5,650
64	35,463	10	59,105	17	62,579	18	2,730	4,550	5,650
65	35,589	10	59,316	17	62,737	18	2,730	4,550	5,650
66	35,716	10	59,526	17	62,895	18	2,730	4,550	5,650
67	35,842	11	59,737	18	63,053	18	2,730	4,550	5,650
68	35,968	11	59,947	18	63,211	19	2,730	4,550	5,650
69	36,095	11	60,158	18	63,368	19	2,730	4,550	5,650
70	36,600	11	61,000	18	64,000	19	2,730	4,550	5,650
71	36,600	11	61,000	18	64,000	19	2,730	4,550	5,650
72	36,600	11	61,000	18	64,000	19	2,730	4,550	5,650
73	36,600	11	61,000	18	64,000	19	2,730	4,550	5,650

Note :

1. Cooling Capacity is based on : indoor temp.27°C DB, 19°C WB
   ; outdoor temp. 35°C DB
2. Heating Capacity is based on : indoor temp.20°C DB
   ; outdoor temp. 7°C DB, 6°C WB
3. The rated capacities above show the rise in the total indoor unit capacity when operating frequency is constant.
   Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.
4. Total capacity index of indoor unit should be within 23~73 Btu/h(40%~130%)
5. At least two indoor units should be connected.

2.3.5 Dimensions

1) Outdoor units

OUTDOOR UNIT

A6UW368FA0 [FM37AH UE0]

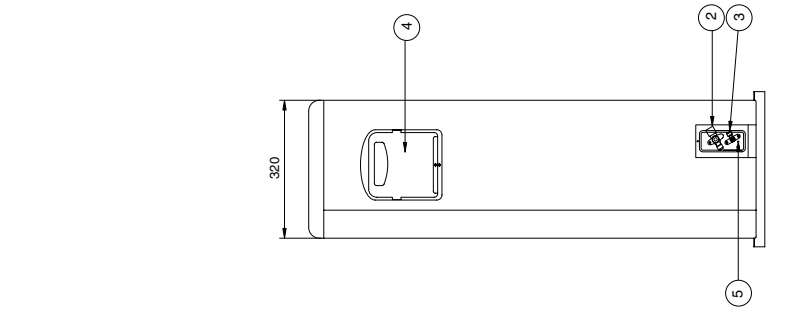
No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	
4	Power & transmission connection	
5	Earth screw	

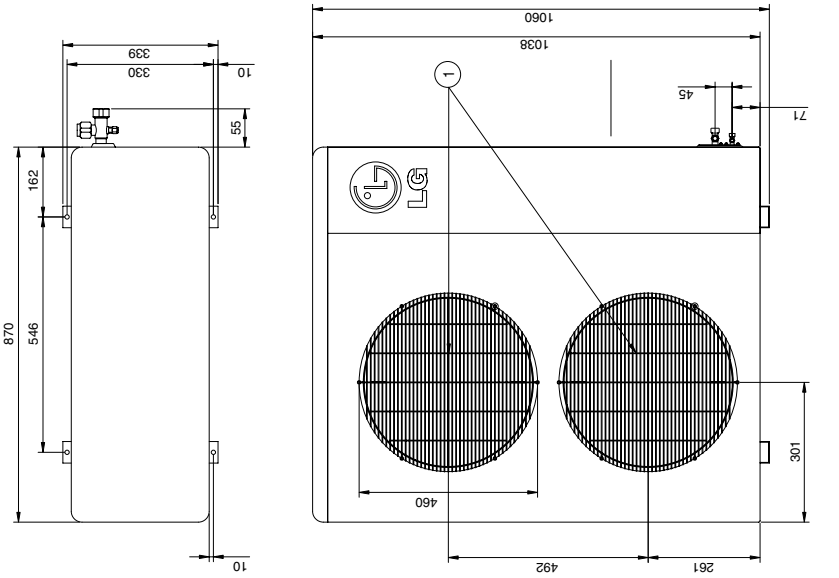
▣ Technical Specification

		Ø/V/Hz	3/ 380~415 / 50
Power supply			
Cooling Capacity		kW	9.67
		Btu/h	33,000
Heating Capacity		kW	11.1
		Btu/h	38,000
Piping Connections	Liquid(Ø)	mm(inch)	6.35(1/4)
	Gas(Ø)	mm(inch)	15.88(5/8)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.





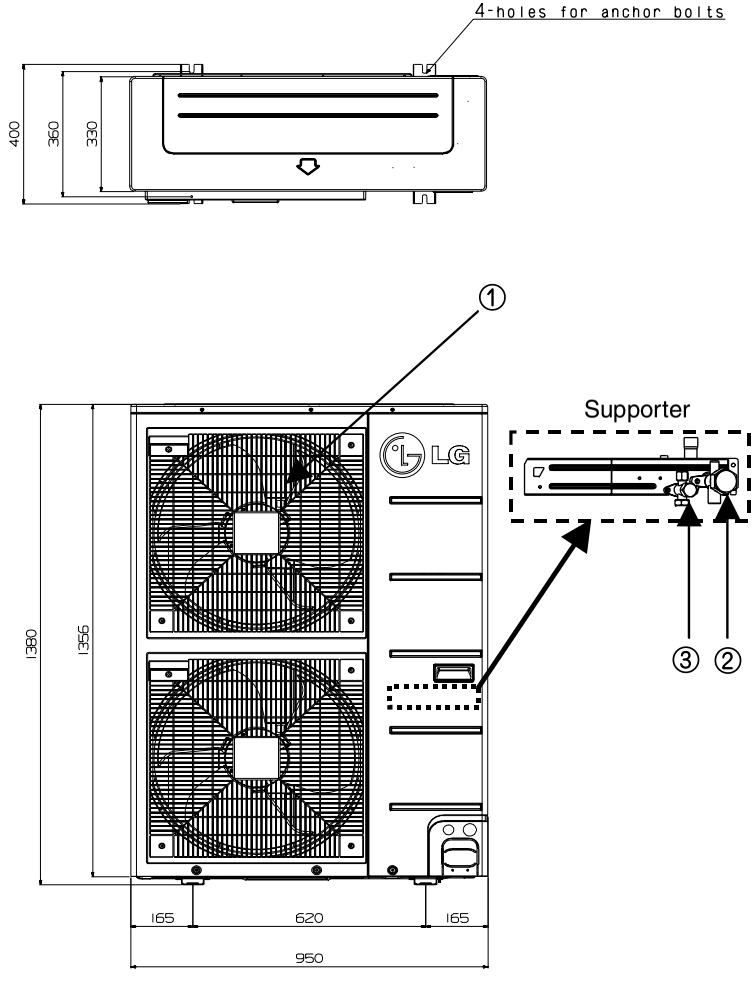
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam, 641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: UE2

OUTDOOR UNIT

A7UW428FA3 [FM41AH U33]



No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	

▣ Technical Specification

Power supply		Ø /V/Hz	3/ 380~415 / 50
Cooling Capacity		kW	13.5
		Btu/h	46,000
Heating Capacity		kW	14.1
		Btu/h	48,000
Piping Connections	Liquid(Ø)	mm(inch)	9.52(3/8)
	Gas(Ø)	mm(inch)	19.05(3/4)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

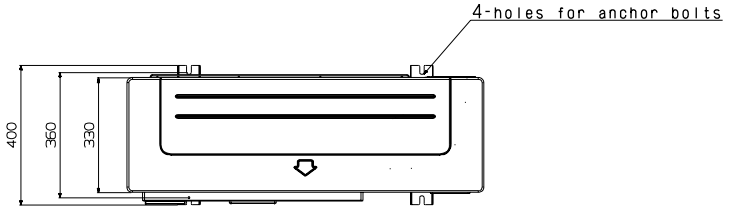
LG Electronics

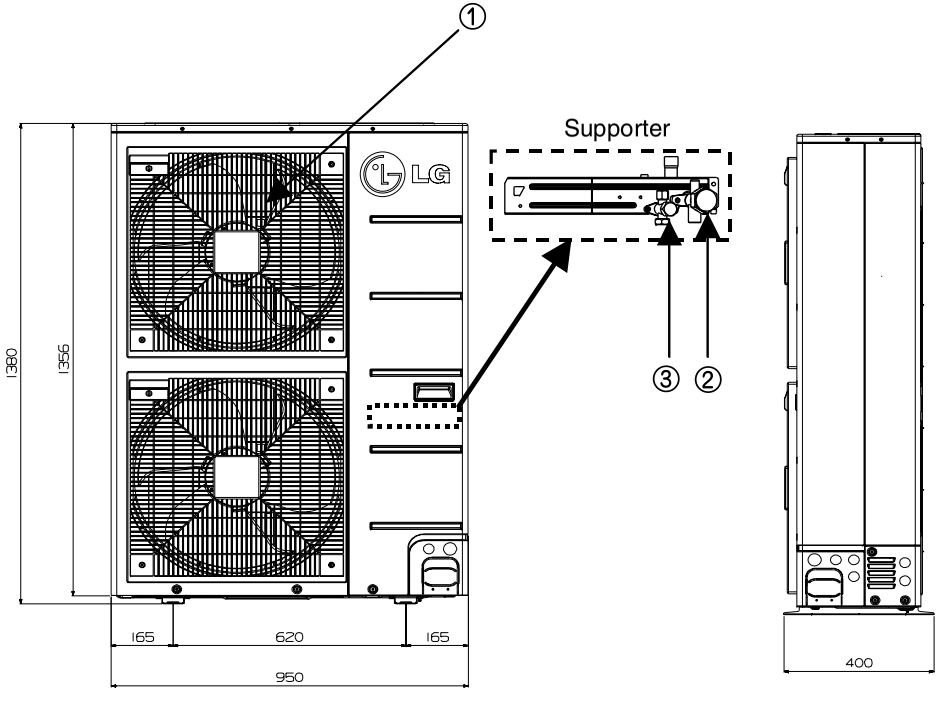
76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: U3

OUTDOOR UNIT

A8UW488FA3 [FM49AH U33]





No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	

▣ Technical Specification

Power supply		Ø /V/Hz	3/ 380~415 / 50
Cooling Capacity		kW	15.5
		Btu/h	52,800
Heating Capacity		kW	16.4
		Btu/h	56,000
Piping Connections	Liquid(Ø)	mm(inch)	9.52(3/8)
	Gas(Ø)	mm(inch)	19.05(3/4)

▣ Note

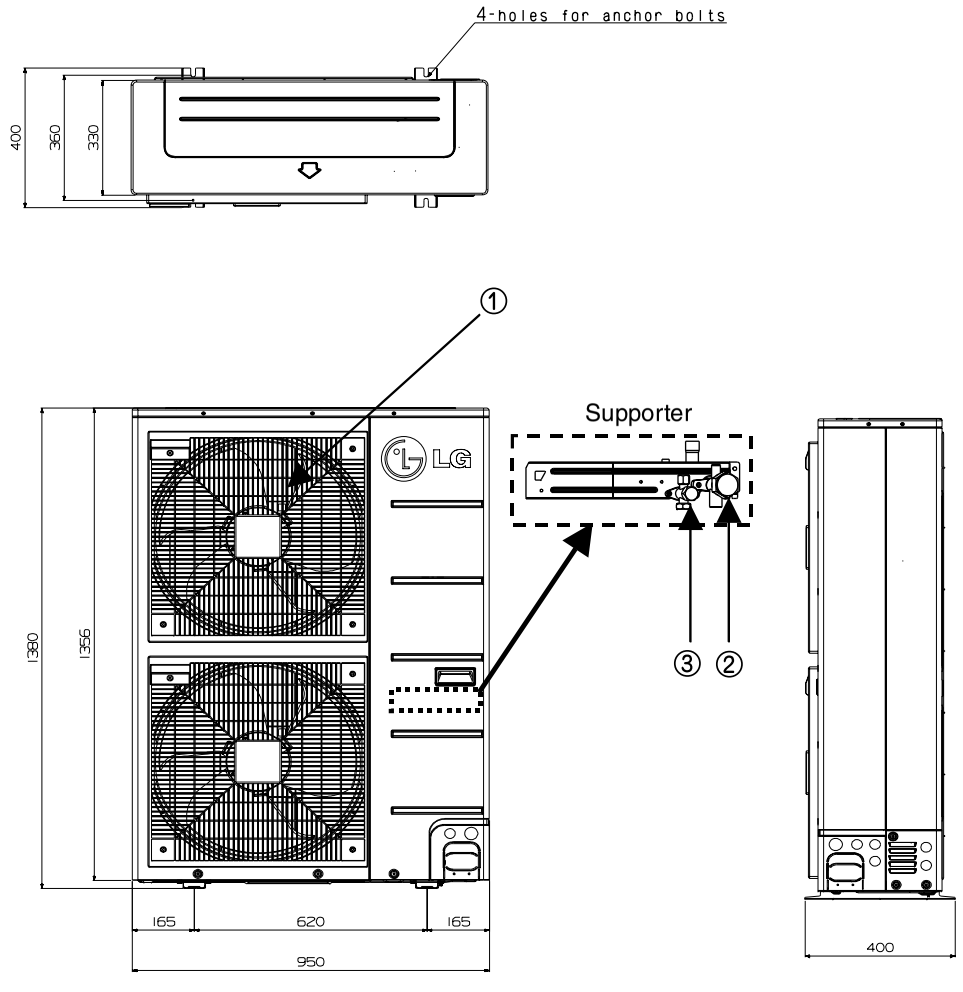
1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

LG Electronics
76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: U3

OUTDOOR UNIT

A9UW548FA3 [FM57AH U33]



No.	Part Name	Remark
1	Air discharge grille	
2	Gas pipe connection	
3	Liquid pipe connection	

▣ Technical Specification

Power supply		Ø /V/Hz	3/ 380~415 / 50
Cooling Capacity		kW	16.7
		Btu/h	57,000
Heating Capacity		kW	17.87
		Btu/h	61,000
Piping Connections	Liquid(Ø)	mm(inch)	9.52(3/8)
	Gas(Ø)	mm(inch)	19.05(3/4)

▣ Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials to be supplied on the site must comply with the local regulations or international codes.
4. Electrical characteristics chapter should be considered for electrical work and design. Especially the capacity of power cable and circuit breaker for outdoor unit should be more than that of electrical characteristics chapter.

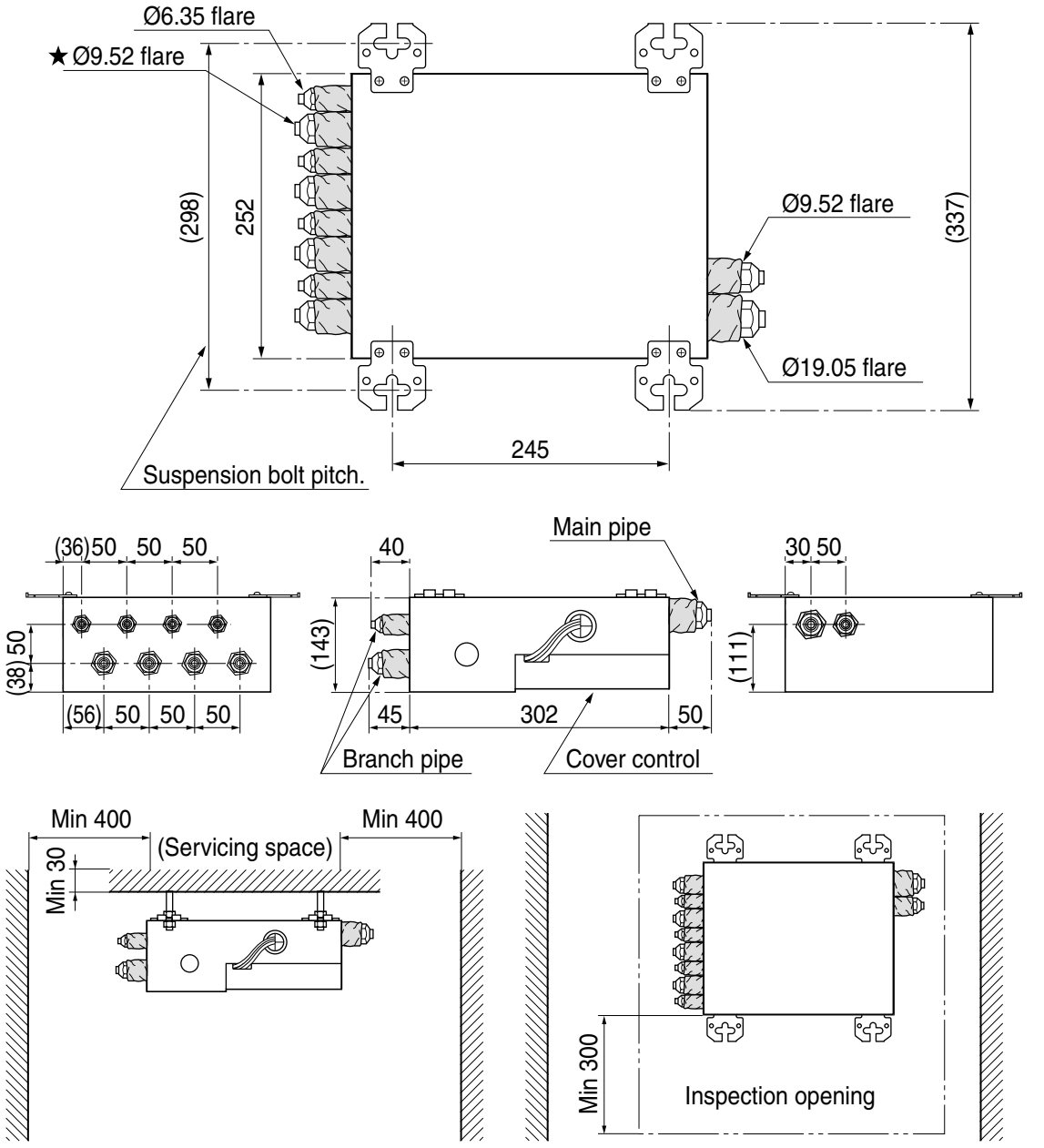
LG Electronics

76, Seongsan-dong, Changwon City, Gyeongnam,
641-713, Korea
www.lge.com/airconditioner

CHASSIS CODE: U3

2) BD unit

Models : PMBD3620, PMBD3630, PMBD3640, PMBD7230



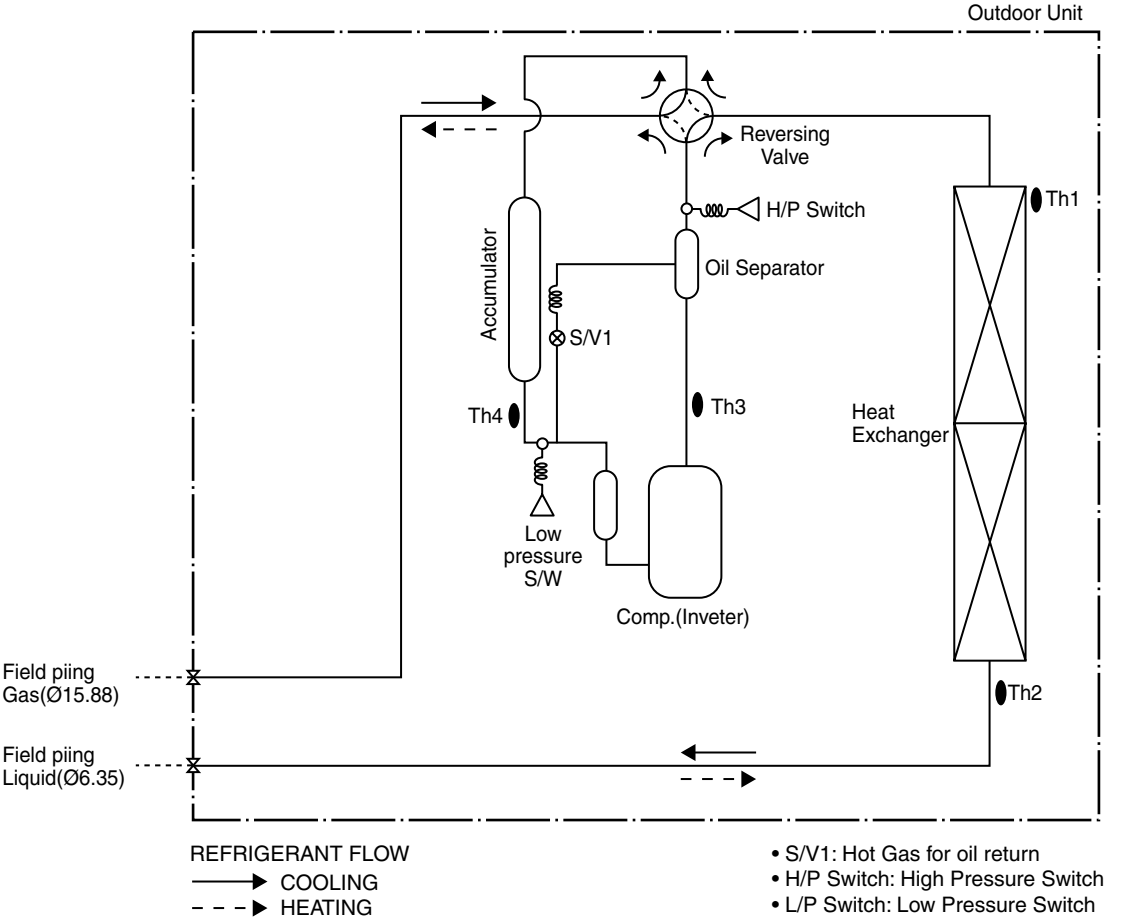
BD unit			PMBD3620	PMBD3630	PMBD3640	PMBD7230
Connectable indoor units	Number of indoor unit		1~2units	1~3units	1~4units	1~3units
	Capacity	kW	2.1/2.6/3.5/5.3/7.0	2.1/2.6/3.5/5.3/7.0	2.1/2.6/3.5/5.3/7.0	5.3/7.0/8.8
		Btu/h	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k	18k/24k/30k/36k

Note
1.★: PMBD7230 ➔ Ø12.7 x 3EA

2.3.6 Piping diagrams

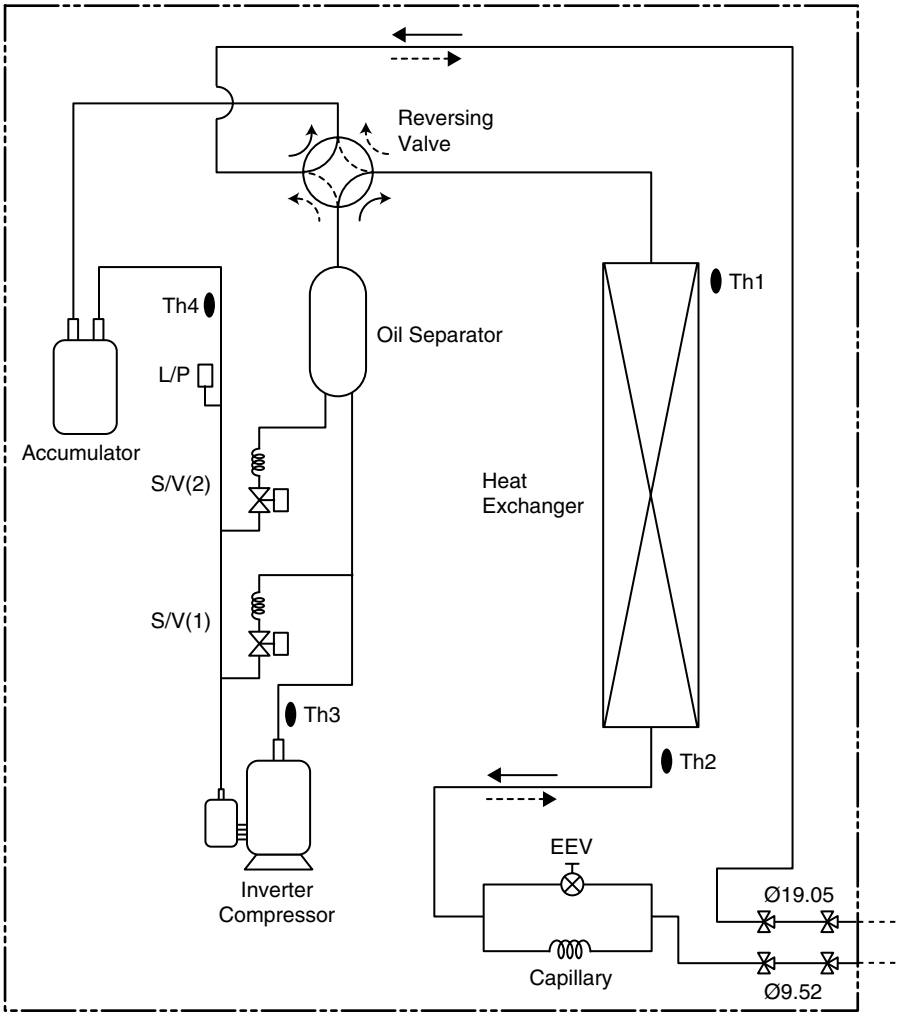
1) Outdoor unit

Models : A6UW368FA0 [FM37AH UE0]



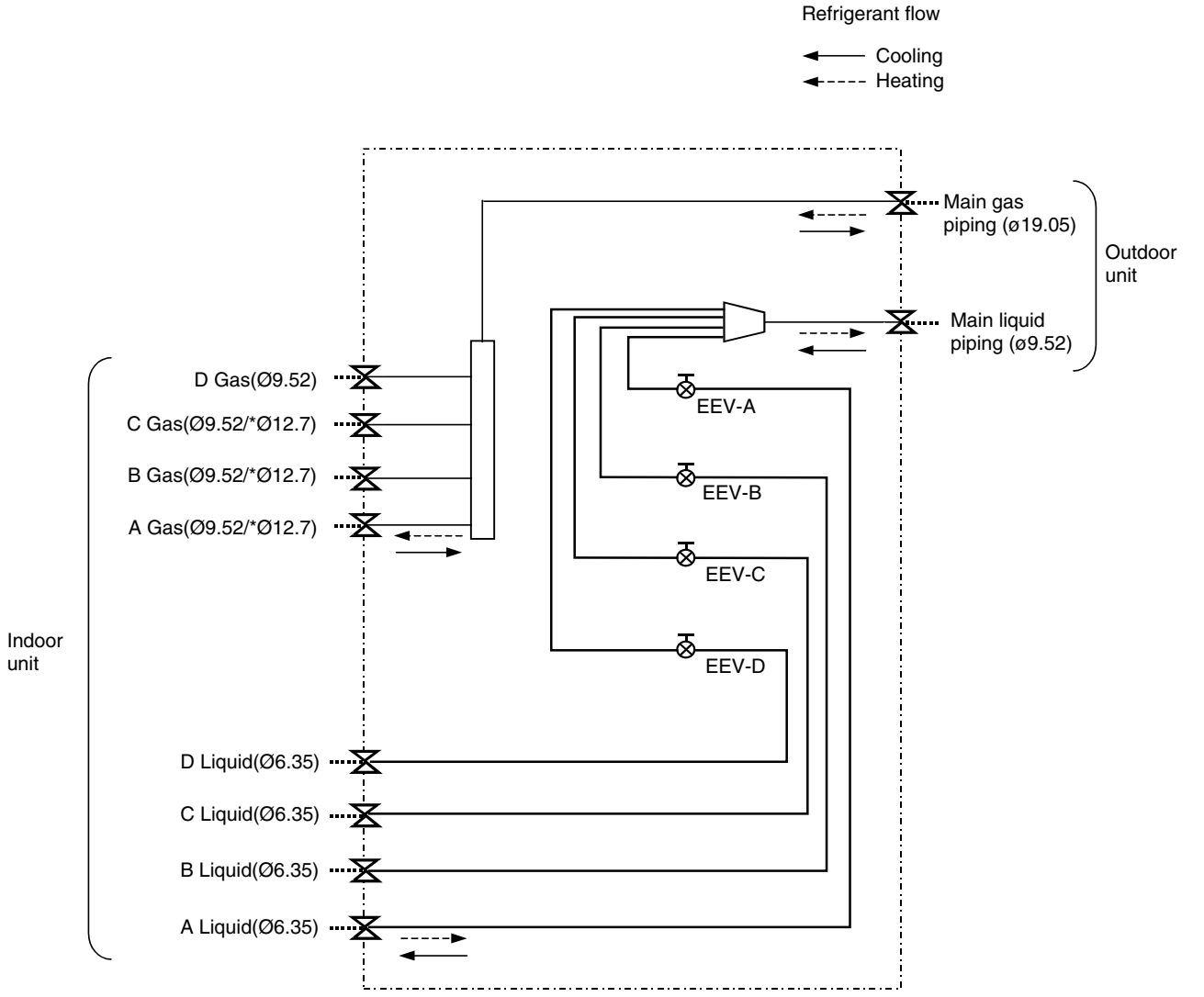
LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH2
Th2	Thermistor for condensing temperature	CN_TH2
Th3	Thermistor for discharge pipe temperature	CN_TH3
Th4	Thermistor for suction pipe temperature	CN_TH3

Models : A7UW428FA0 [FM41AH UH0], A8UW488FA0 [FM49AH UH0], A9UW548FA0 [FM57AH UH0]



LOC.	Description	PCB Connector
Th1	Thermistor for outdoor air temperature	CN_TH1
Th2	Thermistor for condensing temperature	CN_TH1
Th3	Thermistor for discharge pipe temperature	CN_TH2
Th4	Thermistor for suction pipe temperature	CN_TH2
S/V(1)	Solenoid Valve for Hotgas	CN_HOT GAS
S/V(2)	Solenoid Valve for Oil Separator	CN_OIL/S
L/P	Low Pressure Switch	CN_L/PRESS

2) BD Unit

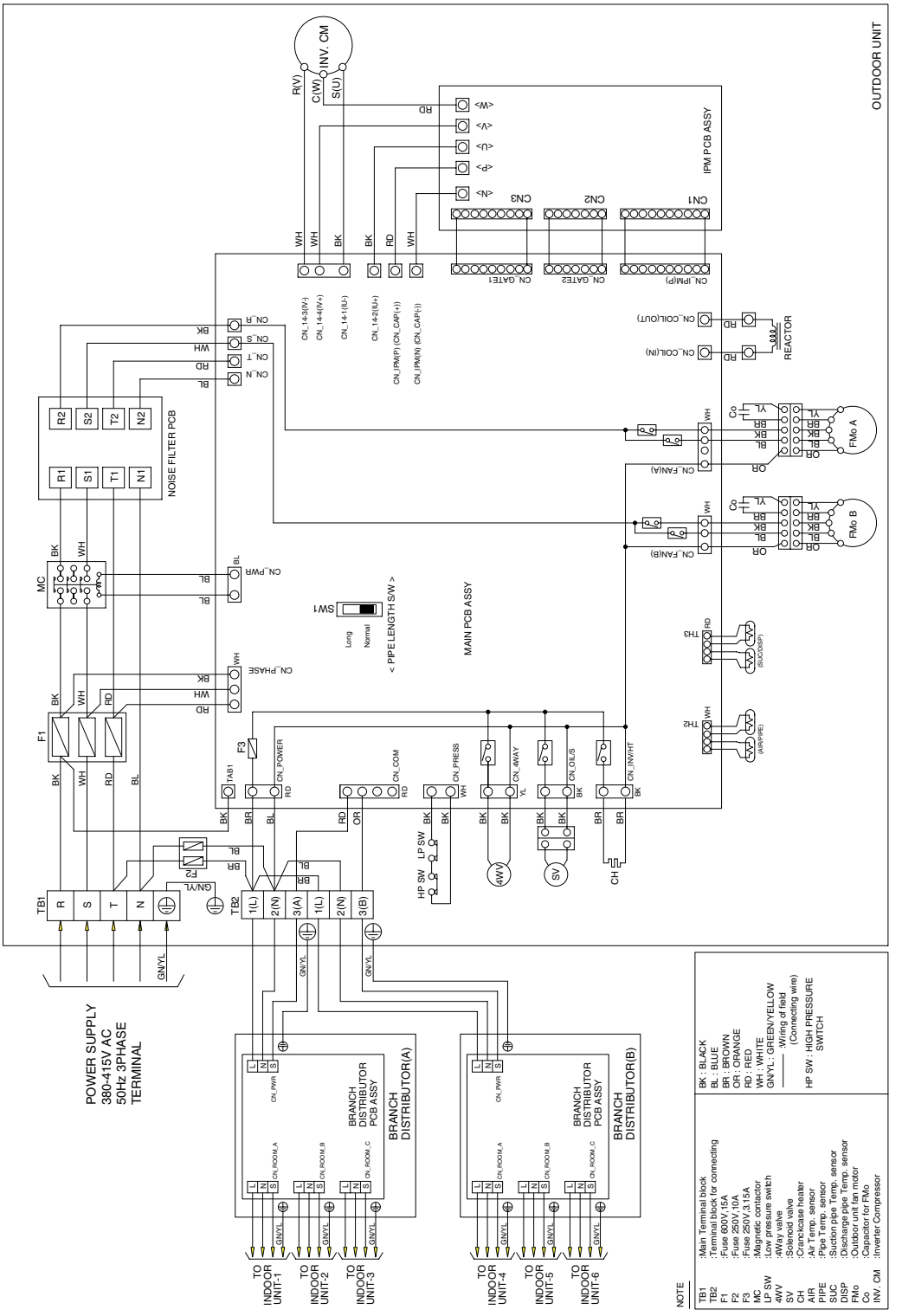


Notes;
1. Flare connection for the field piping connection
2. Use the connector if the pipe size is not matched when connecting indoor unit.
3. E.E.V.: Electronic Expansion Valve
4. * : For PMBD7230
5. PMBD3620: A, B
   PMBD3630, PMBD7230: A, B, C
   PMBD3640 : A, B, C, D

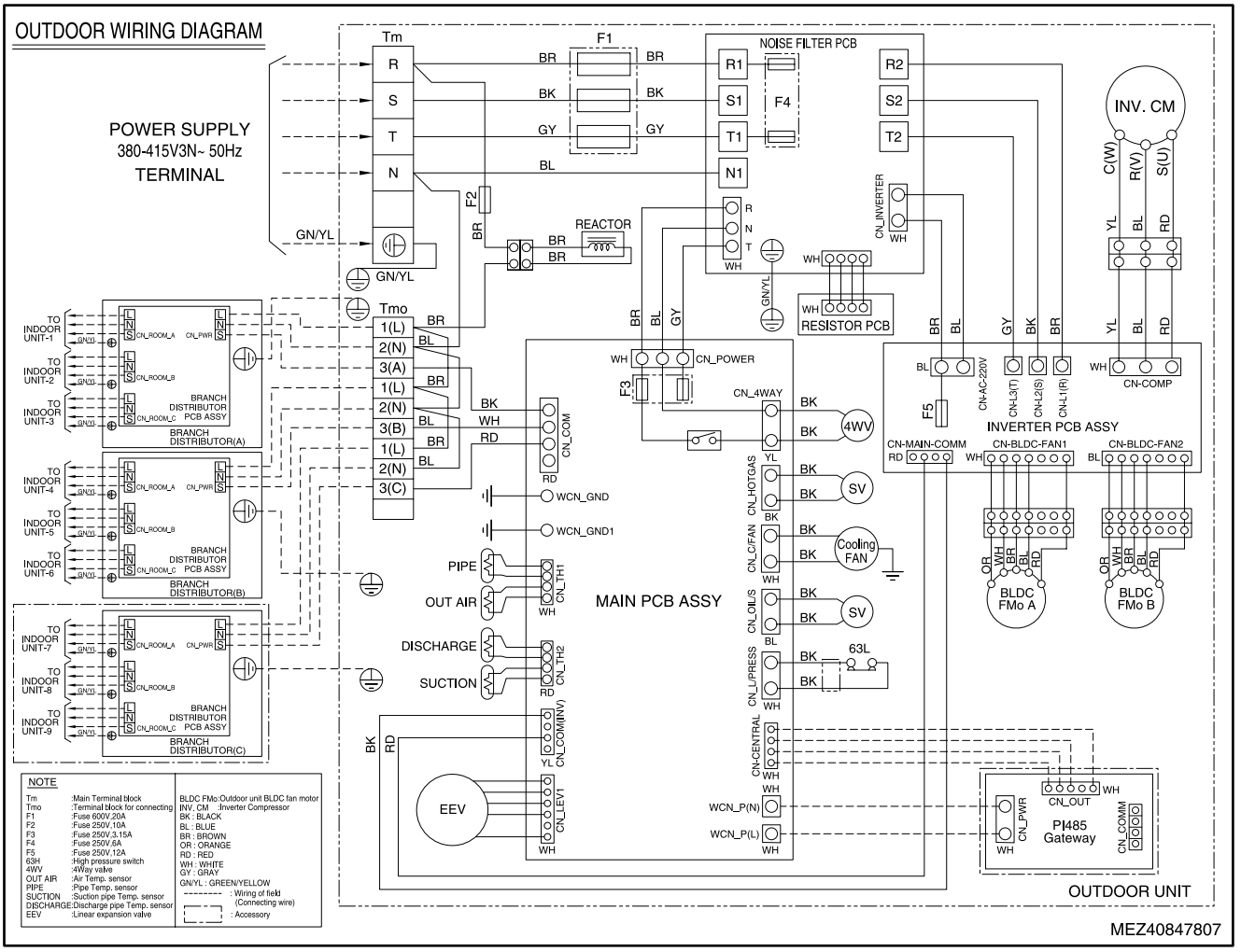
2.3.7 Wiring diagrams

1) Outdoor unit

Models : A6UW368FA0 [FM37AH UE0]

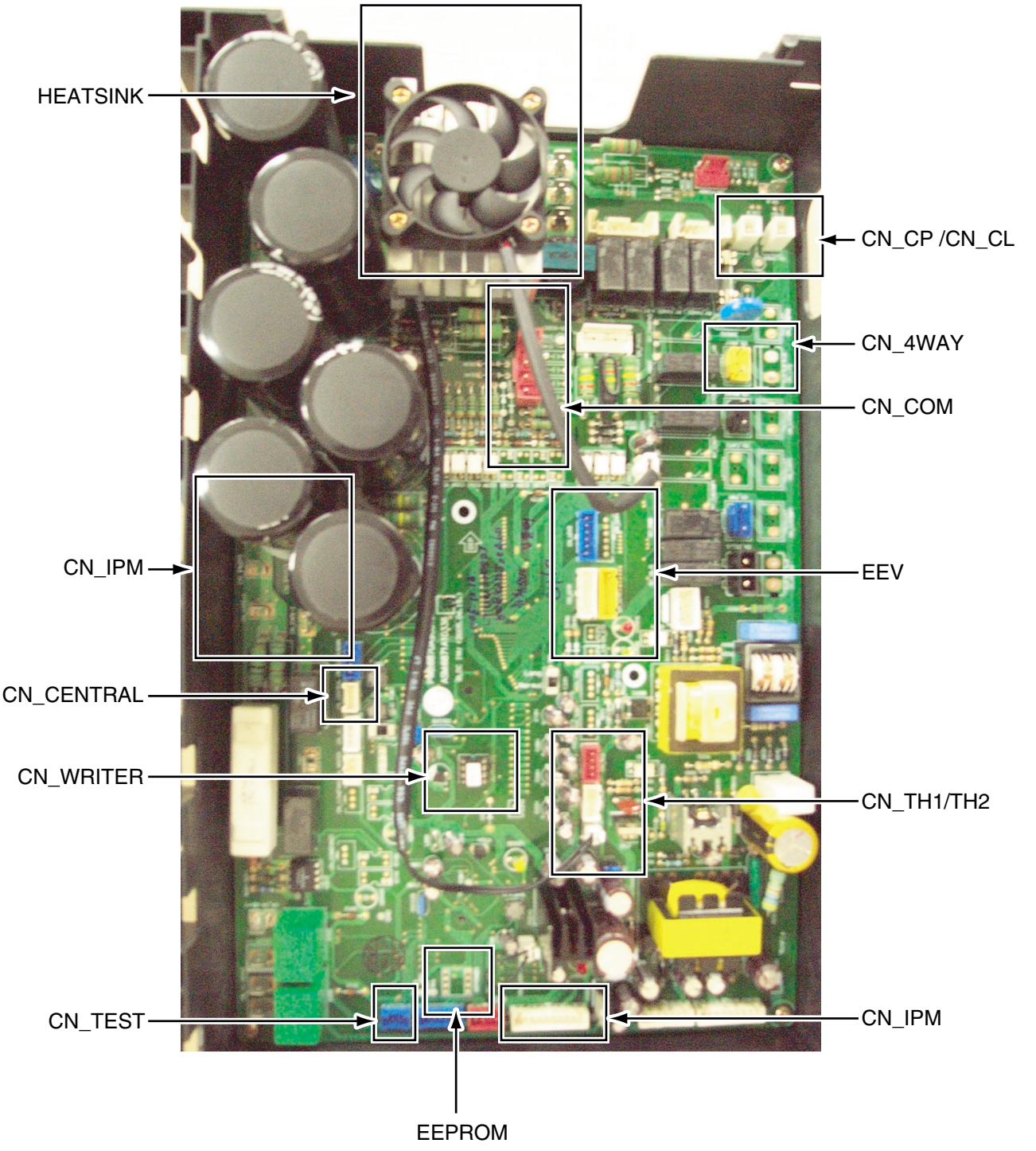


Models : A7UW428FA3 [FM41AH U33], A8UW488FA3 [FM49AH U33], A9UW548FA3[FM57AH U33]



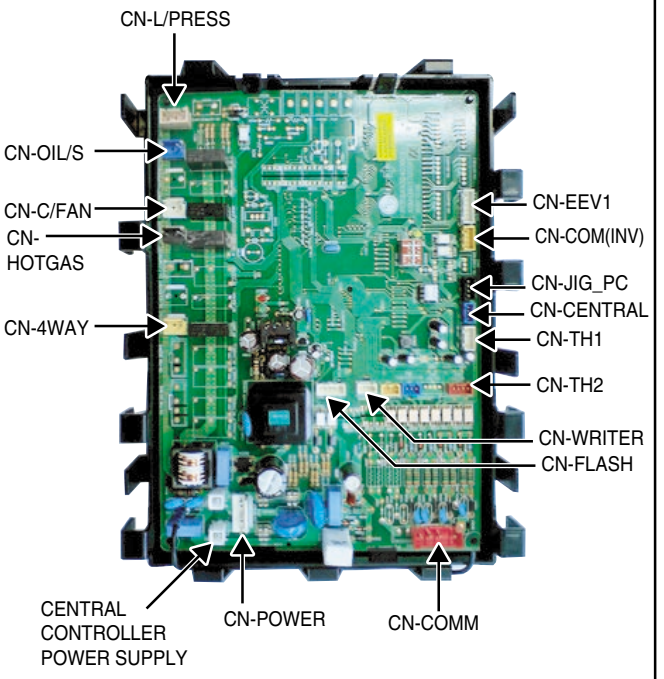
❇ These models are under developing.

Models : A6UW368FA0 [FM37AH UE0]

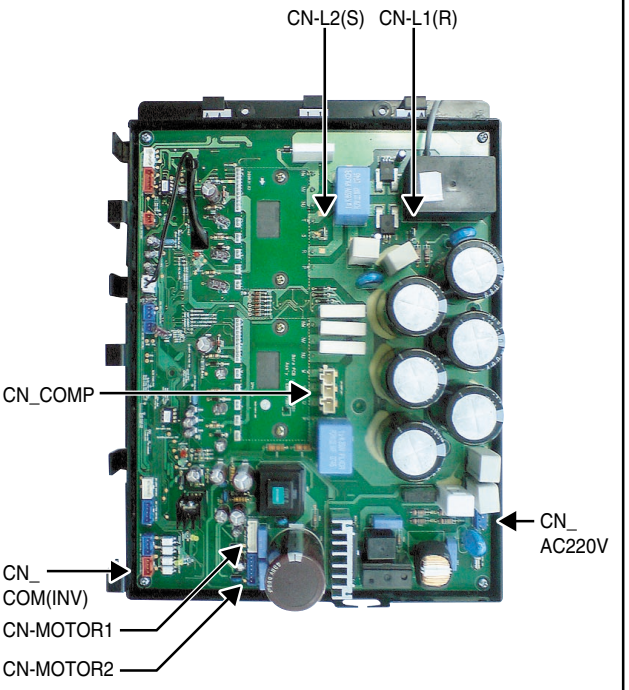


Models : A7UW428FA3[FM41AH U33], A8UW486FA3[FM49AH U33], A9UW548FA3[FM57AH U33]

MAIN PCB ASSY



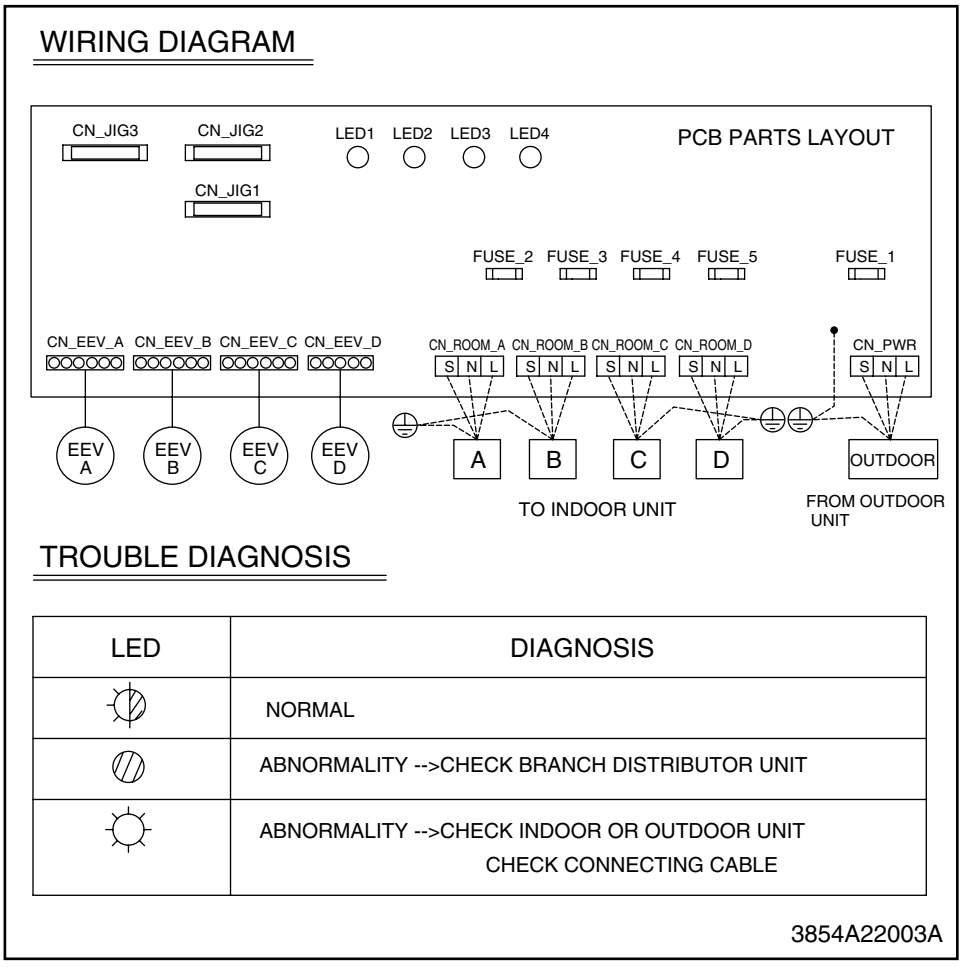
INVERTER PCB ASSY



❉ This Chassis is under developing.

2) BD Unit

Models : PMBD3620, PMBD3630, PMBD3640, PMBD7230



TROUBLE DIAGNOSIS

LED	DIAGNOSIS
	NORMAL
	ABNORMALITY -->CHECK BRANCH DISTRIBUTOR UNIT
	ABNORMALITY -->CHECK INDOOR OR OUTDOOR UNIT CHECK CONNECTING CABLE

3854A22003A

Notes;

1. 'PMBD3620' unit : "A, B" parts available.
2. 'PMBD3630', 'PMBD7230' unit : "A, B, C" parts available.
3. 'PMBD3640' unit : "A, B, C, D" parts available.

2.3.8 Capacity tables

Models : A6UW368FA0 [FM37AH UE0]

[Cooling capacity]

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)											
		14		16		18		19		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
46 (13.5/129)	10	8.52	1.38	10.1	1.69	11.8	2.01	12.6	2.06	13.1	1.93	13.4	1.84
	12	8.52	1.41	10.1	1.72	11.8	2.05	12.5	2.05	13.0	1.92	13.3	1.84
	14	8.52	1.43	10.1	1.76	11.8	2.08	12.4	2.03	12.8	1.93	13.1	1.95
	16	8.52	1.46	10.1	1.79	11.8	2.07	12.2	2.02	12.7	2.04	13.0	2.06
	18	8.52	1.49	10.1	1.83	11.8	2.11	12.0	2.12	12.5	2.15	12.8	2.18
	20	8.52	1.52	10.1	1.92	11.7	2.22	11.8	2.23	12.3	2.27	12.6	2.29
	21	8.52	1.54	10.1	1.99	11.6	2.27	11.8	2.29	12.2	2.32	12.5	2.34
	23	8.52	1.66	10.1	2.14	11.5	2.38	11.6	2.40	12.1	2.43	12.4	2.46
	25	8.52	1.78	10.1	2.30	11.3	2.49	11.5	2.51	11.9	2.55	12.2	2.57
	27	8.52	1.90	10.1	2.46	11.1	2.60	11.3	2.62	11.8	2.66	12.1	2.68
	29	8.52	2.03	10.1	2.63	11.0	2.71	11.1	2.73	11.6	2.77	11.9	2.80
	31	8.52	2.17	10.1	2.79	10.8	2.82	10.9	2.84	11.4	2.89	11.7	2.92
	33	8.52	2.32	10.1	2.90	10.6	2.93	10.8	2.95	11.2	3.00	11.5	3.03
	35	8.52	2.47	10.1	3.01	10.5	3.05	10.6	3.06	11.1	3.12	11.4	3.15
	37	8.52	2.64	9.99	3.12	10.3	3.16	10.5	3.18	10.9	3.23	11.2	3.27
	39	8.52	2.81	9.82	3.24	10.1	3.27	10.3	3.29	10.8	3.35	11.1	3.39
43 (12.6/119)	10	7.91	1.27	9.44	1.55	11.0	1.84	11.8	1.99	13.1	2.00	13.4	1.91
	12	7.91	1.29	9.44	1.58	11.0	1.88	11.8	2.03	12.9	1.98	13.2	1.90
	14	7.91	1.31	9.44	1.61	11.0	1.91	11.8	2.07	12.7	1.97	13.0	1.94
	16	7.91	1.34	9.44	1.64	11.0	1.95	11.8	2.08	12.6	2.04	12.9	2.05
	18	7.91	1.37	9.44	1.67	11.0	1.99	11.8	2.12	12.4	2.14	12.7	2.17
	20	7.91	1.39	9.44	1.71	11.0	2.14	11.8	2.23	12.2	2.26	12.5	2.28
	21	7.91	1.40	9.44	1.78	11.0	2.22	11.7	2.28	12.2	2.31	12.5	2.33
	23	7.91	1.49	9.44	1.91	11.0	2.38	11.5	2.39	12.0	2.42	12.3	2.45
	25	7.91	1.59	9.44	2.04	11.0	2.49	11.4	2.50	11.8	2.53	12.1	2.56
	27	7.91	1.70	9.44	2.19	11.0	2.60	11.2	2.61	11.7	2.65	11.9	2.67
	29	7.91	1.82	9.44	2.35	10.9	2.71	11.1	2.72	11.5	2.76	11.8	2.79
	31	7.91	1.94	9.44	2.51	10.8	2.81	10.9	2.83	11.3	2.87	11.6	2.90
	33	7.91	2.07	9.44	2.68	10.6	2.93	10.7	2.94	11.1	2.99	11.5	3.02
	35	7.91	2.21	9.44	2.86	10.4	3.04	10.5	3.05	11.0	3.10	11.3	3.13
	37	7.91	2.35	9.44	3.05	10.2	3.15	10.4	3.16	10.8	3.22	11.1	3.25
	39	7.91	2.51	9.44	3.22	10.1	3.26	10.2	3.28	10.7	3.33	10.9	3.37
40 (11.7/111)	10	7.23	1.15	8.63	1.40	10.0	1.66	10.7	1.80	12.8	2.05	13.1	1.98
	12	7.23	1.17	8.63	1.43	10.0	1.69	10.7	1.83	12.6	2.04	12.9	1.97
	14	7.23	1.19	8.63	1.46	10.0	1.73	10.7	1.87	12.5	2.03	12.7	1.96
	16	7.23	1.21	8.63	1.48	10.0	1.76	10.7	1.90	12.3	2.02	12.6	2.03
	18	7.23	1.24	8.63	1.51	10.0	1.80	10.7	1.94	12.2	2.13	12.4	2.15
	20	7.23	1.26	8.63	1.54	10.0	1.87	10.7	2.07	12.0	2.24	12.2	2.26
	21	7.23	1.27	8.63	1.57	10.0	1.95	10.7	2.15	11.9	2.29	12.2	2.31
	23	7.23	1.32	8.63	1.68	10.0	2.09	10.7	2.31	11.7	2.41	12.0	2.42
	25	7.23	1.41	8.63	1.80	10.0	2.24	10.7	2.48	11.5	2.51	11.8	2.54
	27	7.23	1.51	8.63	1.93	10.0	2.40	10.7	2.59	11.4	2.63	11.7	2.65
	29	7.23	1.61	8.63	2.06	10.0	2.57	10.7	2.70	11.2	2.74	11.5	2.76
	31	7.23	1.72	8.63	2.20	10.0	2.75	10.7	2.81	11.1	2.85	11.3	2.88
	33	7.23	1.83	8.63	2.35	10.0	2.91	10.5	2.92	10.9	2.96	11.2	2.99
	35	7.23	1.95	8.63	2.51	10.0	3.01	10.3	3.03	10.7	3.07	11.0	3.11
	37	7.23	2.08	8.63	2.68	10.0	3.13	10.2	3.14	10.5	3.19	10.8	3.22
	39	7.23	2.21	8.63	2.85	9.89	3.24	10.0	3.25	10.4	3.30	10.7	3.33
36 (10.6/100)	10	6.52	1.03	7.77	1.25	9.02	1.48	9.67	1.61	11.6	1.97	12.7	2.04
	12	6.52	1.05	7.77	1.28	9.02	1.52	9.67	1.64	11.6	2.01	12.6	2.03
	14	6.52	1.07	7.77	1.30	9.02	1.54	9.67	1.67	11.6	2.05	12.4	2.02
	16	6.52	1.09	7.77	1.33	9.02	1.57	9.67	1.70	11.6	2.07	12.2	2.01
	18	6.52	1.11	7.77	1.35	9.02	1.60	9.67	1.73	11.6	2.11	12.0	2.12
	20	6.52	1.13	7.77	1.38	9.02	1.64	9.67	1.79	11.6	2.22	11.9	2.23
	21	6.52	1.14	7.77	1.39	9.02	1.69	9.67	1.86	11.6	2.27	11.8	2.29
	23	6.52	1.17	7.77	1.47	9.02	1.81	9.67	2.00	11.4	2.38	11.7	2.40
	25	6.52	1.24	7.77	1.57	9.02	1.94	9.67	2.14	11.2	2.49	11.5	2.51
	27	6.52	1.33	7.77	1.68	9.02	2.08	9.67	2.30	11.1	2.60	11.3	2.62
	29	6.52	1.41	7.77	1.79	9.02	2.23	9.67	2.46	10.9	2.71	11.1	2.73
	31	6.52	1.51	7.77	1.92	9.02	2.38	9.67	2.63	10.8	2.82	11.0	2.84
	33	6.52	1.61	7.77	2.04	9.02	2.54	9.67	2.81	10.6	2.93	10.8	2.95
	35	6.52	1.71	7.77	2.18	9.02	2.71	9.67	3.00	10.4	3.04	10.7	3.06
	37	6.52	1.82	7.77	2.32	9.02	2.89	9.67	3.11	10.2	3.15	10.5	3.18
	39	6.52	1.93	7.77	2.47	9.02	3.09	9.67	3.22	10.1	3.26	10.3	3.29

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)											
		14		16		18		19		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
32 (9.4/89)	10	6.12	0.96	7.29	1.16	8.46	1.37	9.09	1.48	10.8	1.82	12.0	2.05
	12	6.12	0.98	7.29	1.18	8.46	1.40	9.09	1.51	10.8	1.85	12.0	2.09
	14	6.12	0.99	7.29	1.21	8.46	1.43	9.09	1.54	10.8	1.89	12.0	2.13
	16	6.12	1.01	7.29	1.23	8.46	1.45	9.09	1.56	10.8	1.92	12.0	2.16
	18	6.12	1.03	7.29	1.25	8.46	1.48	9.09	1.60	10.8	1.96	12.0	2.19
	20	6.12	1.05	7.29	1.27	8.46	1.51	9.09	1.63	10.8	2.08	12.0	2.31
	21	6.12	1.06	7.29	1.29	8.46	1.52	9.09	1.66	10.8	2.16	12.0	2.36
	23	6.12	1.08	7.29	1.33	8.46	1.63	9.09	1.79	10.8	2.32	11.9	2.47
	25	6.12	1.13	7.29	1.42	8.46	1.74	9.09	1.91	10.8	2.49	11.7	2.59
	27	6.12	1.21	7.29	1.51	8.46	1.86	9.09	2.05	10.8	2.67	11.5	2.70
	29	6.12	1.29	7.29	1.62	8.46	1.99	9.09	2.19	10.8	2.80	11.4	2.82
	31	6.12	1.37	7.29	1.73	8.46	2.12	9.09	2.34	10.8	2.91	11.2	2.93
	33	6.12	1.46	7.29	1.84	8.46	2.27	9.09	2.50	10.8	3.03	11.0	3.05
	35	6.12	1.55	7.29	1.96	8.46	2.42	9.09	2.67	10.6	3.14	10.8	3.16
	37	6.12	1.64	7.29	2.08	8.46	2.58	9.09	2.85	10.4	3.25	10.7	3.28
	39	6.12	1.75	7.29	2.22	8.46	2.75	9.09	3.03	10.3	3.37	10.5	3.40
28 (8.2/78)	10	5.55	0.89	6.60	1.06	7.70	1.25	8.21	1.34	9.81	1.65	10.9	1.85
	12	5.55	0.90	6.60	1.08	7.70	1.27	8.21	1.37	9.81	1.68	10.9	1.89
	14	5.55	0.92	6.60	1.10	7.70	1.29	8.21	1.39	9.81	1.71	10.9	1.92
	16	5.55	0.93	6.60	1.12	7.70	1.32	8.21	1.42	9.81	1.74	10.9	1.96
	18	5.55	0.95	6.60	1.14	7.70	1.34	8.21	1.45	9.81	1.78	10.9	2.00
	20	5.55	0.97	6.60	1.16	7.70	1.37	8.21	1.48	9.81	1.82	10.9	2.11
	21	5.55	0.97	6.60	1.17	7.70	1.38	8.21	1.49	9.81	1.88	10.9	2.19
	23	5.55	0.99	6.60	1.19	7.70	1.44	8.21	1.57	9.81	2.02	10.9	2.35
	25	5.55	1.01	6.60	1.26	7.70	1.53	8.21	1.68	9.81	2.17	10.9	2.52
	27	5.55	1.08	6.60	1.35	7.70	1.64	8.21	1.80	9.81	2.32	10.9	2.71
	29	5.55	1.15	6.60	1.44	7.70	1.75	8.21	1.92	9.81	2.48	10.9	2.90
	31	5.55	1.23	6.60	1.53	7.70	1.87	8.21	2.05	9.81	2.65	10.9	3.02
	33	5.55	1.30	6.60	1.63	7.70	1.99	8.21	2.19	9.81	2.84	10.9	3.13
	35	5.55	1.38	6.60	1.73	7.70	2.12	8.21	2.33	9.81	3.03	10.8	3.25
	37	5.55	1.47	6.60	1.84	7.70	2.26	8.21	2.49	9.81	3.23	10.6	3.37
	39	5.55	1.56	6.60	1.96	7.70	2.41	8.21	2.65	9.81	3.44	10.5	3.49
25 (7.3/69)	10	4.95	0.84	5.88	0.99	6.86	1.16	7.33	1.25	8.73	1.52	9.71	1.71
	12	4.95	0.85	5.88	1.01	6.86	1.18	7.33	1.27	8.73	1.55	9.71	1.74
	14	4.95	0.86	5.88	1.03	6.86	1.20	7.33	1.29	8.73	1.57	9.71	1.77
	16	4.95	0.88	5.88	1.04	6.86	1.22	7.33	1.32	8.73	1.61	9.71	1.81
	18	4.95	0.89	5.88	1.06	6.86	1.25	7.33	1.34	8.73	1.64	9.71	1.84
	20	4.95	0.91	5.88	1.08	6.86	1.27	7.33	1.37	8.73	1.67	9.71	1.88
	21	4.95	0.91	5.88	1.09	6.86	1.28	7.33	1.38	8.73	1.69	9.71	1.94
	23	4.95	0.93	5.88	1.11	6.86	1.31	7.33	1.41	8.73	1.80	9.71	2.08
	25	4.95	0.95	5.88	1.15	6.86	1.38	7.33	1.51	8.73	1.92	9.71	2.23
	27	4.95	0.99	5.88	1.22	6.86	1.48	7.33	1.61	8.73	2.06	9.71	2.39
	29	4.95	1.06	5.88	1.30	6.86	1.57	7.33	1.72	8.73	2.20	9.71	2.55
	31	4.95	1.12	5.88	1.39	6.86	1.68	7.33	1.84	8.73	2.35	9.71	2.73
	33	4.95	1.19	5.88	1.47	6.86	1.79	7.33	1.96	8.73	2.51	9.71	2.91
	35	4.95	1.26	5.88	1.57	6.86	1.90	7.33	2.08	8.73	2.67	9.71	3.11
	37	4.95	1.34	5.88	1.66	6.86	2.02	7.33	2.22	8.73	2.85	9.71	3.32
	39	4.95	1.42	5.88	1.77	6.86	2.15	7.33	2.36	8.73	3.04	9.71	3.54
21 (6.2/58)	10	4.17	0.75	4.96	0.88	5.79	1.02	6.15	1.09	7.39	1.32	8.18	1.48
	12	4.17	0.76	4.96	0.90	5.79	1.04	6.15	1.11	7.39	1.34	8.18	1.50
	14	4.17	0.77	4.96	0.91	5.79	1.06	6.15	1.13	7.39	1.37	8.18	1.53
	16	4.17	0.78	4.96	0.93	5.79	1.07	6.15	1.15	7.39	1.39	8.18	1.56
	18	4.17	0.80	4.96	0.94	5.79	1.09	6.15	1.17	7.39	1.42	8.18	1.59
	20	4.17	0.81	4.96	0.96	5.79	1.11	6.15	1.19	7.39	1.45	8.18	1.62
	21	4.17	0.81	4.96	0.96	5.79	1.12	6.15	1.20	7.39	1.46	8.18	1.64
	23	4.17	0.83	4.96	0.98	5.79	1.14	6.15	1.23	7.39	1.50	8.18	1.72
	25	4.17	0.84	4.96	1.00	5.79	1.18	6.15	1.28	7.39	1.61	8.18	1.85
	27	4.17	0.87	4.96	1.05	5.79	1.26	6.15	1.36	7.39	1.72	8.18	1.98
	29	4.17	0.92	4.96	1.12	5.79	1.34	6.15	1.45	7.39	1.83	8.18	2.11
	31	4.17	0.98	4.96	1.19	5.79	1.42	6.15	1.54	7.39	1.96	8.18	2.25
	33	4.17	1.03	4.96	1.26	5.79	1.51	6.15	1.65	7.39	2.08	8.18	2.40
	35	4.17	1.10	4.96	1.34	5.79	1.61	6.15	1.75	7.39	2.22	8.18	2.56
	37	4.17	1.16	4.96	1.42	5.79	1.70	6.15	1.86	7.39	2.36	8.18	2.73
	39	4.17	1.23	4.96	1.50	5.79	1.81	6.15	1.97	7.39	2.51	8.18	2.91
18 (5.3/50)	10	3.56	0.69	4.25	0.80	4.95	0.92	5.28	0.98	6.31	1.17	6.97	1.31
	12	3.56	0.70	4.25	0.81	4.95	0.94	5.28	1.00	6.31	1.19	6.97	1.33
	14	3.56	0.71	4.25	0.82	4.95	0.95	5.28	1.01	6.31	1.21	6.97	1.35
	16	3.56	0.73	4.25	0.84	4.95	0.96	5.28	1.03	6.31	1.23	6.97	1.37
	18	3.56	0.73	4.25	0.85	4.95	0.98	5.28	1.05	6.31	1.25	6.97	1.40
	20	3.56	0.74	4.25	0.86	4.95	1.00	5.28	1.06	6.31	1.28	6.97	1.43
	21	3.56	0.75	4.25	0.87	4.95	1.00	5.28	1.07	6.31	1.29	6.97	1.44
	23	3.56	0.76	4.25	0.89	4.95	1.02	5.28	1.09	6.31	1.31	6.97	1.47
	25	3.56	0.77	4.25	0.90	4.95	1.04	5.28	1.11	6.31	1.37	6.97	1.56
	27	3.56	0.79	4.25	0.93	4.95	1.09	5.28	1.18	6.31	1.46	6.97	1.67
	29	3.56	0.82	4.25	0.99	4.95	1.16	5.28	1.25	6.31	1.56	6.97	1.78
	31	3.56	0.87	4.25	1.05	4.95	1.23	5.28	1.33	6.31	1.65	6.97	1.89
	33	3.56	0.92	4.25	1.11	4.95	1.31	5.28	1.41	6.31	1.76	6.97	2.01
	35	3.56	0.97	4.25	1.17	4.95	1.38	5.28	1.50	6.31	1.87	6.97	2.14
	37	3.56	1.03	4.25	1.24	4.95	1.47	5.28	1.59	6.31	1.99	6.97	2.28
	39	3.56	1.09	4.25	1.31	4.95	1.56	5.28	1.69	6.31	2.11	6.97	2.42

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)											
		14		16		18		19		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
16 (4.7/44)	10	3.17	0.62	3.78	0.71	4.40	0.82	4.69	0.87	5.61	1.04	6.20	1.16
	12	3.17	0.62	3.78	0.72	4.40	0.83	4.69	0.89	5.61	1.06	6.20	1.18
	14	3.17	0.63	3.78	0.73	4.40	0.84	4.69	0.90	5.61	1.08	6.20	1.20
	16	3.17	0.64	3.78	0.75	4.40	0.86	4.69	0.92	5.61	1.09	6.20	1.22
	18	3.17	0.65	3.78	0.76	4.40	0.87	4.69	0.93	5.61	1.11	6.20	1.24
	20	3.17	0.66	3.78	0.77	4.40	0.89	4.69	0.94	5.61	1.14	6.20	1.27
	21	3.17	0.66	3.78	0.78	4.40	0.89	4.69	0.95	5.61	1.15	6.20	1.28
	23	3.17	0.67	3.78	0.79	4.40	0.91	4.69	0.97	5.61	1.17	6.20	1.30
	25	3.17	0.68	3.78	0.80	4.40	0.92	4.69	0.99	5.61	1.22	6.20	1.38
	27	3.17	0.70	3.78	0.83	4.40	0.97	4.69	1.05	5.61	1.29	6.20	1.48
	29	3.17	0.73	3.78	0.88	4.40	1.03	4.69	1.11	5.61	1.38	6.20	1.58
	31	3.17	0.78	3.78	0.93	4.40	1.09	4.69	1.18	5.61	1.47	6.20	1.68
	33	3.17	0.82	3.78	0.98	4.40	1.16	4.69	1.25	5.61	1.56	6.20	1.79
	35	3.17	0.87	3.78	1.04	4.40	1.23	4.69	1.33	5.61	1.66	6.20	1.90
	37	3.17	0.92	3.78	1.10	4.40	1.30	4.69	1.41	5.61	1.77	6.20	2.03
	39	3.17	0.97	3.78	1.17	4.40	1.38	4.69	1.50	5.61	1.87	6.20	2.15

Notes:
1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating Capacity]

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16		18		20		21		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
46 (13.5/129)	-20.0	6.63	1.71	6.63	1.84	6.59	1.97	6.59	2.03	6.55	2.10	6.55	2.22
	-19.0	6.84	1.78	6.80	1.90	6.80	2.03	6.76	2.09	6.76	2.15	6.71	2.28
	-17.0	7.21	1.91	7.21	2.02	7.17	2.14	7.17	2.20	7.13	2.26	7.13	2.38
	-15.0	7.63	2.02	7.59	2.13	7.55	2.24	7.55	2.30	7.55	2.35	7.51	2.47
	-13.0	8.01	2.12	7.96	2.23	7.96	2.34	7.96	2.39	7.92	2.44	7.92	2.54
	-11.0	8.38	2.22	8.38	2.32	8.34	2.42	8.34	2.47	8.34	2.52	8.30	2.62
	-10.0	8.59	2.26	8.59	2.36	8.55	2.45	8.55	2.50	8.51	2.55	8.51	2.65
	-9.1	8.76	2.30	8.76	2.39	8.72	2.49	8.72	2.54	8.72	2.58	8.67	2.68
	-7.6	9.05	2.35	9.05	2.45	9.01	2.54	9.01	2.59	9.01	2.63	8.97	2.73
	-5.6	9.47	2.43	9.42	2.52	9.42	2.61	9.38	2.65	9.38	2.69	9.38	2.78
	-3.7	9.84	2.49	9.80	2.58	9.80	2.66	9.76	2.70	9.76	2.75	9.72	2.83
	-0.7	10.4	2.58	10.4	2.66	10.4	2.74	10.3	2.78	10.3	2.83	10.3	2.91
	2.2	11.0	2.66	11.0	2.74	10.9	2.82	10.9	2.85	10.9	2.89	10.9	2.97
	4.1	11.3	2.71	11.3	2.78	11.3	2.86	11.3	2.89	11.3	2.93	11.3	3.01
	6.0	11.7	2.75	11.7	2.83	11.7	2.90	11.7	2.93	11.7	2.97	11.6	3.04
	7.9	12.1	2.80	12.1	2.86	12.1	2.93	12.1	2.97	12.1	3.01	11.8	2.99
	9.8	12.5	2.84	12.5	2.90	12.4	2.97	12.4	3.01	12.4	3.04	11.8	2.88
	11.8	12.9	2.88	12.8	2.94	12.8	3.01	12.8	3.04	12.7	3.02	11.8	2.77
	13.7	13.3	2.91	13.2	2.97	13.2	3.04	13.1	3.04	12.7	2.92	11.8	2.68
43 (12.6/119)	-20.0	6.55	1.85	6.55	1.97	6.51	2.09	6.51	2.15	6.51	2.20	6.47	2.32
	-19.0	6.76	1.92	6.72	2.03	6.72	2.14	6.72	2.20	6.67	2.26	6.67	2.37
	-17.0	7.13	2.03	7.13	2.14	7.09	2.25	7.09	2.30	7.09	2.35	7.05	2.46
	-15.0	7.55	2.14	7.50	2.24	7.50	2.34	7.50	2.39	7.46	2.44	7.46	2.54
	-13.0	7.92	2.23	7.92	2.33	7.88	2.42	7.88	2.47	7.88	2.52	7.84	2.61
	-11.0	8.33	2.31	8.29	2.41	8.29	2.50	8.25	2.54	8.25	2.59	8.25	2.68
	-10.0	8.50	2.36	8.50	2.45	8.46	2.53	8.46	2.58	8.46	2.62	8.42	2.71
	-9.1	8.71	2.39	8.66	2.48	8.66	2.56	8.62	2.61	8.62	2.65	8.58	2.74
	-7.6	9.00	2.44	8.96	2.53	8.96	2.61	8.91	2.65	8.91	2.70	8.91	2.78
	-5.6	9.37	2.51	9.37	2.59	9.33	2.67	9.33	2.71	9.29	2.75	9.29	2.83
	-3.7	9.74	2.57	9.70	2.64	9.70	2.72	9.70	2.76	9.66	2.80	9.66	2.88
	-0.7	10.3	2.65	10.3	2.72	10.3	2.80	10.3	2.83	10.3	2.87	10.2	2.94
	2.2	10.9	2.72	10.9	2.79	10.9	2.86	10.8	2.90	10.8	2.93	10.8	3.00
	4.1	11.3	2.77	11.2	2.83	11.2	2.90	11.2	2.93	11.2	2.97	10.8	2.89
	6.0	11.7	2.81	11.6	2.87	11.6	2.94	11.6	2.97	11.6	3.00	10.8	2.78
	7.9	12.0	2.85	12.0	2.91	12.0	2.97	11.9	3.00	11.7	2.91	10.8	2.67
	9.8	12.4	2.88	12.4	2.94	12.3	3.00	12.0	2.93	11.7	2.81	10.8	2.58
	11.8	12.8	2.92	12.7	2.98	12.4	2.93	12.0	2.82	11.7	2.70	10.8	2.48
	13.7	13.1	2.95	13.1	3.01	12.4	2.83	12.0	2.72	11.7	2.61	10.8	2.40
40 (11.7/111)	-20.0	6.61	2.05	6.57	2.16	6.57	2.27	6.53	2.33	6.53	2.38	6.53	2.49
	-19.0	6.78	2.11	6.78	2.22	6.74	2.33	6.74	2.38	6.74	2.43	6.70	2.54
	-17.0	7.20	2.22	7.16	2.32	7.16	2.42	7.11	2.47	7.11	2.52	7.11	2.62
	-15.0	7.57	2.32	7.57	2.41	7.53	2.51	7.53	2.55	7.53	2.60	7.49	2.70
	-13.0	7.95	2.41	7.95	2.50	7.95	2.59	7.91	2.63	7.91	2.68	7.91	2.76
	-11.0	8.37	2.49	8.33	2.57	8.33	2.66	8.33	2.70	8.29	2.74	8.29	2.82
	-10.0	8.58	2.52	8.54	2.60	8.54	2.69	8.50	2.73	8.50	2.77	8.50	2.86
	-9.1	8.75	2.55	8.70	2.63	8.70	2.72	8.70	2.76	8.66	2.80	8.66	2.88
	-7.6	9.04	2.60	9.00	2.68	9.00	2.76	9.00	2.80	8.96	2.84	8.96	2.92
	-5.6	9.42	2.66	9.42	2.74	9.37	2.82	9.37	2.86	9.37	2.89	9.33	2.97
	-3.7	9.79	2.72	9.79	2.79	9.75	2.87	9.75	2.90	9.75	2.94	9.71	3.01
	-0.7	10.4	2.80	10.4	2.87	10.3	2.93	10.3	2.97	10.3	3.00	10.0	2.94
	2.2	11.0	2.87	10.9	2.93	10.9	3.00	10.9	3.03	10.8	3.00	10.0	2.75
	4.1	11.3	2.91	11.3	2.97	11.3	3.03	11.1	3.00	10.8	2.88	10.0	2.64
	6.0	11.7	2.95	11.7	3.01	11.5	3.00	11.1	2.88	10.8	2.77	10.0	2.54
	7.9	12.1	2.98	12.1	3.04	11.5	2.89	11.1	2.77	10.8	2.66	10.0	2.45
	9.8	12.5	3.01	12.3	3.00	11.5	2.78	11.1	2.67	10.8	2.57	10.0	2.36
	11.8	12.8	3.05	12.3	2.89	11.5	2.68	11.1	2.57	10.8	2.47	10.0	2.28
	13.7	13.0	2.99	12.3	2.79	11.5	2.59	11.1	2.49	10.8	2.39	10.0	2.20
36 (10.6/100)	-20.0	6.99	2.54	6.95	2.66	6.95	2.77	6.95	2.82	6.90	2.88	6.90	2.99
	-19.0	7.17	2.60	7.17	2.72	7.17	2.82	7.13	2.88	7.13	2.93	7.13	3.04
	-17.0	7.62	2.72	7.57	2.82	7.57	2.92	7.57	2.98	7.57	3.03	7.53	3.13
	-15.0	8.02	2.82	8.02	2.92	7.97	3.02	7.97	3.06	7.97	3.11	7.97	3.21
	-13.0	8.46	2.91	8.42	3.00	8.42	3.09	8.42	3.14	8.37	3.19	8.37	3.28
	-11.0	8.86	2.99	8.86	3.08	8.82	3.17	8.82	3.21	8.82	3.26	8.78	3.35
	-10.0	9.09	3.03	9.04	3.12	9.04	3.20	9.04	3.25	9.00	3.29	9.00	3.38
	-9.1	9.27	3.06	9.27	3.15	9.22	3.23	9.22	3.28	9.22	3.31	9.18	3.40
	-7.6	9.58	3.12	9.58	3.20	9.53	3.28	9.53	3.32	9.53	3.36	9.49	3.44
	-5.6	10.0	3.18	9.98	3.26	9.98	3.34	9.93	3.38	9.93	3.41	9.71	3.37
	-3.7	10.4	3.24	10.4	3.31	10.4	3.39	10.3	3.42	10.3	3.46	9.71	3.21
	-0.7	11.0	3.32	11.0	3.39	11.0	3.46	10.8	3.39	10.4	3.26	9.71	2.99
	2.2	11.6	3.39	11.6	3.45	11.1	3.31	10.8	3.18	10.4	3.05	9.71	2.81
	4.1	12.0	3.43	11.8	3.42	11.1	3.17	10.8	3.05	10.4	2.93	9.71	2.69
	6.0	12.4	3.47	11.8	3.29	11.1	3.05	10.8	2.93	10.4	2.82	9.71	2.59
	7.9	12.6	3.40	11.8	3.16	11.1	2.94	10.8	2.82	10.4	2.72	9.71	2.50
	9.8	12.6	3.27	11.8	3.05	11.1	2.83	10.8	2.72	10.4	2.62	9.71	2.42
	11.8	12.6	3.15	11.8	2.94	11.1	2.73	10.8	2.63	10.4	2.53	9.71	2.33
	13.7	12.6	3.04	11.8	2.84	11.1	2.64	10.8	2.54	10.4	2.45	9.71	2.26

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16		18		20		21		22		24	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
32 (9.4/89)	-20.0	7.28	2.76	7.28	2.86	7.24	2.96	7.24	3.01	7.24	3.06	7.19	3.17
	-19.0	7.52	2.82	7.47	2.91	7.47	3.01	7.47	3.06	7.47	3.11	7.42	3.21
	-17.0	7.94	2.92	7.94	3.01	7.89	3.10	7.89	3.15	7.89	3.20	7.89	3.29
	-15.0	8.40	3.01	8.36	3.10	8.36	3.19	8.36	3.23	8.31	3.27	8.31	3.36
	-13.0	8.82	3.09	8.82	3.17	8.78	3.26	8.78	3.30	8.78	3.34	8.73	3.43
	-11.0	9.24	3.17	9.24	3.25	9.24	3.33	9.20	3.37	9.20	3.41	9.15	3.47
	-10.0	9.48	3.20	9.48	3.28	9.43	3.36	9.43	3.40	9.43	3.44	9.15	3.37
	-9.1	9.66	3.23	9.66	3.31	9.62	3.38	9.62	3.42	9.62	3.46	9.15	3.28
	-7.6	10.0	3.28	10.0	3.35	10.0	3.43	9.94	3.46	9.85	3.43	9.15	3.15
	-5.6	10.5	3.34	10.4	3.41	10.4	3.48	10.2	3.39	9.85	3.26	9.15	2.99
	-3.7	10.9	3.39	10.8	3.46	10.5	3.36	10.2	3.23	9.85	3.10	9.15	2.85
	-0.7	11.5	3.46	11.2	3.37	10.5	3.13	10.2	3.01	9.85	2.89	9.15	2.66
	2.2	11.9	3.39	11.2	3.16	10.5	2.93	10.2	2.82	9.85	2.71	9.15	2.50
	4.1	11.9	3.25	11.2	3.03	10.5	2.82	10.2	2.71	9.85	2.61	9.15	2.40
	6.0	11.9	3.13	11.2	2.92	10.5	2.71	10.2	2.61	9.85	2.51	9.15	2.31
	7.9	11.9	3.01	11.2	2.81	10.5	2.61	10.2	2.51	9.85	2.42	9.15	2.24
	9.8	11.9	2.90	11.2	2.71	10.5	2.52	10.2	2.43	9.85	2.34	9.15	2.16
	11.8	11.9	2.80	11.2	2.62	10.5	2.43	10.2	2.34	9.85	2.26	9.15	2.09
	13.7	11.9	2.71	11.2	2.53	10.5	2.35	10.2	2.27	9.85	2.19	9.15	2.02
28 (8.2/78)	-20.0	7.12	2.96	7.12	3.06	7.12	3.15	7.08	3.19	7.08	3.24	7.08	3.33
	-19.0	7.35	3.02	7.35	3.10	7.31	3.19	7.31	3.23	7.31	3.28	7.31	3.37
	-17.0	7.77	3.11	7.77	3.19	7.77	3.27	7.72	3.31	7.72	3.36	7.72	3.44
	-15.0	8.23	3.19	8.18	3.27	8.18	3.35	8.18	3.39	8.18	3.43	8.00	3.41
	-13.0	8.64	3.27	8.64	3.34	8.59	3.41	8.59	3.45	8.59	3.49	8.00	3.20
	-11.0	9.10	3.33	9.05	3.40	9.05	3.47	8.91	3.42	8.59	3.28	8.00	3.02
	-10.0	9.28	3.36	9.28	3.43	9.19	3.46	8.91	3.32	8.59	3.19	8.00	2.93
	-9.1	9.51	3.39	9.47	3.46	9.19	3.37	8.91	3.24	8.59	3.11	8.00	2.86
	-7.6	9.83	3.43	9.79	3.49	9.19	3.23	8.91	3.11	8.59	2.98	8.00	2.74
	-5.6	10.2	3.48	9.79	3.31	9.19	3.07	8.91	2.95	8.59	2.84	8.00	2.61
	-3.7	10.4	3.38	9.79	3.15	9.19	2.93	8.91	2.81	8.59	2.70	8.00	2.49
	-0.7	10.4	3.15	9.79	2.94	9.19	2.73	8.91	2.63	8.59	2.53	8.00	2.33
	2.2	10.4	2.95	9.79	2.75	9.19	2.56	8.91	2.47	8.59	2.38	8.00	2.19
	4.1	10.4	2.83	9.79	2.65	9.19	2.46	8.91	2.38	8.59	2.28	8.00	2.11
	6.0	10.4	2.73	9.79	2.55	9.19	2.37	8.91	2.29	8.59	2.21	8.00	2.04
	7.9	10.4	2.63	9.79	2.46	9.19	2.29	8.91	2.21	8.59	2.13	8.00	1.97
	9.8	10.4	2.54	9.79	2.37	9.19	2.21	8.91	2.14	8.59	2.06	8.00	1.90
	11.8	10.4	2.45	9.79	2.29	9.19	2.14	8.91	2.06	8.59	1.99	8.00	1.84
	13.7	10.4	2.37	9.79	2.22	9.19	2.07	8.91	2.00	8.59	1.93	8.00	1.79
25 (7.3/69)	-20.0	7.22	3.27	7.22	3.35	7.22	3.44	7.22	3.48	7.22	3.52	7.17	3.58
	-19.0	7.46	3.32	7.46	3.40	7.46	3.48	7.41	3.52	7.41	3.56	7.17	3.44
	-17.0	7.92	3.40	7.88	3.48	7.88	3.55	7.88	3.59	7.69	3.50	7.17	3.21
	-15.0	8.35	3.48	8.35	3.55	8.21	3.54	7.92	3.40	7.69	3.27	7.17	3.01
	-13.0	8.77	3.54	8.72	3.58	8.21	3.33	7.92	3.20	7.69	3.07	7.17	2.82
	-11.0	9.24	3.61	8.72	3.38	8.21	3.13	7.92	3.01	7.69	2.90	7.17	2.67
	-10.0	9.24	3.52	8.72	3.28	8.21	3.05	7.92	2.93	7.69	2.82	7.17	2.59
	-9.1	9.24	3.43	8.72	3.20	8.21	2.97	7.92	2.86	7.69	2.75	7.17	2.53
	-7.6	9.24	3.29	8.72	3.07	8.21	2.85	7.92	2.75	7.69	2.64	7.17	2.43
	-5.6	9.24	3.12	8.72	2.91	8.21	2.71	7.92	2.61	7.69	2.51	7.17	2.32
	-3.7	9.24	2.98	8.72	2.78	8.21	2.59	7.92	2.49	7.69	2.40	7.17	2.22
	-0.7	9.24	2.78	8.72	2.60	8.21	2.42	7.92	2.34	7.69	2.25	7.17	2.08
	2.2	9.24	2.61	8.72	2.44	8.21	2.28	7.92	2.20	7.69	2.12	7.17	1.96
	4.1	9.24	2.51	8.72	2.35	8.21	2.19	7.92	2.12	7.69	2.04	7.17	1.89
	6.0	9.24	2.42	8.72	2.27	8.21	2.12	7.92	2.04	7.69	1.97	7.17	1.83
	7.9	9.24	2.34	8.72	2.19	8.21	2.05	7.92	1.97	7.69	1.91	7.17	1.77
	9.8	9.24	2.26	8.72	2.12	8.21	1.98	7.92	1.91	7.69	1.84	7.17	1.71
	11.8	9.24	2.18	8.72	2.05	8.21	1.91	7.92	1.85	7.69	1.78	7.17	1.66
	13.7	9.24	2.11	8.72	1.98	8.21	1.86	7.92	1.79	7.69	1.73	7.17	1.61
21 (6.2/58)	-20.0	7.08	3.45	7.03	3.51	6.89	3.47	6.66	3.33	6.43	3.20	6.02	2.94
	-19.0	7.26	3.48	7.26	3.55	6.89	3.34	6.66	3.21	6.43	3.09	6.02	2.84
	-17.0	7.72	3.55	7.35	3.36	6.89	3.11	6.66	2.99	6.43	2.88	6.02	2.65
	-15.0	7.77	3.37	7.35	3.14	6.89	2.92	6.66	2.81	6.43	2.70	6.02	2.49
	-13.0	7.77	3.16	7.35	2.95	6.89	2.74	6.66	2.64	6.43	2.54	6.02	2.34
	-11.0	7.77	2.98	7.35	2.78	6.89	2.59	6.66	2.50	6.43	2.40	6.02	2.22
	-10.0	7.77	2.90	7.35	2.71	6.89	2.52	6.66	2.43	6.43	2.34	6.02	2.16
	-9.1	7.77	2.83	7.35	2.64	6.89	2.46	6.66	2.37	6.43	2.28	6.02	2.11
	-7.6	7.77	2.72	7.35	2.54	6.89	2.37	6.66	2.28	6.43	2.20	6.02	2.03
	-5.6	7.77	2.59	7.35	2.42	6.89	2.25	6.66	2.17	6.43	2.10	6.02	1.94
	-3.7	7.77	2.47	7.35	2.31	6.89	2.16	6.66	2.08	6.43	2.01	6.02	1.86
	-0.7	7.77	2.31	7.35	2.16	6.89	2.02	6.66	1.95	6.43	1.88	6.02	1.75
	2.2	7.77	2.17	7.35	2.04	6.89	1.91	6.66	1.84	6.43	1.78	6.02	1.65
	4.1	7.77	2.09	7.35	1.97	6.89	1.84	6.66	1.78	6.43	1.72	6.02	1.60
	6.0	7.77	2.02	7.35	1.90	6.89	1.78	6.66	1.72	6.43	1.66	6.02	1.54
	7.9	7.77	1.95	7.35	1.84	6.89	1.72	6.66	1.66	6.43	1.60	6.02	1.50
	9.8	7.77	1.89	7.35	1.78	6.89	1.67	6.66	1.61	6.43	1.56	6.02	1.45
	11.8	7.77	1.83	7.35	1.72	6.89	1.61	6.66	1.56	6.43	1.51	6.02	1.41
	13.7	7.77	1.77	7.35	1.67	6.89	1.57	6.66	1.51	6.43	1.47	6.02	1.37

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16		18		20		21		22		24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
18 (5.3/50)	-20.0	6.66	3.33	6.29	3.11	5.91	2.89	5.72	2.78	5.53	2.67	5.15	2.47
	-19.0	6.66	3.21	6.29	2.99	5.91	2.79	5.72	2.68	5.53	2.58	5.15	2.38
	-17.0	6.66	2.99	6.29	2.80	5.91	2.61	5.72	2.51	5.53	2.41	5.15	2.23
	-15.0	6.66	2.81	6.29	2.62	5.91	2.45	5.72	2.36	5.53	2.27	5.15	2.10
	-13.0	6.66	2.64	6.29	2.47	5.91	2.31	5.72	2.22	5.53	2.15	5.15	1.98
	-11.0	6.66	2.50	6.29	2.34	5.91	2.18	5.72	2.11	5.53	2.03	5.15	1.88
	-10.0	6.66	2.43	6.29	2.28	5.91	2.13	5.72	2.05	5.53	1.98	5.15	1.84
	-9.1	6.66	2.37	6.29	2.22	5.91	2.08	5.72	2.01	5.53	1.94	5.15	1.80
	-7.6	6.66	2.29	6.29	2.15	5.91	2.00	5.72	1.94	5.53	1.87	5.15	1.73
	-5.6	6.66	2.18	6.29	2.04	5.91	1.91	5.72	1.85	5.53	1.78	5.15	1.66
	-3.7	6.66	2.09	6.29	1.96	5.91	1.84	5.72	1.78	5.53	1.72	5.15	1.59
	-0.7	6.66	1.96	6.29	1.84	5.91	1.72	5.72	1.67	5.53	1.61	5.15	1.50
	2.2	6.66	1.85	6.29	1.74	5.91	1.63	5.72	1.58	5.53	1.53	5.15	1.42
	4.1	6.66	1.78	6.29	1.68	5.91	1.58	5.72	1.53	5.53	1.48	5.15	1.38
	6.0	6.66	1.72	6.29	1.63	5.91	1.53	5.72	1.48	5.53	1.43	5.15	1.33
	7.9	6.66	1.67	6.29	1.58	5.91	1.48	5.72	1.43	5.53	1.39	5.15	1.30
	9.8	6.66	1.62	6.29	1.53	5.91	1.44	5.72	1.39	5.53	1.35	5.15	1.26
	11.8	6.66	1.57	6.29	1.48	5.91	1.40	5.72	1.35	5.53	1.31	5.15	1.22
	13.7	6.66	1.53	6.29	1.44	5.91	1.35	5.72	1.31	5.53	1.27	5.15	1.19
16 (4.7/44)	-20.0	5.92	2.96	5.59	2.76	5.25	2.57	5.08	2.47	4.92	2.38	4.58	2.19
	-19.0	5.92	2.86	5.59	2.66	5.25	2.48	5.08	2.39	4.92	2.29	4.58	2.12
	-17.0	5.92	2.66	5.59	2.48	5.25	2.32	5.08	2.23	4.92	2.15	4.58	1.98
	-15.0	5.92	2.50	5.59	2.33	5.25	2.18	5.08	2.10	4.92	2.02	4.58	1.87
	-13.0	5.92	2.35	5.59	2.20	5.25	2.05	5.08	1.98	4.92	1.91	4.58	1.76
	-11.0	5.92	2.22	5.59	2.08	5.25	1.94	5.08	1.87	4.92	1.80	4.58	1.67
	-10.0	5.92	2.16	5.59	2.02	5.25	1.89	5.08	1.83	4.92	1.76	4.58	1.63
	-9.1	5.92	2.11	5.59	1.98	5.25	1.85	5.08	1.78	4.92	1.72	4.58	1.60
	-7.6	5.92	2.03	5.59	1.91	5.25	1.78	5.08	1.72	4.92	1.66	4.58	1.54
	-5.6	5.92	1.94	5.59	1.82	5.25	1.70	5.08	1.64	4.92	1.59	4.58	1.48
	-3.7	5.92	1.85	5.59	1.74	5.25	1.63	5.08	1.58	4.92	1.52	4.58	1.42
	-0.7	5.92	1.74	5.59	1.64	5.25	1.53	5.08	1.48	4.92	1.43	4.58	1.33
	2.2	5.92	1.64	5.59	1.55	5.25	1.45	5.08	1.40	4.92	1.36	4.58	1.26
	4.1	5.92	1.59	5.59	1.49	5.25	1.40	5.08	1.36	4.92	1.31	4.58	1.22
	6.0	5.92	1.53	5.59	1.45	5.25	1.36	5.08	1.31	4.92	1.27	4.58	1.19
	7.9	5.92	1.48	5.59	1.40	5.25	1.31	5.08	1.27	4.92	1.23	4.58	1.15
	9.8	5.92	1.44	5.59	1.36	5.25	1.28	5.08	1.24	4.92	1.20	4.58	1.12
	11.8	5.92	1.39	5.59	1.31	5.25	1.24	5.08	1.20	4.92	1.16	4.58	1.09
	13.7	5.92	1.36	5.59	1.28	5.25	1.20	5.08	1.17	4.92	1.13	4.58	1.06

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m

   is shown as reference.
   When selecting the unit models, avoid the outdoor air temperature range shown by .

2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A7UW428FA3 [FM41AH U33]

[Cooling capacity]

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
54 (130%)	10	14.3	2.51	15.0	2.53	15.7	2.55	16.2	2.56	16.4	2.56	17.4	2.58	18.2	2.60
	12	14.0	2.56	14.7	2.58	15.4	2.60	15.8	2.61	16.0	2.61	17.1	2.63	17.9	2.65
	14	13.7	2.64	14.4	2.66	15.2	2.68	15.6	2.69	15.8	2.69	16.8	2.72	17.6	2.74
	16	13.5	2.75	14.2	2.77	15.0	2.79	15.4	2.80	15.6	2.80	16.6	2.83	17.4	2.85
	18	13.4	2.95	14.0	2.97	14.8	2.99	15.2	3.00	15.4	3.01	16.4	3.03	17.2	3.06
	20	13.2	3.02	13.9	3.05	14.6	3.07	15.0	3.08	15.2	3.08	16.2	3.11	17.0	3.13
	21	13.1	3.10	13.8	3.13	14.5	3.15	14.9	3.16	15.1	3.16	16.2	3.19	16.9	3.21
	23	13.0	3.26	13.6	3.29	14.4	3.31	14.8	3.32	15.0	3.32	16.0	3.35	16.8	3.37
	25	12.8	3.42	13.5	3.45	14.2	3.47	14.6	3.48	14.9	3.48	15.9	3.51	16.6	3.53
	27	12.7	3.58	13.3	3.60	14.1	3.62	14.5	3.63	14.7	3.63	15.7	3.66	16.5	3.68
	29	12.5	3.72	13.1	3.74	13.9	3.76	14.3	3.77	14.5	3.77	15.5	3.79	16.3	3.81
	31	12.2	3.83	12.9	3.86	13.7	3.87	14.1	3.88	14.3	3.88	15.3	3.90	16.1	3.92
	33	12.0	3.92	12.6	3.94	13.4	3.95	13.8	3.96	14.0	3.96	15.1	3.98	15.8	4.00
	35	11.7	3.97	12.3	3.98	13.1	4.00	13.5	4.00	13.7	4.00	14.7	4.02	15.5	4.03
	37	11.3	3.97	12.0	3.98	12.7	3.99	13.1	3.99	13.3	3.99	14.4	4.00	15.1	4.02
	39	10.9	3.91	11.5	3.92	12.3	3.93	12.7	3.93	12.9	3.93	13.9	3.94	14.7	3.95
	41	10.4	3.80	11.0	3.81	11.8	3.81	12.2	3.81	12.4	3.81	13.4	3.81	14.1	3.82
	43	9.79	3.62	10.4	3.62	11.2	3.62	11.6	3.62	11.8	3.62	12.8	3.62	13.5	3.62
	46	8.80	3.22	9.42	3.22	10.1	3.22	10.5	3.21	10.7	3.21	11.7	3.20	12.4	3.21
50 (120%)	10	13.9	2.50	14.5	2.52	15.3	2.54	15.7	2.55	15.9	2.55	16.9	2.57	17.6	2.58
	12	13.6	2.55	14.2	2.56	14.9	2.58	15.3	2.59	15.5	2.60	16.5	2.62	17.3	2.64
	14	13.3	2.62	13.9	2.64	14.7	2.66	15.1	2.67	15.3	2.68	16.3	2.70	17.0	2.72
	16	13.1	2.73	13.7	2.75	14.5	2.77	14.9	2.78	15.1	2.79	16.1	2.81	16.8	2.83
	18	12.9	2.86	13.6	2.88	14.3	2.90	14.7	2.91	14.9	2.92	15.9	2.94	16.6	2.96
	20	12.8	3.00	13.4	3.02	14.1	3.05	14.5	3.06	14.7	3.06	15.7	3.09	16.5	3.11
	21	12.7	3.08	13.3	3.10	14.1	3.12	14.5	3.14	14.7	3.14	15.7	3.17	16.4	3.19
	23	12.6	3.24	13.2	3.26	13.9	3.28	14.3	3.30	14.5	3.30	15.5	3.33	16.3	3.35
	25	12.4	3.40	13.1	3.42	13.8	3.44	14.2	3.46	14.4	3.46	15.4	3.49	16.1	3.51
	27	12.3	3.56	12.9	3.58	13.6	3.60	14.0	3.61	14.2	3.62	15.2	3.64	16.0	3.66
	29	12.1	3.70	12.7	3.72	13.5	3.74	13.9	3.75	14.1	3.75	15.0	3.78	15.8	3.80
	31	11.9	3.82	12.5	3.84	13.3	3.86	13.6	3.87	13.8	3.87	14.8	3.89	15.6	3.91
	33	11.6	3.91	12.3	3.93	13.0	3.94	13.4	3.95	13.6	3.96	14.6	3.98	15.3	3.99
	35	11.3	3.96	12.0	3.98	12.7	3.99	13.1	4.00	13.3	4.00	14.3	4.02	15.0	4.03
	37	11.0	3.97	11.6	3.98	12.4	4.00	12.7	4.00	12.9	4.00	13.9	4.02	14.7	4.03
	39	10.6	3.93	11.2	3.94	11.9	3.95	12.3	3.95	12.5	3.95	13.5	3.96	14.3	3.97
	41	10.1	3.83	10.7	3.83	11.5	3.84	11.8	3.84	12.0	3.84	13.0	3.85	13.8	3.85
	43	9.57	3.66	10.2	3.66	10.9	3.66	11.3	3.66	11.5	3.66	12.4	3.67	13.2	3.67
	46	8.63	3.29	9.24	3.28	9.93	3.28	10.3	3.28	10.5	3.28	11.4	3.27	12.1	3.27
46 (110%)	10	13.4	2.36	14.0	2.38	14.8	2.40	15.1	2.41	15.3	2.41	16.3	2.43	17.1	2.44
	12	13.1	2.40	13.7	2.42	14.5	2.44	14.8	2.45	15.0	2.46	16.0	2.48	16.7	2.49
	14	12.9	2.48	13.5	2.50	14.2	2.52	14.6	2.53	14.8	2.53	15.8	2.55	16.5	2.57
	16	12.7	2.58	13.3	2.60	14.0	2.62	14.4	2.63	14.6	2.63	15.5	2.66	16.3	2.67
	18	12.5	2.70	13.1	2.72	13.8	2.74	14.2	2.75	14.4	2.75	15.4	2.78	16.1	2.80
	20	12.4	2.83	13.0	2.85	13.7	2.88	14.1	2.89	14.3	2.89	15.2	2.92	15.9	2.94
	21	12.3	2.91	12.9	2.93	13.6	2.95	14.0	2.96	14.2	2.97	15.1	2.99	15.9	3.01
	23	12.1	3.06	12.8	3.08	13.5	3.10	13.9	3.11	14.0	3.12	15.0	3.14	15.7	3.16
	25	12.0	3.21	12.6	3.23	13.3	3.25	13.7	3.26	13.9	3.27	14.9	3.29	15.6	3.31
	27	11.9	3.36	12.5	3.38	13.2	3.40	13.6	3.41	13.8	3.41	14.7	3.44	15.5	3.46
	29	11.7	3.50	12.3	3.51	13.0	3.53	13.4	3.54	13.6	3.55	14.6	3.57	15.3	3.59
	31	11.5	3.61	12.1	3.63	12.8	3.65	13.2	3.66	13.4	3.66	14.4	3.68	15.1	3.70
	33	11.3	3.70	11.9	3.72	12.6	3.74	13.0	3.74	13.2	3.75	14.1	3.77	14.9	3.78
	35	11.0	3.76	11.6	3.77	12.3	3.79	12.7	3.80	12.9	3.80	13.9	3.81	14.6	3.83
	37	10.7	3.78	11.3	3.79	12.0	3.80	12.4	3.80	12.6	3.81	13.5	3.82	14.2	3.83
	39	10.3	3.75	10.9	3.75	11.6	3.76	12.0	3.77	12.2	3.77	13.1	3.78	13.9	3.79
	41	9.84	3.66	10.5	3.67	11.2	3.67	11.5	3.67	11.7	3.67	12.7	3.68	13.4	3.69
	43	9.35	3.52	9.95	3.52	10.6	3.52	11.0	3.52	11.2	3.52	12.1	3.53	12.8	3.53
	46	8.48	3.19	9.06	3.19	9.74	3.18	10.1	3.18	10.3	3.18	11.2	3.18	11.9	3.18
42 (100%)	10	12.9	2.12	13.5	2.13	14.2	2.15	14.5	2.16	14.7	2.16	15.6	2.18	16.3	2.19
	12	12.6	2.17	13.2	2.18	13.9	2.20	14.3	2.21	14.5	2.21	15.4	2.23	16.1	2.24
	14	12.4	2.24	13.0	2.26	13.7	2.27	14.1	2.28	14.3	2.28	15.2	2.30	15.9	2.32
	16	12.2	2.33	12.8	2.35	13.5	2.36	13.9	2.37	14.1	2.38	15.0	2.40	15.7	2.41
	18	12.0	2.43	12.6	2.45	13.3	2.47	13.7	2.48	13.9	2.48	14.8	2.50	15.5	2.52
	20	11.9	2.55	12.5	2.57	13.2	2.59	13.5	2.60	13.7	2.60	14.7	2.62	15.4	2.64
	21	11.8	2.61	12.4	2.63	13.1	2.65	13.5	2.66	13.6	2.66	14.6	2.68	15.3	2.70
	23	11.6	2.74	12.2	2.76	12.9	2.78	13.3	2.78	13.5	2.79	14.4	2.81	15.1	2.83
	25	11.5	2.87	12.1	2.89	12.8	2.90	13.2	2.91	13.3	2.92	14.3	2.94	15.0	2.96
	27	11.4	3.00	11.9	3.02	12.6	3.03	13.0	3.04	13.2	3.05	14.1	3.07	14.8	3.09
	29	11.2	3.12	11.8	3.14	12.5	3.16	12.8	3.17	13.0	3.17	14.0	3.19	14.7	3.21
	31	11.0	3.24	11.6	3.26	12.3	3.27	12.7	3.28	12.9	3.29	13.8	3.31	14.5	3.32
	33	10.9	3.34	11.4	3.36	12.1	3.38	12.5	3.38	12.7	3.39	13.6	3.41	14.3	3.42
	35	10.7	3.44	11.2	3.45	11.9	3.46	12.3	3.47	12.5	3.48	13.4	3.49	14.1	3.51
	37	10.4	3.51	11.0	3.52	11.7	3.53	12.1	3.54	12.3	3.54	13.2	3.56	13.9	3.57
	39	10.2	3.56	10.8	3.57	11.5	3.58	11.8	3.59	12.0	3.59	12.9	3.60	13.6	3.61
	41	9.91	3.58	10.5	3.59	11.2	3.60	11.5	3.60	11.7	3.61	12.6	3.62	13.3	3.63
	43	9.59	3.57	10.2	3.58	10.9	3.59	11.2	3.59	11.4	3.60	12.3	3.61	13.0	3.61
	46	9.04	3.50	9.62	3.51	10.3	3.51	10.7	3.51	10.8	3.52	11.7	3.52	12.4	3.52

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
38 (90%)	10	11.6	1.92	12.1	1.94	12.8	1.95	13.1	1.96	13.3	1.96	14.1	1.98	14.7	1.99
	12	11.5	2.00	12.0	2.01	12.6	2.03	12.9	2.04	13.1	2.04	14.0	2.06	14.6	2.07
	14	11.3	2.09	11.8	2.10	12.5	2.12	12.8	2.13	13.0	2.13	13.8	2.15	14.4	2.16
	16	11.1	2.18	11.7	2.20	12.3	2.21	12.6	2.22	12.8	2.23	13.7	2.25	14.3	2.26
	18	11.0	2.28	11.5	2.30	12.2	2.31	12.5	2.32	12.7	2.33	13.5	2.35	14.1	2.36
	20	10.8	2.38	11.4	2.40	12.0	2.42	12.3	2.42	12.5	2.43	13.3	2.45	14.0	2.46
	21	10.7	2.44	11.3	2.45	11.9	2.47	12.2	2.48	12.4	2.48	13.3	2.50	13.9	2.51
	23	10.6	2.54	11.1	2.56	11.7	2.57	12.1	2.58	12.2	2.58	13.1	2.60	13.7	2.62
	25	10.4	2.64	10.9	2.66	11.6	2.67	11.9	2.68	12.1	2.69	12.9	2.70	13.6	2.72
	27	10.2	2.74	10.8	2.76	11.4	2.77	11.7	2.78	11.9	2.79	12.8	2.80	13.4	2.82
	29	10.1	2.84	10.6	2.86	11.2	2.87	11.6	2.88	11.7	2.88	12.6	2.90	13.2	2.92
	31	9.92	2.94	10.5	2.95	11.1	2.97	11.4	2.98	11.6	2.98	12.4	3.00	13.0	3.01
	33	9.77	3.04	10.3	3.05	10.9	3.07	11.3	3.07	11.4	3.08	12.3	3.10	12.9	3.11
	35	9.62	3.13	10.2	3.15	10.8	3.16	11.1	3.17	11.3	3.18	12.1	3.19	12.7	3.21
	37	9.46	3.23	10.0	3.25	10.6	3.26	10.9	3.27	11.1	3.28	11.9	3.29	12.6	3.31
	39	9.31	3.33	9.85	3.35	10.5	3.37	10.8	3.37	11.0	3.38	11.8	3.40	12.4	3.41
	41	9.15	3.44	9.69	3.45	10.3	3.47	10.6	3.48	10.8	3.48	11.6	3.50	12.3	3.52
	43	8.98	3.54	9.53	3.56	10.2	3.58	10.5	3.58	10.7	3.59	11.5	3.61	12.1	3.62
	46	8.71	3.69	9.26	3.71	9.89	3.73	10.2	3.73	10.4	3.74	11.3	3.76	11.9	3.77
34 (80%)	10	10.5	1.70	10.9	1.71	11.5	1.73	11.8	1.73	11.9	1.74	12.7	1.75	13.2	1.76
	12	10.3	1.77	10.8	1.78	11.4	1.80	11.7	1.80	11.8	1.81	12.6	1.82	13.1	1.83
	14	10.2	1.85	10.7	1.86	11.2	1.88	11.5	1.88	11.7	1.89	12.4	1.90	13.0	1.91
	16	10.0	1.93	10.5	1.95	11.1	1.96	11.4	1.97	11.5	1.97	12.3	1.99	12.9	2.00
	18	9.89	2.02	10.4	2.03	10.9	2.05	11.2	2.05	11.4	2.06	12.2	2.07	12.7	2.09
	20	9.74	2.11	10.2	2.12	10.8	2.14	11.1	2.15	11.3	2.15	12.0	2.17	12.6	2.18
	21	9.66	2.15	10.2	2.17	10.7	2.18	11.0	2.19	11.2	2.19	11.9	2.21	12.5	2.22
	23	9.51	2.25	10.0	2.26	10.6	2.28	10.9	2.28	11.0	2.29	11.8	2.30	12.4	2.32
	25	9.37	2.34	9.86	2.35	10.4	2.37	10.7	2.37	10.9	2.38	11.6	2.39	12.2	2.41
	27	9.22	2.43	9.71	2.44	10.3	2.46	10.6	2.46	10.7	2.47	11.5	2.48	12.1	2.49
	29	9.08	2.51	9.57	2.53	10.1	2.54	10.4	2.55	10.6	2.55	11.3	2.57	11.9	2.58
	31	8.94	2.60	9.43	2.61	9.99	2.63	10.3	2.64	10.4	2.64	11.2	2.65	11.8	2.67
	33	8.80	2.69	9.29	2.70	9.84	2.71	10.1	2.72	10.3	2.72	11.0	2.74	11.6	2.75
	35	8.66	2.77	9.15	2.79	9.70	2.80	10.0	2.81	10.2	2.81	10.9	2.83	11.5	2.84
	37	8.53	2.86	9.01	2.88	9.57	2.89	9.86	2.90	10.0	2.90	10.8	2.92	11.3	2.93
	39	8.39	2.95	8.87	2.97	9.43	2.98	9.73	2.99	9.88	2.99	10.6	3.01	11.2	3.02
	41	8.24	3.04	8.73	3.06	9.29	3.07	9.59	3.08	9.74	3.08	10.5	3.10	11.1	3.11
	43	8.09	3.13	8.58	3.15	9.15	3.17	9.45	3.17	9.60	3.18	10.4	3.19	10.9	3.21
	46	7.84	3.27	8.34	3.28	8.91	3.30	9.22	3.31	9.37	3.31	10.1	3.33	10.7	3.34
30 (70%)	10	9.21	1.44	9.63	1.45	10.1	1.46	10.4	1.46	10.5	1.47	11.2	1.48	11.7	1.49
	12	9.08	1.49	9.51	1.51	10.0	1.52	10.3	1.52	10.4	1.53	11.1	1.54	11.6	1.55
	14	8.96	1.56	9.39	1.57	9.89	1.58	10.2	1.59	10.3	1.59	11.0	1.61	11.5	1.62
	16	8.83	1.63	9.26	1.64	9.76	1.66	10.0	1.66	10.2	1.66	10.8	1.68	11.3	1.69
	18	8.70	1.71	9.13	1.72	9.64	1.73	9.90	1.74	10.0	1.74	10.7	1.75	11.2	1.76
	20	8.57	1.78	9.00	1.79	9.50	1.81	9.77	1.81	9.91	1.82	10.6	1.83	11.1	1.84
	21	8.50	1.82	8.94	1.83	9.44	1.85	9.70	1.85	9.84	1.85	10.5	1.87	11.0	1.88
	23	8.37	1.90	8.81	1.91	9.31	1.92	9.57	1.93	9.71	1.93	10.4	1.95	10.9	1.96
	25	8.24	1.98	8.68	1.99	9.18	2.00	9.44	2.01	9.57	2.01	10.2	2.02	10.8	2.03
	27	8.12	2.05	8.55	2.06	9.04	2.07	9.31	2.08	9.44	2.08	10.1	2.10	10.6	2.11
	29	7.99	2.13	8.42	2.14	8.92	2.15	9.18	2.15	9.31	2.16	9.98	2.17	10.5	2.18
	31	7.87	2.20	8.30	2.21	8.79	2.22	9.05	2.23	9.18	2.23	9.85	2.24	10.3	2.25
	33	7.75	2.27	8.17	2.28	8.66	2.29	8.92	2.30	9.06	2.30	9.72	2.32	10.2	2.33
	35	7.62	2.34	8.05	2.35	8.54	2.37	8.80	2.37	8.93	2.37	9.59	2.39	10.1	2.40
	37	7.50	2.42	7.93	2.43	8.42	2.44	8.68	2.45	8.81	2.45	9.47	2.46	9.97	2.48
	39	7.38	2.49	7.81	2.50	8.30	2.52	8.56	2.52	8.69	2.53	9.35	2.54	9.85	2.55
	41	7.26	2.57	7.68	2.58	8.18	2.59	8.44	2.60	8.57	2.60	9.23	2.62	9.74	2.63
	43	7.12	2.65	7.55	2.66	8.05	2.67	8.31	2.68	8.45	2.68	9.12	2.70	9.62	2.71
	46	6.90	2.76	7.34	2.77	7.84	2.79	8.11	2.79	8.25	2.80	8.93	2.81	9.44	2.82
25 (60%)	10	7.64	1.10	7.99	1.11	8.39	1.12	8.61	1.13	8.71	1.13	9.26	1.14	9.67	1.15
	12	7.54	1.15	7.89	1.16	8.30	1.17	8.52	1.17	8.63	1.18	9.17	1.19	9.59	1.19
	14	7.43	1.20	7.79	1.21	8.20	1.22	8.42	1.22	8.53	1.23	9.08	1.24	9.50	1.25
	16	7.32	1.26	7.68	1.26	8.10	1.27	8.32	1.28	8.43	1.28	8.99	1.29	9.41	1.30
	18	7.22	1.31	7.58	1.32	7.99	1.33	8.21	1.34	8.32	1.34	8.88	1.35	9.30	1.36
	20	7.11	1.37	7.47	1.38	7.88	1.39	8.10	1.40	8.22	1.40	8.77	1.41	9.20	1.42
	21	7.05	1.40	7.41	1.41	7.83	1.42	8.05	1.43	8.16	1.43	8.72	1.44	9.14	1.45
	23	6.94	1.46	7.31	1.47	7.72	1.48	7.94	1.48	8.05	1.49	8.61	1.50	9.03	1.51
	25	6.84	1.52	7.20	1.53	7.61	1.54	7.83	1.54	7.94	1.55	8.50	1.56	8.92	1.56
	27	6.73	1.58	7.09	1.59	7.50	1.60	7.72	1.60	7.83	1.60	8.39	1.61	8.81	1.62
	29	6.63	1.64	6.99	1.65	7.40	1.65	7.61	1.66	7.72	1.66	8.27	1.67	8.69	1.68
	31	6.53	1.69	6.88	1.70	7.29	1.71	7.51	1.71	7.62	1.72	8.17	1.73	8.58	1.73
	33	6.42	1.75	6.78	1.76	7.19	1.77	7.40	1.77	7.51	1.77	8.06	1.78	8.48	1.79
	35	6.32	1.80	6.68	1.81	7.08	1.82	7.30	1.83	7.41	1.83	7.96	1.84	8.37	1.85
	37	6.22	1.86	6.58	1.87	6.98	1.88	7.20	1.88	7.31	1.89	7.86	1.90	8.27	1.90
	39	6.12	1.92	6.48	1.93	6.88	1.94	7.10	1.94	7.21	1.94	7.76	1.96	8.17	1.96
	41	6.02	1.98	6.37	1.99	6.78	2.00	7.00	2.00	7.11	2.00	7.66	2.02	8.08	2.03
	43	5.91	2.04	6.26	2.05	6.68	2.06	6.90	2.06	7.01	2.07	7.56	2.08	7.98	2.09
	46	5.73	2.12	6.09	2.13	6.51	2.14	6.73	2.15	6.84	2.15	7.41	2.17	7.83	2.17

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
21 (50%)	10	6.49	1.05	6.78	1.06	7.13	1.07	7.31	1.07	7.40	1.07	7.86	1.08	8.21	1.09
	12	6.40	1.10	6.70	1.10	7.05	1.11	7.23	1.12	7.33	1.12	7.79	1.13	8.14	1.13
	14	6.31	1.14	6.62	1.15	6.97	1.16	7.15	1.17	7.25	1.17	7.72	1.18	8.07	1.19
	16	6.22	1.19	6.53	1.20	6.88	1.21	7.06	1.22	7.16	1.22	7.63	1.23	7.99	1.24
	18	6.13	1.25	6.44	1.26	6.79	1.27	6.98	1.27	7.07	1.28	7.54	1.29	7.90	1.30
	20	6.04	1.30	6.34	1.31	6.70	1.32	6.88	1.33	6.98	1.33	7.45	1.34	7.81	1.35
	21	5.99	1.33	6.30	1.34	6.65	1.35	6.84	1.36	6.93	1.36	7.41	1.37	7.77	1.38
	23	5.90	1.39	6.21	1.40	6.56	1.41	6.74	1.41	6.84	1.42	7.31	1.43	7.67	1.44
	25	5.81	1.44	6.11	1.45	6.46	1.46	6.65	1.47	6.74	1.47	7.22	1.48	7.57	1.49
	27	5.72	1.50	6.02	1.51	6.37	1.52	6.56	1.52	6.65	1.52	7.12	1.54	7.48	1.54
	29	5.63	1.55	5.93	1.56	6.28	1.57	6.47	1.58	6.56	1.58	7.03	1.59	7.38	1.60
	31	5.54	1.61	5.84	1.62	6.19	1.62	6.38	1.63	6.47	1.63	6.94	1.64	7.29	1.65
	33	5.46	1.66	5.76	1.67	6.10	1.68	6.29	1.68	6.38	1.68	6.85	1.69	7.20	1.70
	35	5.37	1.72	5.67	1.73	6.02	1.73	6.20	1.74	6.29	1.74	6.76	1.75	7.11	1.75
	37	5.29	1.78	5.59	1.78	5.93	1.79	6.11	1.79	6.21	1.80	6.67	1.80	7.02	1.81
	39	5.20	1.84	5.50	1.84	5.85	1.85	6.03	1.85	6.12	1.86	6.59	1.86	6.94	1.87
	41	5.11	1.90	5.41	1.91	5.76	1.91	5.94	1.92	6.04	1.92	6.51	1.92	6.86	1.93
	43	5.02	1.97	5.32	1.97	5.67	1.98	5.86	1.98	5.95	1.98	6.42	1.99	6.78	1.99
	46	4.87	2.07	5.17	2.07	5.53	2.08	5.72	2.08	5.81	2.08	6.29	2.08	6.65	2.08
16 (40%)	10	4.92	0.80	5.14	0.81	5.40	0.82	5.54	0.82	5.61	0.82	5.96	0.83	6.22	0.83
	12	4.85	0.84	5.08	0.84	5.34	0.85	5.48	0.85	5.55	0.85	5.91	0.86	6.17	0.87
	14	4.78	0.87	5.02	0.88	5.28	0.89	5.42	0.89	5.49	0.89	5.85	0.90	6.12	0.91
	16	4.72	0.91	4.95	0.92	5.21	0.93	5.36	0.93	5.43	0.93	5.79	0.94	6.06	0.95
	18	4.65	0.95	4.88	0.96	5.15	0.97	5.29	0.97	5.36	0.97	5.72	0.98	5.99	0.99
	20	4.58	1.00	4.81	1.00	5.08	1.01	5.22	1.02	5.29	1.02	5.65	1.03	5.92	1.03
	21	4.54	1.02	4.77	1.03	5.04	1.03	5.18	1.04	5.25	1.04	5.61	1.05	5.89	1.05
	23	4.47	1.06	4.70	1.07	4.97	1.08	5.11	1.08	5.18	1.08	5.54	1.09	5.82	1.10
	25	4.40	1.10	4.63	1.11	4.90	1.12	5.04	1.12	5.11	1.12	5.47	1.13	5.74	1.14
	27	4.34	1.14	4.57	1.15	4.83	1.16	4.97	1.16	5.04	1.16	5.40	1.17	5.67	1.18
	29	4.27	1.19	4.50	1.19	4.76	1.20	4.90	1.20	4.97	1.21	5.33	1.21	5.60	1.22
	31	4.20	1.23	4.43	1.23	4.69	1.24	4.83	1.24	4.90	1.25	5.26	1.25	5.53	1.26
	33	4.14	1.27	4.36	1.28	4.63	1.28	4.77	1.29	4.84	1.29	5.19	1.29	5.46	1.30
	35	4.07	1.31	4.30	1.32	4.56	1.32	4.70	1.33	4.77	1.33	5.12	1.33	5.39	1.34
	37	4.01	1.36	4.23	1.36	4.50	1.37	4.64	1.37	4.71	1.37	5.06	1.38	5.32	1.38
	39	3.94	1.40	4.17	1.41	4.43	1.41	4.57	1.42	4.64	1.42	4.99	1.42	5.26	1.43
	41	3.88	1.45	4.10	1.46	4.37	1.46	4.51	1.46	4.58	1.46	4.93	1.47	5.20	1.47
	43	3.81	1.51	4.03	1.51	4.30	1.51	4.44	1.51	4.51	1.51	4.87	1.52	5.14	1.52
	46	3.69	1.58	3.92	1.58	4.19	1.59	4.33	1.59	4.41	1.59	4.77	1.59	5.04	1.59

Notes:
1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating capacity]

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
54 (130%)	-15.0	8.89	3.18	8.79	3.22	8.73	3.27	8.70	3.31	8.69	3.34	8.66	3.42
	-13.0	8.95	3.11	8.89	3.16	8.86	3.23	8.84	3.27	8.84	3.31	8.82	3.39
	-11.0	9.19	3.09	9.16	3.15	9.14	3.23	9.14	3.27	9.14	3.32	9.14	3.41
	-10.0	9.37	3.09	9.34	3.16	9.34	3.25	9.34	3.29	9.34	3.34	9.34	3.43
	-9.1	9.55	3.10	9.54	3.18	9.54	3.27	9.54	3.31	9.54	3.36	9.54	3.46
	-7.6	9.92	3.14	9.91	3.22	9.92	3.31	9.92	3.36	9.92	3.41	9.92	3.51
	-5.6	10.5	3.20	10.5	3.29	10.5	3.39	10.5	3.44	10.5	3.49	10.5	3.59
	-3.7	11.1	3.28	11.1	3.38	11.1	3.48	11.1	3.53	11.1	3.58	11.1	3.68
	-0.7	12.1	3.43	12.1	3.53	12.1	3.63	12.1	3.68	12.1	3.73	12.0	3.83
	0.0	12.3	3.46	12.3	3.56	12.3	3.66	12.3	3.71	12.3	3.77	12.2	3.87
	1.0	12.7	3.51	12.7	3.61	12.6	3.71	12.6	3.76	12.6	3.81	12.5	3.91
	2.2	13.1	3.57	13.1	3.67	13.0	3.77	13.0	3.82	13.0	3.87	12.9	3.96
	4.1	13.7	3.65	13.7	3.75	13.6	3.84	13.6	3.89	13.5	3.94	13.4	4.03
	6.0	14.3	3.71	14.2	3.81	14.1	3.90	14.0	3.94	14.0	3.99	13.8	4.07
	7.9	14.8	3.76	14.6	3.85	14.5	3.93	14.4	3.97	14.4	4.01	14.1	4.08
	9.8	15.1	3.77	15.0	3.85	14.8	3.93	14.7	3.97	14.6	4.00	14.3	4.06
	11.8	15.4	3.75	15.2	3.82	15.0	3.89	14.9	3.91	14.7	3.94	14.4	3.98
	13.7	15.6	3.68	15.3	3.74	15.0	3.80	14.9	3.82	14.7	3.84	14.3	3.86
	15.0	15.5	3.61	15.3	3.66	14.9	3.70	14.7	3.72	14.5	3.73	14.1	3.74
	18.0	15.2	3.33	14.8	3.36	14.3	3.37	14.0	3.37	13.8	3.37	13.1	3.35
50 (120%)	-15.0	8.77	3.18	8.68	3.22	8.62	3.28	8.60	3.31	8.58	3.35	8.56	3.43
	-13.0	8.83	3.11	8.78	3.17	8.74	3.24	8.73	3.28	8.73	3.32	8.72	3.41
	-11.0	9.07	3.09	9.04	3.16	9.03	3.24	9.02	3.28	9.02	3.33	9.02	3.42
	-10.0	9.24	3.10	9.22	3.17	9.22	3.26	9.22	3.30	9.22	3.35	9.22	3.44
	-9.1	9.43	3.11	9.42	3.19	9.42	3.28	9.42	3.32	9.42	3.37	9.42	3.47
	-7.6	9.79	3.15	9.79	3.23	9.80	3.32	9.80	3.37	9.80	3.42	9.80	3.52
	-5.6	10.4	3.21	10.4	3.31	10.4	3.40	10.4	3.45	10.4	3.50	10.4	3.60
	-3.7	11.0	3.30	11.0	3.39	11.0	3.49	11.0	3.54	11.0	3.59	10.9	3.69
	-0.7	12.0	3.44	12.0	3.54	12.0	3.64	11.9	3.69	11.9	3.74	11.8	3.83
	0.0	12.2	3.48	12.2	3.58	12.2	3.68	12.2	3.72	12.1	3.77	12.0	3.87
	1.0	12.6	3.53	12.5	3.63	12.5	3.72	12.5	3.77	12.4	3.82	12.3	3.91
	2.2	13.0	3.58	12.9	3.68	12.9	3.78	12.8	3.82	12.8	3.87	12.7	3.95
	4.1	13.6	3.66	13.5	3.76	13.4	3.85	13.4	3.89	13.3	3.93	13.1	4.01
	6.0	14.1	3.73	14.0	3.82	13.9	3.90	13.8	3.94	13.7	3.98	13.5	4.04
	7.9	14.6	3.76	14.4	3.85	14.3	3.92	14.2	3.96	14.1	3.99	13.8	4.04
	9.8	14.9	3.77	14.8	3.84	14.5	3.91	14.4	3.94	14.3	3.96	13.9	4.00
	11.8	15.1	3.73	14.9	3.80	14.6	3.85	14.5	3.87	14.3	3.89	13.9	3.91
	13.7	15.2	3.65	14.9	3.71	14.6	3.74	14.4	3.76	14.2	3.77	13.7	3.77
	15.0	15.1	3.57	14.8	3.61	14.4	3.64	14.2	3.65	13.9	3.65	13.4	3.64
	18.0	14.6	3.27	14.2	3.29	13.6	3.28	13.3	3.28	13.0	3.26	12.3	3.22
46 (110%)	-15.0	8.66	3.12	8.59	3.17	8.54	3.23	8.52	3.27	8.51	3.30	8.50	3.38
	-13.0	8.73	3.06	8.69	3.12	8.67	3.19	8.66	3.23	8.66	3.27	8.65	3.36
	-11.0	8.98	3.05	8.96	3.12	8.96	3.20	8.95	3.24	8.95	3.29	8.95	3.38
	-10.0	9.16	3.06	9.15	3.13	9.15	3.22	9.15	3.26	9.15	3.30	9.15	3.40
	-9.1	9.35	3.07	9.35	3.15	9.35	3.24	9.35	3.28	9.35	3.33	9.35	3.42
	-7.6	9.72	3.11	9.72	3.19	9.73	3.28	9.73	3.33	9.73	3.37	9.71	3.47
	-5.6	10.3	3.18	10.3	3.27	10.3	3.36	10.3	3.41	10.3	3.45	10.3	3.55
	-3.7	10.9	3.26	10.9	3.36	10.9	3.45	10.9	3.49	10.9	3.54	10.8	3.63
	-0.7	11.9	3.41	11.9	3.50	11.9	3.59	11.8	3.64	11.8	3.68	11.7	3.76
	0.0	12.2	3.44	12.1	3.53	12.1	3.62	12.0	3.67	12.0	3.71	11.9	3.79
	1.0	12.5	3.49	12.5	3.58	12.4	3.67	12.3	3.71	12.3	3.75	12.2	3.83
	2.2	12.9	3.54	12.8	3.63	12.7	3.72	12.7	3.76	12.6	3.80	12.5	3.87
	4.1	13.5	3.62	13.4	3.70	13.3	3.78	13.2	3.82	13.1	3.85	12.9	3.92
	6.0	14.0	3.67	13.9	3.75	13.7	3.82	13.6	3.85	13.5	3.88	13.2	3.94
	7.9	14.4	3.70	14.2	3.77	14.0	3.83	13.9	3.86	13.8	3.89	13.4	3.93
	9.8	14.7	3.70	14.5	3.76	14.2	3.81	14.1	3.83	13.9	3.85	13.5	3.88
	11.8	14.9	3.65	14.6	3.70	14.3	3.74	14.1	3.75	13.9	3.77	13.4	3.78
	13.7	14.9	3.56	14.6	3.60	14.2	3.62	13.9	3.63	13.7	3.63	13.1	3.63
	15.0	14.8	3.47	14.4	3.50	13.9	3.51	13.7	3.52	13.4	3.51	12.8	3.50
	18.0	14.1	3.16	13.6	3.16	13.1	3.15	12.8	3.14	12.4	3.12	11.7	3.07
42 (100%)	-15.0	8.53	3.04	8.44	3.08	8.39	3.14	8.37	3.17	8.35	3.20	8.33	3.28
	-13.0	8.58	2.97	8.53	3.03	8.50	3.10	8.49	3.14	8.48	3.17	8.48	3.26
	-11.0	8.81	2.96	8.78	3.03	8.77	3.10	8.77	3.14	8.77	3.18	8.77	3.27
	-10.0	8.97	2.96	8.96	3.04	8.96	3.12	8.96	3.16	8.96	3.20	8.96	3.29
	-9.1	9.15	2.98	9.15	3.05	9.15	3.14	9.15	3.18	9.16	3.22	9.16	3.32
	-7.6	9.51	3.01	9.51	3.09	9.52	3.18	9.52	3.22	9.52	3.27	9.52	3.37
	-5.6	10.1	3.08	10.1	3.17	10.1	3.26	10.1	3.30	10.1	3.35	10.1	3.44
	-3.7	10.7	3.16	10.7	3.25	10.7	3.34	10.7	3.39	10.7	3.43	10.6	3.53
	-0.7	11.7	3.30	11.7	3.39	11.6	3.48	11.6	3.53	11.6	3.57	11.5	3.66
	0.0	11.9	3.33	11.9	3.43	11.9	3.52	11.8	3.56	11.8	3.61	11.7	3.69
	1.0	12.2	3.38	12.2	3.47	12.2	3.56	12.1	3.61	12.1	3.65	12.0	3.73
	2.2	12.6	3.43	12.6	3.52	12.5	3.61	12.5	3.65	12.4	3.70	12.3	3.77
	4.1	13.2	3.51	13.1	3.60	13.1	3.68	13.0	3.72	12.9	3.76	12.7	3.83
	6.0	13.7	3.56	13.6	3.65	13.5	3.73	13.4	3.76	13.3	3.79	13.1	3.85
	7.9	14.2	3.60	14.0	3.68	13.8	3.74	13.7	3.77	13.6	3.80	13.3	3.85
	9.8	14.5	3.60	14.3	3.67	14.1	3.73	13.9	3.75	13.8	3.77	13.4	3.81
	11.8	14.7	3.56	14.4	3.62	14.1	3.67	14.0	3.68	13.8	3.70	13.3	3.72
	13.7	14.7	3.48	14.4	3.53	14.0	3.56	13.8	3.57	13.6	3.58	13.1	3.58
	15.0	14.6	3.40	14.2	3.44	13.8	3.46	13.6	3.46	13.3	3.46	12.8	3.45
	18.0	14.0	3.10	13.5	3.12	13.0	3.11	12.7	3.10	12.3	3.09	11.6	3.05

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
38 (90%)	-15.0	7.62	2.82	7.56	2.86	7.52	2.91	7.51	2.94	7.49	2.97	7.47	3.04
	-13.0	7.79	2.81	7.75	2.86	7.73	2.92	7.72	2.95	7.71	2.99	7.70	3.06
	-11.0	8.07	2.81	8.04	2.87	8.03	2.94	8.03	2.98	8.02	3.02	8.01	3.10
	-10.0	8.25	2.82	8.22	2.89	8.21	2.96	8.21	3.00	8.21	3.04	8.20	3.12
	-9.1	8.42	2.84	8.40	2.90	8.39	2.98	8.39	3.02	8.39	3.06	8.38	3.15
	-7.6	8.74	2.87	8.73	2.94	8.72	3.02	8.72	3.06	8.72	3.10	8.71	3.19
	-5.6	9.22	2.92	9.21	3.00	9.20	3.08	9.20	3.12	9.20	3.17	9.19	3.26
	-3.7	9.71	2.98	9.70	3.06	9.69	3.14	9.69	3.19	9.68	3.24	9.66	3.33
	-0.7	10.5	3.08	10.5	3.16	10.5	3.25	10.5	3.30	10.5	3.35	10.4	3.44
	0.0	10.7	3.10	10.7	3.19	10.7	3.28	10.7	3.32	10.6	3.37	10.6	3.47
	1.0	11.0	3.14	11.0	3.23	10.9	3.32	10.9	3.36	10.9	3.41	10.9	3.51
	2.2	11.3	3.18	11.3	3.27	11.2	3.36	11.2	3.40	11.2	3.45	11.2	3.55
	4.1	11.8	3.25	11.8	3.34	11.7	3.43	11.7	3.47	11.7	3.52	11.6	3.61
	6.0	12.3	3.31	12.3	3.40	12.2	3.49	12.2	3.53	12.1	3.58	12.1	3.67
	7.9	12.8	3.37	12.7	3.46	12.7	3.55	12.6	3.59	12.6	3.63	12.5	3.72
	9.8	13.3	3.43	13.2	3.51	13.1	3.59	13.0	3.64	13.0	3.68	12.9	3.77
	11.8	13.7	3.47	13.6	3.55	13.5	3.63	13.4	3.67	13.4	3.71	13.2	3.79
	13.7	14.1	3.50	14.0	3.57	13.8	3.65	13.7	3.68	13.7	3.72	13.4	3.79
	15.0	14.4	3.50	14.2	3.57	14.0	3.64	13.9	3.67	13.8	3.70	13.5	3.76
	18.0	14.7	3.44	14.5	3.50	14.2	3.54	14.0	3.56	13.8	3.58	13.4	3.60
34 (80%)	-15.0	6.78	2.50	6.77	2.55	6.77	2.61	6.77	2.64	6.77	2.68	6.78	2.75
	-13.0	7.08	2.54	7.07	2.60	7.06	2.66	7.06	2.70	7.06	2.73	7.06	2.81
	-11.0	7.43	2.59	7.42	2.65	7.41	2.71	7.40	2.75	7.40	2.78	7.39	2.86
	-10.0	7.62	2.61	7.61	2.67	7.59	2.74	7.59	2.77	7.58	2.81	7.57	2.89
	-9.1	7.80	2.63	7.79	2.69	7.77	2.76	7.76	2.80	7.75	2.83	7.74	2.91
	-7.6	8.12	2.66	8.10	2.73	8.08	2.80	8.07	2.83	8.06	2.87	8.03	2.95
	-5.6	8.57	2.71	8.54	2.78	8.50	2.85	8.49	2.88	8.47	2.92	8.44	3.00
	-3.7	8.99	2.75	8.96	2.82	8.91	2.89	8.89	2.93	8.87	2.97	8.84	3.05
	-0.7	9.66	2.82	9.61	2.89	9.56	2.96	9.53	3.00	9.51	3.04	9.46	3.12
	0.0	9.82	2.84	9.76	2.91	9.71	2.98	9.68	3.02	9.66	3.05	9.61	3.14
	1.0	10.0	2.86	9.97	2.93	9.92	3.00	9.89	3.04	9.87	3.08	9.82	3.16
	2.2	10.3	2.89	10.2	2.96	10.2	3.03	10.1	3.07	10.1	3.11	10.1	3.20
	4.1	10.7	2.93	10.6	3.00	10.6	3.08	10.6	3.12	10.5	3.16	10.5	3.25
	6.0	11.1	2.98	11.1	3.06	11.0	3.14	11.0	3.18	11.0	3.22	10.9	3.32
	7.9	11.5	3.03	11.5	3.12	11.4	3.20	11.4	3.25	11.4	3.29	11.4	3.39
	9.8	12.0	3.10	12.0	3.19	11.9	3.27	11.9	3.32	11.9	3.37	11.9	3.48
	11.8	12.5	3.17	12.5	3.27	12.5	3.36	12.5	3.41	12.4	3.46	12.4	3.57
	13.7	13.1	3.25	13.0	3.35	13.0	3.45	13.0	3.50	13.0	3.55	12.9	3.65
	15.0	13.4	3.30	13.4	3.40	13.4	3.50	13.3	3.55	13.3	3.60	13.2	3.70
	18.0	14.3	3.38	14.2	3.48	14.1	3.57	14.0	3.61	13.9	3.65	13.7	3.73
30 (70%)	-15.0	5.98	2.27	5.97	2.32	5.97	2.37	5.97	2.40	5.97	2.43	5.97	2.49
	-13.0	6.24	2.31	6.24	2.36	6.23	2.42	6.23	2.45	6.22	2.48	6.22	2.55
	-11.0	6.55	2.35	6.54	2.41	6.53	2.47	6.53	2.50	6.52	2.53	6.51	2.60
	-10.0	6.72	2.37	6.71	2.43	6.70	2.49	6.69	2.52	6.68	2.55	6.67	2.62
	-9.1	6.88	2.39	6.87	2.45	6.85	2.51	6.84	2.54	6.84	2.57	6.82	2.64
	-7.6	7.16	2.42	7.14	2.48	7.12	2.54	7.11	2.58	7.10	2.61	7.08	2.68
	-5.6	7.55	2.46	7.53	2.52	7.50	2.59	7.48	2.62	7.47	2.66	7.44	2.73
	-3.7	7.93	2.50	7.90	2.56	7.86	2.63	7.84	2.66	7.82	2.70	7.79	2.77
	-0.7	8.52	2.56	8.48	2.63	8.43	2.69	8.40	2.73	8.38	2.76	8.34	2.84
	0.0	8.66	2.58	8.61	2.64	8.56	2.71	8.53	2.74	8.51	2.78	8.47	2.85
	1.0	8.85	2.60	8.80	2.66	8.74	2.73	8.72	2.76	8.70	2.80	8.66	2.87
	2.2	9.07	2.62	9.02	2.69	8.97	2.75	8.94	2.79	8.92	2.83	8.89	2.90
	4.1	9.43	2.66	9.38	2.73	9.33	2.80	9.31	2.83	9.29	2.87	9.25	2.95
	6.0	9.80	2.71	9.75	2.77	9.70	2.85	9.68	2.89	9.66	2.93	9.64	3.01
	7.9	10.2	2.76	10.1	2.83	10.1	2.91	10.1	2.95	10.1	2.99	10.1	3.08
	9.8	10.6	2.82	10.5	2.89	10.5	2.97	10.5	3.02	10.5	3.06	10.5	3.16
	11.8	11.0	2.89	11.0	2.97	11.0	3.05	11.0	3.10	11.0	3.14	11.0	3.24
	13.7	11.5	2.96	11.5	3.04	11.5	3.13	11.4	3.18	11.4	3.22	11.4	3.32
	15.0	11.9	3.00	11.8	3.09	11.8	3.18	11.8	3.22	11.7	3.27	11.7	3.36
	18.0	12.6	3.08	12.5	3.16	12.4	3.24	12.4	3.28	12.3	3.32	12.1	3.39
25 (60%)	-15.0	4.99	1.98	4.99	2.02	4.99	2.07	4.99	2.09	4.99	2.12	4.99	2.18
	-13.0	5.21	2.01	5.21	2.06	5.20	2.11	5.20	2.13	5.20	2.16	5.20	2.22
	-11.0	5.47	2.05	5.46	2.09	5.45	2.15	5.45	2.17	5.45	2.20	5.44	2.27
	-10.0	5.61	2.06	5.60	2.11	5.59	2.17	5.59	2.20	5.58	2.22	5.57	2.29
	-9.1	5.75	2.08	5.74	2.13	5.72	2.18	5.72	2.21	5.71	2.24	5.70	2.31
	-7.6	5.98	2.11	5.97	2.16	5.95	2.21	5.94	2.24	5.93	2.27	5.92	2.34
	-5.6	6.31	2.14	6.29	2.20	6.26	2.25	6.25	2.28	6.24	2.31	6.22	2.38
	-3.7	6.62	2.18	6.60	2.23	6.56	2.29	6.55	2.32	6.53	2.35	6.51	2.41
	-0.7	7.12	2.23	7.08	2.29	7.04	2.34	7.02	2.37	7.00	2.40	6.97	2.47
	0.0	7.23	2.24	7.19	2.30	7.15	2.36	7.13	2.39	7.11	2.42	7.08	2.48
	1.0	7.39	2.26	7.35	2.32	7.30	2.37	7.28	2.41	7.26	2.44	7.23	2.50
	2.2	7.58	2.28	7.53	2.34	7.49	2.40	7.47	2.43	7.45	2.46	7.42	2.53
	4.1	7.88	2.32	7.83	2.37	7.79	2.44	7.77	2.47	7.75	2.50	7.73	2.57
	6.0	8.18	2.36	8.14	2.42	8.10	2.48	8.08	2.51	8.07	2.55	8.05	2.62
	7.9	8.50	2.40	8.46	2.46	8.43	2.53	8.42	2.57	8.41	2.60	8.39	2.68
	9.8	8.84	2.45	8.81	2.52	8.78	2.59	8.77	2.63	8.77	2.67	8.75	2.75
	11.8	9.23	2.51	9.20	2.58	9.18	2.66	9.17	2.70	9.16	2.74	9.15	2.82
	13.7	9.62	2.57	9.60	2.65	9.57	2.73	9.56	2.77	9.55	2.81	9.51	2.89
	15.0	9.90	2.61	9.87	2.69	9.84	2.77	9.82	2.81	9.80	2.85	9.74	2.93
	18.0	10.5	2.68	10.5	2.75	10.4	2.82	10.3	2.86	10.3	2.89	10.1	2.95

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
21 (50%)	-15.0	4.19	1.51	4.18	1.54	4.18	1.58	4.18	1.59	4.18	1.61	4.18	1.66
	-13.0	4.37	1.54	4.37	1.57	4.36	1.61	4.36	1.63	4.36	1.65	4.36	1.69
	-11.0	4.59	1.56	4.58	1.60	4.57	1.64	4.57	1.66	4.57	1.68	4.56	1.73
	-10.0	4.71	1.57	4.70	1.61	4.69	1.65	4.68	1.67	4.68	1.69	4.67	1.74
	-9.1	4.82	1.59	4.81	1.63	4.80	1.67	4.79	1.69	4.79	1.71	4.78	1.76
	-7.6	5.02	1.61	5.00	1.65	4.99	1.69	4.98	1.71	4.97	1.73	4.96	1.78
	-5.6	5.29	1.63	5.27	1.68	5.25	1.72	5.24	1.74	5.23	1.76	5.21	1.81
	-3.7	5.55	1.66	5.53	1.70	5.50	1.75	5.49	1.77	5.48	1.79	5.46	1.84
	-0.7	5.96	1.70	5.93	1.74	5.90	1.79	5.89	1.81	5.87	1.83	5.85	1.89
	0.0	6.06	1.71	6.03	1.75	5.99	1.80	5.98	1.82	5.96	1.84	5.94	1.90
	1.0	6.19	1.72	6.16	1.77	6.12	1.81	6.11	1.84	6.10	1.86	6.07	1.91
	2.2	6.35	1.74	6.32	1.78	6.28	1.83	6.27	1.85	6.25	1.88	6.23	1.93
	4.1	6.60	1.77	6.57	1.81	6.54	1.86	6.52	1.89	6.51	1.91	6.49	1.97
	6.0	6.86	1.80	6.83	1.85	6.80	1.90	6.79	1.92	6.78	1.95	6.77	2.01
	7.9	7.13	1.83	7.10	1.88	7.08	1.94	7.07	1.96	7.07	1.99	7.06	2.06
	9.8	7.42	1.87	7.40	1.93	7.38	1.98	7.38	2.01	7.37	2.04	7.37	2.11
	11.8	7.75	1.92	7.74	1.98	7.72	2.04	7.72	2.07	7.72	2.10	7.71	2.17
	13.7	8.09	1.97	8.08	2.03	8.06	2.09	8.06	2.12	8.05	2.16	8.02	2.22
	15.0	8.33	2.00	8.31	2.07	8.29	2.13	8.28	2.16	8.27	2.19	8.22	2.25
	18.0	8.87	2.06	8.82	2.12	8.76	2.17	8.71	2.20	8.66	2.23	8.52	2.28
16 (40%)	-15.0	3.27	1.18	3.27	1.20	3.27	1.23	3.27	1.25	3.27	1.26	3.27	1.30
	-13.0	3.41	1.20	3.41	1.23	3.41	1.26	3.41	1.27	3.41	1.29	3.41	1.33
	-11.0	3.58	1.22	3.58	1.25	3.58	1.28	3.57	1.30	3.57	1.31	3.57	1.35
	-10.0	3.68	1.23	3.67	1.26	3.67	1.29	3.66	1.31	3.66	1.33	3.65	1.36
	-9.1	3.77	1.24	3.76	1.27	3.75	1.30	3.75	1.32	3.74	1.34	3.74	1.37
	-7.6	3.92	1.26	3.91	1.29	3.90	1.32	3.90	1.34	3.89	1.36	3.88	1.39
	-5.6	4.14	1.28	4.13	1.31	4.11	1.35	4.10	1.36	4.09	1.38	4.08	1.42
	-3.7	4.35	1.30	4.33	1.33	4.31	1.37	4.29	1.38	4.28	1.40	4.26	1.44
	-0.7	4.67	1.33	4.64	1.37	4.62	1.40	4.60	1.42	4.59	1.43	4.56	1.47
	0.0	4.75	1.34	4.72	1.37	4.69	1.41	4.67	1.42	4.66	1.44	4.63	1.48
	1.0	4.85	1.35	4.82	1.38	4.79	1.42	4.77	1.43	4.76	1.45	4.73	1.49
	2.2	4.97	1.36	4.94	1.40	4.91	1.43	4.89	1.45	4.88	1.47	4.86	1.51
	4.1	5.17	1.38	5.13	1.42	5.10	1.45	5.09	1.47	5.07	1.49	5.05	1.53
	6.0	5.37	1.41	5.33	1.44	5.30	1.48	5.29	1.50	5.27	1.52	5.26	1.56
	7.9	5.57	1.43	5.54	1.47	5.51	1.51	5.50	1.53	5.49	1.55	5.47	1.59
	9.8	5.79	1.46	5.76	1.50	5.73	1.54	5.72	1.56	5.71	1.58	5.70	1.63
	11.8	6.03	1.49	6.01	1.54	5.98	1.58	5.97	1.60	5.96	1.62	5.95	1.67
	13.7	6.28	1.53	6.25	1.57	6.23	1.61	6.22	1.64	6.21	1.66	6.18	1.71
	15.0	6.45	1.55	6.43	1.59	6.40	1.64	6.38	1.66	6.36	1.68	6.32	1.73
	18.0	6.84	1.58	6.79	1.63	6.73	1.66	6.69	1.68	6.65	1.70	6.53	1.74

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A8UW488FA3 [FM49AH U33]

[Cooling capacity]

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
63 (130%)	10	16.4	2.89	17.2	2.91	18.1	2.93	18.6	2.94	18.8	2.95	20.0	2.97	20.9	2.99
	12	16.1	2.94	16.8	2.97	17.7	2.99	18.2	3.00	18.4	3.00	19.6	3.03	20.5	3.05
	14	15.8	3.03	16.5	3.06	17.4	3.08	17.9	3.09	18.1	3.10	19.3	3.13	20.2	3.15
	16	15.5	3.16	16.3	3.19	17.2	3.21	17.6	3.22	17.9	3.23	19.0	3.25	19.9	3.28
	18	15.3	3.39	16.1	3.42	17.0	3.44	17.4	3.45	17.7	3.46	18.8	3.49	19.7	3.52
	20	15.2	3.48	15.9	3.51	16.8	3.53	17.2	3.54	17.5	3.55	18.6	3.58	19.5	3.60
	21	15.1	3.57	15.8	3.60	16.7	3.62	17.2	3.63	17.4	3.64	18.6	3.67	19.4	3.69
	23	14.9	3.75	15.7	3.78	16.5	3.80	17.0	3.82	17.2	3.82	18.4	3.85	19.3	3.88
	25	14.7	3.94	15.5	3.97	16.4	3.99	16.8	4.00	17.1	4.00	18.2	4.03	19.1	4.06
	27	14.5	4.11	15.3	4.14	16.2	4.16	16.6	4.17	16.9	4.18	18.0	4.20	18.9	4.23
	29	14.3	4.28	15.1	4.30	16.0	4.32	16.4	4.33	16.7	4.34	17.8	4.36	18.7	4.39
	31	14.1	4.41	14.8	4.43	15.7	4.45	16.2	4.46	16.4	4.46	17.6	4.49	18.5	4.51
	33	13.8	4.51	14.5	4.53	15.4	4.55	15.9	4.55	16.1	4.56	17.3	4.58	18.2	4.60
	35	13.4	4.56	14.2	4.58	15.0	4.59	15.5	4.60	15.7	4.60	16.9	4.62	17.8	4.64
	37	13.0	4.56	13.7	4.58	14.6	4.59	15.1	4.59	15.3	4.59	16.5	4.60	17.4	4.62
	39	12.5	4.50	13.2	4.51	14.1	4.52	14.6	4.52	14.8	4.52	16.0	4.53	16.8	4.54
	41	11.9	4.37	12.6	4.38	13.5	4.38	14.0	4.38	14.2	4.38	15.4	4.38	16.2	4.39
	43	11.2	4.16	12.0	4.17	12.8	4.16	13.3	4.16	13.5	4.16	14.6	4.16	15.5	4.17
	46	10.1	3.71	10.8	3.71	11.6	3.70	12.1	3.70	12.3	3.69	13.4	3.68	14.3	3.69
58 (120%)	10	16.0	2.88	16.7	2.90	17.6	2.92	18.0	2.93	18.3	2.93	19.4	2.96	20.3	2.97
	12	15.6	2.93	16.4	2.95	17.2	2.97	17.7	2.98	17.9	2.99	19.1	3.01	19.9	3.03
	14	15.3	3.02	16.1	3.04	16.9	3.06	17.4	3.07	17.6	3.08	18.8	3.11	19.6	3.13
	16	15.1	3.14	15.8	3.16	16.7	3.19	17.1	3.20	17.4	3.20	18.5	3.23	19.4	3.25
	18	14.9	3.29	15.6	3.31	16.5	3.34	16.9	3.35	17.2	3.35	18.3	3.38	19.2	3.41
	20	14.7	3.45	15.5	3.48	16.3	3.50	16.8	3.52	17.0	3.52	18.1	3.55	19.0	3.58
	21	14.6	3.54	15.4	3.57	16.2	3.59	16.7	3.61	16.9	3.61	18.0	3.64	18.9	3.67
	23	14.5	3.73	15.2	3.75	16.1	3.78	16.5	3.79	16.7	3.80	17.9	3.83	18.7	3.85
	25	14.3	3.91	15.0	3.94	15.9	3.96	16.3	3.97	16.6	3.98	17.7	4.01	18.6	4.03
	27	14.1	4.09	14.9	4.11	15.7	4.14	16.2	4.15	16.4	4.16	17.5	4.19	18.4	4.21
	29	13.9	4.25	14.7	4.28	15.5	4.30	16.0	4.31	16.2	4.32	17.3	4.35	18.2	4.37
	31	13.7	4.39	14.4	4.41	15.3	4.43	15.7	4.45	16.0	4.45	17.1	4.48	18.0	4.50
	33	13.4	4.50	14.1	4.52	15.0	4.54	15.4	4.55	15.7	4.55	16.8	4.57	17.7	4.59
	35	13.1	4.56	13.8	4.57	14.6	4.59	15.1	4.60	15.3	4.60	16.5	4.62	17.3	4.64
	37	12.7	4.57	13.4	4.58	14.2	4.59	14.7	4.60	14.9	4.61	16.1	4.62	16.9	4.63
	39	12.2	4.52	12.9	4.53	13.8	4.54	14.2	4.54	14.4	4.54	15.6	4.56	16.4	4.57
	41	11.6	4.40	12.4	4.40	13.2	4.41	13.7	4.41	13.9	4.42	15.0	4.42	15.9	4.43
	43	11.0	4.21	11.7	4.21	12.6	4.21	13.0	4.21	13.2	4.21	14.3	4.22	15.2	4.22
	46	9.95	3.78	10.6	3.78	11.4	3.77	11.9	3.77	12.1	3.77	13.2	3.77	14.0	3.76
53 (110%)	10	15.4	2.72	16.1	2.74	17.0	2.76	17.4	2.77	17.6	2.77	18.8	2.79	19.6	2.81
	12	15.1	2.76	15.8	2.78	16.6	2.80	17.1	2.82	17.3	2.82	18.4	2.85	19.2	2.86
	14	14.8	2.85	15.5	2.87	16.3	2.89	16.8	2.90	17.0	2.91	18.1	2.93	18.9	2.95
	16	14.6	2.96	15.3	2.98	16.1	3.01	16.5	3.02	16.8	3.02	17.9	3.05	18.7	3.07
	18	14.4	3.10	15.1	3.12	15.9	3.15	16.3	3.16	16.6	3.16	17.7	3.19	18.5	3.21
	20	14.2	3.26	14.9	3.28	15.7	3.30	16.2	3.32	16.4	3.32	17.5	3.35	18.3	3.37
	21	14.1	3.34	14.8	3.36	15.6	3.39	16.1	3.40	16.3	3.41	17.4	3.44	18.2	3.46
	23	14.0	3.51	14.7	3.54	15.5	3.56	15.9	3.57	16.1	3.58	17.3	3.61	18.1	3.63
	25	13.8	3.69	14.5	3.71	15.3	3.74	15.8	3.75	16.0	3.75	17.1	3.78	17.9	3.80
	27	13.6	3.86	14.3	3.88	15.2	3.91	15.6	3.92	15.8	3.92	16.9	3.95	17.8	3.97
	29	13.4	4.02	14.1	4.04	15.0	4.06	15.4	4.07	15.6	4.08	16.7	4.10	17.6	4.12
	31	13.2	4.15	13.9	4.17	14.7	4.19	15.2	4.20	15.4	4.21	16.5	4.23	17.4	4.25
	33	12.9	4.26	13.7	4.27	14.5	4.29	14.9	4.30	15.1	4.31	16.2	4.33	17.1	4.34
	35	12.6	4.32	13.3	4.34	14.2	4.35	14.6	4.36	14.8	4.36	15.9	4.38	16.8	4.40
	37	12.3	4.34	13.0	4.35	13.8	4.36	14.2	4.37	14.4	4.37	15.5	4.39	16.4	4.40
	39	11.8	4.30	12.5	4.31	13.3	4.32	13.8	4.33	14.0	4.33	15.1	4.34	15.9	4.35
	41	11.3	4.21	12.0	4.21	12.8	4.22	13.3	4.22	13.5	4.22	14.6	4.23	15.4	4.23
	43	10.7	4.04	11.4	4.04	12.2	4.05	12.7	4.05	12.9	4.05	13.9	4.05	14.8	4.05
	46	9.74	3.66	10.4	3.66	11.2	3.66	11.6	3.66	11.8	3.66	12.9	3.65	13.7	3.65
48 (100%)	10	14.8	2.42	15.5	2.43	16.2	2.45	16.7	2.46	16.9	2.46	17.9	2.48	18.7	2.50
	12	14.5	2.47	15.2	2.49	16.0	2.51	16.4	2.52	16.6	2.52	17.7	2.54	18.5	2.56
	14	14.2	2.55	14.9	2.57	15.7	2.59	16.1	2.60	16.3	2.60	17.4	2.63	18.2	2.64
	16	14.0	2.65	14.7	2.67	15.5	2.69	15.9	2.70	16.1	2.71	17.2	2.73	18.0	2.75
	18	13.8	2.77	14.5	2.79	15.3	2.81	15.7	2.82	15.9	2.83	17.0	2.85	17.8	2.87
	20	13.6	2.90	14.3	2.93	15.1	2.95	15.5	2.96	15.7	2.96	16.8	2.99	17.6	3.01
	21	13.5	2.97	14.2	3.00	15.0	3.02	15.4	3.03	15.6	3.03	16.7	3.06	17.5	3.08
	23	13.4	3.12	14.0	3.14	14.8	3.16	15.3	3.17	15.5	3.18	16.5	3.21	17.3	3.22
	25	13.2	3.27	13.9	3.29	14.7	3.31	15.1	3.32	15.3	3.33	16.4	3.35	17.2	3.37
	27	13.0	3.42	13.7	3.44	14.5	3.46	14.9	3.47	15.1	3.47	16.2	3.50	17.0	3.52
	29	12.8	3.56	13.5	3.58	14.3	3.60	14.7	3.61	14.9	3.61	16.0	3.64	16.8	3.66
	31	12.6	3.69	13.3	3.71	14.1	3.73	14.5	3.74	14.8	3.74	15.8	3.77	16.6	3.79
	33	12.4	3.81	13.1	3.83	13.9	3.85	14.3	3.86	14.5	3.86	15.6	3.88	16.4	3.90
	35	12.2	3.91	12.9	3.93	13.7	3.95	14.1	3.96	14.3	3.96	15.4	3.98	16.2	4.00
	37	12.0	4.00	12.6	4.01	13.4	4.03	13.8	4.03	14.1	4.04	15.1	4.06	15.9	4.07
	39	11.7	4.05	12.4	4.07	13.1	4.08	13.6	4.09	13.8	4.09	14.8	4.11	15.6	4.12
	41	11.4	4.08	12.0	4.09	12.8	4.10	13.2	4.11	13.4	4.11	14.5	4.12	15.3	4.13
	43	11.0	4.07	11.7	4.08	12.4	4.09	12.9	4.10	13.1	4.10	14.1	4.11	14.9	4.12
	46	10.4	3.99	11.0	4.00	11.8	4.00	12.2	4.00	12.4	4.01	13.5	4.01	14.3	4.02

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
43 (90%)	10	13.2	2.15	13.8	2.17	14.5	2.18	14.9	2.19	15.0	2.20	16.0	2.22	16.7	2.23
	12	13.0	2.24	13.6	2.26	14.3	2.27	14.7	2.28	14.9	2.29	15.8	2.31	16.6	2.32
	14	12.8	2.34	13.4	2.36	14.2	2.37	14.5	2.38	14.7	2.39	15.7	2.41	16.4	2.42
	16	12.6	2.44	13.3	2.46	14.0	2.48	14.4	2.49	14.5	2.49	15.5	2.51	16.2	2.53
	18	12.5	2.56	13.1	2.57	13.8	2.59	14.2	2.60	14.4	2.61	15.3	2.63	16.1	2.64
	20	12.3	2.67	12.9	2.69	13.6	2.71	14.0	2.72	14.2	2.72	15.1	2.74	15.9	2.76
	21	12.2	2.73	12.8	2.75	13.5	2.76	13.9	2.77	14.1	2.78	15.0	2.80	15.8	2.82
	23	12.0	2.84	12.6	2.86	13.3	2.88	13.7	2.89	13.9	2.89	14.9	2.92	15.6	2.93
	25	11.8	2.96	12.4	2.98	13.1	2.99	13.5	3.00	13.7	3.01	14.7	3.03	15.4	3.05
	27	11.6	3.07	12.2	3.09	12.9	3.11	13.3	3.12	13.5	3.12	14.5	3.14	15.2	3.16
	29	11.4	3.18	12.1	3.20	12.8	3.22	13.1	3.23	13.3	3.23	14.3	3.25	15.0	3.27
	31	11.3	3.29	11.9	3.31	12.6	3.33	13.0	3.33	13.1	3.34	14.1	3.36	14.8	3.38
	33	11.1	3.40	11.7	3.42	12.4	3.43	12.8	3.44	13.0	3.45	13.9	3.47	14.6	3.49
	35	10.9	3.51	11.5	3.53	12.2	3.54	12.6	3.55	12.8	3.56	13.7	3.58	14.4	3.60
	37	10.7	3.62	11.4	3.64	12.1	3.66	12.4	3.66	12.6	3.67	13.6	3.69	14.3	3.71
	39	10.6	3.73	11.2	3.75	11.9	3.77	12.3	3.78	12.4	3.78	13.4	3.81	14.1	3.82
	41	10.4	3.85	11.0	3.87	11.7	3.89	12.1	3.90	12.3	3.90	13.2	3.92	13.9	3.94
	43	10.2	3.97	10.8	3.99	11.5	4.00	11.9	4.01	12.1	4.02	13.1	4.04	13.8	4.06
	46	9.88	4.14	10.5	4.16	11.2	4.17	11.6	4.18	11.8	4.19	12.8	4.21	13.5	4.23
38 (80%)	10	11.6	1.92	12.1	1.94	12.8	1.95	13.1	1.96	13.3	1.96	14.1	1.98	14.7	1.99
	12	11.5	2.00	12.0	2.01	12.6	2.03	12.9	2.04	13.1	2.04	14.0	2.06	14.6	2.07
	14	11.3	2.09	11.8	2.10	12.5	2.12	12.8	2.13	13.0	2.13	13.8	2.15	14.4	2.16
	16	11.1	2.18	11.7	2.20	12.3	2.21	12.6	2.22	12.8	2.23	13.7	2.24	14.3	2.26
	18	11.0	2.28	11.5	2.30	12.2	2.31	12.5	2.32	12.7	2.33	13.5	2.34	14.1	2.36
	20	10.8	2.38	11.4	2.40	12.0	2.42	12.3	2.42	12.5	2.43	13.3	2.45	14.0	2.46
	21	10.7	2.43	11.3	2.45	11.9	2.47	12.2	2.48	12.4	2.48	13.3	2.50	13.9	2.51
	23	10.6	2.54	11.1	2.55	11.7	2.57	12.1	2.58	12.2	2.58	13.1	2.60	13.7	2.62
	25	10.4	2.64	10.9	2.66	11.6	2.67	11.9	2.68	12.1	2.68	12.9	2.70	13.6	2.72
	27	10.2	2.74	10.8	2.76	11.4	2.77	11.7	2.78	11.9	2.78	12.8	2.80	13.4	2.82
	29	10.1	2.84	10.6	2.86	11.2	2.87	11.6	2.88	11.7	2.88	12.6	2.90	13.2	2.92
	31	9.92	2.94	10.5	2.95	11.1	2.97	11.4	2.98	11.6	2.98	12.4	3.00	13.0	3.01
	33	9.77	3.03	10.3	3.05	10.9	3.07	11.3	3.07	11.4	3.08	12.3	3.10	12.9	3.11
	35	9.62	3.13	10.2	3.15	10.8	3.16	11.1	3.17	11.3	3.18	12.1	3.19	12.7	3.21
	37	9.46	3.23	10.0	3.25	10.6	3.26	10.9	3.27	11.1	3.28	11.9	3.29	12.6	3.31
	39	9.31	3.33	9.85	3.35	10.5	3.37	10.8	3.37	11.0	3.38	11.8	3.40	12.4	3.41
	41	9.15	3.44	9.69	3.45	10.3	3.47	10.6	3.48	10.8	3.48	11.6	3.50	12.3	3.52
	43	8.98	3.54	9.53	3.56	10.2	3.58	10.5	3.58	10.7	3.59	11.5	3.61	12.1	3.62
	46	8.71	3.69	9.26	3.71	9.90	3.73	10.2	3.73	10.4	3.74	11.3	3.76	11.9	3.77
34 (70%)	10	10.5	1.70	10.9	1.71	11.5	1.73	11.8	1.73	11.9	1.74	12.7	1.75	13.2	1.76
	12	10.3	1.77	10.8	1.78	11.4	1.80	11.7	1.80	11.8	1.81	12.6	1.82	13.1	1.83
	14	10.2	1.85	10.7	1.86	11.2	1.88	11.5	1.88	11.7	1.89	12.4	1.90	13.0	1.91
	16	10.0	1.93	10.5	1.94	11.1	1.96	11.4	1.97	11.5	1.97	12.3	1.99	12.9	2.00
	18	9.89	2.02	10.4	2.03	10.9	2.05	11.3	2.06	11.4	2.06	12.2	2.08	12.7	2.09
	20	9.74	2.11	10.2	2.12	10.8	2.14	11.1	2.15	11.3	2.15	12.0	2.17	12.6	2.18
	21	9.66	2.16	10.2	2.17	10.7	2.18	11.0	2.19	11.2	2.20	11.9	2.21	12.5	2.23
	23	9.52	2.25	10.0	2.26	10.6	2.28	10.9	2.28	11.0	2.29	11.8	2.30	12.4	2.32
	25	9.37	2.34	9.86	2.35	10.4	2.37	10.7	2.37	10.9	2.38	11.6	2.39	12.2	2.41
	27	9.22	2.43	9.71	2.44	10.3	2.46	10.6	2.46	10.7	2.47	11.5	2.48	12.1	2.49
	29	9.08	2.52	9.57	2.53	10.1	2.54	10.4	2.55	10.6	2.55	11.3	2.57	11.9	2.58
	31	8.94	2.60	9.43	2.61	9.99	2.63	10.3	2.64	10.4	2.64	11.2	2.66	11.8	2.67
	33	8.80	2.69	9.29	2.70	9.84	2.71	10.1	2.72	10.3	2.72	11.0	2.74	11.6	2.75
	35	8.66	2.77	9.15	2.79	9.70	2.80	10.0	2.81	10.2	2.81	10.9	2.83	11.5	2.84
	37	8.53	2.86	9.01	2.88	9.57	2.89	9.86	2.90	10.0	2.90	10.8	2.92	11.3	2.93
	39	8.39	2.95	8.87	2.97	9.43	2.98	9.72	2.99	9.88	2.99	10.6	3.01	11.2	3.02
	41	8.25	3.04	8.73	3.06	9.29	3.07	9.59	3.08	9.74	3.08	10.5	3.10	11.1	3.11
	43	8.09	3.14	8.58	3.15	9.15	3.16	9.45	3.17	9.60	3.18	10.4	3.19	10.9	3.21
	46	7.84	3.27	8.34	3.28	8.91	3.30	9.22	3.31	9.37	3.31	10.1	3.33	10.7	3.34
29 (60%)	10	8.89	1.37	9.30	1.38	9.77	1.39	10.0	1.40	10.1	1.40	10.8	1.41	11.3	1.42
	12	8.78	1.42	9.19	1.44	9.66	1.45	9.92	1.45	10.0	1.46	10.7	1.47	11.2	1.48
	14	8.65	1.49	9.07	1.50	9.55	1.51	9.80	1.52	9.93	1.52	10.6	1.53	11.1	1.54
	16	8.53	1.56	8.95	1.57	9.43	1.58	9.69	1.58	9.82	1.59	10.5	1.60	11.0	1.61
	18	8.40	1.63	8.82	1.64	9.31	1.65	9.56	1.66	9.69	1.66	10.3	1.67	10.8	1.68
	20	8.28	1.70	8.70	1.71	9.18	1.72	9.44	1.73	9.57	1.73	10.2	1.75	10.7	1.76
	21	8.21	1.74	8.63	1.75	9.12	1.76	9.37	1.77	9.50	1.77	10.2	1.78	10.6	1.79
	23	8.09	1.81	8.51	1.82	8.99	1.83	9.24	1.84	9.37	1.84	10.0	1.86	10.5	1.87
	25	7.96	1.89	8.38	1.90	8.86	1.91	9.12	1.91	9.25	1.91	9.89	1.93	10.4	1.94
	27	7.84	1.96	8.26	1.97	8.74	1.98	8.99	1.98	9.12	1.99	9.76	2.00	10.3	2.01
	29	7.72	2.03	8.13	2.04	8.61	2.05	8.86	2.05	8.99	2.06	9.64	2.07	10.1	2.08
	31	7.60	2.10	8.01	2.11	8.49	2.12	8.74	2.12	8.87	2.13	9.51	2.14	10.0	2.15
	33	7.48	2.17	7.89	2.18	8.37	2.19	8.62	2.19	8.75	2.19	9.39	2.21	9.87	2.22
	35	7.36	2.24	7.78	2.25	8.25	2.26	8.50	2.26	8.63	2.26	9.26	2.28	9.75	2.29
	37	7.25	2.31	7.66	2.32	8.13	2.33	8.38	2.33	8.51	2.34	9.15	2.35	9.63	2.36
	39	7.13	2.38	7.54	2.39	8.01	2.40	8.27	2.41	8.39	2.41	9.03	2.42	9.52	2.43
	41	7.01	2.45	7.42	2.46	7.90	2.47	8.15	2.48	8.28	2.48	8.92	2.50	9.40	2.51
	43	6.88	2.52	7.29	2.54	7.78	2.55	8.03	2.56	8.16	2.56	8.80	2.57	9.29	2.59
	46	6.67	2.63	7.09	2.64	7.58	2.66	7.84	2.66	7.97	2.67	8.62	2.68	9.12	2.69

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
24 (50%)	10	7.32	1.06	7.66	1.07	8.05	1.08	8.25	1.08	8.35	1.08	8.87	1.09	9.27	1.10
	12	7.23	1.11	7.57	1.12	7.96	1.12	8.17	1.13	8.27	1.13	8.80	1.14	9.20	1.15
	14	7.13	1.15	7.47	1.16	7.86	1.17	8.07	1.18	8.18	1.18	8.71	1.19	9.11	1.20
	16	7.02	1.21	7.37	1.22	7.77	1.23	7.98	1.23	8.08	1.23	8.62	1.24	9.02	1.25
	18	6.92	1.26	7.27	1.27	7.66	1.28	7.88	1.29	7.98	1.29	8.52	1.30	8.92	1.31
	20	6.82	1.32	7.16	1.33	7.56	1.34	7.77	1.34	7.88	1.35	8.41	1.36	8.82	1.37
	21	6.76	1.35	7.11	1.36	7.51	1.37	7.72	1.37	7.83	1.37	8.36	1.39	8.77	1.39
	23	6.66	1.40	7.01	1.41	7.40	1.42	7.61	1.43	7.72	1.43	8.26	1.44	8.66	1.45
	25	6.56	1.46	6.90	1.47	7.30	1.48	7.51	1.48	7.62	1.49	8.15	1.50	8.55	1.51
	27	6.46	1.51	6.80	1.52	7.19	1.53	7.40	1.54	7.51	1.54	8.04	1.55	8.44	1.56
	29	6.36	1.57	6.70	1.58	7.09	1.59	7.30	1.59	7.41	1.59	7.93	1.60	8.34	1.61
	31	6.26	1.62	6.60	1.63	6.99	1.64	7.20	1.65	7.30	1.65	7.83	1.66	8.23	1.67
	33	6.16	1.68	6.50	1.69	6.89	1.70	7.10	1.70	7.20	1.70	7.73	1.71	8.13	1.72
	35	6.06	1.74	6.40	1.74	6.79	1.75	7.00	1.76	7.11	1.76	7.63	1.77	8.03	1.77
	37	5.97	1.79	6.31	1.80	6.70	1.81	6.90	1.81	7.01	1.81	7.53	1.82	7.93	1.83
	39	5.87	1.86	6.21	1.86	6.60	1.87	6.81	1.87	6.91	1.87	7.44	1.88	7.83	1.89
	41	5.77	1.92	6.11	1.93	6.50	1.93	6.71	1.94	6.82	1.94	7.34	1.94	7.74	1.95
	43	5.67	1.99	6.01	2.00	6.40	2.00	6.61	2.00	6.72	2.00	7.25	2.01	7.65	2.01
	46	5.49	2.09	5.84	2.09	6.24	2.10	6.46	2.10	6.56	2.10	7.10	2.10	7.51	2.10
19 (40%)	10	5.86	0.95	6.13	0.96	6.44	0.97	6.60	0.97	6.68	0.97	7.10	0.98	7.41	0.98
	12	5.78	0.99	6.05	1.00	6.37	1.01	6.53	1.01	6.62	1.01	7.04	1.02	7.36	1.03
	14	5.70	1.03	5.98	1.04	6.29	1.05	6.46	1.06	6.54	1.06	6.97	1.07	7.29	1.07
	16	5.62	1.08	5.90	1.09	6.21	1.10	6.38	1.10	6.47	1.10	6.89	1.11	7.22	1.12
	18	5.54	1.13	5.81	1.14	6.13	1.15	6.30	1.15	6.39	1.15	6.81	1.16	7.14	1.17
	20	5.45	1.18	5.73	1.19	6.05	1.20	6.22	1.20	6.30	1.21	6.73	1.22	7.06	1.22
	21	5.41	1.21	5.69	1.21	6.01	1.22	6.18	1.23	6.26	1.23	6.69	1.24	7.01	1.25
	23	5.33	1.26	5.60	1.27	5.92	1.27	6.09	1.28	6.18	1.28	6.60	1.29	6.93	1.30
	25	5.25	1.31	5.52	1.32	5.84	1.32	6.01	1.33	6.09	1.33	6.52	1.34	6.84	1.35
	27	5.17	1.36	5.44	1.36	5.76	1.37	5.92	1.38	6.01	1.38	6.43	1.39	6.75	1.40
	29	5.09	1.40	5.36	1.41	5.67	1.42	5.84	1.43	5.92	1.43	6.35	1.44	6.67	1.44
	31	5.01	1.45	5.28	1.46	5.59	1.47	5.76	1.47	5.84	1.48	6.26	1.48	6.58	1.49
	33	4.93	1.50	5.20	1.51	5.51	1.52	5.68	1.52	5.76	1.52	6.18	1.53	6.50	1.54
	35	4.85	1.55	5.12	1.56	5.43	1.57	5.60	1.57	5.68	1.57	6.10	1.58	6.42	1.59
	37	4.78	1.61	5.05	1.61	5.36	1.62	5.52	1.62	5.61	1.63	6.03	1.63	6.34	1.64
	39	4.70	1.66	4.97	1.67	5.28	1.67	5.45	1.68	5.53	1.68	5.95	1.68	6.27	1.69
	41	4.62	1.72	4.89	1.73	5.20	1.73	5.37	1.73	5.45	1.74	5.88	1.74	6.19	1.74
	43	4.53	1.78	4.81	1.79	5.12	1.79	5.29	1.79	5.38	1.79	5.80	1.80	6.12	1.80
	46	4.39	1.87	4.67	1.88	4.99	1.88	5.16	1.88	5.25	1.88	5.68	1.88	6.01	1.88

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating Capacity]

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
63 (130%)	-15.0	10.3	3.63	10.2	3.67	10.2	3.74	10.1	3.77	10.1	3.81	10.1	3.90
	-13.0	10.4	3.55	10.3	3.61	10.3	3.69	10.3	3.73	10.3	3.78	10.3	3.87
	-11.0	10.7	3.52	10.7	3.60	10.6	3.69	10.6	3.74	10.6	3.79	10.6	3.89
	-10.0	10.9	3.53	10.9	3.61	10.9	3.70	10.9	3.75	10.9	3.81	10.9	3.92
	-9.1	11.1	3.54	11.1	3.63	11.1	3.73	11.1	3.78	11.1	3.83	11.1	3.94
	-7.6	11.5	3.58	11.5	3.67	11.5	3.78	11.5	3.83	11.5	3.89	11.5	4.00
	-5.6	12.2	3.65	12.2	3.76	12.2	3.87	12.2	3.92	12.2	3.98	12.2	4.10
	-3.7	12.9	3.74	12.9	3.85	12.9	3.97	12.9	4.03	12.9	4.08	12.9	4.20
	-0.7	14.1	3.91	14.1	4.02	14.1	4.14	14.0	4.20	14.0	4.26	14.0	4.37
	0.0	14.4	3.95	14.3	4.06	14.3	4.18	14.3	4.24	14.3	4.30	14.2	4.41
	1.0	14.8	4.01	14.7	4.12	14.7	4.23	14.7	4.29	14.7	4.35	14.6	4.46
	2.2	15.2	4.07	15.2	4.18	15.2	4.30	15.1	4.35	15.1	4.41	15.0	4.52
	4.1	15.9	4.16	15.9	4.27	15.8	4.38	15.8	4.44	15.7	4.49	15.6	4.59
	6.0	16.6	4.24	16.5	4.35	16.4	4.45	16.3	4.50	16.3	4.55	16.1	4.64
	7.9	17.2	4.29	17.0	4.39	16.9	4.49	16.8	4.53	16.7	4.58	16.4	4.66
	9.8	17.6	4.31	17.5	4.40	17.2	4.48	17.1	4.52	17.0	4.56	16.7	4.63
	11.8	18.0	4.28	17.7	4.36	17.5	4.43	17.3	4.47	17.1	4.50	16.7	4.55
	13.7	18.1	4.20	17.8	4.27	17.5	4.33	17.3	4.36	17.1	4.38	16.6	4.41
	15.0	18.1	4.12	17.7	4.18	17.4	4.22	17.1	4.24	16.9	4.26	16.3	4.27
	18.0	17.6	3.80	17.2	3.83	16.6	3.85	16.3	3.85	16.0	3.84	15.3	3.82
58 (120%)	-15.0	10.2	3.63	10.1	3.68	10.0	3.74	10.0	3.78	10.0	3.82	9.98	3.91
	-13.0	10.3	3.55	10.2	3.62	10.2	3.70	10.2	3.74	10.2	3.79	10.2	3.89
	-11.0	10.6	3.53	10.5	3.61	10.5	3.70	10.5	3.75	10.5	3.80	10.5	3.90
	-10.0	10.8	3.53	10.8	3.62	10.7	3.72	10.7	3.77	10.7	3.82	10.7	3.93
	-9.1	11.0	3.55	11.0	3.64	11.0	3.74	11.0	3.79	11.0	3.84	11.0	3.96
	-7.6	11.4	3.59	11.4	3.69	11.4	3.79	11.4	3.84	11.4	3.90	11.4	4.01
	-5.6	12.1	3.67	12.1	3.77	12.1	3.88	12.1	3.94	12.1	3.99	12.1	4.11
	-3.7	12.8	3.76	12.8	3.87	12.8	3.98	12.8	4.04	12.8	4.10	12.7	4.21
	-0.7	14.0	3.93	14.0	4.04	13.9	4.16	13.9	4.21	13.9	4.27	13.8	4.37
	0.0	14.2	3.97	14.2	4.08	14.2	4.19	14.2	4.25	14.1	4.30	14.0	4.41
	1.0	14.6	4.03	14.6	4.14	14.6	4.25	14.5	4.30	14.5	4.36	14.4	4.46
	2.2	15.1	4.09	15.1	4.20	15.0	4.31	15.0	4.36	14.9	4.41	14.8	4.51
	4.1	15.8	4.18	15.7	4.29	15.6	4.39	15.6	4.44	15.5	4.49	15.3	4.58
	6.0	16.4	4.25	16.3	4.35	16.2	4.45	16.1	4.49	16.0	4.54	15.7	4.61
	7.9	17.0	4.29	16.8	4.39	16.6	4.48	16.5	4.51	16.4	4.55	16.1	4.61
	9.8	17.4	4.30	17.2	4.39	16.9	4.46	16.8	4.49	16.6	4.52	16.2	4.57
	11.8	17.6	4.26	17.4	4.33	17.1	4.39	16.9	4.42	16.7	4.44	16.2	4.47
	13.7	17.7	4.17	17.4	4.23	17.0	4.27	16.8	4.29	16.5	4.30	15.9	4.31
	15.0	17.6	4.07	17.3	4.12	16.8	4.15	16.5	4.16	16.2	4.17	15.6	4.16
	18.0	17.0	3.73	16.5	3.75	15.9	3.75	15.5	3.74	15.2	3.73	14.3	3.68
53 (110%)	-15.0	10.1	3.67	10.0	3.73	9.97	3.80	9.95	3.84	9.94	3.89	9.92	3.98
	-13.0	10.2	3.60	10.2	3.68	10.1	3.76	10.1	3.81	10.1	3.85	10.1	3.96
	-11.0	10.5	3.59	10.5	3.67	10.5	3.77	10.5	3.82	10.5	3.87	10.5	3.98
	-10.0	10.7	3.60	10.7	3.69	10.7	3.79	10.7	3.84	10.7	3.89	10.7	4.00
	-9.1	10.9	3.62	10.9	3.71	10.9	3.81	10.9	3.86	10.9	3.92	10.9	4.03
	-7.6	11.3	3.66	11.4	3.76	11.4	3.86	11.4	3.92	11.4	3.97	11.3	4.08
	-5.6	12.0	3.74	12.0	3.85	12.0	3.96	12.0	4.01	12.0	4.07	12.0	4.18
	-3.7	12.7	3.84	12.7	3.95	12.7	4.06	12.7	4.11	12.7	4.17	12.6	4.28
	-0.7	13.9	4.01	13.9	4.12	13.8	4.23	13.8	4.28	13.8	4.33	13.7	4.43
	0.0	14.2	4.05	14.2	4.16	14.1	4.27	14.1	4.32	14.0	4.37	13.9	4.47
	1.0	14.6	4.11	14.5	4.22	14.5	4.32	14.4	4.37	14.4	4.42	14.2	4.51
	2.2	15.0	4.17	15.0	4.28	14.9	4.38	14.8	4.42	14.7	4.47	14.6	4.56
	4.1	15.7	4.26	15.6	4.36	15.5	4.45	15.4	4.49	15.3	4.54	15.1	4.61
	6.0	16.3	4.33	16.2	4.42	16.0	4.50	15.9	4.54	15.8	4.57	15.4	4.64
	7.9	16.8	4.36	16.6	4.44	16.4	4.51	16.2	4.55	16.1	4.58	15.7	4.63
	9.8	17.2	4.36	16.9	4.43	16.6	4.49	16.4	4.51	16.2	4.53	15.8	4.57
	11.8	17.4	4.30	17.1	4.36	16.7	4.40	16.5	4.42	16.2	4.43	15.7	4.45
	13.7	17.4	4.20	17.0	4.24	16.5	4.27	16.3	4.28	16.0	4.28	15.3	4.28
	15.0	17.3	4.09	16.8	4.12	16.3	4.14	16.0	4.14	15.7	4.14	15.0	4.12
	18.0	16.5	3.72	15.9	3.72	15.3	3.71	14.9	3.69	14.5	3.67	13.6	3.62
48 (100%)	-15.0	9.98	3.54	9.88	3.59	9.82	3.66	9.79	3.69	9.77	3.73	9.75	3.82
	-13.0	10.0	3.47	9.98	3.53	9.95	3.61	9.94	3.65	9.93	3.70	9.92	3.80
	-11.0	10.3	3.45	10.3	3.53	10.3	3.61	10.3	3.66	10.3	3.71	10.3	3.81
	-10.0	10.5	3.45	10.5	3.54	10.5	3.63	10.5	3.68	10.5	3.73	10.5	3.84
	-9.1	10.7	3.47	10.7	3.56	10.7	3.65	10.7	3.70	10.7	3.75	10.7	3.86
	-7.6	11.1	3.51	11.1	3.60	11.1	3.70	11.1	3.76	11.1	3.81	11.1	3.92
	-5.6	11.8	3.59	11.8	3.69	11.8	3.79	11.8	3.85	11.8	3.90	11.8	4.01
	-3.7	12.5	3.68	12.5	3.79	12.5	3.89	12.5	3.95	12.5	4.00	12.4	4.11
	-0.7	13.6	3.84	13.6	3.95	13.6	4.06	13.6	4.11	13.6	4.16	13.5	4.27
	0.0	13.9	3.88	13.9	3.99	13.9	4.10	13.8	4.15	13.8	4.20	13.7	4.30
	1.0	14.3	3.94	14.3	4.05	14.2	4.15	14.2	4.20	14.1	4.25	14.0	4.35
	2.2	14.8	4.00	14.7	4.11	14.7	4.21	14.6	4.26	14.5	4.31	14.4	4.40
	4.1	15.4	4.09	15.4	4.19	15.3	4.29	15.2	4.33	15.1	4.38	14.9	4.46
	6.0	16.1	4.15	16.0	4.25	15.8	4.34	15.7	4.38	15.6	4.42	15.3	4.49
	7.9	16.6	4.19	16.4	4.28	16.2	4.36	16.1	4.40	15.9	4.43	15.6	4.49
	9.8	16.9	4.19	16.7	4.28	16.5	4.34	16.3	4.37	16.1	4.40	15.7	4.44
	11.8	17.2	4.15	16.9	4.22	16.5	4.27	16.3	4.29	16.1	4.31	15.6	4.33
	13.7	17.2	4.06	16.8	4.11	16.4	4.15	16.2	4.16	15.9	4.17	15.3	4.17
	15.0	17.1	3.96	16.7	4.00	16.2	4.03	15.9	4.03	15.6	4.03	14.9	4.02
	18.0	16.3	3.62	15.8	3.63	15.2	3.62	14.8	3.61	14.4	3.60	13.6	3.55

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-15.0	8.69	3.36	8.62	3.41	8.57	3.47	8.55	3.51	8.54	3.54	8.51	3.62
	-13.0	8.88	3.34	8.83	3.41	8.80	3.48	8.79	3.52	8.78	3.56	8.77	3.65
	-11.0	9.20	3.35	9.17	3.43	9.15	3.51	9.14	3.55	9.14	3.60	9.13	3.70
	-10.0	9.40	3.36	9.37	3.44	9.36	3.53	9.35	3.58	9.35	3.62	9.34	3.73
	-9.1	9.59	3.38	9.57	3.46	9.56	3.55	9.56	3.60	9.56	3.65	9.55	3.75
	-7.6	9.96	3.42	9.95	3.50	9.94	3.60	9.94	3.65	9.94	3.70	9.93	3.81
	-5.6	10.5	3.48	10.5	3.57	10.5	3.67	10.5	3.72	10.5	3.78	10.5	3.89
	-3.7	11.1	3.55	11.1	3.65	11.0	3.75	11.0	3.80	11.0	3.86	11.0	3.97
	-0.7	12.0	3.67	12.0	3.77	11.9	3.88	11.9	3.93	11.9	3.99	11.9	4.11
43	0.0	12.2	3.70	12.2	3.80	12.2	3.91	12.1	3.96	12.1	4.02	12.1	4.14
(90%)	1.0	12.5	3.74	12.5	3.85	12.5	3.95	12.4	4.01	12.4	4.06	12.4	4.18
	2.2	12.9	3.79	12.8	3.90	12.8	4.00	12.8	4.06	12.8	4.12	12.7	4.23
	4.1	13.5	3.87	13.4	3.98	13.4	4.08	13.3	4.14	13.3	4.19	13.2	4.31
	6.0	14.0	3.95	14.0	4.05	13.9	4.16	13.9	4.21	13.8	4.27	13.8	4.38
	7.9	14.6	4.02	14.5	4.12	14.4	4.23	14.4	4.28	14.3	4.33	14.2	4.44
	9.8	15.1	4.09	15.0	4.19	14.9	4.29	14.9	4.34	14.8	4.39	14.7	4.49
	11.8	15.6	4.14	15.5	4.24	15.4	4.33	15.3	4.38	15.2	4.43	15.1	4.52
	13.7	16.1	4.17	15.9	4.26	15.8	4.35	15.7	4.39	15.6	4.43	15.3	4.51
	15.0	16.4	4.18	16.2	4.26	16.0	4.34	15.8	4.38	15.7	4.42	15.4	4.49
	18.0	16.8	4.10	16.5	4.17	16.2	4.22	16.0	4.25	15.8	4.27	15.3	4.30
	-15.0	7.52	3.07	7.51	3.14	7.51	3.21	7.51	3.25	7.51	3.29	7.51	3.38
	-13.0	7.85	3.13	7.84	3.20	7.83	3.27	7.83	3.31	7.83	3.36	7.83	3.45
	-11.0	8.24	3.18	8.23	3.25	8.21	3.33	8.21	3.38	8.20	3.42	8.19	3.51
	-10.0	8.45	3.21	8.44	3.28	8.42	3.36	8.42	3.41	8.41	3.45	8.39	3.55
	-9.1	8.65	3.23	8.64	3.31	8.62	3.39	8.61	3.43	8.60	3.48	8.58	3.58
	-7.6	9.01	3.27	8.99	3.35	8.96	3.44	8.95	3.48	8.93	3.53	8.91	3.62
	-5.6	9.50	3.33	9.47	3.41	9.43	3.50	9.41	3.54	9.40	3.59	9.36	3.69
	-3.7	9.97	3.38	9.93	3.47	9.89	3.55	9.86	3.60	9.84	3.64	9.80	3.74
	-0.7	10.7	3.47	10.7	3.55	10.6	3.64	10.6	3.68	10.5	3.73	10.5	3.83
38	0.0	10.9	3.48	10.8	3.57	10.8	3.66	10.7	3.70	10.7	3.75	10.7	3.85
(80%)	1.0	11.1	3.51	11.1	3.60	11.0	3.69	11.0	3.73	10.9	3.78	10.9	3.89
	2.2	11.4	3.54	11.3	3.63	11.3	3.72	11.3	3.77	11.2	3.82	11.2	3.93
	4.1	11.9	3.60	11.8	3.69	11.7	3.78	11.7	3.83	11.7	3.88	11.6	3.99
	6.0	12.3	3.66	12.3	3.75	12.2	3.85	12.2	3.90	12.2	3.96	12.1	4.07
	7.9	12.8	3.73	12.7	3.83	12.7	3.93	12.7	3.99	12.7	4.04	12.6	4.17
	9.8	13.3	3.81	13.3	3.91	13.2	4.02	13.2	4.08	13.2	4.14	13.2	4.27
	11.8	13.9	3.90	13.9	4.01	13.8	4.13	13.8	4.19	13.8	4.25	13.8	4.38
	13.7	14.5	3.99	14.5	4.11	14.4	4.23	14.4	4.29	14.4	4.36	14.3	4.49
	15.0	14.9	4.06	14.9	4.18	14.8	4.30	14.8	4.36	14.8	4.42	14.7	4.55
	18.0	15.8	4.15	15.8	4.27	15.6	4.38	15.5	4.43	15.4	4.48	15.2	4.58
	-15.0	6.78	2.76	6.77	2.82	6.77	2.89	6.77	2.92	6.77	2.96	6.77	3.03
	-13.0	7.08	2.81	7.07	2.87	7.06	2.94	7.06	2.98	7.06	3.02	7.06	3.10
	-11.0	7.43	2.86	7.42	2.93	7.41	3.00	7.40	3.04	7.39	3.08	7.39	3.16
	-10.0	7.62	2.88	7.61	2.95	7.59	3.03	7.59	3.07	7.58	3.11	7.57	3.19
	-9.1	7.80	2.91	7.79	2.98	7.77	3.05	7.76	3.09	7.75	3.13	7.74	3.22
	-7.6	8.12	2.94	8.10	3.02	8.08	3.09	8.07	3.13	8.05	3.17	8.03	3.26
	-5.6	8.56	2.99	8.54	3.07	8.50	3.15	8.49	3.19	8.47	3.23	8.44	3.32
	-3.7	8.99	3.04	8.96	3.12	8.91	3.20	8.89	3.24	8.87	3.28	8.84	3.37
	-0.7	9.66	3.12	9.61	3.19	9.56	3.27	9.53	3.32	9.51	3.36	9.46	3.45
34	0.0	9.82	3.14	9.76	3.21	9.71	3.29	9.68	3.33	9.65	3.38	9.61	3.47
(70%)	1.0	10.0	3.16	9.98	3.24	9.92	3.32	9.89	3.36	9.86	3.40	9.82	3.50
	2.2	10.3	3.19	10.2	3.27	10.2	3.35	10.1	3.39	10.1	3.44	10.1	3.53
	4.1	10.7	3.24	10.6	3.32	10.6	3.40	10.6	3.45	10.5	3.49	10.5	3.59
	6.0	11.1	3.29	11.1	3.37	11.0	3.46	11.0	3.51	11.0	3.56	10.9	3.67
	7.9	11.5	3.35	11.5	3.44	11.4	3.54	11.4	3.59	11.4	3.64	11.4	3.75
	9.8	12.0	3.43	12.0	3.52	11.9	3.62	11.9	3.67	11.9	3.72	11.9	3.84
	11.8	12.5	3.51	12.5	3.61	12.5	3.71	12.5	3.77	12.4	3.82	12.4	3.94
	13.7	13.1	3.60	13.0	3.70	13.0	3.81	13.0	3.86	13.0	3.92	12.9	4.04
	15.0	13.4	3.65	13.4	3.76	13.4	3.86	13.3	3.92	13.3	3.98	13.2	4.09
	18.0	14.3	3.74	14.2	3.84	14.1	3.94	14.0	3.99	13.9	4.03	13.7	4.12
	-15.0	5.73	2.44	5.73	2.49	5.73	2.55	5.73	2.58	5.73	2.62	5.73	2.69
	-13.0	5.98	2.49	5.98	2.54	5.97	2.60	5.97	2.64	5.97	2.67	5.97	2.75
	-11.0	6.28	2.53	6.27	2.59	6.26	2.65	6.26	2.69	6.25	2.72	6.25	2.80
	-10.0	6.44	2.55	6.43	2.61	6.42	2.68	6.42	2.71	6.41	2.75	6.40	2.83
	-9.1	6.60	2.57	6.59	2.63	6.57	2.70	6.56	2.74	6.56	2.77	6.54	2.85
	-7.6	6.87	2.61	6.85	2.67	6.83	2.74	6.82	2.77	6.81	2.81	6.79	2.89
	-5.6	7.24	2.65	7.22	2.72	7.19	2.78	7.18	2.82	7.16	2.86	7.14	2.94
	-3.7	7.60	2.69	7.57	2.76	7.54	2.83	7.52	2.87	7.50	2.90	7.47	2.98
	-0.7	8.17	2.76	8.13	2.83	8.08	2.90	8.06	2.93	8.04	2.97	8.00	3.05
29	0.0	8.30	2.77	8.25	2.84	8.21	2.91	8.18	2.95	8.16	2.99	8.13	3.07
(60%)	1.0	8.48	2.80	8.43	2.86	8.38	2.93	8.36	2.97	8.34	3.01	8.30	3.09
	2.2	8.70	2.82	8.65	2.89	8.60	2.96	8.58	3.00	8.56	3.04	8.52	3.13
	4.1	9.05	2.86	8.99	2.94	8.94	3.01	8.92	3.05	8.90	3.09	8.87	3.18
	6.0	9.40	2.91	9.34	2.99	9.30	3.07	9.28	3.11	9.27	3.15	9.24	3.24
	7.9	9.76	2.97	9.71	3.04	9.68	3.13	9.66	3.17	9.65	3.22	9.64	3.32
	9.8	10.2	3.03	10.1	3.11	10.1	3.20	10.1	3.25	10.1	3.30	10.1	3.40
	11.8	10.6	3.11	10.6	3.19	10.5	3.29	10.5	3.33	10.5	3.38	10.5	3.49
	13.7	11.0	3.18	11.0	3.27	11.0	3.37	11.0	3.42	11.0	3.47	10.9	3.57
	15.0	11.4	3.23	11.3	3.32	11.3	3.42	11.3	3.47	11.3	3.52	11.2	3.62
	18.0	12.1	3.31	12.0	3.40	11.9	3.49	11.9	3.53	11.8	3.57	11.6	3.65

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
24 (50%)	-15.0	4.74	2.05	4.74	2.09	4.74	2.14	4.73	2.17	4.73	2.19	4.74	2.25
	-13.0	4.95	2.09	4.95	2.13	4.94	2.18	4.94	2.21	4.94	2.24	4.93	2.30
	-11.0	5.20	2.12	5.19	2.17	5.18	2.22	5.17	2.25	5.17	2.28	5.17	2.34
	-10.0	5.33	2.14	5.32	2.19	5.31	2.24	5.31	2.27	5.30	2.30	5.29	2.37
	-9.1	5.46	2.16	5.45	2.21	5.43	2.26	5.43	2.29	5.42	2.32	5.41	2.39
	-7.6	5.68	2.18	5.66	2.24	5.65	2.29	5.64	2.32	5.63	2.35	5.62	2.42
	-5.6	5.99	2.22	5.97	2.28	5.95	2.33	5.93	2.36	5.92	2.39	5.90	2.46
	-3.7	6.29	2.26	6.26	2.31	6.23	2.37	6.22	2.40	6.21	2.43	6.18	2.50
	-0.7	6.75	2.31	6.72	2.37	6.68	2.43	6.67	2.46	6.65	2.49	6.62	2.56
	0.0	6.86	2.32	6.82	2.38	6.79	2.44	6.77	2.47	6.75	2.51	6.73	2.58
	1.0	7.01	2.34	6.97	2.40	6.94	2.46	6.92	2.49	6.90	2.53	6.88	2.60
	2.2	7.19	2.36	7.15	2.42	7.11	2.49	7.10	2.52	7.08	2.55	7.06	2.63
	4.1	7.48	2.40	7.44	2.46	7.40	2.53	7.39	2.56	7.37	2.60	7.35	2.67
	6.0	7.77	2.44	7.73	2.51	7.70	2.58	7.69	2.61	7.68	2.65	7.66	2.73
	7.9	8.08	2.49	8.04	2.56	8.02	2.63	8.01	2.67	8.00	2.71	8.00	2.79
	9.8	8.40	2.54	8.38	2.62	8.36	2.70	8.35	2.74	8.35	2.78	8.35	2.87
	11.8	8.78	2.61	8.76	2.69	8.75	2.77	8.74	2.81	8.74	2.86	8.73	2.95
	13.7	9.16	2.68	9.14	2.76	9.13	2.84	9.12	2.89	9.11	2.93	9.09	3.02
	15.0	9.43	2.72	9.41	2.81	9.39	2.89	9.38	2.93	9.36	2.98	9.31	3.06
	18.0	10.0	2.79	9.99	2.88	9.91	2.95	9.87	2.99	9.81	3.02	9.65	3.09
19 (40%)	-15.0	3.76	1.51	3.76	1.54	3.76	1.58	3.76	1.60	3.76	1.62	3.77	1.66
	-13.0	3.93	1.54	3.93	1.57	3.92	1.61	3.92	1.63	3.92	1.65	3.92	1.70
	-11.0	4.13	1.56	4.12	1.60	4.12	1.64	4.11	1.66	4.11	1.68	4.11	1.73
	-10.0	4.23	1.58	4.23	1.62	4.22	1.66	4.22	1.68	4.21	1.70	4.21	1.75
	-9.1	4.34	1.59	4.33	1.63	4.32	1.67	4.31	1.69	4.31	1.71	4.30	1.76
	-7.6	4.52	1.61	4.51	1.65	4.49	1.69	4.48	1.71	4.48	1.74	4.46	1.78
	-5.6	4.76	1.64	4.75	1.68	4.73	1.72	4.72	1.74	4.71	1.77	4.69	1.82
	-3.7	5.00	1.67	4.98	1.71	4.96	1.75	4.94	1.77	4.93	1.79	4.91	1.84
	-0.7	5.38	1.71	5.35	1.75	5.31	1.79	5.30	1.81	5.28	1.84	5.25	1.89
	0.0	5.46	1.72	5.43	1.76	5.39	1.80	5.38	1.82	5.36	1.85	5.33	1.90
	1.0	5.58	1.73	5.55	1.77	5.51	1.82	5.49	1.84	5.48	1.86	5.45	1.91
	2.2	5.72	1.75	5.69	1.79	5.65	1.83	5.63	1.86	5.61	1.88	5.59	1.93
	4.1	5.95	1.77	5.91	1.82	5.87	1.86	5.85	1.88	5.84	1.91	5.81	1.96
	6.0	6.18	1.80	6.14	1.85	6.10	1.89	6.08	1.92	6.07	1.94	6.05	2.00
	7.9	6.41	1.83	6.37	1.88	6.34	1.93	6.33	1.96	6.32	1.98	6.30	2.04
	9.8	6.66	1.87	6.63	1.92	6.60	1.97	6.59	2.00	6.58	2.03	6.56	2.09
	11.8	6.94	1.91	6.91	1.97	6.89	2.02	6.88	2.05	6.87	2.08	6.85	2.14
	13.7	7.23	1.96	7.20	2.01	7.17	2.07	7.16	2.10	7.14	2.13	7.11	2.19
	15.0	7.43	1.99	7.40	2.04	7.36	2.10	7.35	2.13	7.32	2.15	7.27	2.21
	18.0	7.87	2.03	7.82	2.08	7.75	2.13	7.70	2.16	7.65	2.18	7.52	2.23

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

Models : A9UW548FA3 [FM57AH U33]

[Cooling capacity]

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
73 (130%)	10	17.7	3.08	18.5	3.11	19.5	3.13	20.0	3.14	20.2	3.14	21.5	3.17	22.5	3.19
	12	17.3	3.14	18.1	3.17	19.1	3.19	19.6	3.20	19.8	3.21	21.1	3.23	22.1	3.26
	14	17.0	3.24	17.8	3.27	18.8	3.29	19.3	3.30	19.5	3.31	20.8	3.34	21.7	3.36
	16	16.7	3.37	17.6	3.40	18.5	3.43	19.0	3.44	19.2	3.44	20.5	3.47	21.5	3.50
	18	16.5	3.62	17.3	3.65	18.3	3.68	18.8	3.69	19.0	3.69	20.3	3.72	21.2	3.75
	20	16.3	3.71	17.1	3.74	18.1	3.77	18.6	3.78	18.8	3.79	20.1	3.82	21.0	3.85
	21	16.2	3.81	17.0	3.84	18.0	3.86	18.5	3.88	18.7	3.88	20.0	3.91	20.9	3.94
	23	16.0	4.00	16.9	4.04	17.8	4.06	18.3	4.07	18.6	4.08	19.8	4.11	20.8	4.14
	25	15.9	4.20	16.7	4.23	17.6	4.26	18.1	4.27	18.4	4.27	19.6	4.30	20.6	4.33
	27	15.7	4.39	16.5	4.42	17.4	4.44	17.9	4.46	18.2	4.46	19.4	4.49	20.4	4.52
	29	15.4	4.56	16.2	4.59	17.2	4.61	17.7	4.62	17.9	4.63	19.2	4.65	20.2	4.68
	31	15.1	4.71	16.0	4.73	16.9	4.75	17.4	4.76	17.7	4.77	18.9	4.79	19.9	4.81
	33	14.8	4.81	15.6	4.84	16.6	4.85	17.1	4.86	17.3	4.86	18.6	4.88	19.6	4.91
	35	14.4	4.87	15.3	4.89	16.2	4.90	16.7	4.91	17.0	4.91	18.2	4.93	19.2	4.95
	37	14.0	4.87	14.8	4.89	15.7	4.90	16.2	4.90	16.5	4.90	17.8	4.92	18.7	4.93
	39	13.4	4.80	14.2	4.82	15.2	4.82	15.7	4.82	15.9	4.83	17.2	4.83	18.2	4.85
	41	12.8	4.66	13.6	4.67	14.5	4.67	15.0	4.67	15.3	4.67	16.5	4.68	17.5	4.69
	43	12.1	4.44	12.9	4.45	13.8	4.45	14.3	4.44	14.5	4.44	15.8	4.44	16.7	4.45
	46	10.9	3.96	11.6	3.96	12.5	3.95	13.0	3.95	13.2	3.94	14.4	3.93	15.4	3.93
65 (120%)	10	17.2	3.07	18.0	3.09	19.0	3.11	19.5	3.12	19.7	3.13	21.0	3.15	21.9	3.17
	12	16.9	3.12	17.7	3.15	18.6	3.17	19.1	3.18	19.3	3.19	20.6	3.22	21.5	3.24
	14	16.6	3.22	17.4	3.24	18.3	3.27	18.8	3.28	19.0	3.29	20.3	3.32	21.2	3.34
	16	16.3	3.35	17.1	3.37	18.0	3.40	18.5	3.41	18.7	3.42	20.0	3.45	20.9	3.47
	18	16.1	3.51	16.9	3.53	17.8	3.56	18.3	3.57	18.5	3.58	19.8	3.61	20.7	3.64
	20	15.9	3.69	16.7	3.71	17.6	3.74	18.1	3.75	18.3	3.76	19.6	3.79	20.5	3.82
	21	15.8	3.78	16.6	3.81	17.5	3.84	18.0	3.85	18.2	3.86	19.5	3.89	20.4	3.91
	23	15.6	3.98	16.4	4.00	17.3	4.03	17.8	4.05	18.1	4.05	19.3	4.09	20.2	4.11
	25	15.4	4.17	16.2	4.20	17.2	4.23	17.6	4.24	17.9	4.25	19.1	4.28	20.1	4.31
	27	15.2	4.37	16.0	4.39	17.0	4.42	17.5	4.43	17.7	4.44	18.9	4.47	19.9	4.49
	29	15.0	4.54	15.8	4.56	16.7	4.59	17.2	4.60	17.5	4.61	18.7	4.64	19.7	4.66
	31	14.8	4.69	15.6	4.71	16.5	4.73	17.0	4.75	17.2	4.75	18.5	4.78	19.4	4.80
	33	14.5	4.80	15.3	4.82	16.2	4.84	16.7	4.85	16.9	4.86	18.2	4.88	19.1	4.90
	35	14.1	4.87	14.9	4.88	15.8	4.90	16.3	4.91	16.5	4.91	17.8	4.94	18.7	4.95
	37	13.7	4.88	14.5	4.89	15.4	4.90	15.9	4.91	16.1	4.92	17.3	4.93	18.3	4.95
	39	13.2	4.82	13.9	4.83	14.9	4.84	15.3	4.85	15.6	4.85	16.8	4.86	17.7	4.87
	41	12.6	4.70	13.4	4.70	14.3	4.71	14.7	4.71	15.0	4.71	16.2	4.72	17.1	4.73
	43	11.9	4.49	12.7	4.49	13.6	4.50	14.0	4.50	14.3	4.50	15.5	4.50	16.4	4.50
	46	10.7	4.04	11.5	4.03	12.4	4.03	12.8	4.03	13.0	4.03	14.2	4.02	15.1	4.01
59 (110%)	10	16.8	3.06	17.6	3.08	18.5	3.10	19.0	3.11	19.2	3.12	20.4	3.15	21.4	3.16
	12	16.4	3.11	17.2	3.13	18.1	3.16	18.6	3.17	18.8	3.18	20.0	3.20	21.0	3.22
	14	16.1	3.20	16.9	3.23	17.8	3.26	18.3	3.27	18.5	3.27	19.7	3.30	20.6	3.32
	16	15.9	3.33	16.6	3.36	17.5	3.39	18.0	3.40	18.3	3.40	19.5	3.44	20.4	3.46
	18	15.7	3.49	16.4	3.52	17.3	3.54	17.8	3.56	18.0	3.56	19.2	3.60	20.1	3.62
	20	15.5	3.67	16.2	3.69	17.1	3.72	17.6	3.73	17.8	3.74	19.0	3.77	19.9	3.80
	21	15.4	3.76	16.2	3.79	17.0	3.82	17.5	3.83	17.8	3.84	19.0	3.87	19.9	3.89
	23	15.2	3.96	16.0	3.98	16.9	4.01	17.3	4.02	17.6	4.03	18.8	4.06	19.7	4.09
	25	15.0	4.15	15.8	4.18	16.7	4.21	17.2	4.22	17.4	4.23	18.6	4.26	19.5	4.28
	27	14.8	4.35	15.6	4.37	16.5	4.40	17.0	4.41	17.2	4.42	18.4	4.45	19.3	4.47
	29	14.6	4.52	15.4	4.55	16.3	4.57	16.8	4.58	17.0	4.59	18.2	4.62	19.1	4.64
	31	14.4	4.68	15.2	4.70	16.1	4.72	16.5	4.73	16.8	4.74	18.0	4.76	18.9	4.78
	33	14.1	4.79	14.9	4.81	15.8	4.83	16.2	4.84	16.5	4.85	17.7	4.87	18.6	4.89
	35	13.7	4.87	14.5	4.88	15.4	4.90	15.9	4.91	16.1	4.91	17.3	4.94	18.3	4.95
	37	13.3	4.89	14.1	4.90	15.0	4.92	15.5	4.92	15.7	4.93	16.9	4.94	17.8	4.96
	39	12.9	4.85	13.6	4.86	14.5	4.87	15.0	4.87	15.2	4.88	16.4	4.89	17.3	4.90
	41	12.3	4.74	13.1	4.74	14.0	4.75	14.4	4.75	14.7	4.75	15.9	4.76	16.8	4.77
	43	11.7	4.55	12.5	4.55	13.3	4.56	13.8	4.56	14.0	4.56	15.2	4.56	16.1	4.56
	46	10.6	4.13	11.3	4.12	12.2	4.12	12.6	4.12	12.9	4.12	14.0	4.11	14.9	4.11
54 (100%)	10	16.2	2.76	17.0	2.78	17.9	2.80	18.3	2.81	18.6	2.81	19.7	2.84	20.6	2.85
	12	15.9	2.82	16.7	2.84	17.6	2.86	18.0	2.88	18.2	2.88	19.4	2.90	20.3	2.92
	14	15.7	2.92	16.4	2.94	17.3	2.96	17.7	2.97	18.0	2.98	19.1	3.00	20.0	3.02
	16	15.4	3.03	16.2	3.05	17.0	3.08	17.5	3.09	17.7	3.09	18.9	3.12	19.8	3.14
	18	15.2	3.17	15.9	3.19	16.8	3.22	17.3	3.23	17.5	3.23	18.7	3.26	19.6	3.28
	20	15.0	3.32	15.7	3.34	16.6	3.37	17.1	3.38	17.3	3.39	18.5	3.42	19.3	3.44
	21	14.9	3.40	15.6	3.42	16.5	3.45	17.0	3.46	17.2	3.47	18.4	3.50	19.3	3.52
	23	14.7	3.57	15.4	3.59	16.3	3.61	16.8	3.63	17.0	3.63	18.2	3.66	19.1	3.68
	25	14.5	3.73	15.2	3.76	16.1	3.78	16.6	3.80	16.8	3.80	18.0	3.83	18.9	3.85
	27	14.3	3.90	15.1	3.93	15.9	3.95	16.4	3.96	16.6	3.97	17.8	4.00	18.7	4.02
	29	14.1	4.07	14.9	4.09	15.7	4.11	16.2	4.12	16.4	4.13	17.6	4.16	18.5	4.18
	31	13.9	4.22	14.7	4.24	15.5	4.26	16.0	4.27	16.2	4.28	17.4	4.31	18.3	4.33
	33	13.7	4.36	14.4	4.38	15.3	4.40	15.8	4.41	16.0	4.41	17.2	4.44	18.0	4.46
	35	13.4	4.47	14.2	4.49	15.0	4.51	15.5	4.52	15.7	4.53	16.9	4.55	17.8	4.57
	37	13.1	4.57	13.9	4.58	14.8	4.60	15.2	4.61	15.5	4.62	16.6	4.64	17.5	4.65
	39	12.8	4.63	13.6	4.65	14.4	4.66	14.9	4.67	15.1	4.67	16.3	4.69	17.2	4.71
	41	12.5	4.66	13.2	4.68	14.1	4.69	14.5	4.70	14.8	4.70	15.9	4.71	16.8	4.72
	43	12.1	4.66	12.8	4.67	13.7	4.68	14.1	4.68	14.4	4.68	15.5	4.70	16.4	4.70
	46	11.4	4.56	12.1	4.57	13.0	4.57	13.4	4.58	13.7	4.58	14.8	4.58	15.7	4.59

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
49 (90%)	10	15.0	2.44	15.6	2.46	16.4	2.48	16.9	2.49	17.1	2.50	18.1	2.52	18.9	2.53
	12	14.8	2.54	15.5	2.56	16.3	2.58	16.7	2.59	16.9	2.60	18.0	2.62	18.8	2.64
	14	14.6	2.66	15.3	2.68	16.1	2.70	16.5	2.71	16.7	2.71	17.8	2.74	18.6	2.75
	16	14.3	2.78	15.1	2.80	15.9	2.82	16.3	2.83	16.5	2.83	17.6	2.86	18.4	2.88
	18	14.1	2.90	14.8	2.92	15.7	2.94	16.1	2.96	16.3	2.96	17.4	2.99	18.2	3.00
	20	13.9	3.03	14.6	3.05	15.4	3.08	15.9	3.09	16.1	3.09	17.2	3.12	18.0	3.13
	21	13.8	3.10	14.5	3.12	15.3	3.14	15.8	3.15	16.0	3.16	17.1	3.18	17.9	3.20
	23	13.6	3.23	14.3	3.25	15.1	3.27	15.6	3.28	15.8	3.29	16.9	3.31	17.7	3.33
	25	13.4	3.36	14.1	3.38	14.9	3.40	15.3	3.41	15.6	3.42	16.6	3.44	17.5	3.46
	27	13.2	3.49	13.9	3.51	14.7	3.53	15.1	3.54	15.3	3.55	16.4	3.57	17.2	3.59
	29	13.0	3.62	13.7	3.64	14.5	3.66	14.9	3.67	15.1	3.67	16.2	3.69	17.0	3.71
	31	12.8	3.74	13.5	3.76	14.3	3.78	14.7	3.79	14.9	3.79	16.0	3.82	16.8	3.84
	33	12.6	3.86	13.3	3.88	14.1	3.90	14.5	3.91	14.7	3.92	15.8	3.94	16.6	3.96
	35	12.4	3.99	13.1	4.01	13.9	4.03	14.3	4.04	14.5	4.04	15.6	4.07	16.4	4.09
	37	12.2	4.11	12.9	4.13	13.7	4.15	14.1	4.16	14.3	4.17	15.4	4.19	16.2	4.21
	39	12.0	4.24	12.7	4.26	13.5	4.28	13.9	4.29	14.1	4.30	15.2	4.32	16.0	4.34
	41	11.8	4.37	12.5	4.40	13.3	4.42	13.7	4.43	13.9	4.43	15.0	4.46	15.8	4.48
	43	11.6	4.51	12.3	4.53	13.1	4.55	13.5	4.56	13.7	4.57	14.8	4.59	15.6	4.61
	46	11.2	4.70	11.9	4.72	12.7	4.74	13.2	4.75	13.4	4.76	14.5	4.78	15.3	4.80
43 (80%)	10	13.2	2.15	13.8	2.17	14.5	2.18	14.9	2.19	15.0	2.20	16.0	2.21	16.7	2.23
	12	13.0	2.24	13.6	2.26	14.3	2.27	14.7	2.28	14.9	2.29	15.8	2.31	16.6	2.32
	14	12.8	2.34	13.4	2.36	14.2	2.37	14.5	2.38	14.7	2.39	15.7	2.41	16.4	2.42
	16	12.6	2.44	13.3	2.46	14.0	2.48	14.4	2.49	14.5	2.49	15.5	2.51	16.2	2.53
	18	12.5	2.55	13.1	2.57	13.8	2.59	14.2	2.60	14.4	2.60	15.3	2.63	16.1	2.64
	20	12.3	2.67	12.9	2.69	13.6	2.71	14.0	2.72	14.2	2.72	15.1	2.74	15.9	2.76
	21	12.2	2.73	12.8	2.75	13.5	2.76	13.9	2.77	14.1	2.78	15.1	2.80	15.8	2.81
	23	12.0	2.84	12.6	2.86	13.3	2.88	13.7	2.89	13.9	2.89	14.9	2.91	15.6	2.93
	25	11.8	2.96	12.4	2.98	13.1	2.99	13.5	3.00	13.7	3.01	14.7	3.03	15.4	3.04
	27	11.6	3.07	12.2	3.09	12.9	3.11	13.3	3.12	13.5	3.12	14.5	3.14	15.2	3.16
	29	11.4	3.18	12.1	3.20	12.8	3.22	13.1	3.23	13.3	3.23	14.3	3.25	15.0	3.27
	31	11.3	3.29	11.9	3.31	12.6	3.33	13.0	3.33	13.1	3.34	14.1	3.36	14.8	3.38
	33	11.1	3.40	11.7	3.42	12.4	3.43	12.8	3.44	13.0	3.45	13.9	3.47	14.6	3.48
	35	10.9	3.51	11.5	3.53	12.2	3.54	12.6	3.55	12.8	3.56	13.7	3.58	14.4	3.59
	37	10.7	3.62	11.4	3.64	12.1	3.66	12.4	3.66	12.6	3.67	13.6	3.69	14.3	3.71
	39	10.6	3.73	11.2	3.75	11.9	3.77	12.3	3.78	12.4	3.78	13.4	3.81	14.1	3.82
	41	10.4	3.85	11.0	3.87	11.7	3.89	12.1	3.90	12.3	3.90	13.2	3.92	13.9	3.94
	43	10.2	3.97	10.8	3.99	11.5	4.00	11.9	4.01	12.1	4.02	13.1	4.04	13.8	4.06
	46	9.88	4.14	10.5	4.16	11.2	4.17	11.6	4.18	11.8	4.19	12.8	4.21	13.5	4.23
38 (70%)	10	11.6	1.92	12.1	1.93	12.8	1.95	13.1	1.96	13.3	1.96	14.1	1.98	14.7	1.99
	12	11.5	2.00	12.0	2.01	12.6	2.03	13.0	2.04	13.1	2.04	14.0	2.06	14.6	2.07
	14	11.3	2.09	11.8	2.10	12.5	2.12	12.8	2.13	13.0	2.13	13.8	2.15	14.4	2.16
	16	11.1	2.18	11.7	2.20	12.3	2.21	12.6	2.22	12.8	2.23	13.7	2.25	14.3	2.26
	18	11.0	2.28	11.5	2.30	12.2	2.31	12.5	2.32	12.7	2.33	13.5	2.35	14.1	2.36
	20	10.8	2.38	11.4	2.40	12.0	2.42	12.3	2.42	12.5	2.43	13.3	2.45	14.0	2.46
	21	10.7	2.44	11.3	2.45	11.9	2.47	12.2	2.48	12.4	2.48	13.3	2.50	13.9	2.51
	23	10.6	2.54	11.1	2.55	11.7	2.57	12.1	2.58	12.2	2.58	13.1	2.60	13.7	2.62
	25	10.4	2.64	10.9	2.66	11.6	2.67	11.9	2.68	12.1	2.69	12.9	2.70	13.6	2.72
	27	10.2	2.74	10.8	2.76	11.4	2.77	11.7	2.78	11.9	2.79	12.8	2.80	13.4	2.82
	29	10.1	2.84	10.6	2.86	11.2	2.87	11.6	2.88	11.7	2.88	12.6	2.90	13.2	2.92
	31	9.92	2.94	10.5	2.95	11.1	2.97	11.4	2.98	11.6	2.98	12.4	3.00	13.1	3.01
	33	9.77	3.04	10.3	3.05	10.9	3.07	11.3	3.07	11.4	3.08	12.3	3.10	12.9	3.11
	35	9.62	3.13	10.2	3.15	10.8	3.16	11.1	3.17	11.3	3.18	12.1	3.20	12.7	3.21
	37	9.46	3.23	10.0	3.25	10.6	3.26	10.9	3.27	11.1	3.28	11.9	3.30	12.6	3.31
	39	9.31	3.33	9.85	3.35	10.5	3.37	10.8	3.37	11.0	3.38	11.8	3.40	12.4	3.41
	41	9.15	3.44	9.69	3.45	10.3	3.47	10.6	3.48	10.8	3.48	11.6	3.50	12.3	3.52
	43	8.99	3.54	9.53	3.56	10.2	3.57	10.5	3.58	10.7	3.59	11.5	3.61	12.1	3.62
	46	8.71	3.69	9.26	3.71	9.90	3.73	10.2	3.73	10.4	3.74	11.3	3.76	11.9	3.78
32 (60%)	10	9.83	1.57	10.3	1.58	10.8	1.59	11.1	1.60	11.2	1.60	11.9	1.62	12.4	1.63
	12	9.70	1.63	10.2	1.64	10.7	1.66	11.0	1.66	11.1	1.67	11.8	1.68	12.3	1.69
	14	9.57	1.70	10.0	1.72	10.6	1.73	10.8	1.74	11.0	1.74	11.7	1.76	12.2	1.77
	16	9.43	1.78	9.90	1.79	10.4	1.81	10.7	1.81	10.9	1.82	11.6	1.83	12.1	1.85
	18	9.29	1.86	9.76	1.88	10.3	1.89	10.6	1.90	10.7	1.90	11.4	1.92	12.0	1.93
	20	9.15	1.95	9.62	1.96	10.2	1.97	10.4	1.98	10.6	1.98	11.3	2.00	11.8	2.01
	21	9.08	1.99	9.55	2.00	10.1	2.02	10.4	2.02	10.5	2.02	11.2	2.04	11.8	2.05
	23	8.94	2.07	9.41	2.09	9.94	2.10	10.2	2.11	10.4	2.11	11.1	2.12	11.6	2.14
	25	8.81	2.16	9.27	2.17	9.80	2.18	10.1	2.19	10.2	2.19	10.9	2.21	11.5	2.22
	27	8.67	2.24	9.13	2.25	9.66	2.27	9.94	2.27	10.1	2.27	10.8	2.29	11.3	2.30
	29	8.54	2.32	8.99	2.33	9.52	2.35	9.80	2.35	9.95	2.35	10.7	2.37	11.2	2.38
	31	8.40	2.40	8.86	2.41	9.39	2.43	9.67	2.43	9.81	2.43	10.5	2.45	11.1	2.46
	33	8.27	2.48	8.73	2.49	9.25	2.50	9.53	2.51	9.67	2.51	10.4	2.53	10.9	2.54
	35	8.14	2.56	8.60	2.57	9.12	2.58	9.40	2.59	9.54	2.59	10.2	2.61	10.8	2.62
	37	8.01	2.64	8.47	2.65	8.99	2.67	9.27	2.67	9.41	2.67	10.1	2.69	10.6	2.70
	39	7.88	2.72	8.34	2.74	8.86	2.75	9.14	2.75	9.28	2.76	9.99	2.77	10.5	2.79
	41	7.75	2.81	8.21	2.82	8.73	2.83	9.01	2.84	9.15	2.84	9.86	2.86	10.4	2.87
	43	7.61	2.89	8.07	2.90	8.60	2.92	8.88	2.93	9.02	2.93	9.74	2.95	10.3	2.96
	46	7.37	3.01	7.84	3.03	8.38	3.04	8.67	3.05	8.81	3.05	9.54	3.07	10.1	3.08

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CDB)	Indoor Air Temperature (°CWB)													
		14.0		16.0		18.0		19.0		19.5		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
27 (50%)	10	8.26	1.24	8.64	1.25	9.08	1.26	9.31	1.26	9.43	1.26	10.0	1.27	10.5	1.28
	12	8.16	1.29	8.54	1.30	8.98	1.31	9.22	1.31	9.33	1.32	9.93	1.33	10.4	1.33
	14	8.04	1.35	8.43	1.36	8.88	1.37	9.11	1.37	9.23	1.37	9.83	1.39	10.3	1.39
	16	7.93	1.41	8.32	1.42	8.76	1.43	9.00	1.43	9.12	1.44	9.72	1.45	10.2	1.46
	18	7.81	1.47	8.20	1.48	8.65	1.49	8.89	1.50	9.01	1.50	9.61	1.51	10.1	1.52
	20	7.69	1.53	8.08	1.55	8.53	1.56	8.77	1.56	8.89	1.57	9.50	1.58	9.95	1.59
	21	7.63	1.57	8.02	1.58	8.47	1.59	8.71	1.60	8.83	1.60	9.44	1.61	9.90	1.62
	23	7.52	1.63	7.91	1.65	8.36	1.66	8.59	1.66	8.71	1.67	9.32	1.68	9.77	1.69
	25	7.40	1.70	7.79	1.71	8.24	1.72	8.47	1.73	8.59	1.73	9.20	1.74	9.65	1.75
	27	7.29	1.76	7.67	1.77	8.12	1.79	8.36	1.79	8.48	1.79	9.07	1.81	9.53	1.82
	29	7.17	1.83	7.56	1.84	8.00	1.85	8.24	1.85	8.36	1.86	8.95	1.87	9.41	1.88
	31	7.06	1.89	7.45	1.90	7.89	1.91	8.12	1.92	8.24	1.92	8.84	1.93	9.29	1.94
	33	6.95	1.95	7.34	1.96	7.78	1.97	8.01	1.98	8.13	1.98	8.72	1.99	9.17	2.00
	35	6.84	2.02	7.23	2.03	7.67	2.04	7.90	2.04	8.02	2.05	8.61	2.06	9.06	2.06
	37	6.74	2.09	7.12	2.10	7.56	2.11	7.79	2.11	7.91	2.11	8.50	2.12	8.95	2.13
	39	6.63	2.16	7.01	2.17	7.45	2.18	7.68	2.18	7.80	2.18	8.39	2.19	8.84	2.20
	41	6.51	2.24	6.90	2.25	7.34	2.25	7.57	2.25	7.69	2.26	8.29	2.26	8.74	2.27
	43	6.40	2.32	6.78	2.32	7.23	2.33	7.46	2.33	7.58	2.33	8.18	2.34	8.63	2.34
	46	6.20	2.44	6.59	2.44	7.04	2.44	7.29	2.44	7.41	2.44	8.02	2.45	8.47	2.45
23 (40%)	10	7.01	1.02	7.33	1.03	7.70	1.03	7.90	1.04	8.00	1.04	8.49	1.05	8.87	1.05
	12	6.92	1.06	7.24	1.07	7.62	1.08	7.82	1.08	7.92	1.08	8.42	1.09	8.80	1.10
	14	6.82	1.11	7.15	1.12	7.53	1.13	7.73	1.13	7.83	1.13	8.34	1.14	8.72	1.15
	16	6.72	1.16	7.05	1.17	7.43	1.18	7.63	1.18	7.74	1.18	8.25	1.19	8.63	1.20
	18	6.62	1.21	6.95	1.22	7.34	1.23	7.54	1.23	7.64	1.24	8.15	1.25	8.54	1.26
	20	6.52	1.26	6.86	1.27	7.24	1.28	7.44	1.29	7.54	1.29	8.05	1.30	8.44	1.31
	21	6.47	1.29	6.81	1.30	7.19	1.31	7.39	1.32	7.49	1.32	8.00	1.33	8.39	1.34
	23	6.37	1.35	6.71	1.36	7.09	1.37	7.29	1.37	7.39	1.37	7.90	1.38	8.29	1.39
	25	6.28	1.40	6.61	1.41	6.99	1.42	7.19	1.42	7.29	1.43	7.80	1.44	8.19	1.44
	27	6.18	1.45	6.51	1.46	6.89	1.47	7.09	1.48	7.19	1.48	7.70	1.49	8.08	1.50
	29	6.08	1.50	6.41	1.51	6.79	1.52	6.99	1.53	7.09	1.53	7.59	1.54	7.98	1.55
	31	5.99	1.56	6.32	1.57	6.69	1.57	6.89	1.58	6.99	1.58	7.49	1.59	7.88	1.60
	33	5.90	1.61	6.22	1.62	6.60	1.63	6.79	1.63	6.89	1.63	7.40	1.64	7.78	1.65
	35	5.80	1.67	6.13	1.67	6.50	1.68	6.70	1.68	6.80	1.69	7.30	1.69	7.68	1.70
	37	5.71	1.72	6.04	1.73	6.41	1.74	6.61	1.74	6.71	1.74	7.21	1.75	7.59	1.75
	39	5.62	1.78	5.94	1.79	6.32	1.79	6.52	1.80	6.62	1.80	7.12	1.80	7.50	1.81
	41	5.52	1.85	5.85	1.85	6.23	1.86	6.42	1.86	6.53	1.86	7.03	1.86	7.41	1.87
	43	5.42	1.91	5.75	1.91	6.13	1.92	6.33	1.92	6.43	1.92	6.94	1.92	7.32	1.93
	46	5.26	2.01	5.59	2.01	5.97	2.01	6.18	2.01	6.28	2.01	6.80	2.01	7.19	2.02

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

[Heating Capacity]

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
73 (130%)	-15.0	11.3	3.71	11.2	3.76	11.1	3.82	11.1	3.86	11.0	3.90	11.0	3.99
	-13.0	11.4	3.63	11.3	3.69	11.2	3.77	11.2	3.81	11.2	3.86	11.2	3.96
	-11.0	11.7	3.60	11.6	3.68	11.6	3.77	11.6	3.82	11.6	3.87	11.6	3.98
	-10.0	11.9	3.61	11.9	3.69	11.9	3.79	11.9	3.84	11.9	3.89	11.9	4.00
	-9.1	12.1	3.62	12.1	3.71	12.1	3.81	12.1	3.86	12.1	3.92	12.1	4.03
	-7.6	12.6	3.66	12.6	3.75	12.6	3.86	12.6	3.92	12.6	3.98	12.6	4.09
	-5.6	13.3	3.74	13.3	3.84	13.3	3.95	13.3	4.01	13.3	4.07	13.3	4.19
	-3.7	14.1	3.83	14.1	3.94	14.1	4.06	14.1	4.12	14.1	4.18	14.1	4.30
	-0.7	15.4	4.00	15.4	4.11	15.3	4.23	15.3	4.29	15.3	4.35	15.3	4.47
	0.0	15.7	4.04	15.7	4.15	15.6	4.27	15.6	4.33	15.6	4.39	15.5	4.51
	1.0	16.1	4.10	16.1	4.21	16.1	4.33	16.0	4.39	16.0	4.45	15.9	4.56
	2.2	16.6	4.16	16.6	4.28	16.5	4.39	16.5	4.45	16.5	4.51	16.3	4.62
	4.1	17.4	4.26	17.3	4.37	17.3	4.48	17.2	4.54	17.1	4.59	17.0	4.70
	6.0	18.1	4.33	18.0	4.44	17.9	4.55	17.8	4.60	17.7	4.65	17.5	4.75
	7.9	18.7	4.38	18.6	4.49	18.4	4.59	18.3	4.63	18.2	4.68	18.0	4.76
	9.8	19.2	4.40	19.0	4.50	18.8	4.59	18.7	4.63	18.6	4.67	18.2	4.73
	11.8	19.6	4.37	19.3	4.46	19.1	4.53	18.9	4.57	18.7	4.60	18.3	4.65
	13.7	19.7	4.30	19.4	4.37	19.1	4.43	18.9	4.45	18.6	4.47	18.1	4.50
	15.0	19.7	4.21	19.4	4.27	18.9	4.32	18.7	4.34	18.4	4.35	17.8	4.37
	18.0	19.2	3.89	18.7	3.92	18.1	3.94	17.8	3.94	17.5	3.93	16.6	3.90
65 (120%)	-15.0	11.0	3.71	10.9	3.76	10.8	3.83	10.8	3.87	10.7	3.91	10.7	4.00
	-13.0	11.1	3.63	11.0	3.70	10.9	3.78	10.9	3.82	10.9	3.87	10.9	3.97
	-11.0	11.3	3.61	11.3	3.69	11.3	3.78	11.3	3.83	11.3	3.88	11.3	3.99
	-10.0	11.6	3.61	11.5	3.70	11.5	3.80	11.5	3.85	11.5	3.90	11.5	4.02
	-9.1	11.8	3.63	11.8	3.72	11.8	3.82	11.8	3.88	11.8	3.93	11.8	4.04
	-7.6	12.3	3.67	12.3	3.77	12.3	3.88	12.3	3.93	12.3	3.99	12.3	4.10
	-5.6	13.0	3.75	13.0	3.86	13.0	3.97	13.0	4.03	13.0	4.08	13.0	4.20
	-3.7	13.7	3.85	13.7	3.96	13.7	4.07	13.7	4.13	13.7	4.19	13.7	4.30
	-0.7	15.0	4.02	15.0	4.13	15.0	4.25	14.9	4.31	14.9	4.36	14.8	4.47
	0.0	15.3	4.06	15.3	4.17	15.3	4.29	15.2	4.35	15.2	4.40	15.1	4.51
	1.0	15.7	4.12	15.7	4.23	15.7	4.34	15.6	4.40	15.6	4.45	15.4	4.56
	2.2	16.2	4.18	16.2	4.30	16.1	4.41	16.1	4.46	16.0	4.51	15.9	4.61
	4.1	17.0	4.27	16.9	4.39	16.8	4.49	16.7	4.54	16.6	4.59	16.4	4.68
	6.0	17.7	4.35	17.6	4.45	17.4	4.55	17.3	4.60	17.2	4.64	16.9	4.72
	7.9	18.2	4.39	18.1	4.49	17.9	4.58	17.7	4.62	17.6	4.65	17.3	4.72
	9.8	18.7	4.40	18.5	4.49	18.2	4.56	18.0	4.59	17.8	4.62	17.4	4.67
	11.8	19.0	4.36	18.7	4.43	18.3	4.49	18.1	4.52	17.9	4.54	17.4	4.57
	13.7	19.0	4.26	18.7	4.32	18.2	4.37	18.0	4.38	17.7	4.40	17.1	4.40
	15.0	18.9	4.16	18.5	4.21	18.0	4.25	17.8	4.26	17.5	4.26	16.8	4.25
	18.0	18.3	3.81	17.7	3.83	17.1	3.83	16.7	3.82	16.3	3.81	15.4	3.76
59 (110%)	-15.0	10.7	3.72	10.7	3.78	10.6	3.85	10.6	3.90	10.6	3.94	10.5	4.04
	-13.0	10.8	3.65	10.8	3.73	10.8	3.81	10.7	3.86	10.7	3.91	10.7	4.01
	-11.0	11.1	3.64	11.1	3.72	11.1	3.82	11.1	3.87	11.1	3.92	11.1	4.03
	-10.0	11.4	3.65	11.4	3.74	11.4	3.84	11.4	3.89	11.4	3.94	11.4	4.05
	-9.1	11.6	3.66	11.6	3.76	11.6	3.86	11.6	3.91	11.6	3.97	11.6	4.08
	-7.6	12.1	3.71	12.1	3.81	12.1	3.92	12.1	3.97	12.1	4.02	12.1	4.14
	-5.6	12.8	3.79	12.8	3.90	12.8	4.01	12.8	4.06	12.8	4.12	12.7	4.23
	-3.7	13.5	3.89	13.5	4.00	13.5	4.11	13.5	4.17	13.5	4.22	13.4	4.33
	-0.7	14.8	4.07	14.8	4.18	14.7	4.28	14.7	4.34	14.6	4.39	14.5	4.49
	0.0	15.1	4.11	15.0	4.22	15.0	4.32	14.9	4.38	14.9	4.43	14.7	4.53
	1.0	15.5	4.16	15.5	4.27	15.4	4.38	15.3	4.43	15.3	4.48	15.1	4.57
	2.2	16.0	4.23	15.9	4.33	15.8	4.43	15.7	4.48	15.7	4.53	15.5	4.62
	4.1	16.7	4.32	16.6	4.42	16.5	4.51	16.4	4.55	16.3	4.60	16.0	4.68
	6.0	17.4	4.38	17.2	4.48	17.0	4.56	16.9	4.60	16.7	4.63	16.4	4.70
	7.9	17.9	4.42	17.7	4.50	17.4	4.57	17.3	4.61	17.1	4.64	16.7	4.69
	9.8	18.3	4.41	18.0	4.49	17.7	4.55	17.5	4.57	17.3	4.59	16.8	4.63
	11.8	18.5	4.36	18.1	4.42	17.7	4.46	17.5	4.48	17.2	4.49	16.6	4.51
	13.7	18.5	4.25	18.1	4.30	17.6	4.32	17.3	4.33	17.0	4.34	16.3	4.33
	15.0	18.3	4.14	17.9	4.18	17.3	4.19	17.0	4.19	16.7	4.19	15.9	4.17
	18.0	17.6	3.77	16.9	3.77	16.2	3.76	15.8	3.74	15.4	3.72	14.5	3.67
54 (100%)	-15.0	10.6	3.96	10.4	4.01	10.4	4.09	10.4	4.13	10.3	4.17	10.3	4.27
	-13.0	10.6	3.87	10.6	3.95	10.5	4.04	10.5	4.08	10.5	4.13	10.5	4.25
	-11.0	10.9	3.85	10.9	3.94	10.8	4.04	10.8	4.09	10.8	4.15	10.9	4.27
	-10.0	11.1	3.86	11.1	3.96	11.1	4.06	11.1	4.11	11.1	4.17	11.1	4.29
	-9.1	11.3	3.88	11.3	3.98	11.3	4.08	11.3	4.14	11.3	4.20	11.3	4.32
	-7.6	11.8	3.92	11.8	4.03	11.8	4.14	11.8	4.20	11.8	4.26	11.8	4.38
	-5.6	12.4	4.01	12.5	4.12	12.5	4.24	12.5	4.30	12.5	4.36	12.4	4.49
	-3.7	13.2	4.11	13.2	4.23	13.2	4.35	13.2	4.41	13.2	4.47	13.1	4.60
	-0.7	14.4	4.30	14.4	4.42	14.4	4.54	14.4	4.60	14.3	4.66	14.2	4.77
	0.0	14.7	4.34	14.7	4.46	14.7	4.58	14.6	4.64	14.6	4.70	14.5	4.81
	1.0	15.1	4.40	15.1	4.52	15.0	4.64	15.0	4.70	15.0	4.75	14.8	4.86
	2.2	15.6	4.47	15.6	4.59	15.5	4.71	15.4	4.76	15.4	4.81	15.2	4.92
	4.1	16.3	4.57	16.3	4.68	16.1	4.79	16.1	4.84	16.0	4.89	15.7	4.98
	6.0	17.0	4.64	16.9	4.75	16.7	4.85	16.6	4.90	16.5	4.94	16.2	5.02
	7.9	17.5	4.69	17.4	4.79	17.1	4.88	17.0	4.92	16.8	4.95	16.5	5.02
	9.8	17.9	4.69	17.7	4.78	17.4	4.86	17.2	4.89	17.0	4.92	16.6	4.96
	11.8	18.1	4.64	17.9	4.72	17.5	4.78	17.3	4.80	17.0	4.82	16.5	4.84
	13.7	18.1	4.54	17.8	4.60	17.3	4.64	17.1	4.65	16.8	4.66	16.2	4.66
	15.0	18.0	4.43	17.6	4.48	17.1	4.50	16.8	4.51	16.5	4.51	15.8	4.50
	18.0	17.3	4.04	16.7	4.06	16.0	4.05	15.7	4.04	15.3	4.02	14.4	3.97

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
49 (90%)	-15.0	10.0	3.69	9.92	3.74	9.87	3.81	9.85	3.84	9.83	3.88	9.80	3.97
	-13.0	10.2	3.67	10.2	3.73	10.1	3.81	10.1	3.86	10.1	3.90	10.1	4.00
	-11.0	10.6	3.67	10.6	3.75	10.5	3.84	10.5	3.89	10.5	3.94	10.5	4.05
	-10.0	10.8	3.69	10.8	3.77	10.8	3.87	10.8	3.92	10.8	3.97	10.8	4.08
	-9.1	11.0	3.70	11.0	3.80	11.0	3.89	11.0	3.95	11.0	4.00	11.0	4.12
	-7.6	11.5	3.74	11.4	3.84	11.4	3.94	11.4	4.00	11.4	4.06	11.4	4.17
	-5.6	12.1	3.81	12.1	3.91	12.1	4.02	12.1	4.08	12.1	4.14	12.0	4.26
	-3.7	12.7	3.89	12.7	4.00	12.7	4.11	12.7	4.17	12.7	4.23	12.7	4.35
	-0.7	13.8	4.02	13.8	4.13	13.7	4.25	13.7	4.31	13.7	4.37	13.7	4.50
	0.0	14.0	4.05	14.0	4.17	14.0	4.28	14.0	4.34	14.0	4.41	13.9	4.53
	1.0	14.4	4.10	14.4	4.21	14.3	4.33	14.3	4.39	14.3	4.45	14.2	4.58
	2.2	14.8	4.16	14.8	4.27	14.7	4.39	14.7	4.45	14.7	4.51	14.6	4.64
	4.1	15.5	4.24	15.4	4.36	15.4	4.48	15.4	4.54	15.3	4.60	15.2	4.72
	6.0	16.1	4.33	16.1	4.44	16.0	4.56	16.0	4.62	15.9	4.68	15.8	4.80
	7.9	16.8	4.41	16.7	4.52	16.6	4.63	16.5	4.69	16.5	4.75	16.4	4.87
	9.8	17.4	4.48	17.3	4.59	17.2	4.70	17.1	4.75	17.0	4.81	16.9	4.92
	11.8	18.0	4.54	17.8	4.64	17.7	4.75	17.6	4.80	17.5	4.85	17.3	4.95
	13.7	18.5	4.57	18.3	4.67	18.1	4.77	18.0	4.81	17.9	4.86	17.6	4.95
	15.0	18.8	4.58	18.6	4.67	18.4	4.76	18.2	4.80	18.1	4.84	17.8	4.92
	18.0	19.3	4.50	19.0	4.57	18.6	4.63	18.4	4.65	18.2	4.68	17.6	4.71
43 (80%)	-15.0	8.56	3.35	8.56	3.42	8.56	3.50	8.56	3.55	8.56	3.59	8.56	3.69
	-13.0	8.94	3.41	8.93	3.49	8.93	3.57	8.92	3.62	8.92	3.66	8.92	3.76
	-11.0	9.39	3.47	9.37	3.55	9.36	3.64	9.35	3.68	9.35	3.73	9.34	3.84
	-10.0	9.63	3.50	9.61	3.58	9.60	3.67	9.59	3.72	9.58	3.77	9.56	3.87
	-9.1	9.86	3.53	9.84	3.61	9.82	3.70	9.81	3.75	9.80	3.80	9.78	3.90
	-7.6	10.3	3.57	10.2	3.66	10.2	3.75	10.2	3.80	10.2	3.85	10.2	3.96
	-5.6	10.8	3.63	10.8	3.73	10.7	3.82	10.7	3.87	10.7	3.92	10.7	4.02
	-3.7	11.4	3.69	11.3	3.79	11.3	3.88	11.2	3.93	11.2	3.98	11.2	4.09
	-0.7	12.2	3.78	12.1	3.88	12.1	3.97	12.0	4.02	12.0	4.07	12.0	4.18
	0.0	12.4	3.80	12.3	3.90	12.3	3.99	12.2	4.04	12.2	4.10	12.1	4.21
	1.0	12.7	3.83	12.6	3.93	12.5	4.03	12.5	4.08	12.5	4.13	12.4	4.24
	2.2	13.0	3.87	12.9	3.97	12.9	4.06	12.8	4.12	12.8	4.17	12.7	4.29
	4.1	13.5	3.93	13.4	4.03	13.4	4.13	13.3	4.18	13.3	4.24	13.3	4.36
	6.0	14.0	3.99	14.0	4.10	13.9	4.21	13.9	4.26	13.9	4.32	13.8	4.45
	7.9	14.6	4.07	14.5	4.18	14.5	4.29	14.4	4.35	14.4	4.41	14.4	4.55
	9.8	15.2	4.16	15.1	4.27	15.1	4.39	15.1	4.45	15.0	4.52	15.0	4.66
	11.8	15.8	4.26	15.8	4.38	15.8	4.51	15.7	4.57	15.7	4.64	15.7	4.79
	13.7	16.5	4.36	16.5	4.49	16.4	4.62	16.4	4.69	16.4	4.76	16.3	4.90
	15.0	17.0	4.43	16.9	4.56	16.9	4.69	16.9	4.76	16.8	4.83	16.7	4.96
	18.0	18.1	4.53	17.9	4.66	17.8	4.78	17.7	4.84	17.6	4.90	17.3	5.00
38 (70%)	-15.0	7.52	3.07	7.51	3.14	7.51	3.21	7.51	3.25	7.51	3.29	7.51	3.37
	-13.0	7.85	3.13	7.84	3.20	7.83	3.27	7.83	3.31	7.83	3.36	7.83	3.45
	-11.0	8.24	3.18	8.23	3.25	8.21	3.34	8.21	3.38	8.20	3.42	8.19	3.51
	-10.0	8.45	3.21	8.44	3.28	8.42	3.37	8.41	3.41	8.41	3.45	8.39	3.55
	-9.1	8.65	3.23	8.64	3.31	8.62	3.39	8.61	3.44	8.60	3.48	8.58	3.58
	-7.6	9.01	3.27	8.99	3.35	8.96	3.44	8.95	3.48	8.93	3.53	8.91	3.63
	-5.6	9.50	3.33	9.47	3.41	9.43	3.50	9.41	3.54	9.39	3.59	9.36	3.69
	-3.7	9.97	3.38	9.93	3.47	9.89	3.56	9.86	3.60	9.84	3.65	9.80	3.75
	-0.7	10.7	3.47	10.7	3.55	10.6	3.64	10.6	3.69	10.5	3.74	10.5	3.84
	0.0	10.9	3.49	10.8	3.57	10.8	3.66	10.7	3.71	10.7	3.76	10.7	3.86
	1.0	11.1	3.51	11.1	3.60	11.0	3.69	11.0	3.74	10.9	3.79	10.9	3.89
	2.2	11.4	3.55	11.3	3.63	11.3	3.72	11.2	3.77	11.2	3.82	11.2	3.93
	4.1	11.9	3.60	11.8	3.69	11.7	3.78	11.7	3.83	11.7	3.89	11.6	4.00
	6.0	12.3	3.66	12.3	3.75	12.2	3.85	12.2	3.90	12.2	3.96	12.1	4.08
	7.9	12.8	3.73	12.7	3.83	12.7	3.93	12.7	3.99	12.7	4.04	12.6	4.17
	9.8	13.3	3.81	13.3	3.91	13.2	4.02	13.2	4.08	13.2	4.14	13.2	4.27
	11.8	13.9	3.90	13.9	4.01	13.8	4.13	13.8	4.19	13.8	4.25	13.8	4.38
	13.7	14.5	4.00	14.5	4.11	14.4	4.23	14.4	4.29	14.4	4.36	14.3	4.49
	15.0	14.9	4.06	14.9	4.18	14.8	4.30	14.8	4.36	14.8	4.42	14.7	4.55
	18.0	15.8	4.16	15.8	4.27	15.6	4.38	15.5	4.43	15.4	4.49	15.2	4.58
32 (60%)	-15.0	6.34	2.63	6.34	2.69	6.34	2.75	6.34	2.79	6.34	2.82	6.34	2.90
	-13.0	6.63	2.68	6.62	2.74	6.61	2.81	6.61	2.84	6.61	2.88	6.61	2.96
	-11.0	6.96	2.73	6.95	2.79	6.94	2.86	6.93	2.90	6.93	2.94	6.92	3.02
	-10.0	7.14	2.75	7.12	2.82	7.11	2.89	7.10	2.92	7.10	2.96	7.09	3.05
	-9.1	7.31	2.77	7.29	2.84	7.28	2.91	7.27	2.95	7.26	2.99	7.25	3.07
	-7.6	7.61	2.81	7.59	2.88	7.57	2.95	7.55	2.99	7.54	3.03	7.52	3.11
	-5.6	8.02	2.86	7.99	2.93	7.96	3.00	7.95	3.04	7.93	3.08	7.90	3.17
	-3.7	8.42	2.90	8.39	2.97	8.35	3.05	8.33	3.09	8.31	3.13	8.27	3.21
	-0.7	9.05	2.97	9.00	3.05	8.95	3.12	8.93	3.16	8.90	3.20	8.86	3.29
	0.0	9.19	2.99	9.14	3.06	9.09	3.14	9.06	3.18	9.04	3.22	9.00	3.31
	1.0	9.40	3.01	9.34	3.09	9.29	3.16	9.26	3.20	9.24	3.25	9.20	3.34
	2.2	9.64	3.04	9.58	3.12	9.52	3.19	9.50	3.24	9.48	3.28	9.44	3.37
	4.1	10.0	3.09	9.96	3.16	9.90	3.25	9.88	3.29	9.86	3.33	9.83	3.43
	6.0	10.4	3.14	10.3	3.22	10.3	3.30	10.3	3.35	10.3	3.40	10.2	3.50
	7.9	10.8	3.20	10.8	3.28	10.7	3.37	10.7	3.42	10.7	3.47	10.7	3.57
	9.8	11.2	3.27	11.2	3.36	11.2	3.45	11.2	3.50	11.1	3.55	11.1	3.66
	11.8	11.7	3.35	11.7	3.44	11.7	3.54	11.7	3.59	11.7	3.65	11.6	3.76
	13.7	12.2	3.43	12.2	3.53	12.2	3.63	12.2	3.69	12.1	3.74	12.1	3.85
	15.0	12.6	3.48	12.6	3.58	12.5	3.69	12.5	3.74	12.5	3.79	12.4	3.90
	18.0	13.4	3.57	13.3	3.67	13.2	3.76	13.1	3.81	13.0	3.85	12.8	3.93

Combination Capacity Index (kW/%)	Outdoor Air Temperature (°CWB)	Indoor Air Temperature (°CDB)											
		16.0		18.0		20.0		21.0		22.0		24.0	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
27 (50%)	-15.0	5.36	2.31	5.35	2.36	5.35	2.42	5.35	2.44	5.35	2.47	5.35	2.54
	-13.0	5.60	2.35	5.59	2.41	5.58	2.46	5.58	2.49	5.58	2.52	5.58	2.59
	-11.0	5.87	2.39	5.86	2.45	5.85	2.51	5.85	2.54	5.84	2.57	5.84	2.65
	-10.0	6.02	2.41	6.01	2.47	6.00	2.53	5.99	2.56	5.99	2.60	5.98	2.67
	-9.1	6.17	2.43	6.15	2.49	6.14	2.55	6.13	2.58	6.13	2.62	6.11	2.69
	-7.6	6.42	2.46	6.40	2.52	6.38	2.59	6.37	2.62	6.36	2.65	6.35	2.73
	-5.6	6.77	2.50	6.74	2.57	6.72	2.63	6.71	2.67	6.69	2.70	6.67	2.78
	-3.7	7.10	2.54	7.07	2.61	7.04	2.67	7.03	2.71	7.01	2.74	6.98	2.82
	-0.7	7.63	2.61	7.59	2.67	7.55	2.74	7.53	2.77	7.51	2.81	7.48	2.89
	0.0	7.75	2.62	7.71	2.69	7.67	2.76	7.65	2.79	7.63	2.83	7.60	2.91
	1.0	7.92	2.64	7.88	2.71	7.84	2.78	7.82	2.81	7.80	2.85	7.77	2.93
	2.2	8.13	2.67	8.08	2.74	8.04	2.80	8.02	2.84	8.00	2.88	7.97	2.96
	4.1	8.45	2.71	8.40	2.78	8.36	2.85	8.34	2.89	8.33	2.93	8.31	3.02
	6.0	8.78	2.75	8.74	2.83	8.70	2.91	8.69	2.95	8.67	2.99	8.66	3.08
	7.9	9.12	2.81	9.09	2.89	9.06	2.97	9.05	3.01	9.04	3.06	9.03	3.15
	9.8	9.50	2.87	9.47	2.95	9.45	3.04	9.44	3.09	9.43	3.13	9.43	3.23
	11.8	9.92	2.94	9.90	3.03	9.88	3.13	9.88	3.17	9.87	3.22	9.86	3.33
	13.7	10.4	3.02	10.3	3.11	10.3	3.21	10.3	3.26	10.3	3.31	10.3	3.41
	15.0	10.7	3.07	10.6	3.17	10.6	3.26	10.6	3.31	10.6	3.36	10.5	3.46
	18.0	11.3	3.15	11.3	3.24	11.2	3.33	11.1	3.37	11.1	3.41	10.9	3.49
23 (40%)	-15.0	4.56	1.99	4.56	2.03	4.56	2.08	4.56	2.11	4.56	2.13	4.57	2.19
	-13.0	4.77	2.02	4.76	2.07	4.76	2.12	4.76	2.15	4.76	2.18	4.76	2.24
	-11.0	5.01	2.06	5.00	2.11	4.99	2.16	4.99	2.19	4.99	2.22	4.98	2.28
	-10.0	5.14	2.08	5.13	2.13	5.12	2.18	5.12	2.21	5.11	2.24	5.10	2.30
	-9.1	5.26	2.09	5.25	2.15	5.24	2.20	5.23	2.23	5.23	2.26	5.22	2.32
	-7.6	5.48	2.12	5.47	2.18	5.45	2.23	5.44	2.26	5.43	2.29	5.42	2.35
	-5.6	5.78	2.16	5.76	2.22	5.74	2.27	5.72	2.30	5.71	2.33	5.69	2.39
	-3.7	6.07	2.20	6.04	2.25	6.01	2.31	6.00	2.34	5.98	2.36	5.95	2.43
	-0.7	6.52	2.25	6.48	2.31	6.44	2.36	6.42	2.39	6.40	2.42	6.37	2.48
	0.0	6.63	2.26	6.59	2.32	6.54	2.37	6.52	2.40	6.50	2.43	6.47	2.50
	1.0	6.77	2.28	6.73	2.34	6.68	2.39	6.66	2.42	6.64	2.45	6.61	2.52
	2.2	6.94	2.30	6.90	2.36	6.85	2.42	6.83	2.44	6.81	2.47	6.78	2.54
	4.1	7.22	2.34	7.17	2.40	7.12	2.45	7.10	2.48	7.08	2.51	7.05	2.58
	6.0	7.49	2.37	7.44	2.43	7.40	2.50	7.38	2.53	7.36	2.56	7.34	2.63
	7.9	7.78	2.42	7.73	2.48	7.69	2.54	7.68	2.58	7.66	2.61	7.64	2.69
	9.8	8.08	2.46	8.04	2.53	8.00	2.60	7.99	2.63	7.98	2.67	7.96	2.75
	11.8	8.42	2.52	8.39	2.59	8.35	2.66	8.34	2.70	8.33	2.74	8.31	2.82
	13.7	8.77	2.58	8.73	2.65	8.70	2.73	8.68	2.76	8.67	2.80	8.63	2.88
	15.0	9.01	2.62	8.97	2.69	8.93	2.76	8.91	2.80	8.89	2.84	8.82	2.92
	18.0	9.55	2.67	9.48	2.74	9.40	2.81	9.34	2.84	9.28	2.87	9.12	2.93

Notes:

1. Capacities are based on the following conditions.
   Corresponding refrigerant piping length : 7.5m
   Level difference : 0m
2. TC : Total Capacity (kW)
   PI : Power Input (kW)

2.3.9 Capacity coefficient factor

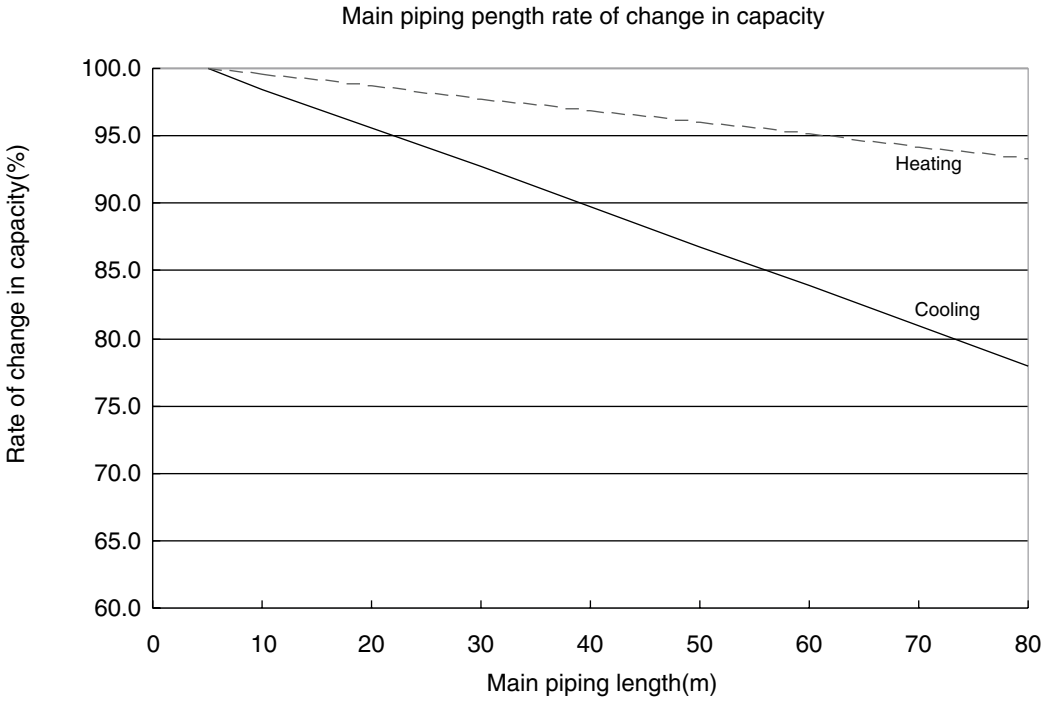
1) Rate of change in capacity due to the main piping length

Rate of change in cooling capacity

Main piping length(m)	5	10	20	30	40	50	60	70	80
Rate of change in cooling capacity(%)	100.0	95.5	95.6	92.7	89.7	86.8	83.9	80.9	78.0

Rate of change in heating capacity

Main piping length(m)	5	10	20	30	40	50	60	70	80
Rate of change in heating capacity(%)	100.0	99.6	98.7	97.8	96.9	96.0	95.1	94.2	93.3



2) Rate of change in capacity due to the branch piping length

7k Btu/h(2.1 kW) models

Piping Length	Rate of Change in Capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	98.0	99.5
15	96.0	98.9
20	94.0	98.4

9k Btu/h(2.6 kW) models

Piping Length	Rate of Change in Capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	97.5	99.5
15	95.0	98.9
20	92.5	98.4

12k Btu/h(3.5 kW) models

Piping Length	Rate of Change in Capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	97.0	98.3
15	94.0	96.5
20	91.0	94.8

18k Btu/h(5.3 kW) models

Piping Length	Rate of Change in Capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	97.8	99.5
15	95.5	99.0
20	93.3	98.5

24k Btu/h(7.0 kW) models

Piping Length	Rate of Change in Capacity	
	Cooling(%)	Heating(%)
5	100.0	100.0
10	97.8	99.2
15	95.5	98.4
20	93.3	97.6

3) Calculation of actual system capacity

① Outdoor unit rated capacity

$Q_{odu(rated)}$ [from specification table]

② Outdoor unit capacity at Ti, To temperature.

$Q_{odu(Ti, To)}$ [from capacity table]

③ Outdoor unit capacity coefficient factor

$F_{(Ti, To)} = Q_{odu(Ti, To)} / Q_{odu(rated)}$

④ Piping correction factor [from capacity voefficient factor table]

$F_{main\ (length, elevation)}$ for main piping length or elevation

$F_{branch\ (length, elevation)}$ for branch piping length or elevation

⑤ Individual indoor unit combinational capacity

$Q_{idu\ (combi)} = Q_{odu(rated)} \times Q_{idu(rated)} / Q_{idu(rated\text{-}total)}$

⑥ Individual indoor unit actual capacity

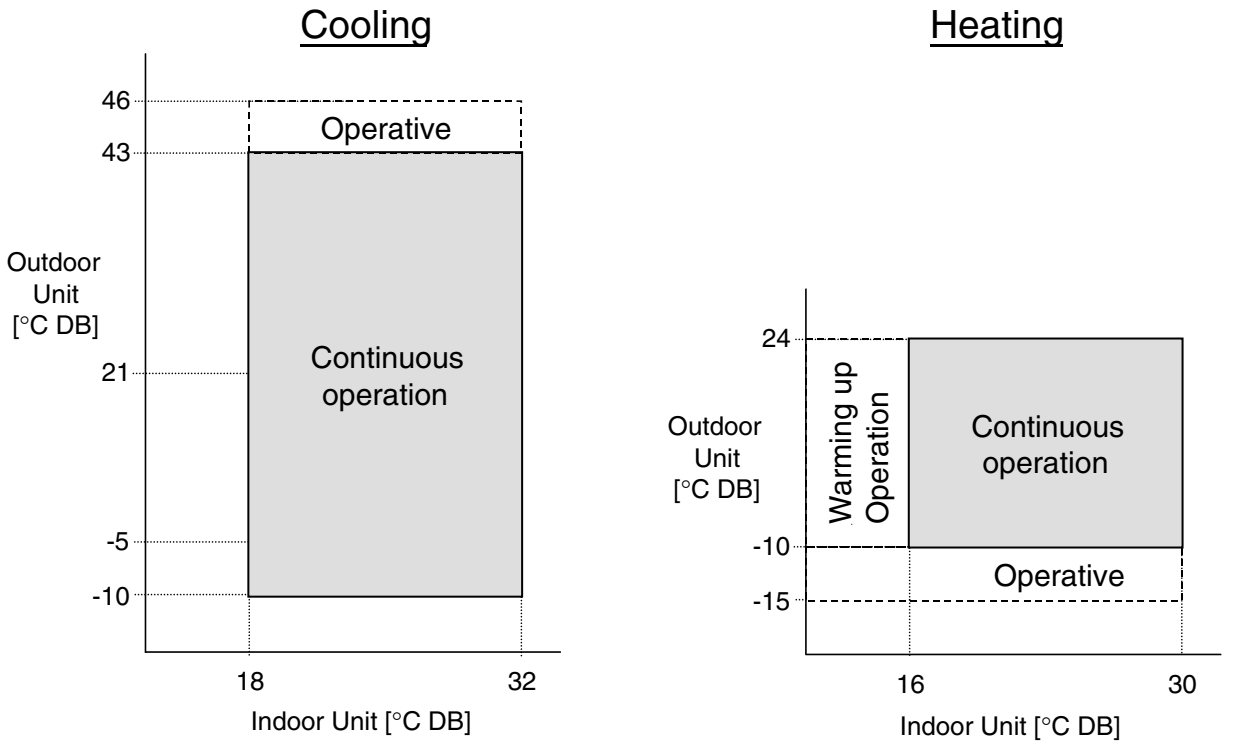
$Q_{idu\ (actual)} = Q_{odu(combi)} \times F_{(Ti, To)} \times F_{main\ (length, elevation)} \times F_{branch\ (length, elevation)}$

Example)

- Outdoor unit model : A6UW368FA0 [FM37AH UH0]
- Total indoor units combination : 7k(A room) + 7k .... + 9k
- Outdoor temperature : 39°CDB
- Indoor temperature : 19.5°CWB (A room)
- Main piping length (O/D to BD) : 40m
- Branch piping length (BD to I/D) : 10m (A room)
- Indoor unit actual coding capacity in A room?
  - $Q_{odu\ (rated)}$: **11.7 kW**
  - $Q_{odu\ (Ti, To)}$:
    1) Combination ratio : $Q_{odu\ (rated\ -\ total)}$ / $Q_{odu\ (rated)}$ = **115%**
    2) From capacity table at T_i, T_o
       110% : 11.4 kW
       120% : 11.4 kW
       ∴ $Q_{odu\ (Ti, To)}$ = **115%**
  - $F_{(Ti, To)}$: 11.4 kW / 11.7 kW = **97%**
  - $F_{main\ (length, elevation)}$ = **89.8%** (40m)
  - $F_{branch\ (length, elevation)}$ = **96.0%** (7k, 10m)
  - $Q_{idu(combi)}$ [7k] = $40k \times \frac{7k}{46k}$ = 6.1 kbtu/h

    ∴ $Q_{idu(actual)}$ [7k] = 6.1k x 0.97 x 0.898 x 0.96
    = 5.05 k Btu/h

2.3.10 Operation limit



Operative: Intermittent operation due to the operational conditions (indoor/outdoor temperature, humidity, load etc.) can cause the heating capacity to decrease

2.3.11 Electrical characteristics

Unit					Power		Compressor		OFM	
Model	**Type**	**Hz**	**Voltage**	**Voltage range**	**MCA**	**MOP**	**MSC**	**RLA**	**KW**	**FLA**
A6UW368FA0 [FM37AH UE0]	Multi inverter	50	380~415	MIN.:342 MAX.:456	7.17	12.17	-	5.0	0.065*2	0.46*2
A7UW428FA3 [FM41AH U33]					9.09	15.19	-	6.1	0.12*2	0.73*2
A8UW488FA3 [FM49AH U33]					9.96	15.79	-	6.8	0.12*2	0.73*2
A9UW548FA3 [FM57AH U33]					11.09	18.79	-	7.7	0.12*2	0.73*2

Notes :

1. Voltage range
   Voltage supplied to the unit terminals should be within the minimum and maximum range
2. Maximum allowable voltage unbalance between phase is 2 %
3. MCA / MOP
   MCA = (1.25 x RLA) + Load1 + Load2
   MOP = (2.25 x RLA) + Load1 + Load2
   - Load1 : sum of current for all other motors
   - Load2 : any other load rated 1.0A or more
4. Select wire spec. based on the MCA
5. Select proper circuit breaker as given below
   MCA < Circuit breaker ≤ MOP
6. Recommended circuit breaker is ELCB (Earth Leakage circuit breaker)
7. MSC & RLA are measured as the compressor only test condition.
8. MSC values
9. RLA is measured during each individual compressor test condition.
   Ex) *5.0* : RLA of (inv. comp.)
10. OFM is measured as the outdoor unit test condition

(Example) Selection of proper circuit breaker

① Model : A6UW368FA0[FM37AH UE0]

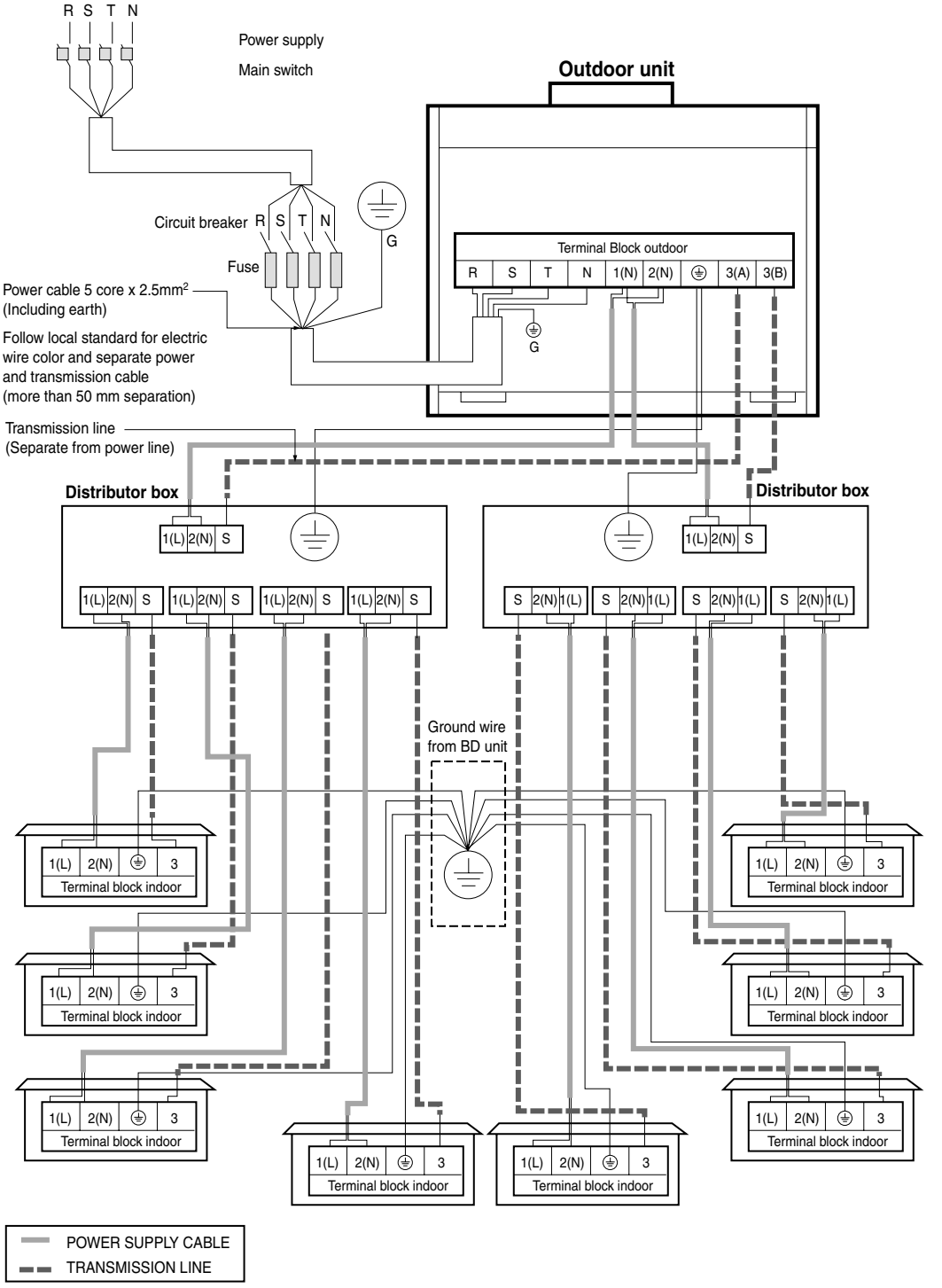
② MCA = (1.25 x RLA) + Load1 + Load2
= (1.25 x 5.0) + 0 + (0.73 x 2) = 7.17 A

③ MOP = (2.25 x RLA) + Load1 + Load2
= (2.25 x 5.0) + 0 + (0.73 x 2) = 12.17 A
→ Finally select circuit breaker 20A

MCA : Minimum Circuit Amperes (A)
MOP : Maximum rating over current protective device
MSC : Maximum Starting Current
RLA : Rated Load Amperes (A)
OFM : Outdoor Fan Motor
kW : Fan Motor rated output (kW)
FLA : Full Load Amperes (A)

2.3.12 Field wiring diagram

Models : A6UW/A7UW/A8UW/A9UW

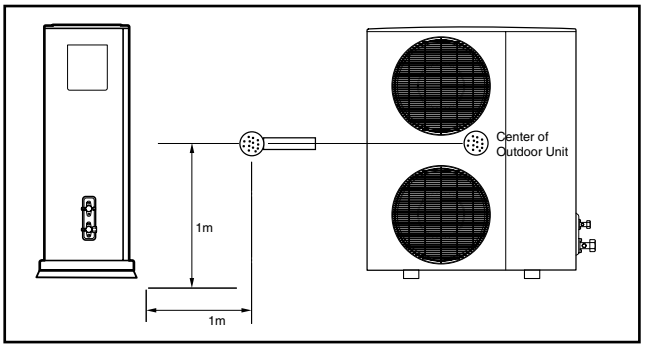


Notes:

1. All wiring, component and materials to be procured on the site should be according to the standard
2. Use copper conductor only
3. Install circuit breaker for safety
4. Unit should be grounded in compliance with the applicable local and national codes
5. Wiring cable size must comply with the applicable local and national code.

2.3.13 Sound levels

Overall



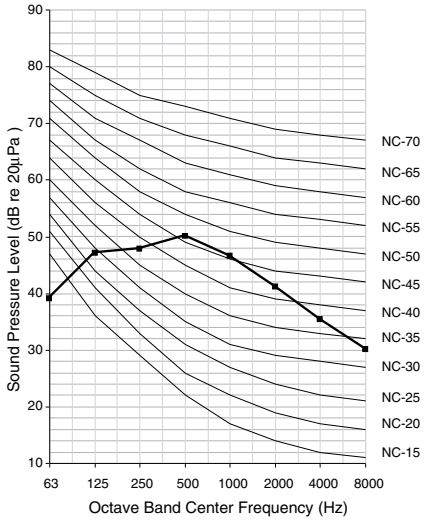
Notes:

- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition
- Data is valid at nominal operation condition
- Reference accoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

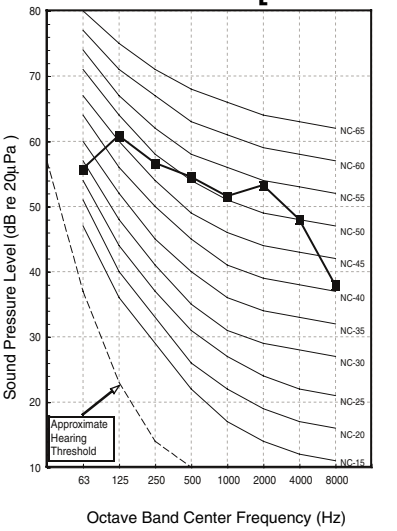
Sound pressure level

Model	50Hz, 400V
	Sound Pressure Level(dBA)±3
A6UW368FA0[FM37AH UE0]	51
A7UW428FA3[FM41AH U33]	58
A8UW488FA3[FM49AH U33]	58
A9UW548FA3[FM57AH U33]	59

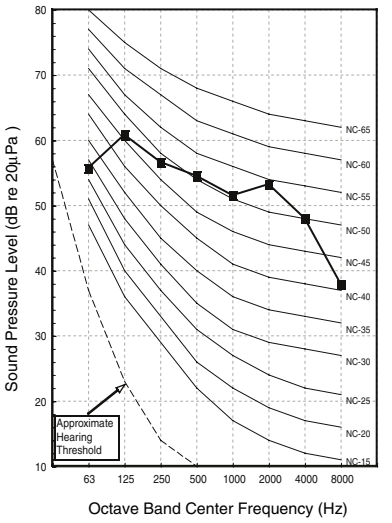
A6UW368FA0[FM37AH UE0]



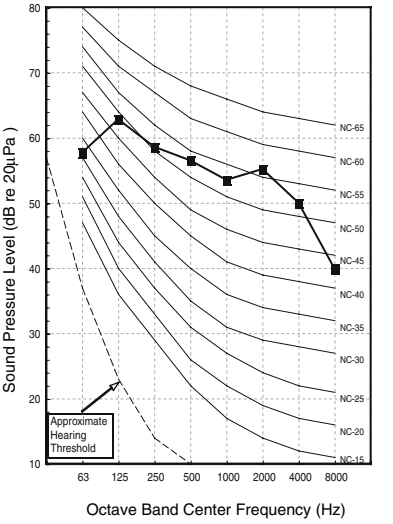
A7UW428FA3[FM41AH U33]



A8UW488FA3[FM49AH U33]



A9UW548FA3[FM57AH U33]



2.3.14 Accessories

Standard accessories

• Installation manual

Optional accessories

No.	Accessory Name	Model Name	Remarks
1	BD Unit	PMBD3620	For 1-2 Indoor Units
		PMBD3630	For 1-3 Indoor Units
		PMBD3640	For 1-4 Indoor Units
		PMBD7230	For 1-3 Indoor Units
2	Branch Unit	PMBL3620	For 2 BD Units
		PMBL5620	For 2 BD Units
		PMBL1203F0	For 3 BD Units

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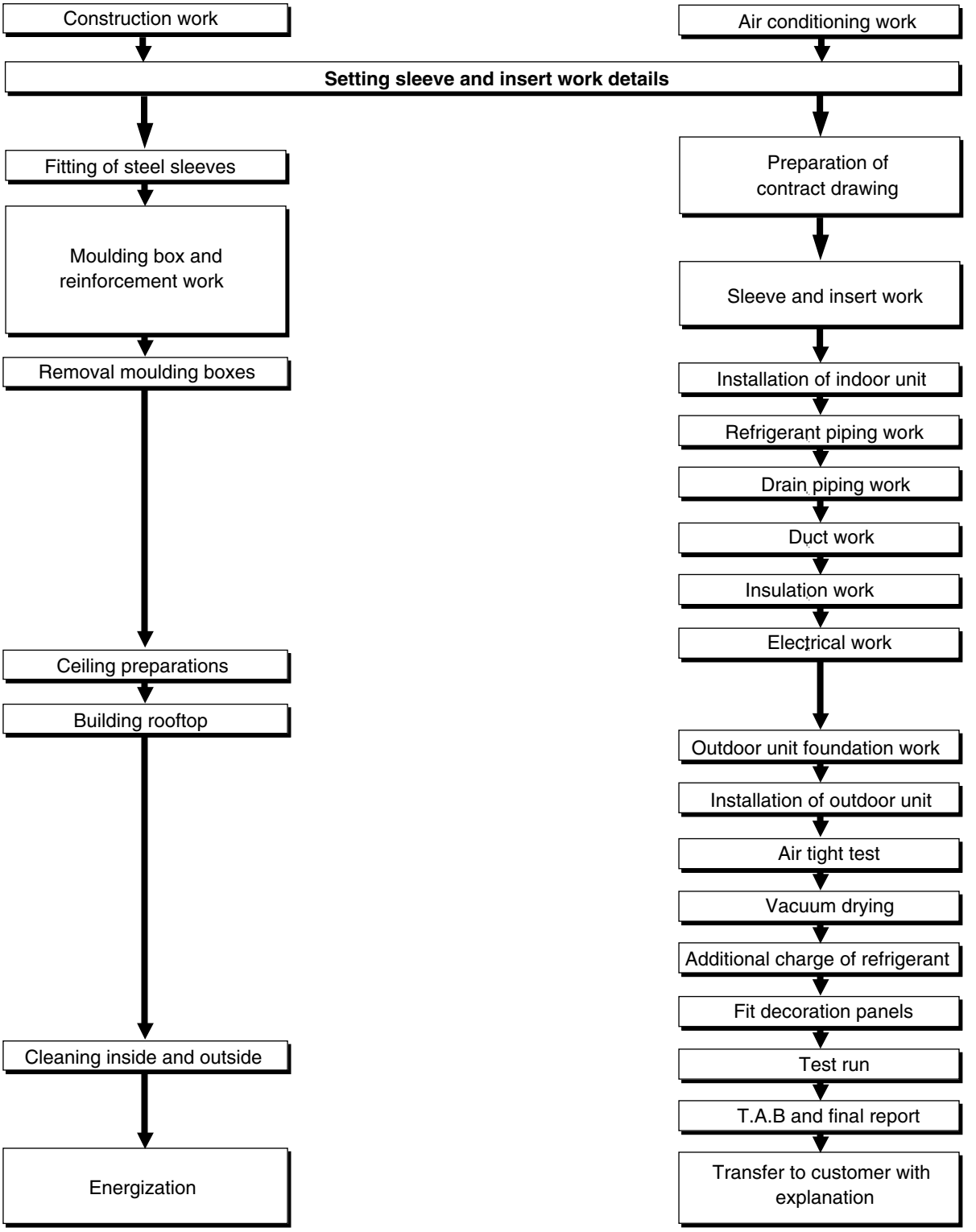
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1. General installation guideline
1.1 Installation process & Guideline

Striking a balance between system installation & General construction work.



1. The division of the work should be thoroughly clarified.

2. keep a constant check on the progress of the construction work to avoid deviations from the air conditioning work schedule.

1.2 Checking the drawing

Installation procedure	Remarks
Determination of work scope	Check and confirm required loads calculation, model selection, drawings etc.
Preparation of contract drawings	Make a relationship between outdoor ,indoor controller and option connection clear. (prepare control circuit diagram)
Sleeve and insert works	Determine sleeve position, size and counts as required
Installation of indoor units	Check model name to make sure the fitting is made correctly
Refrigerant piping works	Special attention to dryness , cleanness and tightness
Drain pipe works	Make sure that the drain pipe diameter is big enough and adjust it to downward gradient
Duct works	Make sure airflow is sufficient
Insulation works	Make sure no gap is left where the insulating materials are joined
Electrical work	Multiple core cable must not be used (suitable cable should be selected)
Outdoor unit foundation works	The foundation must be vibration proof and in level
Installation of outdoor units	Avoid airflow short circuit and ensure sufficient space is allowed for servicing
Air tight test	For 24 hours at 3.8MPa(R410a) or 2.8MPa(R22) there must be no drop in pressure
Vacuum drying	Less than 5 Torr (At least more than 1hr)
Additional charge of refrigerant	Charge the refrigerant accurately by using a charging cylinder
Fit decoration panels	Make sure there are no gaps left between facing materials used on the ceiling
Test run	Follow the testing operation check sheet
Transfer to customer with explanation	Explain to customer or operator the manual etc

1.3 Application guideline



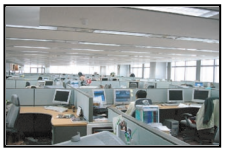
1.3.1 Restaurant

- Load characteristics

Extremely variable loads with high peaks, in many cases, occurring twice daily
High sensible and latent heat gains because of gas, steam, electric appliances, people, and food (sensible and latent loads are not always coincident)
Large quantities of makeup air normally required.
Unbalanced conditions in restaurant areas adjacent to kitchens which, although not part of the conditioned space still require special attention.
Heavy infiltration of outside air through doors during rush hours.
Smoking versus nonsmoking areas.

- Design concepts

High concentrations of food, body, and tobacco-smoke odors require adequate ventilation with exhaust facilities.
Step control of refrigeration plants gives satisfactory and economical operation under reduced loads.
Mechanical humidification is typically not provided because of high internal latent loads.



1.3.2 Office buildings

- Load characteristics

Peripheral zone have variable loads because of changing sun position and weather.

- Design concepts

Office buildings have allowed the use of almost every available air conditioning system.
Built in system flexibility is essential for office building design.
Stores, banks, restaurants, and entertainment facilities should have their own air distribution systems.

- Special consideration

Elevator, refrigeration, plumbing, mechanical equipment rooms, electrical switchgear, and telephone closets may require air conditioning units for spot cooling.
Tall buildings in cold climates experience severe stack effect.

- Revolving doors or vestibules, pressurized lobbies or lower floors
- Automatic dampers on elevator shaft vents, tight construction of the exterior skin
- Tight closure and seals on all dampers opening to the exterior



1.3.3 Bowling centers

- Load characteristics

Bowling center generally have little fenestration, solar load may not be important.
It is necessary to compare the day load and its high outside solar load and off peak people load with the evening peak people load and zero solar load.
The proper heat gain should be applied for each person to avoid too large a design heat load

- Design concepts

As other building types all air systems are generally the most suitable for bowling alley areas.
Temp. may be graded down to the pin area – Unit heaters are often used at this location.
Bowling areas must be well shielded from entrances so that no cold drafts are created in these areas

- Maintaining a positive pressure in the space when outside air pressurization is taken into consideration.
  The return and exhaust air systems should have a large number of small registers uniformly located at high points, or pockets, to draw off the hot, smoky, and odorous air.
  It may be desirable to use all outside air to cool during intermediate seasons.

- Special consideration

A large number of people concentrated in a relatively small area of a very large room.
A major portion of the floor area is unoccupied.
Heavy smoking, high physical activity, and high latent heat load.
Greatest use from about 6:00 P.M. to midnight



1.3.4 Comunication centers

- Load characteristics

Human occupancy is limited in telephone terminal rooms, so the load is primarily equipment heat load.
TV studio have very high lighting capacities, and the load may fluctuate in intensity over short periods.
The A/C system must be capable of handling wide load variations quickly, accurately, and efficiently.
Completely shielded from external noise and thermal environments.

- Design concepts

TV studio – Each rooms should have its own air distribution system separate from studio system.
Simultaneous heating and cooling cannot occur unless heating is as achieved solely by heat recovery
Studio should have its own refrigeration system in case of emergencies.
Required a remote location so that machine noise is isolated from the studio.

- Special consideration

On camera studio – Duct work must be planned carefully to avoid interference with proper studio operation.

Control room – The large number of necessary air changes and the low sound level must be maintained

Noise control – Air outlets or returns should be located away from areas where microphones are used

Air distribution – No rough edges, poor turns, or improperly installed damper to cause turbulence

Piping distribution – All piping in the studio should be supported by suitable vibration isolation hangers

Mechanical equipment room – Located as far from the studio as possible. (noise)

Office and dressing room – Such rooms are treated as separate zones, with their own controls.

Air return – The largest portion of studio air should be returned over the banks of lights.



1.3.5 Hotel

- Load characteristics

The hours for which each public area is used varies widely.
In many cases the load is due to internal sources from people, lights, and equipment.
The main lobby normally is operational 24 hours per day. Areas like restaurants, meeting rooms and retail areas have intermittent use, so the load changes frequently.
HVAC systems that respond effectively and economically must be selected for these areas.

- Design concepts

Year round availability of heating and cooling
Independent unit for each main public area
Economical and satisfactory operation at part-load and low-load conditions
Coordination with adjacent back of the house (BOTH) areas to ensure proper air pressurization

- Special consideration

Unitary refrigerant system – PAC, Air to air pump
Selection of particular system should be based on – first cost, economical operation, maintainability



1.3.6 Warehouses

- Load characteristics

Internal loads from lighting, people, and miscellaneous sources are generally low.
Most load is thermal transmission and infiltration.

- Design concepts

Most warehouses are only heated and ventilated. (located near heat entrances and work areas)
Necessary to keep the temperature above 4°C to protect sprinkler piping or stored materials from freezing.
If the stored product requires defined inside conditions, and a/c system must be added.

- Special consideration

Forklifts and trucks powered by gasoline, propane, and other fuels are often used inside warehouses.
Proper ventilation is necessary to alleviate the buildup of CO and other noxious fumes.
Proper ventilation of battery – charging rooms for electrically powered forklifts and trucks is also required.



1.3.7 Convention and exhibition centers

- Load characteristics

The main exhibition room is subject to a variety of loads, depending on the type of activity in progress.
Alternative loads that are very different in character may be encountered.
(Multi speed fans may provide a better balance of load during these high latent, low sensible periods of use.)

- System application

The main exhibition hall is normally handled by one or mail all air system.
Smaller meeting rooms are best conditioned either with individual room air handlers, or with variable volume central systems, because these rooms have high individual peak loads but are not used frequently.
Offices and restaurants often operate for many more hours than the meeting areas or exhibition areas and should be served separately.

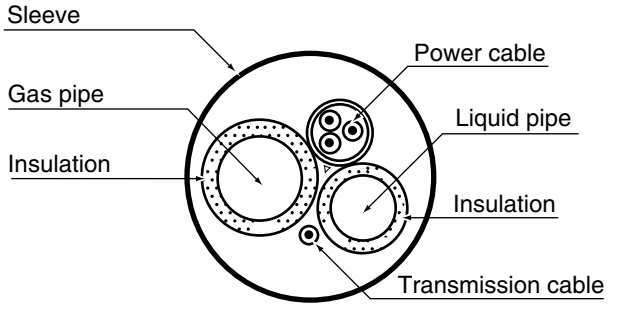
2. Guideline for each installation process
2.1 Sleeve and insert work

2.1.1 Positioning of the pipe holes

1) The through holes for the drain piping should be positioned such that pipes have a downward gradient (the gradient must be at least 1/100.The thickness of the insulating materials must also be taken into consideration.)
2) The diameter of the through holes for the refrigerant piping should include an allowance for the thickness of the heat insulation materials.
3) Attention should be paid to the construction of the beam themselves since there are sometimes parts of the beam which cannot be used to accommodate through holes.

2.1.2 Selection of sleeve

Sleeve work should be performed to make a space for passing pipe and wire through the wall or ground under construction.



For example if gas pipe and liquid pipe is 12.7mm , 6.35mm the sleeve diameter is minimum 79.05mm .

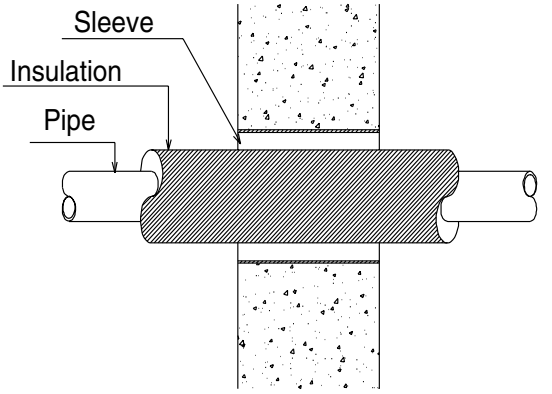
Gas pipe diameter	12.7mm
Liquid pipe diameter	6.35mm
Insulation thickness(gas pipe)	10mm x 2
Insulation thickness(liquid pipe)	10mm x 2
20mm surplus	20mm
Total sleeve diameter	79.05mm

* Assumption : Gas pipe insulation thickness and liquid pipe insulation thickness is 10mm and 10mm respectively

NOTE

Use of shielded transmission cable is recommended to avoid the problem of electrical noise.

2.1.3 Sleeve type



NOTE

Sleeve type should be considered as per local regulation & laws.

CAUTION

1. In high voltage generation places, water-proof flexible conduit should be used. (in substation room, in elevator room)
2. Conduit should be chosen in accordance with electrical installation regulation.

NOTE

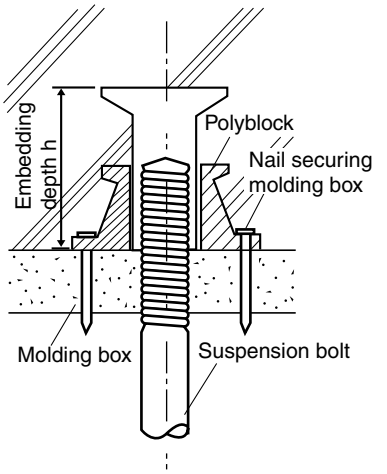
Cable conduit should be considered under the local regulation & laws.

2.1.4 Insert work and support work

An insert is a metal tool which is inserted into a floor or beam before the concrete is set such that fittings such as duct , pipes or suspension bolts for hanging units can be fitted into the place later. The positioning of the inserts must be decided early.

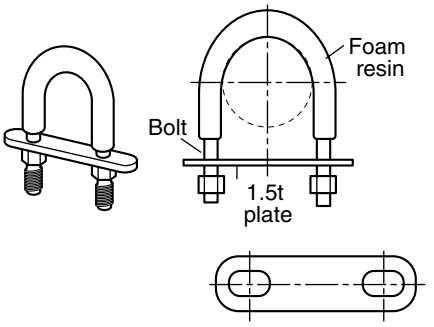
1) Insert work

Example : Through holes in a reinforced concrete beam

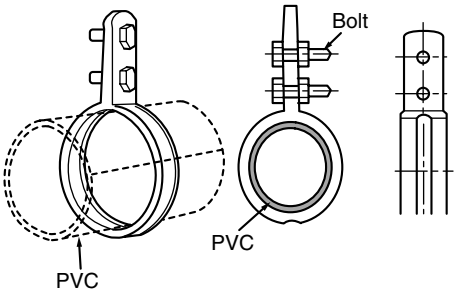


2) Support work.

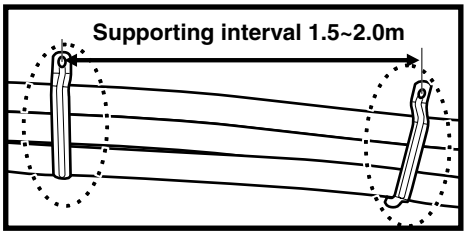
■ Insulated U-bolt type supporting



■ Insulated O-ring band type supporting



■ Saddle supporting

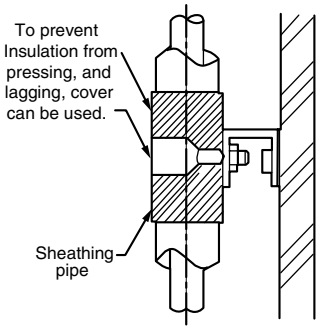


⚠CAUTION

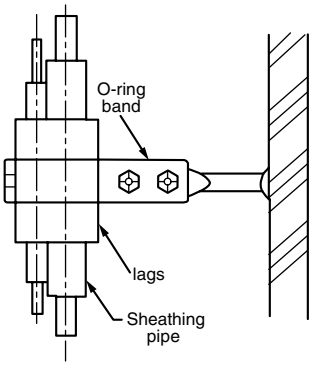
During saddle supporting work, insulation should not be pressed by saddle as this can lead to tearing of insulation and thus falling of condensed water during product operation.

a) Supporting with insulated pipe

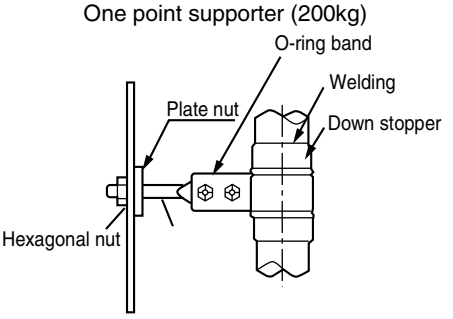
① U-bolt supporting

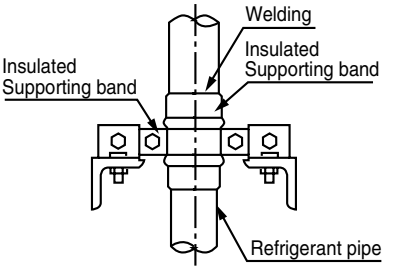


② 0-ring band supporting



B) Down stopper supporting





2.2 Refrigerant piping work

2.2.1 Principles of refrigerant piping

The " principles of refrigerant piping " must be strictly observed.

	Cause of problem	Action to avoid problem
Dry	-Rainwater, work water, etc gets into pipes from outside -Moisture generated inside pipe due to condensation	Flushing → Pipe covering → Vacuum drying
Clean	-Formation of oxides inside pipes during soldering -Dirt,dust or other extraneous material gets into pipes from outside	Replace Nitrogen → Pipe covering Flushing → Pipe covering
Air tight	-Leak from soldered area -Leak from flared area -Leak from flange area	Use the proper materials Adhere strictly to standard soldering work practice. Adhere strictly to standard flaring work practice. Adhere strictly to standard flaring connection work practice.

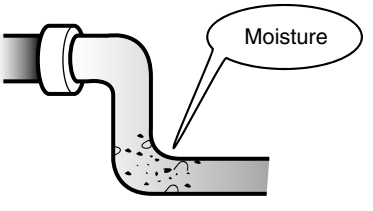
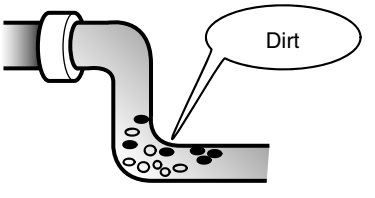
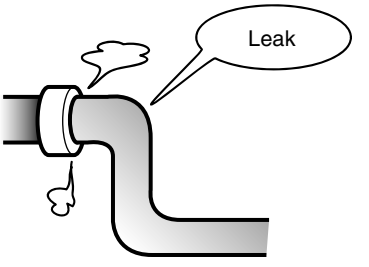
• The end of all copper pipes should be capped to protect them from dust or water particles while safe keeping







The 3 princples of refrigerant piping work

Dry	Clean	Air tight
Make sure there is no moisture inside the pipes	Make sure there is no dirt inside the pipes	Make sure the refrigerant does not leak out.
		

2.2.2 Flaring work

Main cause for gas leakage is due to defect in flaring work. Carry out correct flaring work in the following procedure.

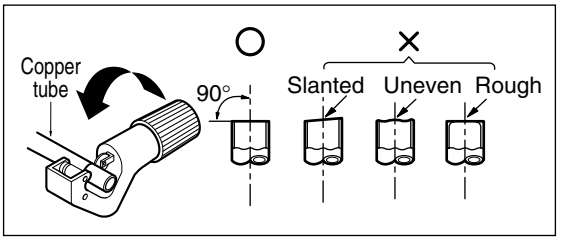
1) Cut the pipes and the cable.

① Use the piping kit accessory or the pipes purchased locally.

② Measure the distance between the indoor and the outdoor unit.

③ Cut the pipes a little longer than measured distance.

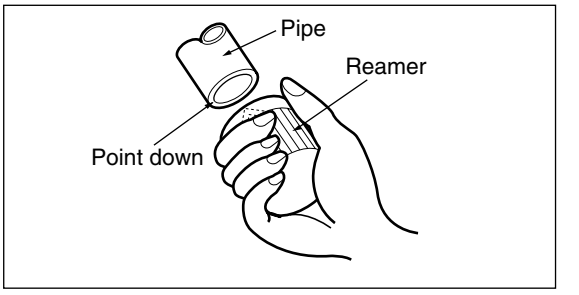
④ Cut the cable 1.5m longer than the pipe length.



2) Burrs removal

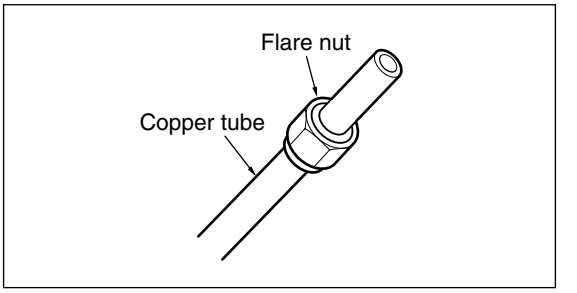
① Completely remove all burrs from the cut cross section of pipe/tube.

② Put the end of the copper tube/pipe in a downward direction as you remove burrs in order to avoid dropping of burrs into the tubing.



3) Putting nut on

① Remove flare nuts attached to indoor and outdoor unit, then put them on pipe/tube having completed burr removal.(not possible to put them on after flaring work)

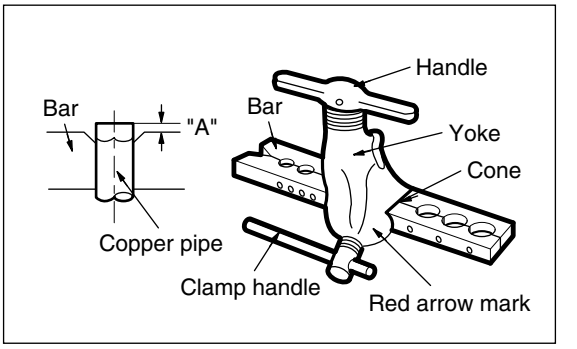


4) Flaring work

① Carry out flaring work using flaring tool as shown below.

② Firmly hold copper pipe in a die in the dimension shown in the table below.

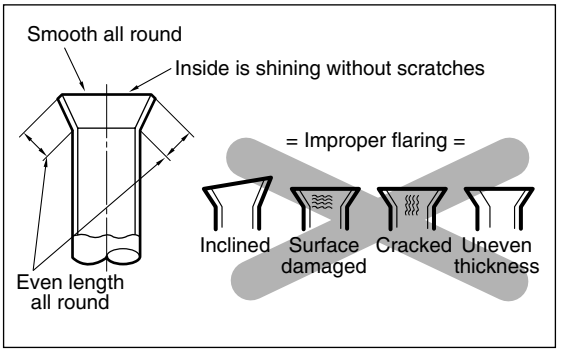
Outer diameter		A
mm	inch	mm
Ø6.35	1/4	1.1~1.3
Ø9.52	3/8	1.5~1.7
Ø12.7	1/2	1.6~1.8
Ø15.88	5/8	1.6~1.8
Ø19.05	3/4	1.9~2.1



5) Check after flaring

① Compare the flared work with figure on right side.

② If flare is found to be defective, cut off the flared section and do flaring work again.



NOTE

Choice of material for refrigerant piping
Copper pipe selection

a. The wall thickness of the refrigerant piping should comply with relevant local and national regulation for R410A the design pressure is 3.8MPa.(38.7kgf/cm^2)
b. If not, we recommend to use with phosphorus deoxidized copper type
c. Generally used copper pipe specifications as follows;

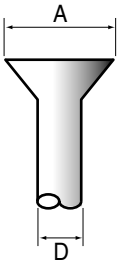
Size(ø)mm	Thickness	
	R22	R410A
6.35	0.7	0.8
9.52	0.8	0.8
12.70	0.8	0.8
15.88	0.8	1.0
19.05	0.8	1.0

* Never use the pipe which is mixed scrap or a pipe used somewhere else
The method how to distinguish the pipe mixed scarp : check the oxidization evidence after leaving the pipe for 24hour.

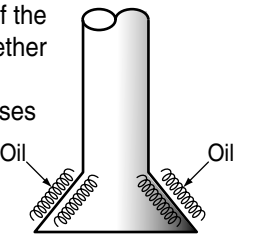
⚠CAUTION

Flare connection and procedure

1. Stiffened pipe must always be annealed at least once prior to the flaring work.
2. A pipe cutter must be used to cut the pipe. (A large pipe cutter must be used where the pipe has a large diameter. When cutting a pipe which is too big for the pipe cutter a metal saw may be used but care must be taken to ensure that the debris from sawing does not get into the pipe.)



3. Set the flaring tool to make sure the flare size remains within the prescribed limits.
4. Coat the inner and outer surface of the flare with refrigerator oil (Ester or ether oil).
(this ensures that the flare nut passes smoothly, preventing the pipe from twisting.)
Do not use SUNISO-4GS oil.



External diameter of pipe D		Pipe widening dimension A
(in)	(mm)	
1/4	6.35	8.6~9.0
3/8	9.52	12.6~13.0
1/2	12.7	15.8~16.2
5/8	15.88	19.0~19.4
3/4	19.05	22.9~23.3

⚠CAUTION

1. Burrs should be carefully removed.
2. 2 spanners should be used to grip the pipe.
3. The flare nut must be inserted before starting the flaring operation.
4. The appropriate amount of torque should be used to tighten the flare nut.
5. Check that there is no superficial damage to the surface of the flare.

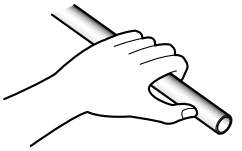
NOTE

Flange connection and procedure

1) Cut the pipe using a pipe cutter.



2) The cut edge has burrs.
(the amount of burrs becomes larger when pipe wall is thick)



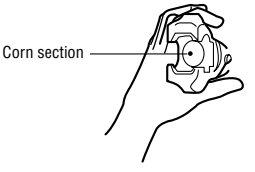
3) Remove the burrs using a reamer
(Be careful not to let particles enter the pipe. Point the pipe end downward during cutting)



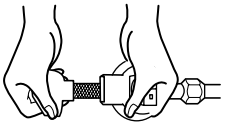
4) Clean the inside of the pipe
(use a thin stick with a cloth wrapped around it)



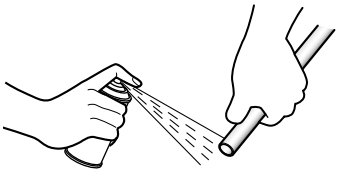
5) Before flaring , clean the cone section of the flaring tool.



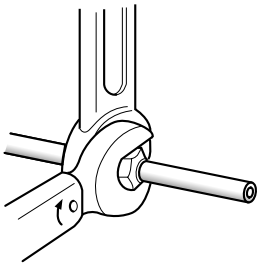
6) Flare the pipe.
Rotate the flaring tool 3 or 4 turns after a clicking sound is produced. this results in a clean flared surface



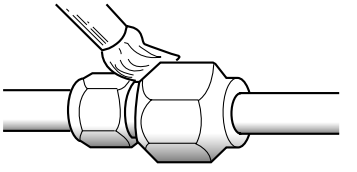
7) Apply refrigerant oil on the inside and outside of the flared section.
(Do not apply SUNISO oil)
(Be careful to keep dust away)



8) Tighten the flare nut. (Use a torque wrench to apply the proper tightening force)



9)
- Check for gas leaks.
  (Check at the threaded section of the flare nut for gas leak)
- Spay –type gas leak detecting products are available on the market.
- Soap water may be used to check for leaks , but use only neutral soap to prevent corrosion of the flare nut.
- Be sure to wipe the nut area clean after the gas leak check.



2.2.3 Pipe connection flaring

NOTE

1. After installation completion make sure to open the valve. operating the unit with the valve shut off will destroy the compressor (Refer to the additional refrigerant charge detail information)
2. Use R410A to add refrigerant. All field piping must be installed by a licensed refrigeration technician
3. Must comply with local and national standard regulations.

1) Connecting the piping to the indoor unit and drain hose to drain pipe

① Align the center of the piping and sufficiently tighten the flare nut by hand.

② Tighten the flare nut with a wrench. Wrap the insulation material around the connecting portion.

Outside diameter(Ø)		Torque
mm	inch	kg·f.m
6.35	1/4	1.80~2.50
9.52	3/8	3.40~4.20
12.7	1/2	5.50~6.60
15.88	5/8	6.30~8.20
19.05	3/4	9.90~12.1

2) Wrap the insulation material around the connecting portion.

① Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there is no gap.

② Wrap the area which accommodates the rear piping housing section with vinyl tape.

③ When the piping is passed through a tray, duct work or a sleeve the insulation wrapping on the pipe is not required.

3) Close up a socket out of use with a brass cap.

① Align the center of the piping and sufficiently tighten the brass cap by hand.

② Tighten the brass cap with a wrench.

③ Wrap the area contacted with insulation.

⚠CAUTION

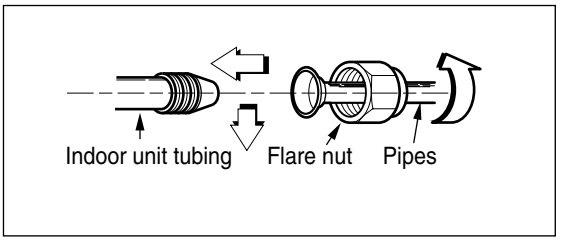
Over tightening of the flare nuts in the pipes may cause nuts to crack or the refrigerant to leak.

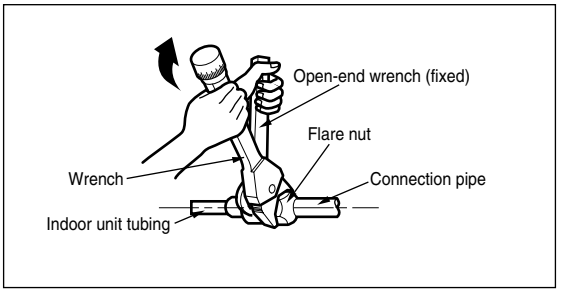
⚠CAUTION

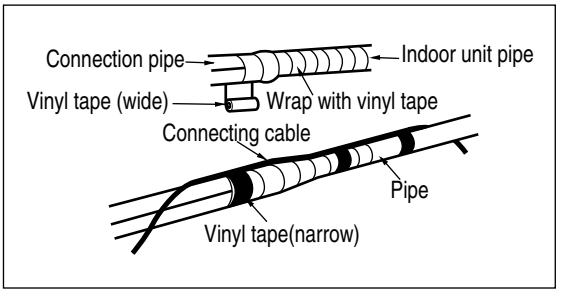
Improper piping and flaring can lead to the leakage of refrigerant

NOTE

For flaring work of the piping, follow the instructions in the installation manual to each unit.







⚠CAUTION

Never use the plastic cap during closing.

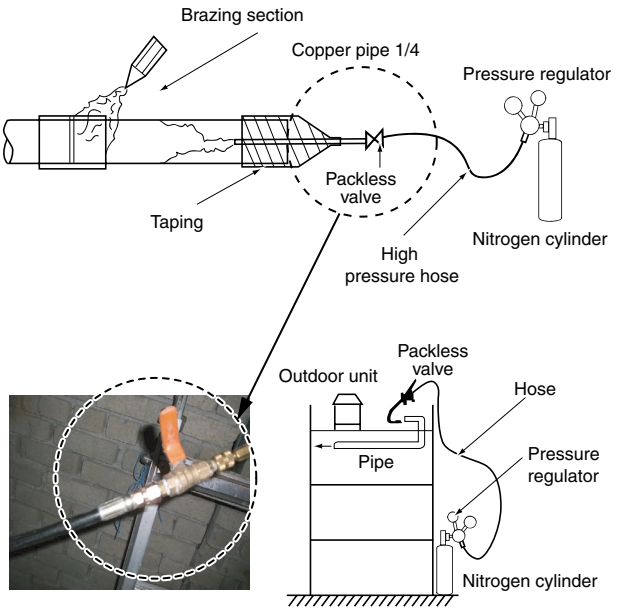
2.2.4 Brazing work

⚠CAUTION

Brazing of refrigerant piping :
The following precaution should be taken.
1. Do not use flux when brazing copper to copper refrigerant piping.

(Particularly for the HFC refrigerant piping)
Therefore, use the phosphor copper brazing filler metal (BCuP) which does not require flux.
(Flux has extremely harmful influence on refrigerant piping systems. For instance, if the chlorine based flux is used, it will cause pipe corrosion or, in particular, if the flux contains fluorine, it will damage the refrigerant oil.)

1) Niorogen flushing method (During brazing)



⚠CAUTION

Nitrogen brazing

a. This procedure is designed to prevent formation of oxidation film by filling piping with inert gas. Note that excessive gas pressure will generate pinholes at brazed points. (Nitrogen gas: Supply pressure 0.05~0.1kg/cm^{2}G)
b. When supplying inert gas, be sure to open one end of piping.

If brazing work is carried out without passing nitrogen gas through the pipes then it allows the formation of oxidation bubbles on the inside surface of the pipes.

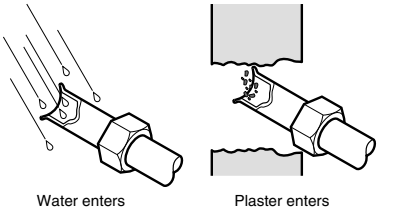
These oxidation bubbles are then carried along inside the pipes to cause damage to various members of the system such as valve or compressors and the system ceases to function properly.

In order to avoid this problem nitrogen is passed through the pipe while the soldering work is being carried out.

This operation work is known as nitrogen replacement.(Air is replaced by nitrogen)

This is standard work during all brazing works.

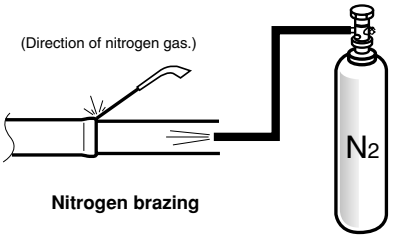
⚠CAUTION



Make sure to keep the connecting piping dry (away from water) , clean (away from dust) , and air tight (avoid refrigerant leakage)

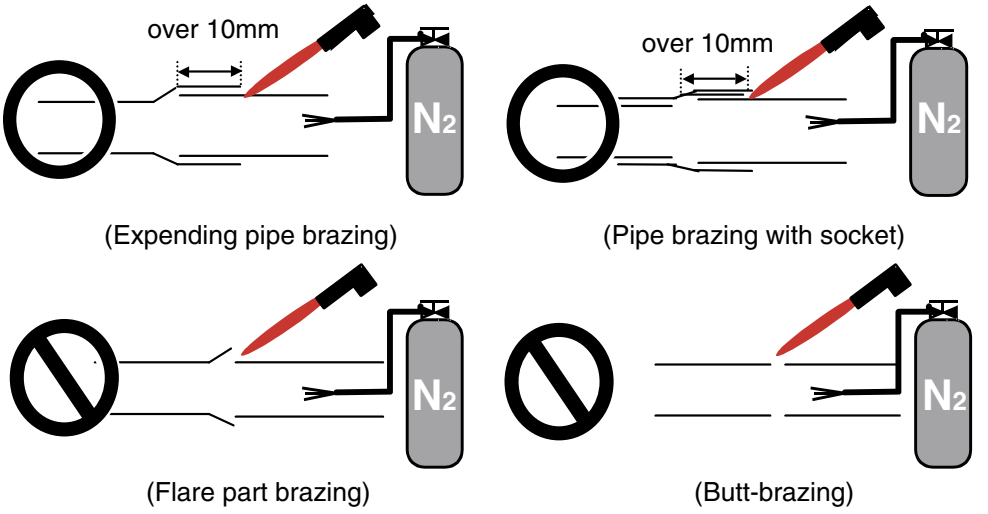
⚠CAUTION

Pipe bending
Annealed copper pipe with small diameter (Ø6.35 or Ø9.52) can be easily bent manually. In this case, secure large R (radius) for the bend section and gradually bend pipe. If annealed copper pipe is large in diameter (Ø15.88 or over), bend pipe with bender. Use bender appropriate for the pipe diameter.



Nitrogen brazing

Brazing work should be carried out either downwards or sideways.
An upward direction should be avoided wherever possible(to prevent leakage).



(Expending pipe brazing) (Pipe brazing with socket)

(Flare part brazing) (Butt-brazing)

Table 1: Correlation of nozzle tip and size of refrigeration piping

Piping size	Nozzle tip No.							Brazing filler diameter Ø		
	# 200	# 225	# 250	# 315	# 400	# 450	# 500	1.6	2.4	3.2
6.35										
9.52										
12.7										
15.9										
19.1										
22.2										
25.4										
31.8										
38.1										
44.5										

⚠CAUTION

1. Generally expending pipe brazing is performed with pan-coil type copper pipe, and socket blazing is performed with straight copper pipe.
2. Do not perform flare part brazing or butt-brazing.
3. Brazing should be performed on welding table.
4. Any dust should enter in the pipe while brazing.
5. Distance of copper pipe support spacing is within 1~2m
6. The copper pipe should not be secured directly by metal brackets.

2.2.5 Refrigerant pipe flushing

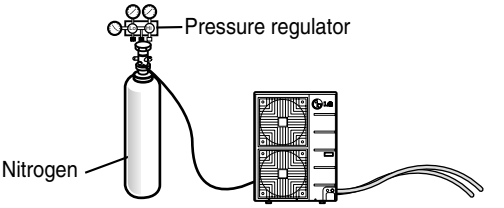
Flushing is a method of cleaning extraneous matter out of pipes using pressurized gas.

NOTE

Refrigerant pipe flushing of 3 major effects
1. Removal of oxidation bubbles formed inside copper pipes when “nitrogen replacement is insufficient” during soldering work
2. Removal of extraneous material and moisture from pipes when covering has been insufficient
3. Checks connections in pipes linking outdoor and indoor units (Both liquid and gas pipes)

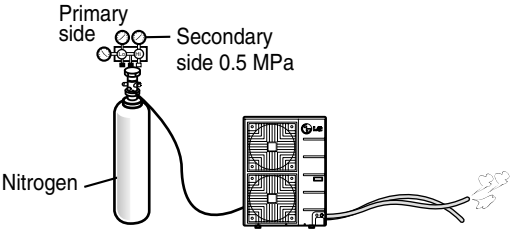
① Set pressure regulator on nitrogen cylinder.

② Connect the charge hose from pressure regulator to service port on the liquid pipe side of the outdoor unit before its connection to B/D unit or indoor unit.



③ Open the main valve on the nitrogen cylinder and set the pressure regulator to 0.5MPa.

④ Ensure that nitrogen is flowing through the pipe properly.

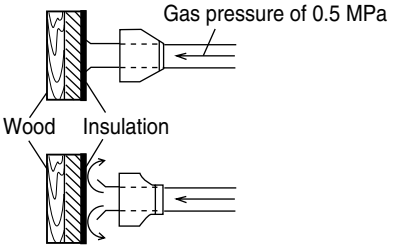


⑤ For flushing block the end of the pipe with wood insulation block.

⑥ When the pressure becomes great remove the block quickly.

⑦ Do step 6 & 7 repeatedly till cleanness is ensured.

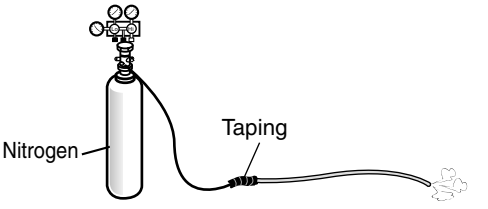
⑧ Connect the charge hose from pressure regulator to service port on the gas pipe side of outdoor unit before its connection to B/D unit or indoor unit.



⑨ Flow the steps 3, 4, 5, 6, 7.

⑩ In case of BD unit system, before connecting to indoor units, each pipe should be flushed individually.

⑪ Flow the steps 3, 4, 5, 6, 7.



⚠CAUTION

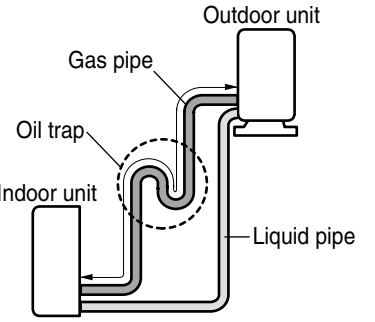
After welding the pipe, nitrogen flushing is strongly recommended.

2.2.6 Necessity of an oil trap

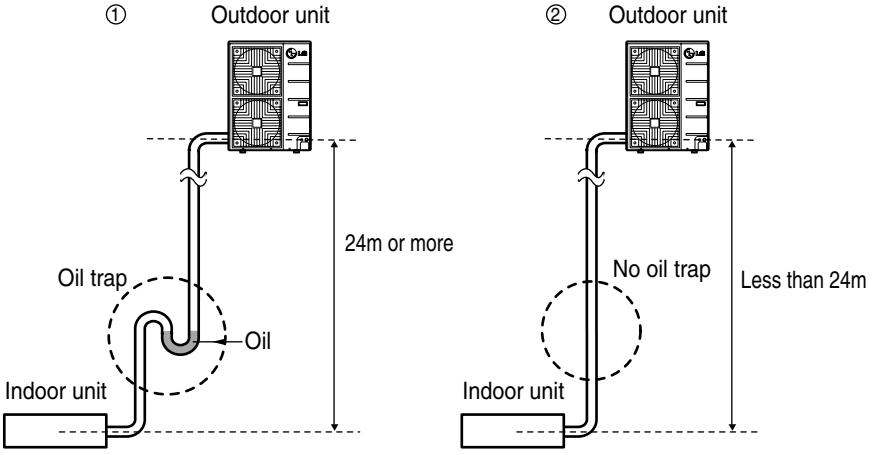
Multi F & Multi FDX has oil seperator or oil return function in there outdoor unit hence they don't need any oil trap within 24m elevation. But after 24m of vertical height 1 oil trap is required.

Since there is fear of the oil held inside the riser piping flowing back into the compressor when stopped and causing liquid compression phenomenon, or cases deterioration of oil return, it will be necessary to provide a trap at an appropriate place in the riser gas piping.

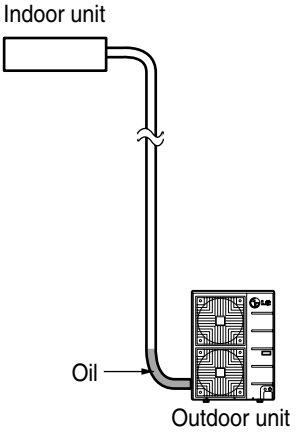
Capacity is based on standard length and maximum allowance length is on the basis of reliability.



1) When outdoor unit is at higher elevation than the indoor units



2) When indoor units are at higher elevation than the outdoor unit



• Oil trap need not be installed

2.3 Drain piping work

The purpose of drain piping is to prevent damage of products and ceiling materials by proper draining of dew condensation which is generated from the evaporator of indoor unit when the hot vapors come in contact with the evaporator.

1) Application

Pipes for draining water generated from indoor unit on cooling operation

Specification for drain piping

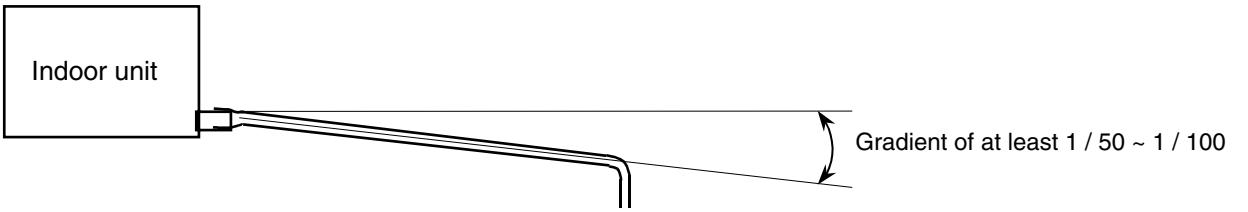
Type		Drain pipe diameter (External/ Internal)	Drain pump	Drain pump discharge head (mm)	Drain amount (at 10mm height)
					cm³/min (lpm)
Multi F Multi F DX	4 way	Ø32/25mm	Standard	700	400 (0.4)
	1 way	Ø32/25mm	Standard	700	400 (0.4)
	Duct	Ø32/25mm	Accessory	700	400 (0.4)
	Ceiling and floor	-	By gravity slope	-	-
	ART COOL	-	By gravity slope	-	-
	Wall Mounted	-	By gravity slope	-	-

[Reference Table] Drain amount per capacity

KW	Air flow rate (CMH)	Drain amount (lpm)	Remark
2.04	8	0.128	Indoor temp. : 26°C DB Indoor humidity RH : 85% Outlet temp. :14°C DB Outlet temp. RH: 50%
2.33	8.5	0.137	
2.91	10.5	0.169	
4.36	11.5	0.185	
5.82	17	0.273	
7.28	19	0.305	
8.73	21	0.337	
10.2	23	0.369	
11.6	25	0.402	
14.6	34	0.546	

2.3.1 Drain pipe slope and support

- Slope gradient for drain should be (1/50~1/100mm) and PVC pipes should be used.
- Support hanger should be at 1~1.5m interval to prevent from loosing and dropping.
- Drain pipe insulation
  : The inside temperature of drain pipe is about 10°C. When high temperature and humidity air touches the surface of pipe, dew condensation occurs. To prevent that, drain pipe keeps warm using insulation with polyethylene 10mm thickness.



1) Application

Refrigerant pipe length contracts and expands on heating and cooling repeatedly. So supporting work is needed not to hinder each copper pipe connection part.

2) Supporting distance for common drain pipe

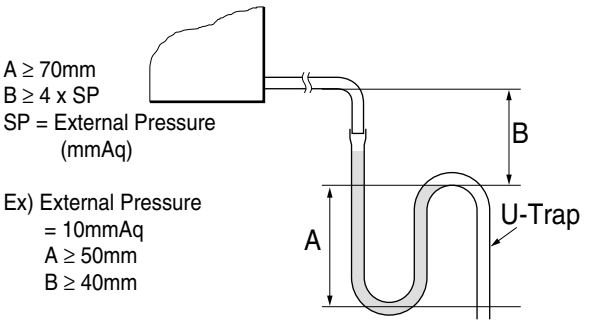
[Table]The interval of the supporting hanger for drainage pipe

Pipe diameter (mm)	Ø20~40	Ø40~50	Ø65~125
Max. interval(m)	Below 1.0	Below 1.2	Below 1.5

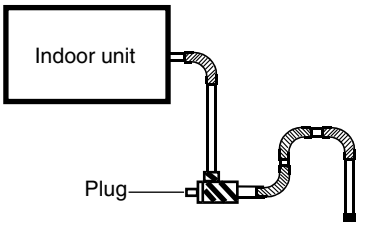
3) Anchor bolt supporting work

Anchor bolt supporting work should be used for supporting a heavy indoor unit to ceiling.
Clamp hanger supporting work is for hanging refrigerant pipe, drain pipe and cables.
It can prevent vibrating noise from passing through pipe.
We recommend set anchor bolt for supporting indoor unit and strong anchor bolt for supporting pipes and cables

2.3.2 Drain pipe trap (only for high static duct)

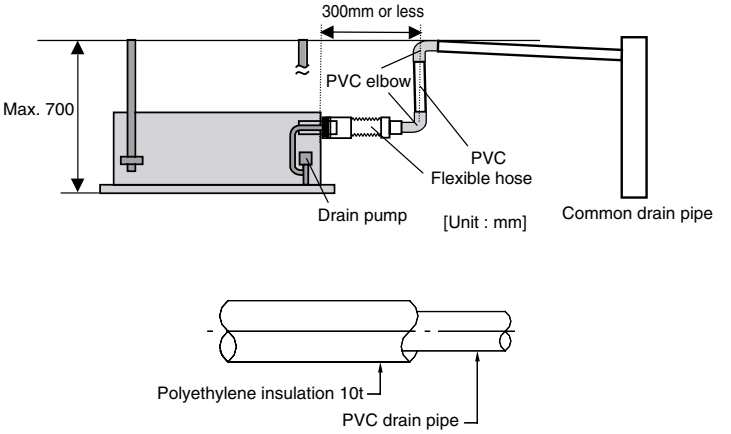


<U-trap size calculations>

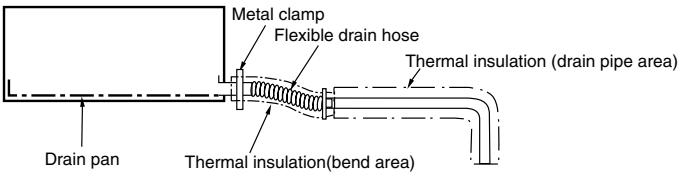


- In case of duct high static pressure, the U trap maintains a positive pressure on the indoor side of the unit.

1) Models with drain pump

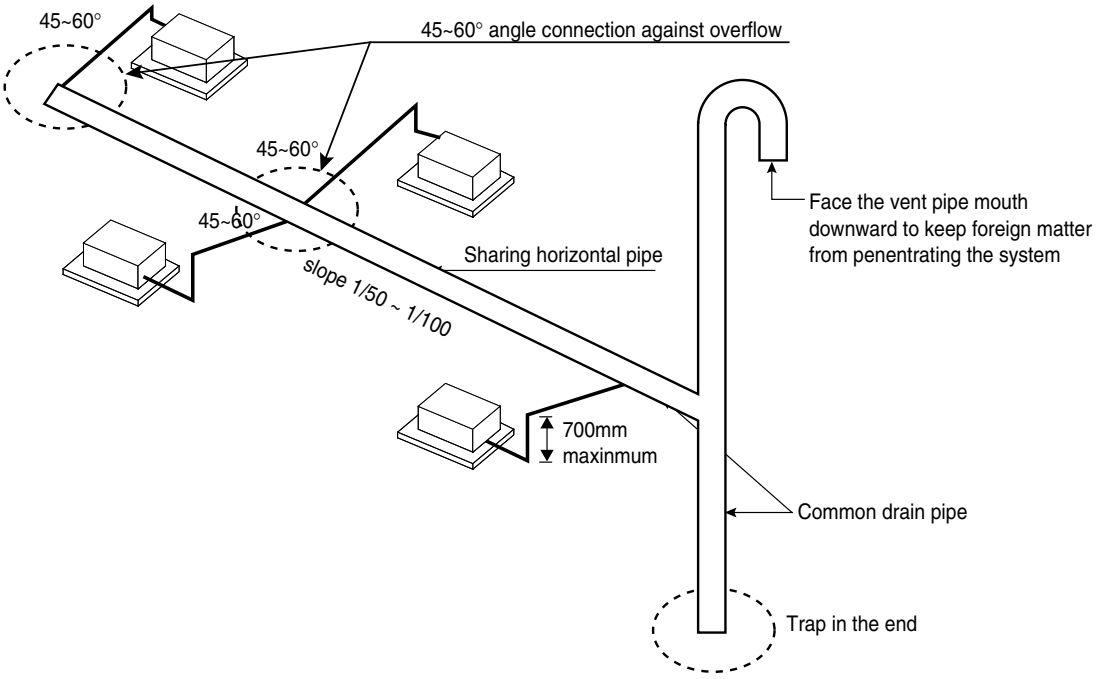


2) Models without drain pump



2.3.3 Grouped drain pipes

It is standard work practice to make connections to the main pipe from above.
The pipe down from the combination should be as large as possible.
The diameter of ventilation pipe should be same or larger than drain pipe diameter.



NOTE

1. Trap is required if the pie is open towards sewage to prevent bad smell from coming to indoor.
2. Do not connect drain pipe with building common drain pipe in heavy snow area. It might block the pipe with ice and remaining collected water can get back to indoor unit.
   Provide seperate air conditioner drain pipe.

Grouped drain piping standard

- For drain pipe diameter selection, refer to the following table.
- The drainpipe should be used for only air conditioners. If you share it for rainwater drain, you should be careful of a back flow, leakage, bad odor and so on.
- Use separate drain pipe for polluted water or wasted water

[Table] Drain pipe diameter selection standard

Sum of the capacity of indoor units (Btu/h)	~80,000	~200,000	~400,000	~600,000	~1000,000
Internal diameter (External)	25(32)	32(40)	40(50)	50(60)	65(75)

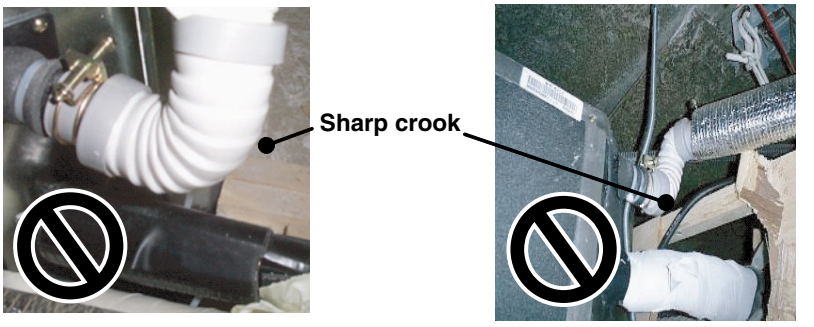
NOTE

Select the diameter of the horizontal pipe bigger than vertical.

2.3.4 Caution for drain piping work

1) Notice on drain working

① Flexible tube should not be crooked sharply.
The tube can be broken by continuous vibration for a long time.



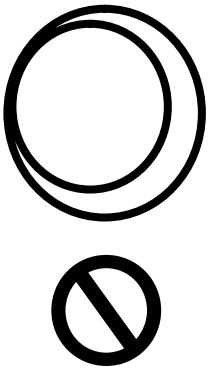
⚠CAUTION

Flexible tube should be connected with clamp concentrically.

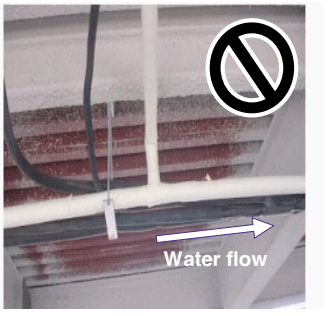
If not, water will leak from the connection.



<clamp connection>



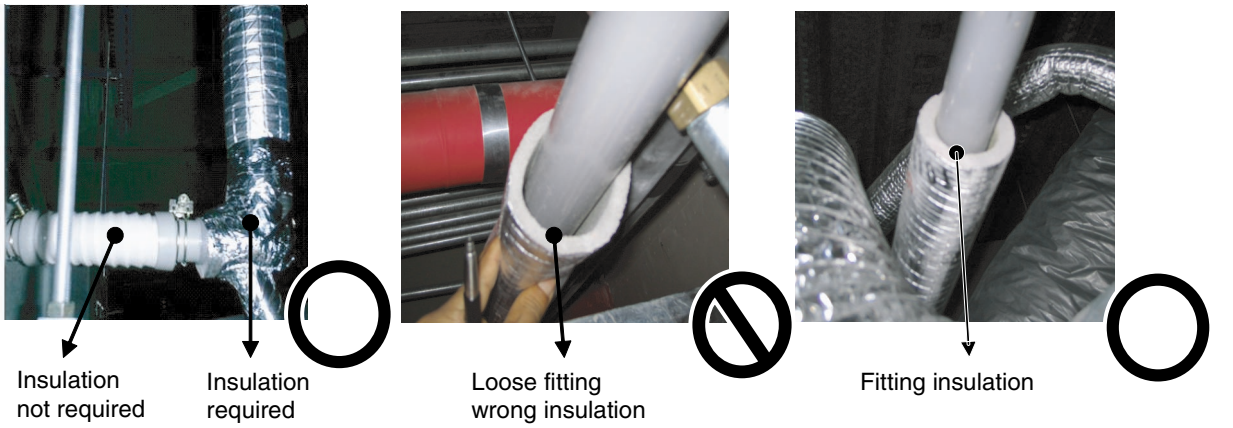
② No reverse slope for drain connection



<Reverse slope>

2) Drain pipe insulation

- Drain pipe should be insulated all connected joints and ends.



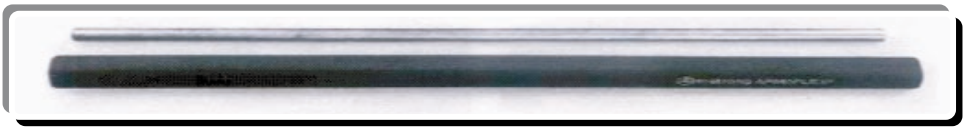
- Do not use the loose fitting insulation.

3) Drain water leakage test

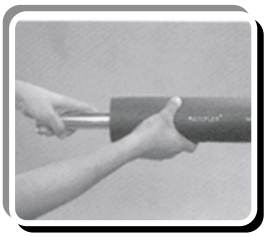
- Water leakage test should be performed 24 hours later after drain work finishing.
- In the test, only water should be used. Other liquids are unacceptable.

2.4 Insulation work

2.4.1 Insulation



1) Operational steps



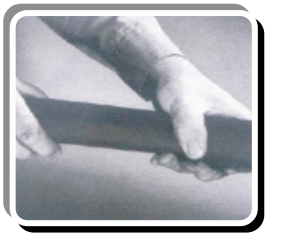
① EPDM length should be more longer than pipe length.
Do not extend EPDM by force.



② Put the pipe in EPDM insulation carefully so that the pipe will not get damaged with EPDM.



③ Bond on both side of cut surfaces of move sure to use the correct type of bond for EPDM cut surface attaching.



④ Dry it until it becomes thick, sticky and does not get detached.

2) Bending vertical side of insulation



① Use the original uncut insulation material.



② Only in specialcase is the vertical cutting of the insulation allowed.



③ Bond both sides of the surface of EPDM and press them together for long lasting bonding.



④ Dry it until it becomes thick and sticky.

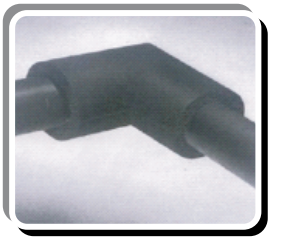
3) 'L' Fitting connection part insulation



① All of the fitting connecting parts should be insulated.
Bring face to face the each end of EPDM on fitting connection part.



② Make fitting cover to fit the EPDM insulation fitting cover should be overlapped with insulation min 1 inch (2.5cm).



③ Bond the both cutting sides of fitting cover.

2.4.2 Forming the piping

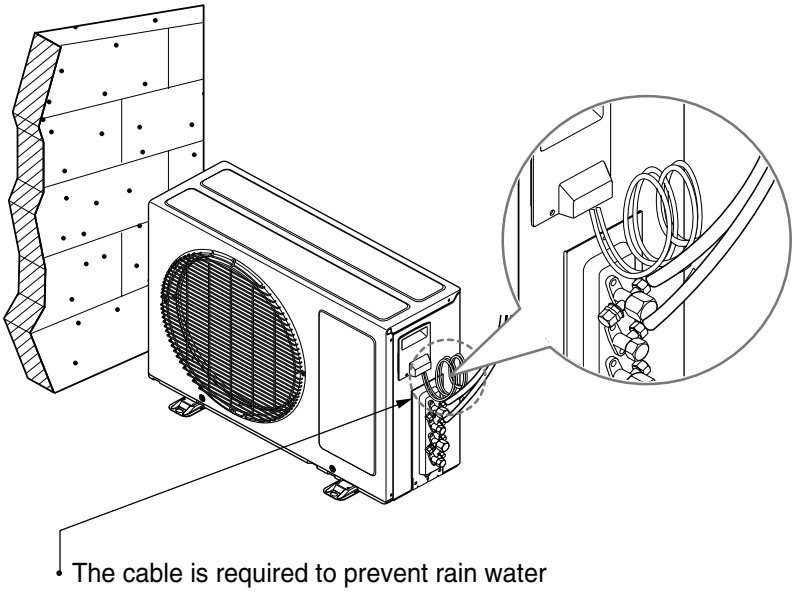
1) Form the piping by wrapping the connecting portion of the indoor unit with insulation material and secure it with two kinds of vinyl tape.

• If you want to connect an additional drain hose, the end of the drain outlet should be routed above the ground. Secure the drain hose appropriately.

2) In cases where the outdoor unit is installed below the indoor unit perform the following.

① Tape the piping, drain hose and transmission cable from down to up.

② Secure the tapped piping along the exterior wall using saddle or equivalent.

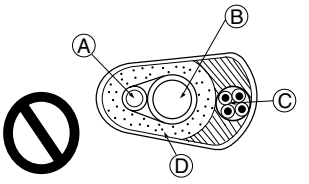


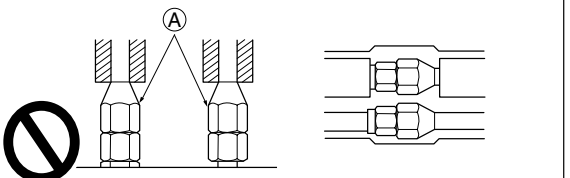
• The cable is required to prevent rain water from entering into electrical parts of outdoor unit.

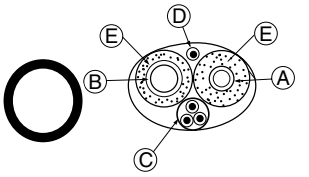
2.4.3 Essential points of thermal insulation

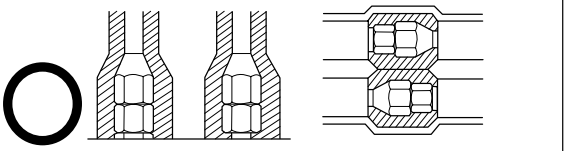
1) Thermal insulation of refrigerant piping

Be sure to give insulation work to refrigerant piping by covering liquid pipe and gas pipe separately with enough thickness heat-resistant insulation materials, so that no gap is observed in the joint between indoor unit and insulating material, and insulating materials themselves. When insulation work is insufficient, there is a possibility of condensation drip, etc. pay special attention to insulation work to ceiling plenum.

<table>
<tr>
<td>Wrong method</td>
<td>• Do not insulate gas or low pressure pipe and liquid or high pressure pipe together.
 

Ⓐ Liquid pipe
Ⓑ Gas pipe
Ⓒ Power cable
Ⓓ Insulation</td>
<td>• Be sure to fully insulate connecting portion.
 

Ⓐ These parts are not insulated.</td>
</tr>
<tr>
<td>Correct method</td>
<td> 

Ⓐ Liquid pipe
Ⓑ Gas pipe
Ⓒ Power cable
Ⓓ Transmission cable
Ⓔ Insulation</td>
<td>  </td>
</tr>
</table>

2) Caution during insulation work

- To avoid electrical noise, the power line and transmission line should be separated from each other.
- In case the cables are installed in the conduit, a finishing tape is not required.
- Defect and insufficient insulation can cause condensation drops.
- Binding the insulation too tight may result in dew drops.
- Be sure not to tie rap the insulation but put special taping or the clamp at the connecting portion.
- The insulation overlapping part at the piping connection must be a distance from the flaring part at the pipe connection.

3) Insulation tube thickness

① Thickness decision of insulation tube
- Insulation material: EPDM or polyethylene foam
- Thermal conductivity 0.035 kcal~0.040kcal/mh°C
- Heat resistance=100°C(Cooling only) or more
  120°C(Heat pump) or over

② The thickness of the thermal insulation material must be determined in the light of the pipe sizes.

Pipe size	Thickness of insulation material (normal)
6.35 ~ 25.4 mm	10mm or more
25.4 ~	15mm

③ It will be necessary to increase the thickness of insulation in the above table when conditions are hot and humid.

④ Where a customer supplies his own specifications then these must be adhered to.

⚠CAUTION

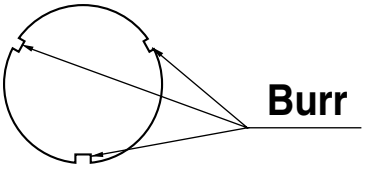
Outdoor temperature and hummidity around the cooling piping might exceed 30°C and RH80%, reinforce the insulation on the cooling piping (at least 20mm thick)

2.5. Electrical work

2.5.1 Precautions

⚠CAUTION

When knocking out knock holes
- To punch a knock hole, hit on it with a hammer.
- After knocking out the holes, we recommend you paint the edges and areas around the edges using paint to prevent rusting.
- When passing electrical wiring through the knock holes, remove any burrs from the knock holes and wrap the wiring with protective tape to prevent damage.



If there are any possibilities that small animals or insects enter the system through the knock holes, plug the holes with packing materials (to be prepared onsite).

Use a conduit for the cable
- Outside the unit, make sure the thin signal cable (i.e. for the remote control, between units, etc.) and the thick electric wiring do not pass near each other, and the shield signal cable, is recommended.
  Otherwise, the outdoor unit may be affected by electrical noise (external noise), and malfunction or fail.
- Secure the wiring with the accessory clamps so that it does not touch the piping.
- Make sure the wiring and the electric parts box cover do not stick up above the structure, and close the cover firmly.

⚠CAUTION

Do not operate the air conditioner until the refrigerant piping work is completed.
(Operating the air conditioner before the refrigerant piping work is completed may damage the compressor.)
- Install an earth leakage circuit breaker.
  Since this is a inverter air conditioner. In order to prevent malfunction of the earth leakage breaker itself, use a breaker resistant to higher harmonics.
- After finishing the electric work, confirm that each electric part and terminal inside the electric parts box is connected securely.

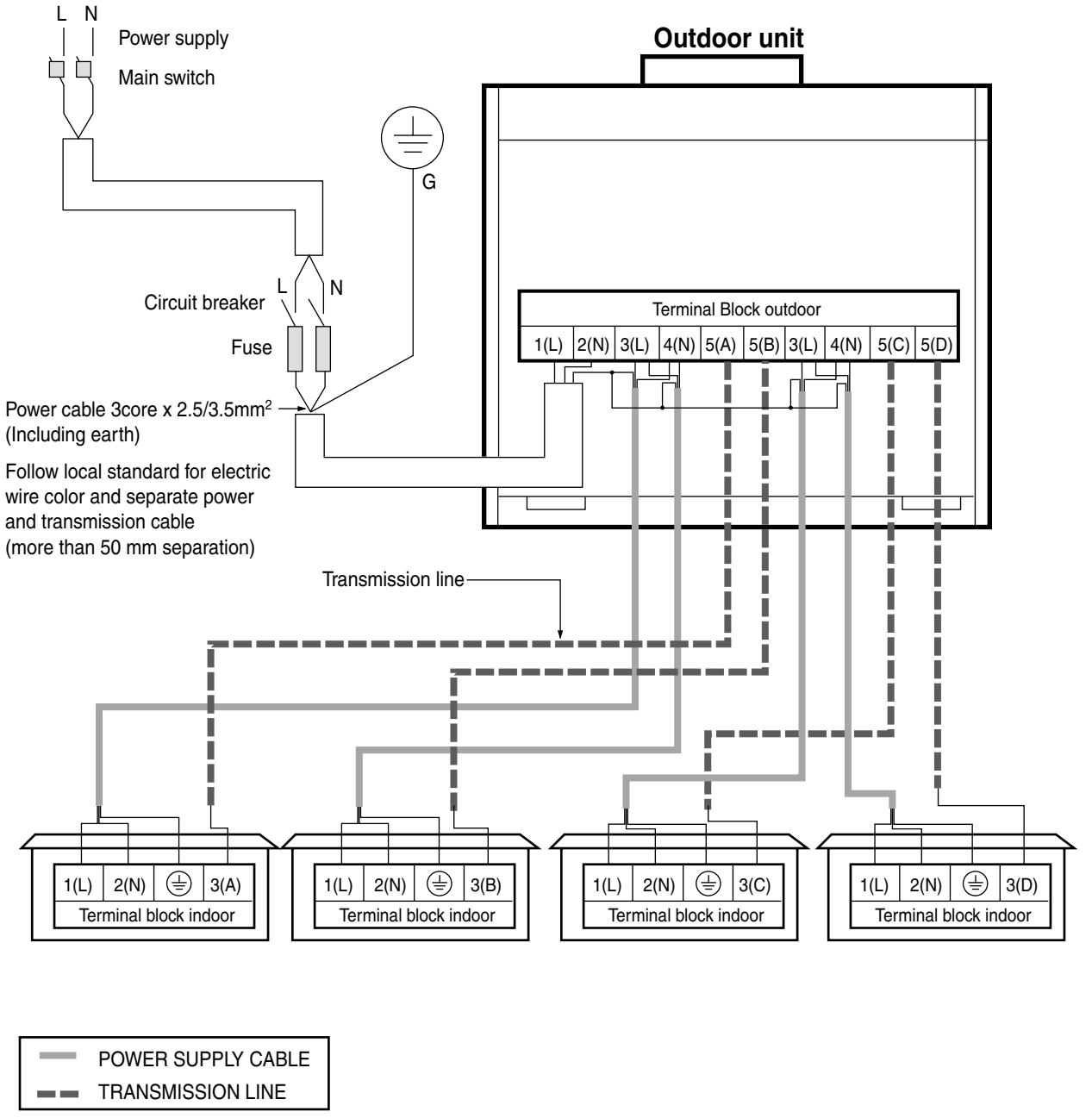
NOTE

- Only professional electricians having sufficient knowledge should perform the electrical wiring work.
  Perform the electrical wiring work in accordance with the electrical wiring diagram.
  Make sure to set OFF the branch switch and over current breaker before starting the work.
- Install an earth leakage breaker.
- Perform grounding to the indoor units and outdoor units.
  - Do not connect the ground wire to gas pipes, sewage pipes, lightning rods telephone ground wires.
  - Gas pipes ···· Can explode or catch fire if gas leaks.
  - Sewage pipes···· Provides no grounding effect if hard plastic pipes are used.
  - Telephone ground wires and lightening rods ···· dangerous when struck by lightening due to abnormal rise in the ele trical potential in the ground.

- Use only copper wires.
- Make sure to shut down the power before starting the electric wiring work.
  Do not set ON any switch until the work is completed.
- The outdoor unit has an inverter compresser which generates noise and charges the outer casing with the leakag current.
  The outdoor unit should be grounded so that the effect of the generated noise on othe equipment can be reduced, and that the outer casing can be discharged.
- Never install a phase advancing capacitor for power factor improvement.
  (Even if it is installed, the power factor is not improved. And if it is installed, the outdoor unit is abnormally overheated.)
- Use specified electric wires in the wiring, and connect them securely.
  Fix them in such a way that external force is not applied at the terminals
  (transmission wiring in the local field and ground terminal).
- Never push excessive electric wires into the units.
- Protect electric wires with conduit tubes or other proper tubes so that they will not be damaged by edges of knock holes.
- Do not use multi conductor cable which have more than 5 wires in one core.

2.5.2 Control wiring / Power supply

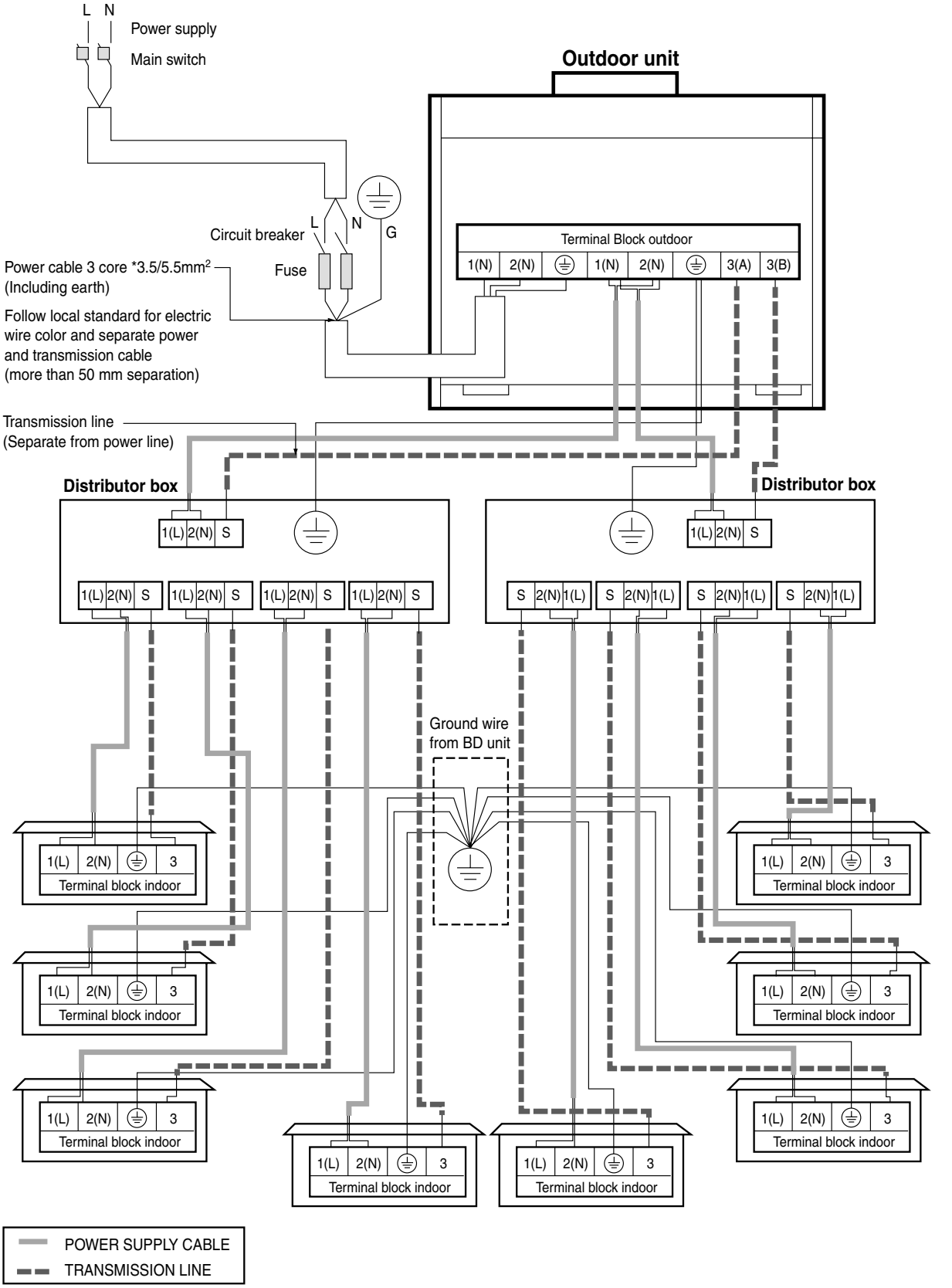
A2UW/A3UW/A4UW/A5UW



Notes:

1. Wiring cable size must comply with the applicable local and national code.

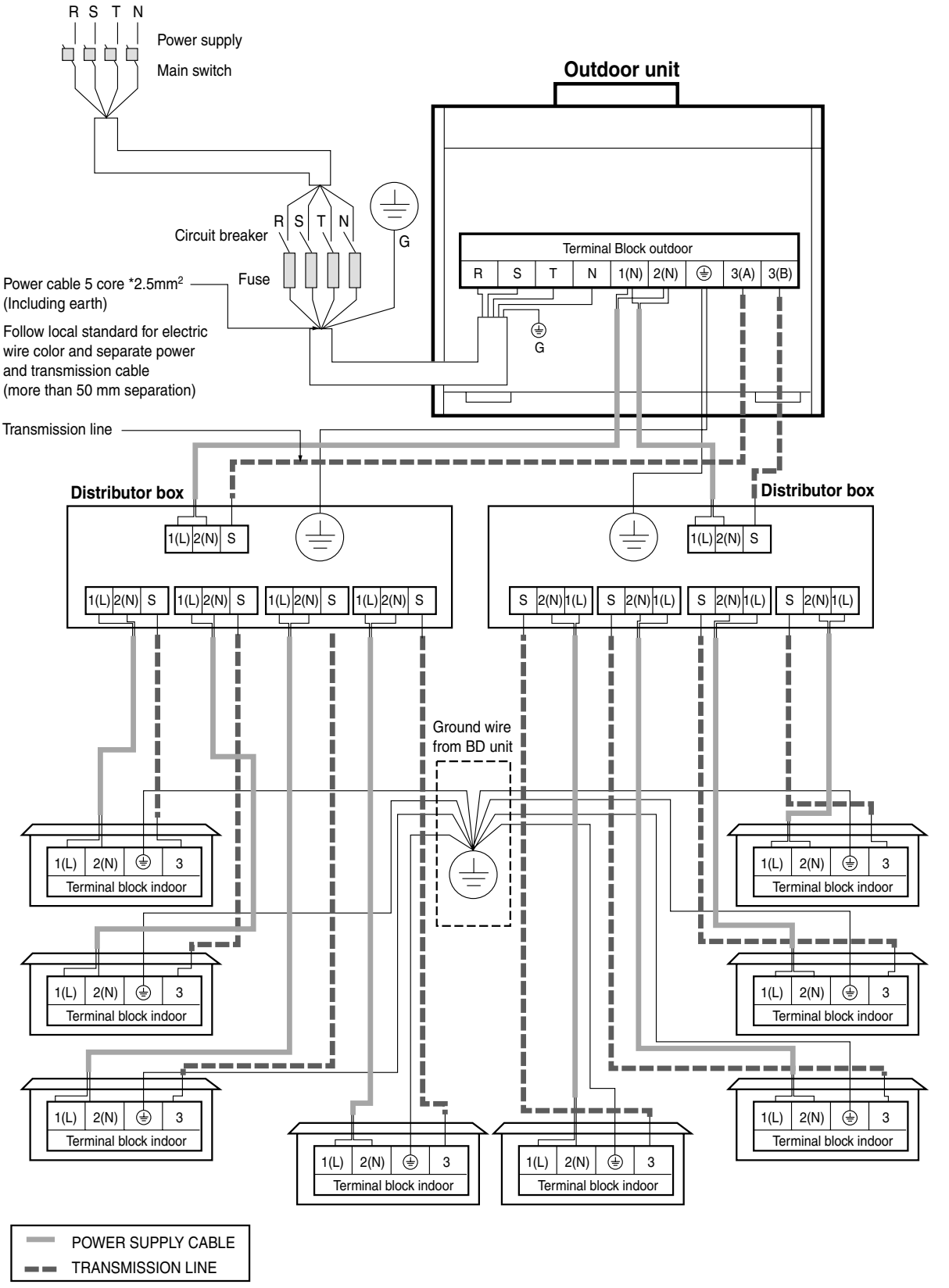
A6UW/A8UW/A9UW



Notes:

1. Wiring cable size must comply with the applicable local and national code.

A6UW/A7UW/A8UW/A9UW(3 phase)



2.6. Air tight test

2.6.1 Air purging

Air and moisture remaining in the refrigerant system have undesirable effects as indicated below.

① Pressure in the system rises.
② Operating current rises.
③ Cooling (or heating) efficiency drops.
④ Moisture in the refrigerant circuit may freeze and block capillary tubing.
⑤ Water may lead to corrosion of parts in the refrigeration system. Therefore, the indoor/outdoor unit and connecting tube must be checked for leak tight, and vacuumed to remove incondensable gas and moisture in the system.

1)Checking method

① Preparation

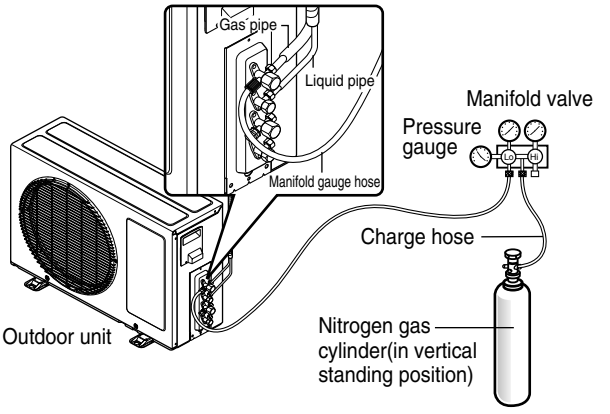
- Check that each pipe (both liquid and gas side pipes) between the indoor and outdoor units have been properly connected and all wiring for the test run has been completed. Remove the service valve caps from both the gas and the liquid side on the outdoor unit. Check that both the liquid and the gas side service valves on the outdoor unit are kept closed at this stage.

② Leakage test

- Connect the manifold valve (with pressure gauges) and dry nitrogen gas cylinder to this service port with charge hoses.

⚠CAUTION

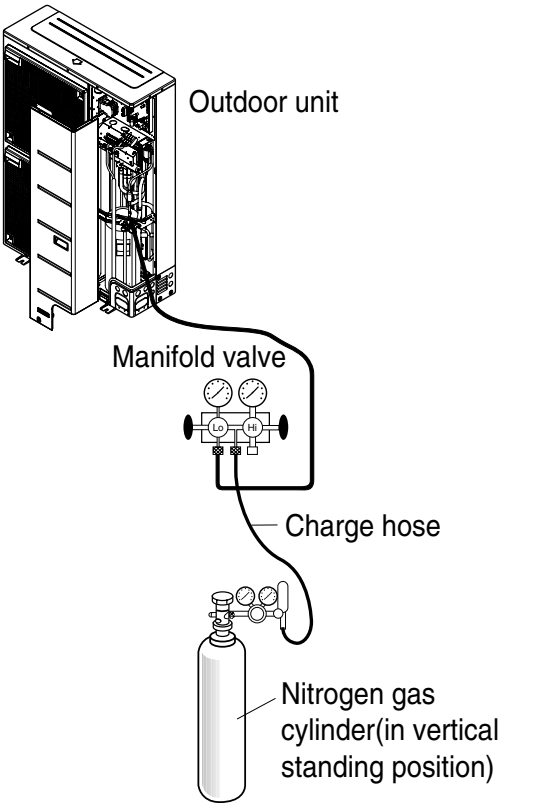
Be sure to use a manifold valve for leakage test. If it is not available, use a stop valve for this purpose. The "Hi" knob of the manifold valve must always be kept close.



⚠CAUTION

To avoid nitrogen entering the refrigerant system in a liquid state, the top of the cylinder must be higher than its bottom when you pressurize the system. Usually, the cylinder is used in a vertical standing position.

1. Do a leakage test of all joints of the Tubing (both indoor and outdoor) and both gas and liquid side service valves. Bubbles indicate a leak. Be sure to wipe off the soap with a clean cloth.
2. After the system is found to be free of leaks, relieve the nitrogen pressure by loosening the charge hose connector at the nitrogen cylinder. When the system pressure is reduced to normal, disconnect the hose from the cylinder.



2.6.2 Essential points of testing

The key to successful testing is strict adherence to the following procedure:

1) The liquid and gas piping in each refrigerant system should be pressurized in turn in accordance with the following steps. (Nitrogen gas must be used.)

Step 1: increase pressure to 0.3MPa for 3 minutes or more
Step 2: increase pressure to 1.5MPa for 3 minutes or more — Major leaks indicate

Step 3: increase pressure to 3.8MPa for approxmate 24 hours — Minor leaks indicate

Increasing the system pressure to 3.8MPa does not guarantee the identification of minor leaks if pressure is maintained for only a short time. It is therefore recommended that the system remain pressurized in accordance with Step 3 above for at least 24 hours.

NOTE

Piping should not be pressured more than 3.8MPa.

2) Check for pressure drop

If there is no drop in pressure then the test is deemed a success.

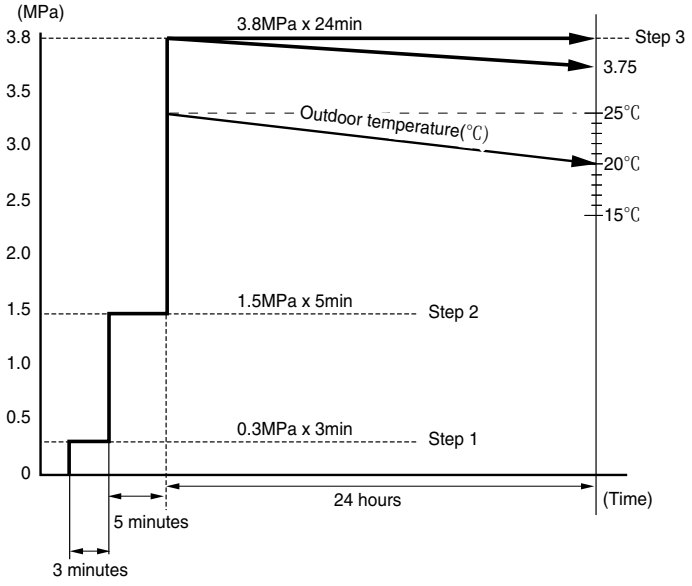
If the pressure drops then the leak must be located. See following page.

However, if there is a change in the ambient temperature between the pressurizing stage and the time when you check for a drop in pressure then you will have to adjust your calculations accordingly since a change of 1°C can account for a pressure change of approximately 0.01MPa.

Compensating adjustment value:
(temperature at time of pressurizing – temperature at time of checking) × 0.01

Example:

During of pressurizing: 3.8MPa 25˚C
24 hours later: 3.75MPa 20˚C
Although the gauge pressure is dropped from 3.8MPa to 3.75MPa, it can be safely assumed that there is no leakage because the gauge pressure can also drop due to the change in outdoor temperature.



2.6.3 Checking for leakage

[Check 1] (Where pressure falls while carrying out Steps 1 to 3 described on previous page)

- Check by measure gage.....Gas detector.
- Check by ear.....Listen for the sound of a major leakage.
- Check by hand.....Check for leak by feeling around jointed sections with hand.
- Bubble check .....Bubbles will reveal the presence of a leakage.

[Check 2] (When searching for a minor leak or when there has been a fall in pressure while the system has been fully pressurized but the source of the leak cannot be traced.)

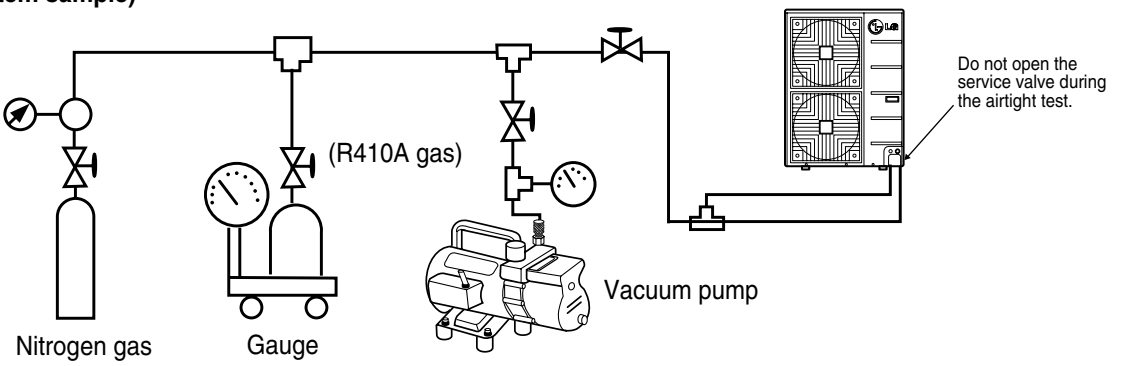
① Release the nitrogen until the pressure reaches 0.3MPa.

② Increase pressure to 1.5MPa using gaseous refrigerant(R410).

③ Search for the source of the leakage using a leackage detector such as a halide torch or a propane or electrronic detector.

④ If the source of the leakage still cannot be traced then repressurize with nitrogen up to 3.8MPa and check again. (The pressure must not be increased to more than 3.8MPa.)

(System sample)



Important points

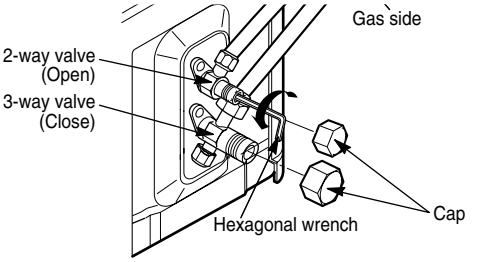
Where the lengths of piping involved are particularly long then the air tight test should be carried out block by block.

- Indoor side
- Indoor side + vertical pipes
- Indoor side + vertical pipes + outdoor side

⚠CAUTION

Soap water method

1. Remove the caps from the 2-way and 3-way valves.
2. Remove the service-port cap from the 3-way valve.
3. To open the 2-way valve turn the valve stem counterclockwise approximately 90°, wait for about 2~3 sec, and close it.
4. Apply a soap water or a liquid neutral detergent on the indoor unit connection or outdoor unit connections by a soft brush to check for leakage of the connecting points of the piping.
5. If bubbles appear then those points have leakage.



2.7. Vacuum drying work

2.7.1 What is Vacuum drying?

Vacuum drying is : The use of a vacuum pump to vaporize(gasify) the moisture (liquid) inside the pipe and expel it leaving the pipes completely dry inside.
At 1 atm(760mmHg) the boiling point (evaporating temperature) of water is 100°C but if a vacuum is created inside the pipes using a vacuum pump then the boiling point is rapidly reduced as the degree of the vacuum is increased.
If the boiling point is reduced to a level below that of the ambient temperature then the moisture in the pipes will evaporate.

Example

When outside temperature is 11.7°C as shown in the table on the right , the degree of vacuum must be lowered below -750mmHg

Boilng point of water(°C)	Gauge pressure		
	mmHg	Pa	Torr
40	-705	7333	55
30	-724	4800	36
26.7	-735	3333	25
24.4	-738	3066	22
22.2	-740	2666	20
20.6	-742	2400	18
17.8	-745	2000	15
15.0	-747	1733	13
11.7	-750	1333	10
7.2	-752	1066	8
0	-755	667	5

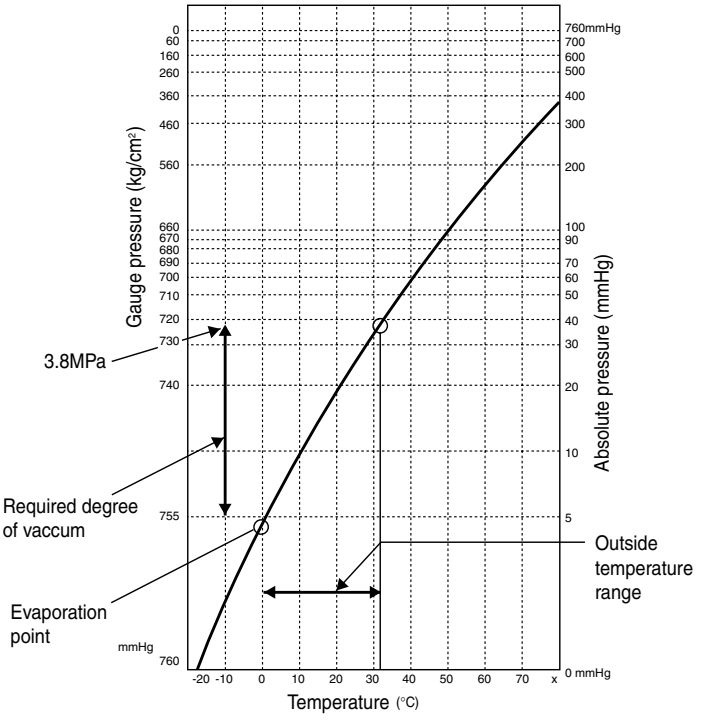
The evacuation of air conditioner piping provides the following effects.

- Vaccum drying
- Removes air and nitrogen(used in air-tightness test) from the inside of pipes.

Therefore , it is necessary to ensure that both purposes have been achieved in the vacuum drying operation.

NOTE

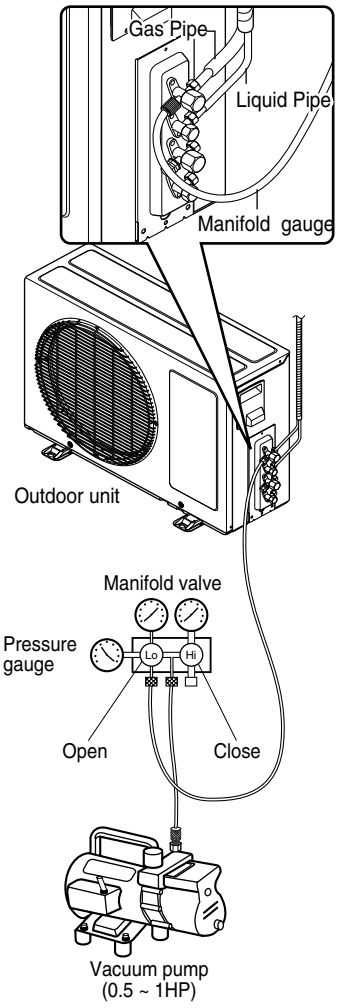
Key point: Maintain a vacuum level of -755mmHg

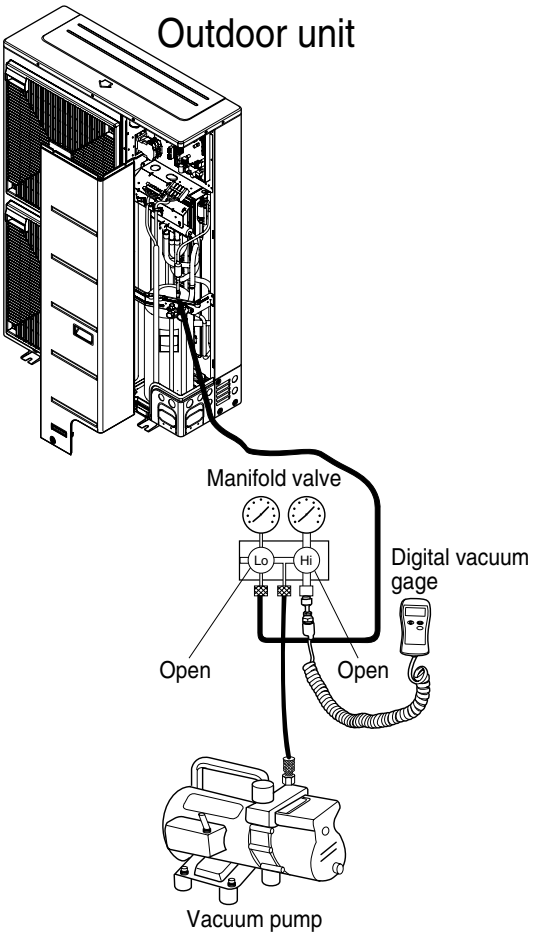


2.7.2 Evacuation

① Connect the manifold hose end described in the preceding steps to the vacuum pump to evacuate the tubing and indoor unit. Confirm the "Lo" knob of the manifold valve is open. Then, run the vacuum pump. The operation time for evacuation varies with tubing length and capacity of the pump. The following table shows the time required for evacuation.

② When the desired vacuum is reached, close the "Lo" knob of the manifold valve and stop the vacuum pump.





⚠CAUTION

Finishing the job

1. With a service valve wrench, turn the valve stem of liquid side valve counter-clockwise to fully open the valve.
2. Turn the valve stem of gas side valve counter-clockwise to fully open the valve.
3. Loose the charge hose connected to the gas side service port slightly to release the pressure, then remove the hose.
4. Replace the flare nut and fasten the flare nut securely with an adjustable wrench. This process is very important to prevent leakage from the system.
5. Replace the valve caps at both gas and liquid side service valves and fasten them tight. This completes air purging with a vacuum pump. The air conditioner is now ready for test run.

2.7.3 Choosing a vacuum pump

The necessity for counter flow prevention

After the vacuum process of the refrigerant cycle, the inside of the hose will be vacuumed after stopping the vacuum pump, the oil of vacuumpump may flow back. Moreover, if the vacuum pump stops during the operation for some reason. Therefore, in order to prevent the counter flow from the vacuum pump, a check valve is reguired.

1) Vacuum pump performance

The 2 most important things for determining vacuum pump performance are as follows:

① Exhaust velocity

② Degree of vacuum

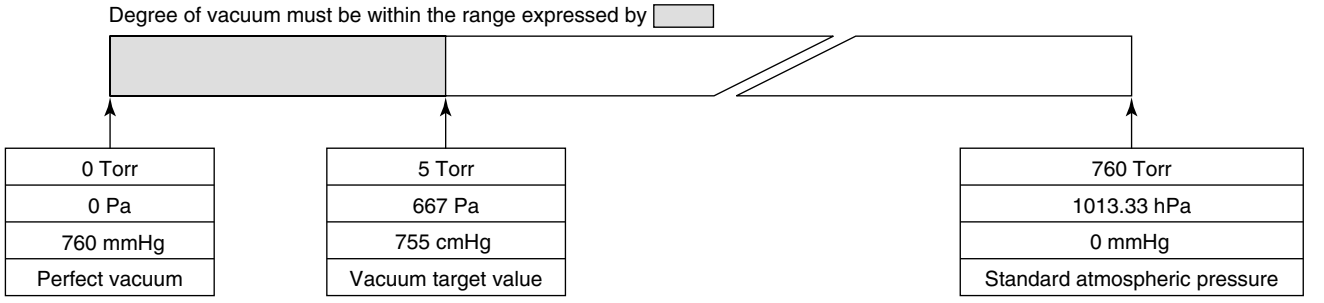
① Exhaust velocity

Exhaust volume is usually expressed as l/min or m^3/hr. The larger the number, the faster the vacuum is achieved.
Generally speaking, the faster the exhaust velocity, the larger and heavier the vacuum pump itself is.
Commercially available vacuum pumps (exhaust velocity of 20 - 30 l/min) usually take an extremely long time to achieve vacuum. (We recommend a vacuum pump of approx. 60 - 100 l/min.)

② Degree of vacuum

Ultimate vacuum varies largely according to use of the vacuum pump. Vacuum pumps used for vacuum forming cannot be used for vacuum drying. (A vacuum pump with a high degree of vacuum is required.)
When selecting a vacuum, you should select one which is capable of achieving 0.2 Torr of ultimate vacuum.
Degree of vacuum is expressed in Torr, micron, mmHg, and Pascal (Pa). The units correlate as follows:

	Unit	Standard atmospheric pressure	Perfect vacuum
Gauge pressure	kg/cm^2	0	-1.033
Absolute pressure	kg/cm^2abs	1.033	0
Torr	Torr	760	0
Micron	Micron	760000	0
mmHg	mmHg	0	760
Pa	Pa	1013.33	0



2) Vacuum pump maintenance

Because of their nature, most vacuum pumps contain large amounts of oil which lubricates bearings, etc., and functions to enhance airtightness of pistons. When using a vacuum pump to discharge air from refrigerant piping, moisture in the air tends to get mixed in with the oil. You must therefore change oil periodically and make sure the proper oil level is maintained. (Perform periodic inspections in accordance with the operating instructions.)

3) Degree of vacuum measurement

An extremely accurate vacuum gauge is required to test degree of vacuum. You cannot accurately measure degree of vacuum with the compound gauge on the gauge manifold. A Pirani vacuum gauge is required to measure degree of vacuum accurately. Because Pirani gauges are very sensitive and require extreme care when using, they are not very suitable for use in the field. You should therefore use the Pirani gauge to calibrate the attached vacuum gauge on the gauge manifold and the degree of vacuum of the vacuum pump.

4) Calibration method

① Connect a Pirani vacuum gauge and the gauge manifold vacuum gauge (760 mmHg) to the vacuum pump at the same time, and run the pump for about 3 minutes.

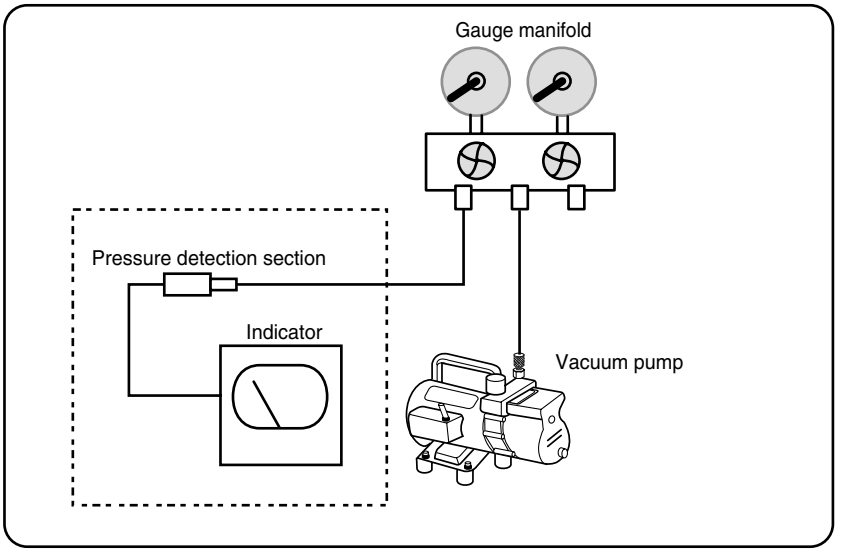
② Make sure the reading of the Pirani vacuum gauge is 5 Torr (667 Pa) or less. The reading of conventional vacuum pumps lowers to about 0.2 Torr.
If the reading is not 5 Torr or less, check the vacuum pump oil. (Oil is low in many cases.)

③ Check the attached gauge on the gauge manifold. Adjust the gauge if the reading is not exactly correct.

④ Adjust the gauge manifold valve so that the Pirani vacuum gauge reads 5 Torr.

⑤ Mark the position indicated by the gauge manifold gauge with an oil based ink pen.

⑥ Use the mark of the gauge manifold as a target when vacuuming in the field.



(Reference) Types of vacuum pump with respect to maximum degree of vacuum

Type	Maximum degree of vacuum	Use	
	Expulsion capacity	Vacuum drying	Air expulsion
Oil rotary (Oil using)	0.02 mmHg 100 l/min	Suitable	Suitable
Oilless rotary (No need of oil)	10 mmHg 50 l/min	Unsuitable	Suitable
	0.02 mmHg 40 l/min	Suitable	Suitable ← Many handy pumps fall into this category

2.7.4 Vacuum drying procedure

There are two vacuum drying methods and the appropriate one should always be chosen to confirm with individual local conditions.
[Normal vacuum drying].....The standard method

[Operational steps]

① Vacuum drying (1st time): Connect a manifold gauge to the service port of the liquid or gas pipe and operate the vacuum pump for at least 2 hours.
(The degree of vacuum produced should be in excess of 5 Torr)
If after 2 hours the vacuum produced has not exceeded 5 Torr then either there is moisture in the pipe or there is a leak.
Operate the vacuum pump for further one more hour.
If, even after 3 hours, the vacuum has not reached 5 Torr then check the system for a leak.

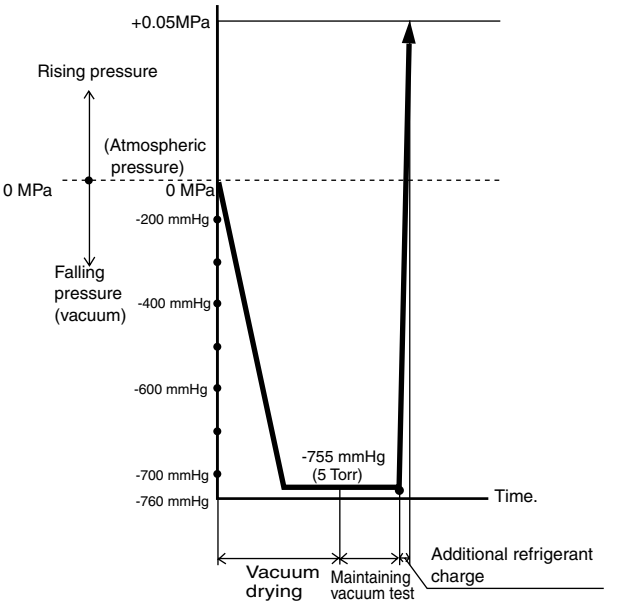
② Carry out vacuum test.
Produce a vacuum in excess of 5 Torr and do not release it for an hour or more. Check the vacuum gauge to make sure that it has not risen. (If the gauge rise then there is still moisture in the pipe or there is a leak somewhere.)

③ Additional charge of refrigerant.
Connect the charging cylinder to the liquid pipe service port and charge with the required amount of refrigerant.

④ Open stop valve to the full.
Open the stop valve on the liquid and the gas pipes to the full.

NOTE

Vacuums should be produced in both the liquid and the gas pipes. (Because there are a large number of functional components in the indoor unit which cut off the vacuum mid-way through)



2.8 Additional charge of refrigerant

2.8.1 Refrigerant charging instructions

① The results of all calculations must be recorded. (make a list)

② The refrigerant will need to be additionally charged when the distance between the outdoor Unit and the most distant indoor unit is more than length (refer to section 8 outdoor unit installation condition)

③ The additional charging operation should be carried out by input of liquid into the liquid pipes from a charging cylinder following completion of the Vacuum drying operation.

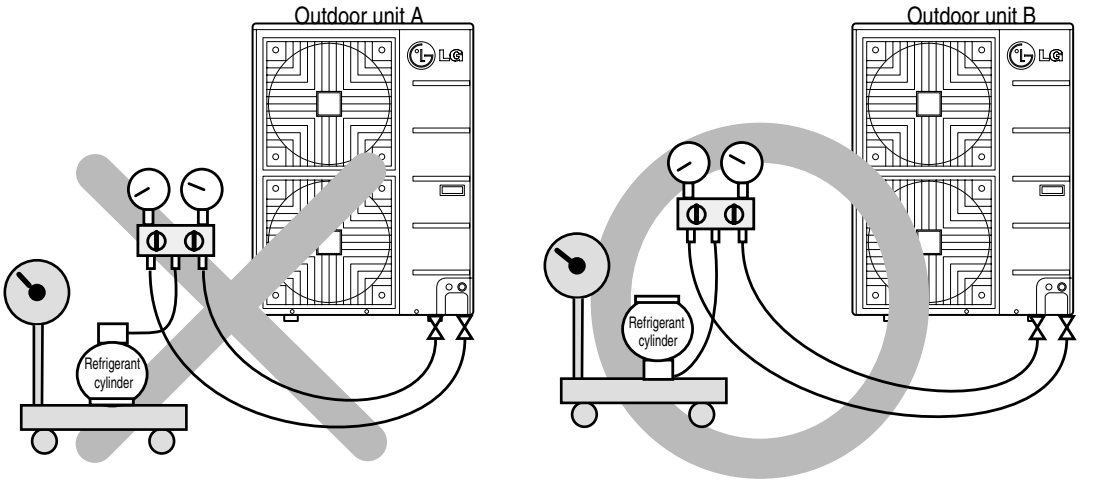
④ When the additional charging operation cannot be satisfactorily completed , use the action of the compressor to complete the additional charging during the test run.

R-410A is a non-azeotrope refrigerants. Therefore , these refrigerants must be charged in the Liquid state.

When charging the refrigerant into equipment from the cylinder , turn the refrigerant cylinder upside down.

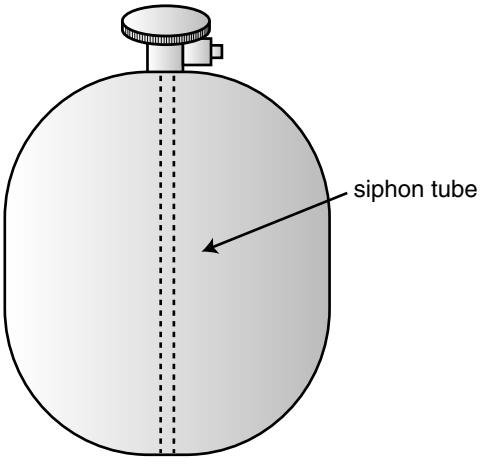
NOTE

Make sure that the refrigerant (liquid) is taken out from the bottom part of the refrigerant cylinder.
Do not take out the refrigerant (gas) at the upper of the refrigerant cylinder for charging.



CAUTION

- Since some refrigerant cylinders differ in the internal mechanism, it is necessary to examine the cylinder carefully. (Some cylinders have a siphon tube to eliminate the need for turning it upside down)



2.9 Trial test run operation

2.9.1 Test run procedure

Check the following before turning power on

- Wrong power wiring , loosed screws
- Wrong control transmission wiring , loose screws
- Piping size , presence of thermal insulation
- Measurement of main power circuit insulation → Use a mega-tester
- Addition or refrigerant if required → Be sure to record the additional quantity of refrigerant
- Fully open respective stop valves on liquid, gas
- Turn on outdoor unit power

2.9.2 Evaluation performance

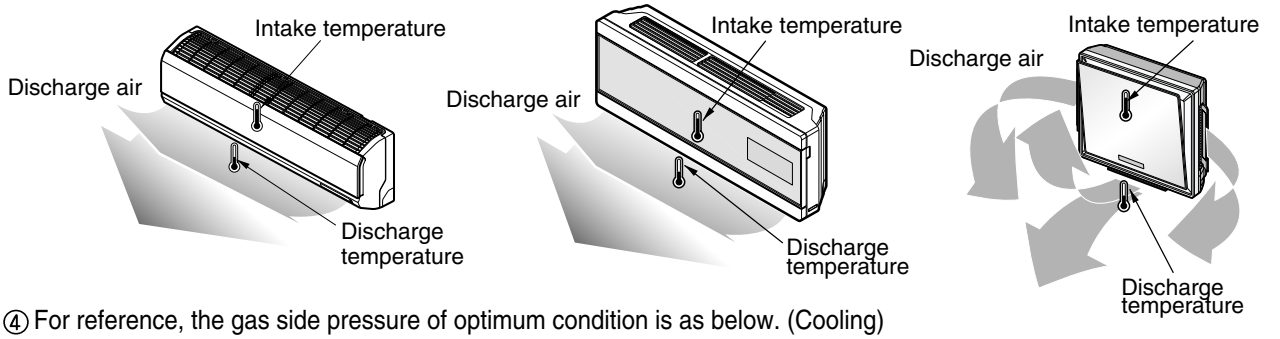
Evaluation of the performance

Operate unit for 15~20 minutes, then check the system refrigerant charge:

① Measure the pressure of the gas side service valve.

② Measure the temperature of the intake and discharge of air.

③ Ensure the difference between the intake temperature and the discharge is more than 8°C



④ For reference, the gas side pressure of optimum condition is as below. (Cooling)

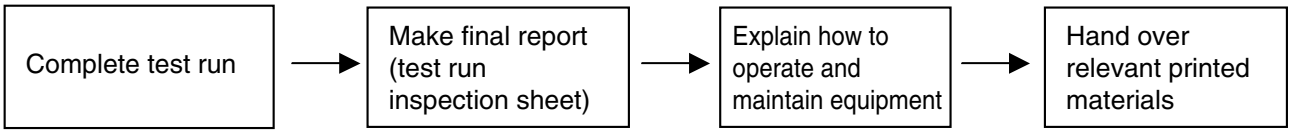
Refrigerant	Outside ambient Temp.	The pressure of the gas side service valve.
R22	35°C (95°F)	4~5kg/cm²G
R410A	35°C (95°F)	8.0~10.0kg/cm²G

NOTE

: If the actual pressure is higher than shown, the system is most likely overcharged so extra refrigerant should be removed.
If the actual pressure is lower than shown, the system is most likely undercharged so extra refrigerant should be added.
The air conditioner is now ready for use.

2.9.3 Transfer to customer with explanation

Operational step



① The measurements taken during the test run should be recorded and kept on a test run inspection sheet.

② Do not forget to record the length of the refrigerant piping and the refrigerant additional charging volume on the plate on the back of the outdoor unit external notice board, as this information will be required for servicing the system.

③ Explain to the customer how to operate and maintain the equipment and let him try it.

④ Assemble all the relevant diagrams and other printed matter which is required to operate the system and hand over to the customer (on the spot) and request him to keep it handy.

⑤ Service contact address.

- List of equipment which has been delivered
- Installation drawing ..... It is essential to prepare a control wiring diagram which clarifies the refrigerant system and the control system.
- 1 set of operation manuals
- Names of those responsible for the work (emergency contact address)
- Equipment guarantees.

3. Installation of indoor unit
3.1 Safety precautions

Please strictly follow the instructions given in the Installation manual .Improper installation by ignoring the instructions can lead to damage of life and property.
Make sure to read the following safety instructions very carefully and throughly .

⚠WARNING	This symbol indicates the possibility of death or serious injury.
⚠CAUTION	This symbol indicates the possibility of injury or damage to properties only.

■ The meanings of the symbols used in this manual are as shown below.

	**Be sure not to do.**
	**Be sure to follow the instruction.**

⚠WARNING

Do not use a defective or underrated circuit breaker.
• There is risk of fire or electric shock.

Always use this appliance on a dedicated circuit breaker.
• Otherwise it can cause electric shock or fire.

For electrical work, contact the dealer, seller, a qualified electrician, or an authorized service center. Do not disassemble or repair the product by yourself.
• There is risk of fire or electric shock.

Always ground the product as per the field wiring diagram. Do not connect the ground wire to gas or water pipes lightening rod or telephone ground wire.
• There is risk of fire or electric shock.

Install the panel and the cover of control box securely.
• There is risk of fire or electric shock due to dust , water etc.

Use the correctly rated breaker or fuse.
• There is risk of fire or electric shock.

Do not modify or extend the power cable. If the power cable or cord has scratches or skin peeled off or deterioted then immediately replace it.
• There is risk of fire or electric shock.

For installation, removal or reinstall, always contact the dealer or an Authorized Service Center.
• There is risk of fire, electric shock, explosion, or injury.

Do not install the product on a defective installation foundation. Be sure that the installation area does not deteriorate with age.
• If the base collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.

When the product is soaked (flooded or submerged) in water, contact an Authorized Service Center for repair before using it again.
• There is risk of fire or eletric shock.

In outdoor unit the step-up capacitor supplies high voltage electlicity to the electrical components.
Be sure to discharge the capacitor completely before conducting the repair work.
• An charged capacitor can cause electrical shock.

Be sure to use only those parts which are listed in the service parts list. Never attempt to modify the equipment.
• The use of inappropriate parts can cause an electrical shock, excessive heat generation or fire.

Indoor/outdoor wiring connections must be secured tightly and the cable should be routed properly so that there is no force pulling the cable at the connection terminals.
• Improper or loose connections can cause excessive heat generation or fire.

Safely dispose off the packing materials.
• Things like screws, nails, batteries, broken things etc. after installation or svc can cause injury to small kids. Tear away and throw away the plastic packaging bags so that children will not play with them.

During svc be sure to check the refrigerant to the used.
• Incorrect refrigerant used can prevent the normal operation of the unit.

When installing the unit, use the installation kit provided with the product.
• Otherwise the unit may fall and cause severe injury .

Do not touch, operate, or repair the product with wet hands.
• There is risk of electric shock or fire.

Do not place a heater or other appliances near the power cable.
• There is risk of fire and electric shock.

Do not allow water to run into electric parts. Install the unit away from water sources
• There is risk of fire, failure of the product, or electric shock.

Do not store or use or even allow flammable gas or combustibles near the product.
• There is risk of fire or failure of product.

Do not use the product in a tightly closed space for a long time. Perform ventilation regularly.
• Oxygen deficiency could occur and hence harm your health.

If strange sounds, smell or smoke comes from product, immediately turn the breaker off or disconnect the power supply cable.
• There is risk of electric shock or fire.

When installing the unit, use the installation kit provided with the product.
• Otherwise the unit may fall and cause severe injury.

Do not open the front grill of the product during operation. (Do not touch the electrostatic filter, if the unit is so equipped.)
• There is risk of physical injury, electric shock or product failure.

Ventilate the product room from time to time when operating it together with a stove, or heating element etc.
• Oxygen deficiency can occur and hence harm your health.

Turn the main power when cleaning or repairing the product.
• There is risk of electric shock.

When the product is not to be used for a long time, shut off the circuit breaker.
• There is risk of product damage or failure or unintended operation.

⚠ CAUTION

Use two or more people to lift and transport the product.
• Avoid personal injury.

Do not install the product where it will be exposed to sea wind (salt spray) directly.
• It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.

Install the drain hose to ensure that water is drained away properly.
• A bad connection may cause water leakage.

Keep level even when installing the product.
• To avoid vibration or noise.

Always check for gas (refrigerant) leakage after installation or repair of product.
• Low pressure levels may cause failure of product.

Do not block the inlet or outlet of air flow.
• It may cause product failure.

Use a soft cloth to clean. Do not use harsh detergents, solvents or splashing water etc .
• There is risk of fire, electric shock, or damage to the plastic parts of the product.

Do not step on or put anyting on the product. (outdoor units)
• There is risk of personal injury and failure of product.

Do not insert hands or other objects through the air inlet or outlet while the product is operating.
• There are sharp and moving parts that could cause personal injury.

Be cautious when unpacking and installing the product.
• Sharp edges could cause injury. Be especially careful of the case edges and the fins on the condenser and evaporator.

If the refrigerant gas leaks during the repair, do not touch the leaking refrigerant gas.
• The refrigerant gas can cause frostbite (cold burn).

Do not tilt the unit when removing or uninstalling it.
• The condensed water inside can cause spill and wet the furniture and the floor.

Do not mix air or gas other than the specified refrigerant used in the system.
• If air enters the refrigerant system, an excessively high pressure results, causing equipment damage or injury.

Replace the all batteries in the remote control with new ones of the same type. Do not mix old and new batteries or different types of batteries.
• There is risk of fire or explosion.

If the liquid from the batteries gets onto your skin or clothes, wash it well with clean water. Do not use the remote if the batteries have leaked.
• The chemicals in batteries could cause burns or other health hazards.

Do not use the product for special purposes, such as preserving foods, works of art, etc. It is a consumer air conditioner, not a precision refrigeration system.
• There is risk of damage or loss of property.

Do not touch the metal parts of the product when removing the air filter.
• There is risk of personal injury.

If the refrigerant gas leaks during the installation or operation ventilate the area immediately.
• Otherwise it can be harmfull for your health.

Do not turn off the power immediately after stopping the operation.
• Always wait for 5 minutes before turning off the power otherwise water leakage and troubles can occur.

Do not let the air conditioner run for a long time when the humidity is very high and a door or a window is left open.
• Moisture may condense and wet or damage furniture.

Do not expose your skin or kids or plants to the cool or hot air draft.
• This could harm to your health.

Do not drink the water drained from the product.
• It is not sanitary and could cause serious health issues.

Use a firm stool or ladder when cleaning, maintaining or repairing the product at an height.
• Be careful and avoid personal injury.

Dismantling of the unit , treatment of the refrigerant oil and eventual parts should be done in accordance with local and national standards.

Do not recharge or disassemble the batteries. Do not dispose off batteries in fire.
• They may burn or explode.

3.1.1 Points for explanation about operations

The items with WARNING and CAUTION marks in the operation manual are the items pertaining to possibillties for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask your customers to read the owner's manual.

NOTE **to the installer**

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

3.1.2 Selecting installation site for indoor units

1) Select an installation site where the following conditions are fulfilled and that meets with your customer's approval.

① Location strong enough to bear the weight of the unit.

② Location accessible and having enough clearance for inspection and service in the future.

③ Location allowing easy condensate drainage and suitable gradient of the unit and the drain pipe.

④ Piping between the indoor and outdoor unit is possible within the allowable limits.

⑤ Location free from electrical noise.

⑥ Location allowing optimum air distribution without any blocking to air flow.

⑦ Location having no risk of flammable gas leakage.

⑧ Location free from mineral oil mist or an oil spray or vapor example in kitchen .It could result in leakage .

⑨ Location free from corrosive gases such as sulphurous acid gas because it corrodes the copper pipes or soldered parts resulting in leakage .

⑩ Location free from any machinery emitting electromagnetic waves which may disturb the control system thus causing malfunction of the unit .

⑪ Location free from flammable gases , carbon fibre , or ignitable dust suspensions in the air or where volatile flames are handled like gasoline or thinner. Operating in such conditions may result in fire .

⑫ Install the indoor and outdoor units, power supply wiring and connecting wires at least 1m away from televisions or radios in order to prevent image interference or noise. (Depending on the radio waves, a distance of 1m. may not be sufficient enough to eliminate the noise.)

⑬ Consider whether the place where the unit will be installed can support the full weight of the unit, and reinforce it with boards and beams, etc. If needed before proceeding with the installation. Also, reinforce the place to prevent vibration and noise before installing.

⑭ The indoor ART COOL, ART COOL mirror, Wallmount unit may not be directly installed on the wall. Use the attached installation plate before installing the unit.

⑮ Obey the local and national regulations and limits regarding airconditioner installation.

2) For the following items, take special care during construction and check after installation is finished

Items to be checked after completion of installtion work

Items to be checked	If not properly done, what is likely to occur	Check
Are the indoor and outdoor unit fixed firmly?	The units may drop, vibrate or make noise.	
Is the gas leak test finished?	It may result in insufficient cooling or heating.	
Is the unit fully insulated?	Condensate water may drip.	
Does drainage flow smoothly?	Condensate water may drip.	
Does the power supply voltage correspond to that shown on the name plate?	The unit may malfunction or the components burn out.	
Are wiring and piping correct?	The unit may malfunction or the components burn out.	
Is the unit safely grounded?	It may be dangerous during electric leakage.	
Is wiring size correct according to specifications?	The unit may malfunction or the components burn out.	
Is there something blocking the air outlet or inlet of either the indoor or outdoor units?	It may result in insufficient cooling or heating.	
Are refrigerant piping length and additional refrigerant charge noted down?	The refrigerant charge in the system is not clear.	

3.1.3 Before installation

During product unpacking and removing it from the packing case, be sure to lift it without exerting any pressure on other parts, especially, horizontal flaps, the refrigerant piping, drain piping, and other resin parts.

- The accessories needed for installation must be retained in your custody until the installation work is completed. Do not discard them!
- Decide upon a line of transport.
- Leave the unit inside its packaging while moving, until reaching the installation site. Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the unit.
- When using the wireless remote controller, refer to the installation manual attached to the wireless remote controller.

NOTE

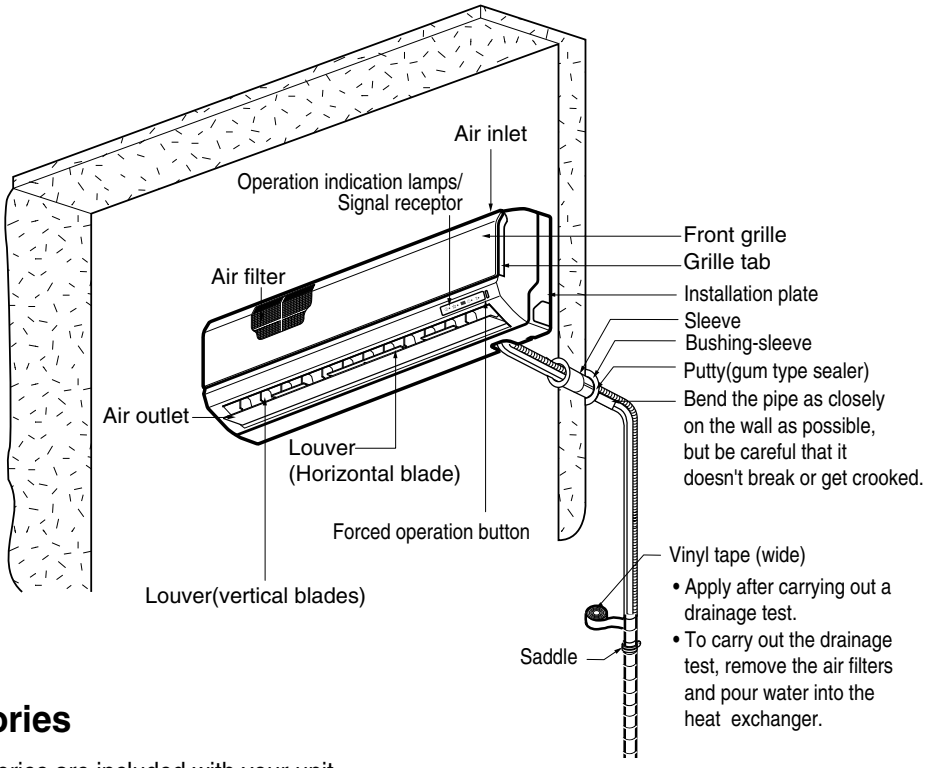
- **Be sure to read this manual before installing the indoor unit.**
- Entrust installation to the place of purchase or an authorized serviceman. Improper installation could lead to leaks and in worst cases, electric shock of fire.
- Use only parts provided with the unit or parts satisfying required specifications. Unspecified parts could cause the unit to fall out of place, or could lead to leaks and in the worst cases, electric shock or fire.

3.2. Wall mounted

• Please read the instruction sheets completely before installing the product.

• When the power cord is damaged, replacement work shall be performed by authorized personnel only.

• Installation work must be performed in accordance with the national wiring standards by authorized personal only.

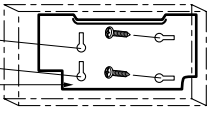


3.2.1 Accessories

The following accessories are included with your unit.

1) Standard accessories

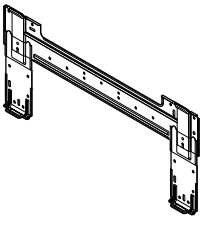
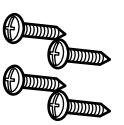
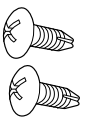
1. Type "A" screw
2. Installation plate





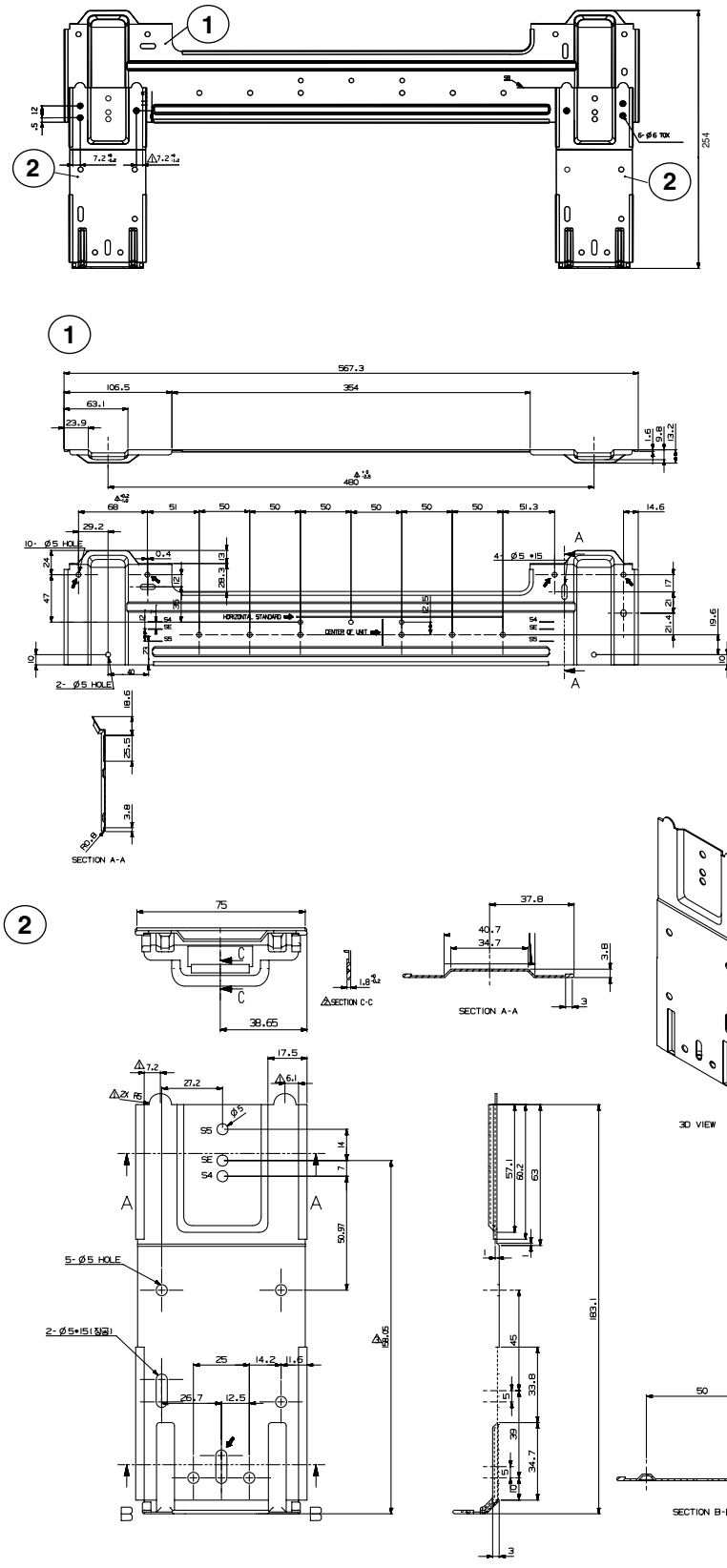
3. Type "B" screw
4. Remote control holder

Cooling & heating model has included drain elbow.

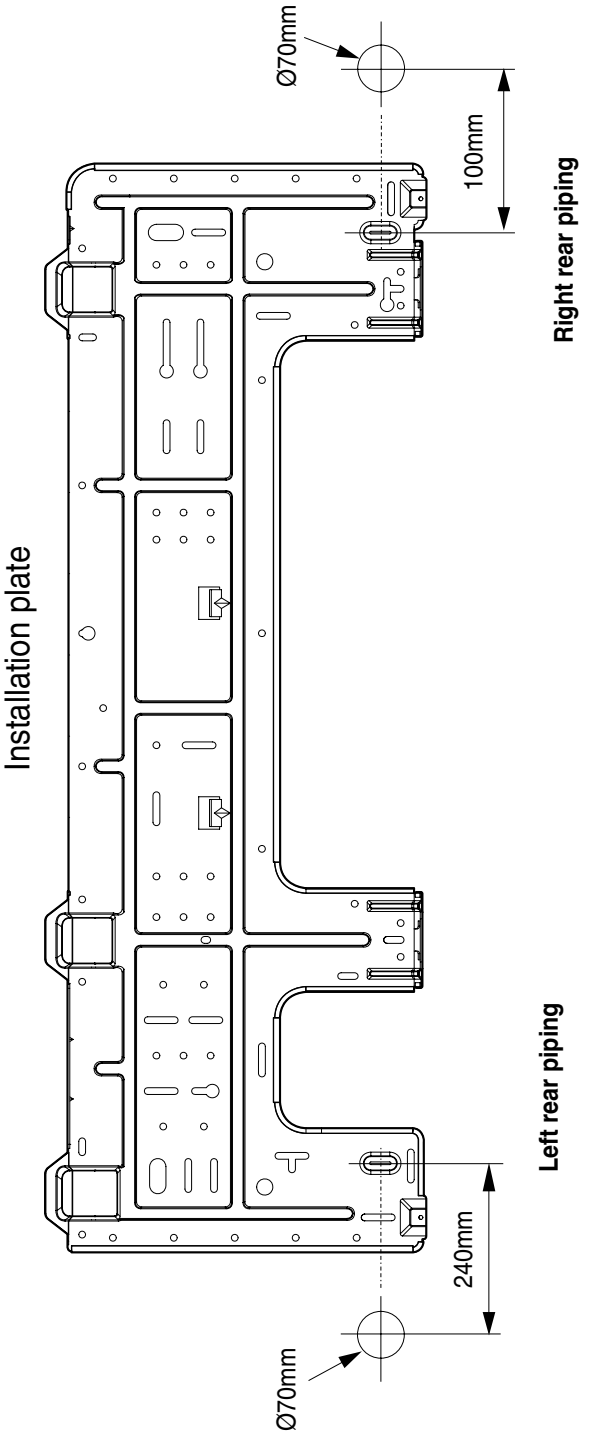
Name	Installation panel	Securing screws		(Other)
Quantity	1 set	4 EA	2 EA	
Shape		Type "A" screw 	Type "B" screw  M4 x 12L	• Owner's manual • Installation manual

2) Installation plates dimensions

S4 chassis



S5 chassis

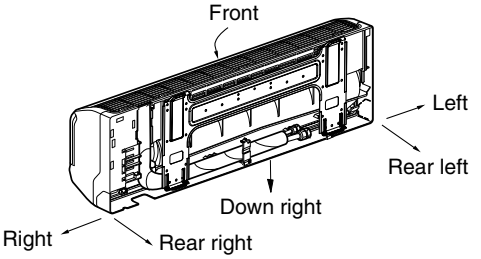


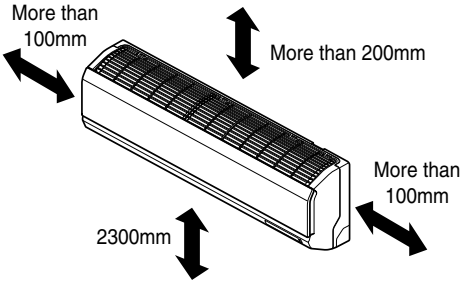
CAUTION

• Use only those accessories (Standard or optional) which have designated specilications

3.2.2 Selection of the best location

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to prevent the air circultion.
- There should be easy provision of condensate drain.
- Taking into account the noise prevention criteria, spot the installation location.
- Do not install the unit near the door way.
- Keep proper distance, of the unit, from ceiling fence, floor, walls & other obstacles as shown in figure.
- The mounting wall should be strong and solid enough to protect it from the vibration.



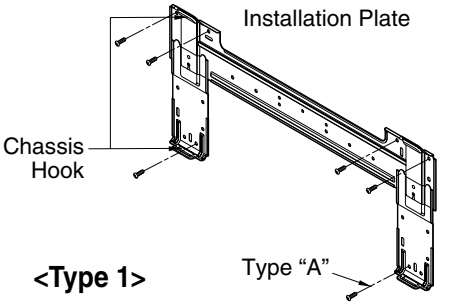


3.2.3 Fixing installation plate

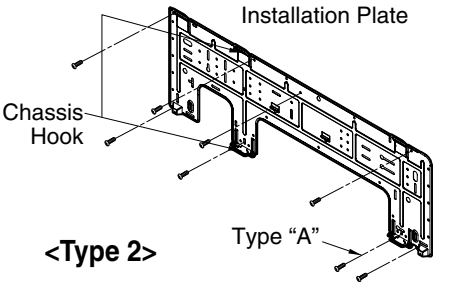
1) Mount the installation plate on the wall with four Type "A" screws.

(If mounting the unit on the concrete wall, consider using anchor bolts.)

① Always mount the Installation plate horizontally by aligning the center line by means of the thread and a level.



<Type 1>

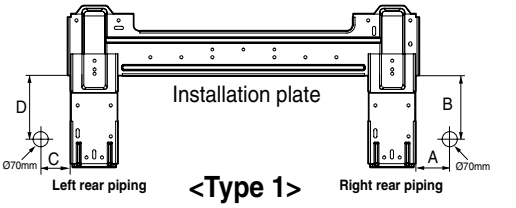


<Type 2>

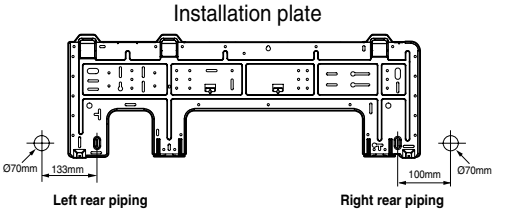
② Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate-routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

2) The lower left and the right side of installation plate

• S4/S5 chassis



<Type 1>



<Type 2>

CHASSIS (Grade)	Distance (mm)			
	A	B	C	D
S4	55	105	65	105
S5	100	122	240	122

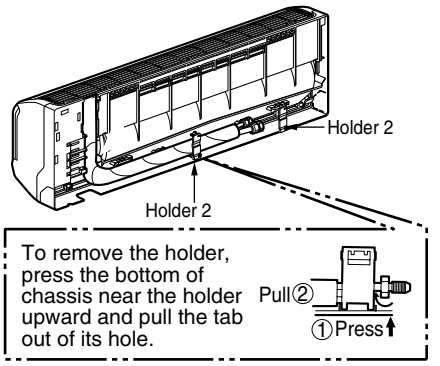
3.2.4 Before piping work

1) Preparation

① Preparing the indoor unit's piping and drain hose for installation through the wall.

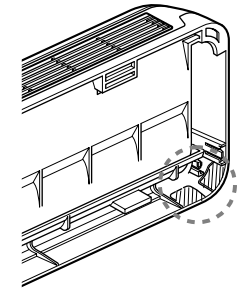
② Remove the plastic tubing retainer(see illustration below) and pull the tubing and drain hose away from chassis.

③ Replace the plastic tubing holder in the original position.



⚠CAUTION

- When install, make sure that the remaining parts must be removed clearly so as not to damage the piping and drain hose, especially power cord and connecting cable.

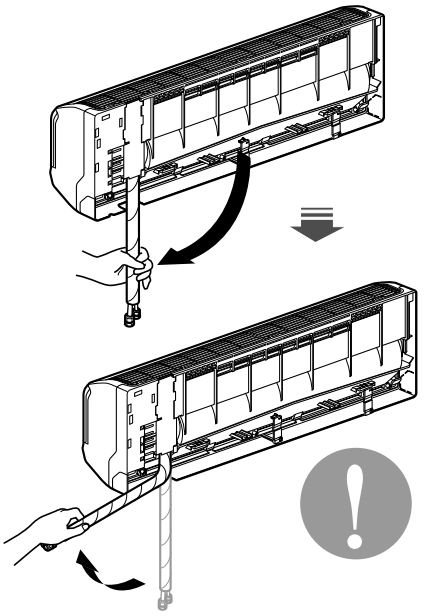


⚠CAUTION

- Installation Information. For right piping. Follow the instruction given below.

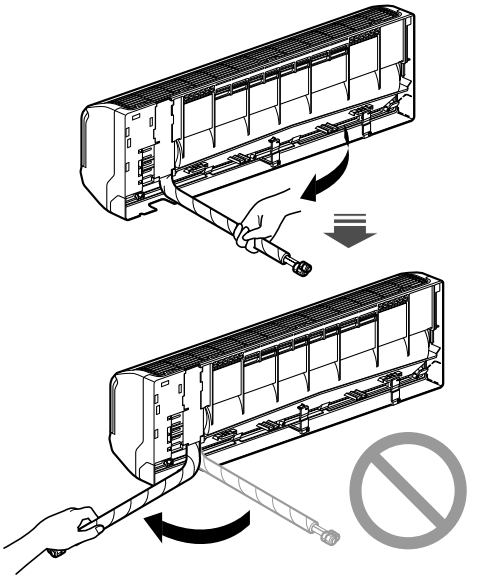
• Correct method

- Press on the upper side of clamp and unfold the tubing to downward slowly.



• Wrong method

- Following bending type from left to right may cause damage to the tubing.

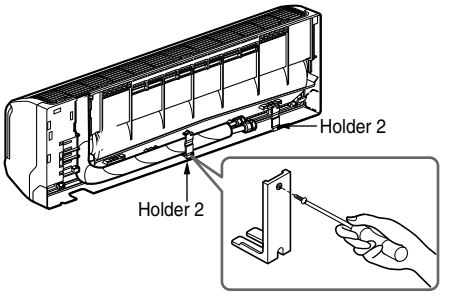


3.2.5 Connecting the piping

① Prepare the indoor unit's piping and drain hose for installation through the wall.

② Remove the plastic tubing retainer(see the illustration) and pull the tubing and drain hose away from chassis.

③ Of the two holders 1 and 2, replace only the holder 1 in its original postition.



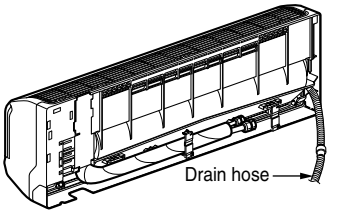
1) For right rear piping

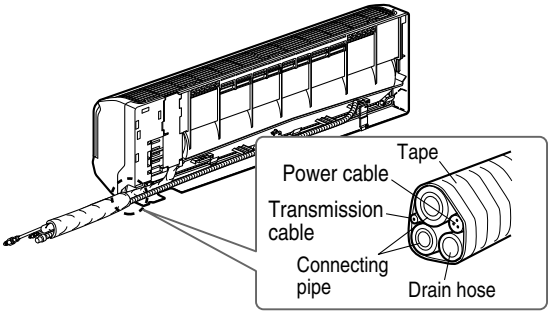
① Route the indoor tubing and the drain hose in the direction of rear right.

② Insert the connecting cable into the indoor unit from the outdoor unit through the piping hole.

- Do not connect the cable to the indoor unit.
- Make a small loop with the cable for easy connection later.

③ Tape the tubing, drain hose, and the connecting cable. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the uper side can cause drain pan to overflow inside the unit.





⚠CAUTION

- If the drain hose is routed inside the room, insulate the hose with an insulation material* so that dripping from condensation will not damage furniture or floors.
  *Foamed polyethylene or equivalent is recommended.

2) For left rear piping

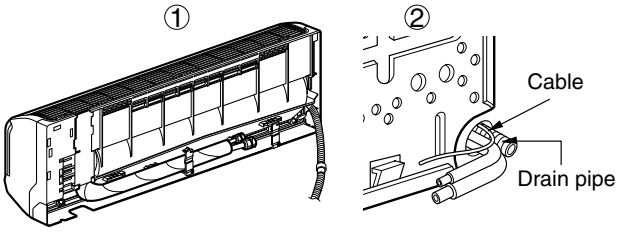
① Route the indoor tubing and the drain hose to the required piping hole position.

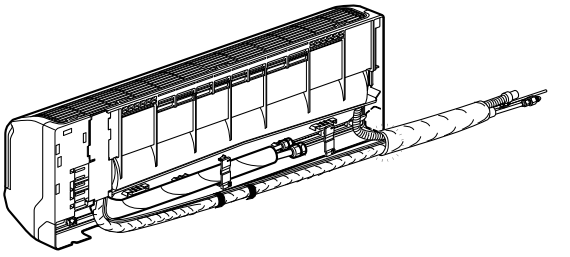
② Insert the piping, drain hose, and the connecting cable into the piping hole.

③ Insert the connecting cable into the indoor unit.

- Don't connect the cable to the indoor unit.
- Make a small loop with the cable for easy connection later.

④ Tape the drain hose and the connecting cables.

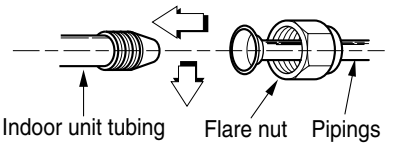


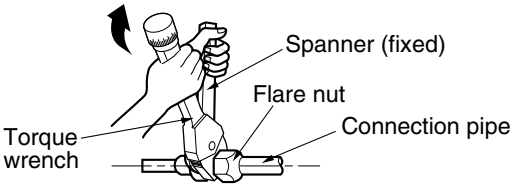


3) Connecting the piping to the indoor unit and drain hose to drain pipe.

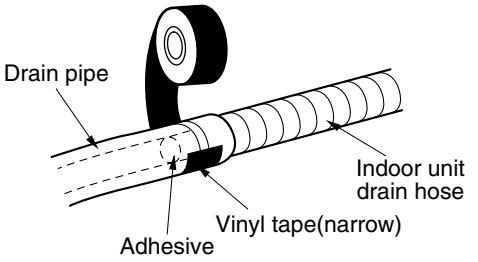
① Align the center of the pipes and sufficiently tighten the flare nut by hand.

② Tighten the flare nut with a wrench.





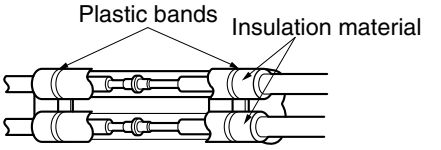
③ When extending the drain hose at the indoor unit, install the drain pipe.

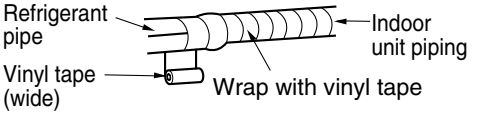


4) Wrap the insulation material around the connecting portion.

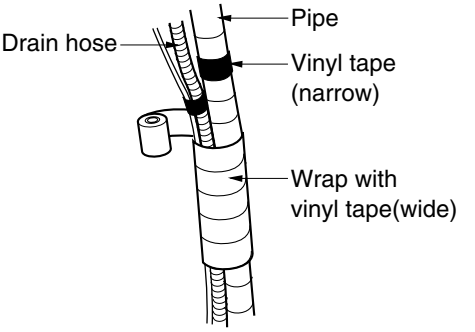
① Overlap the connection pipe heat insulation and the indoor unit pipe heat insulation material. Bind them together with vinyl tape so that there may be no gap.

② Wrap the area which accommodates the rear piping housing section with vinyl tape.





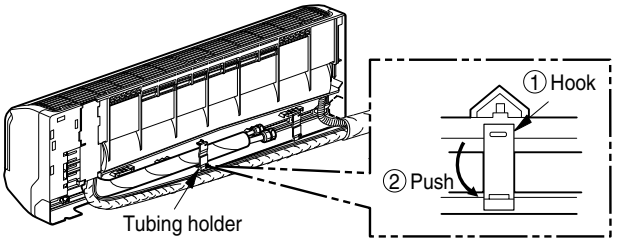
③ Bundle the piping and drain hose together by wrapping them with cloth tape over the range within which they fit into the rear piping housing section.



5) Reroute the pipings and the drain hose across the back of the chassis.

① Set the pipings and the drain hose to the back of the chassis with the tubing holder.

② Hook the edge of tubing holder to tap on chassis and push the bottom of tubing holder to be engaged at the bottom of chassis.

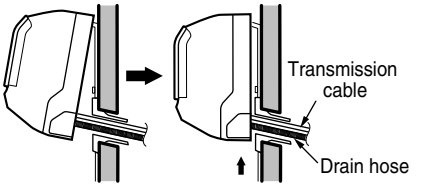


3.2.6 Indoor unit installation on the plate

① Remove the spacer.

② Ensure that the hooks are properly seated on the installation plate by moving it left and right.

③ Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots(clicking sound).

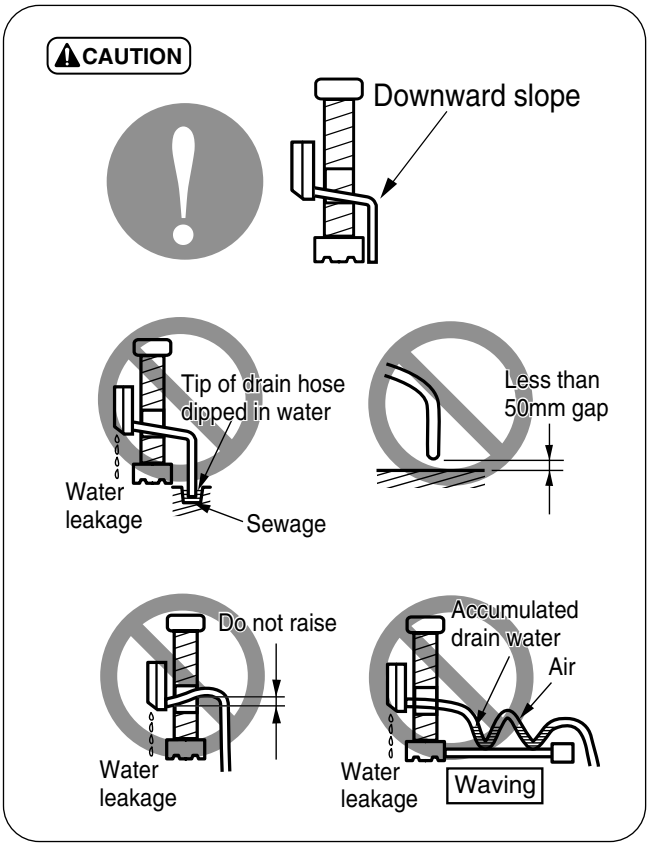


3.2.7 Drain piping work

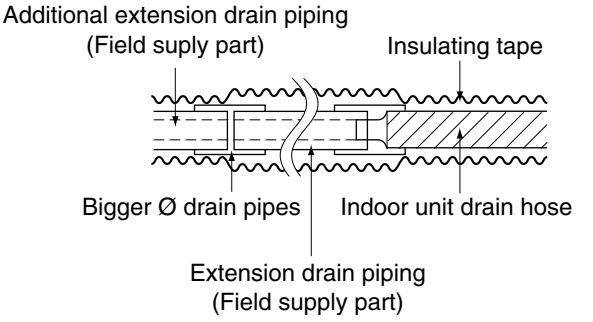
1) Install the drain piping

• The drain pipe should be short with a downward slope and should prevent air pockets from forming.

• Watch out for the points in the figure when performing drain work.

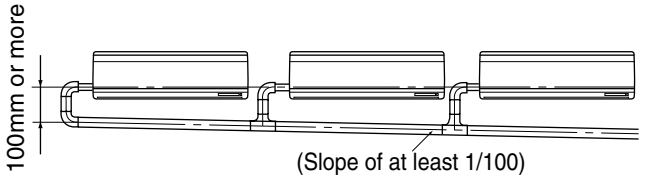


• When extending the drain hose, use a commercially available drain extension hose, and be sure to insulate the extended section of the drain hose which is indoors.

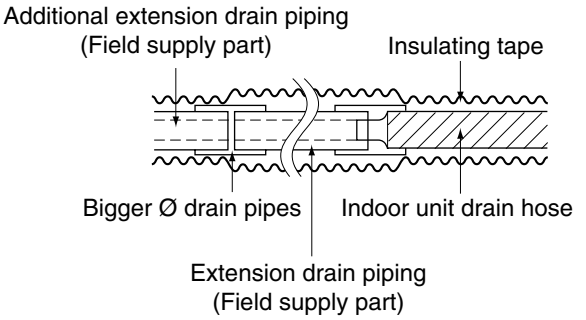


• Make sure the diameter of the extension drain piping is the same as the indoor unit drain hose size or bigger.

- In case of converging multiple drain pipes, install them referring the following figure.
- Select diameter of drain piping which adapts to the capacity of the unit connected.



- When extending the drain hose, use a commercially available drain extension hose, and be sure to insulate the extended section of the drain hose which is indoors. (Refer to the figure given below)

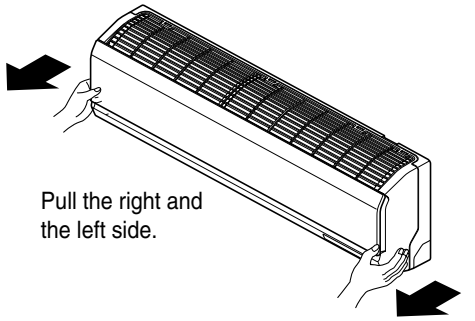


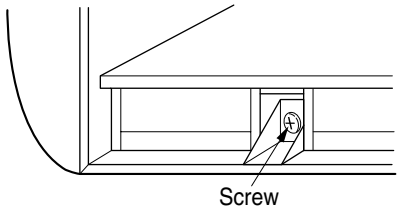
3.2.8 Checking the drainage

1) To remove the front panel from the indoor unit.

① Set the air direction louvers up-and-down to the position(horizontally) by hand.

② Remove the securing screws that retain the front panel. Pull the lower left and right sides of the grille toward you and lift it off.



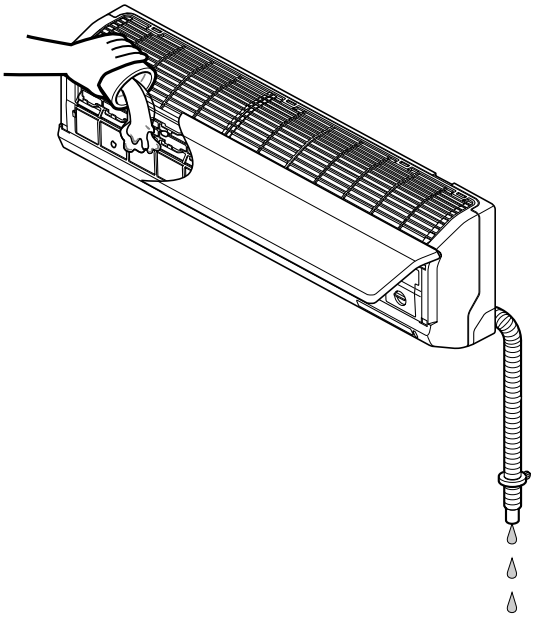


2) To check the drainage.

① Pour a glass of water on the evaporator.

② Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

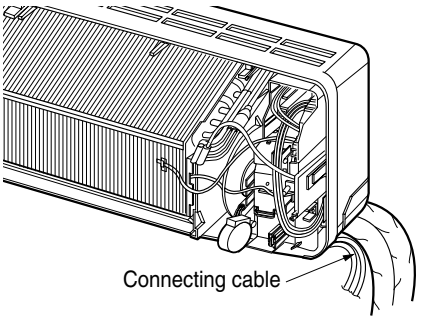
③ Do not use 'Anti freezing solutiobn'



3.2.9 Connecting the cable

1) Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

① Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.



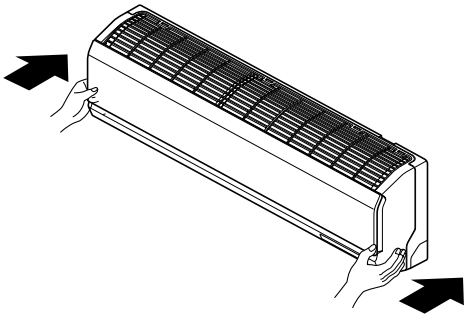
Terminal Block in Indoor				
1(L)	2(N)	⏚	3	4

Connected to Outdoor Unit(or BD Unit)

2) Attach the grille onto the body.

① Grasp after lower left and right side of the grille and engage four tabs on the top inside edge of the chassis.

② Press the grille toward the chassis until it will be back into place.



⚠CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

1) Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, be guided by the circuit diagram posted on the inside of control cover.

2) The screw which fasten the wiring in the casing of electrical fittings are liable to become loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could cause burn-out of the wires.)

3) Confirm the specification of power source.

4) Confirm that electrical capacity is sufficient.

5) See to that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.

6) Confirm that the cable thickness is as specified in the power source specification. (Particularly note the relation between cable length and thickness.)

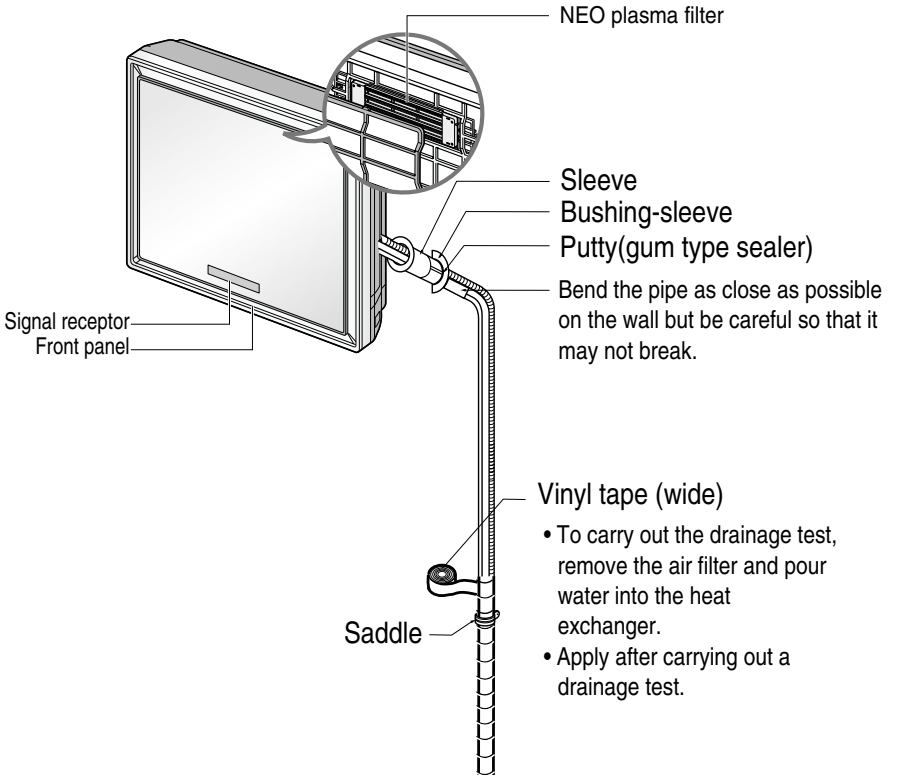
7) In a wet or moist area, always install an earth leakage circuit breaker.

8) The following would be caused by voltage drop.
- **Vibration of a magnetic switch, which will damage the contact point, fuse breaking, disturbance of the normal function of the overload.**

9) The means for disconnection from a power supply shall be incorporated in the fixed wiring and have an air gap contact separation of at least 3mm in each active(phase) conductors.

3.3 ART COOL

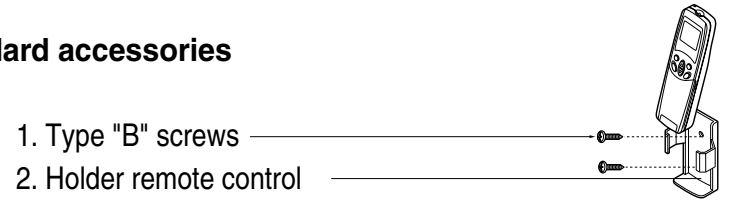
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.



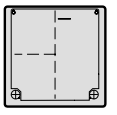
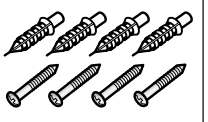
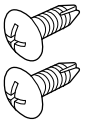
3.3.1 Accessories

Check the following accessories are included with your unit.

1) Standard accessories

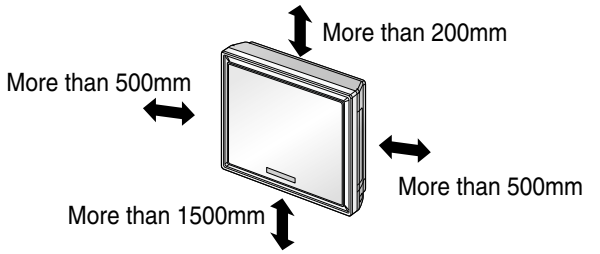


Cooling & heating model has included drain elbow.

Name	Installation guide map	Securing screws		(Other)
Quantity	1 EA	4 EA	2 EA	
Shape		Type "A" screw plastic anchors 	Type "B" screw  M4 x 12L	• Owner's manual • Installation manual

3.3.2 Selection of the best location

- Do not have any heat or steam near the unit.
- Select a place where there are no obstacles in front of the unit.
- Make sure that condensation drainage can be conveniently routed away.
- Do not install near a doorway.
- Ensure that the interval between a wall and the left (or right) of the unit is more than 500mm. The unit should be installed as high as possible on the wall, allowing a minimum of 200mm from ceiling.
- Use a stud finder to locate studs to prevent unnecessary damage to the wall.
- The mounting wall should be strong and solid enough to protect it from the vibration.



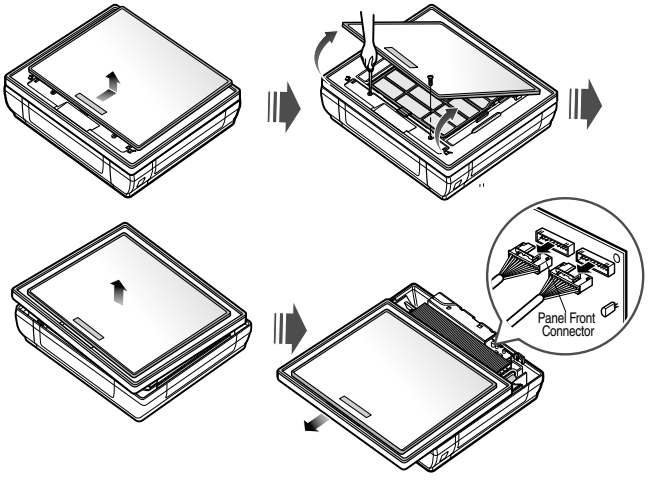
CAUTION

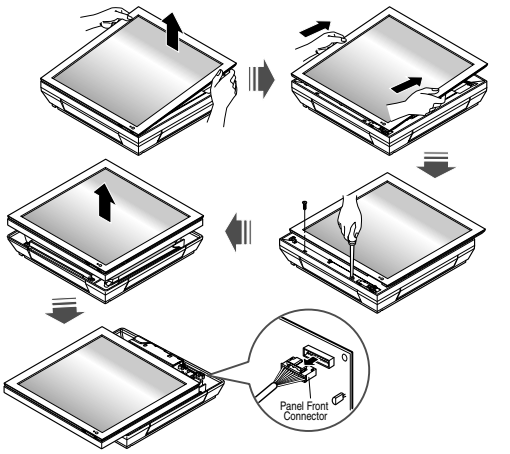
- Install the indoor unit on the wall where the height from the floors is more than 1.5 meters.

3.3.3 Preparing work for installation

1) Open front panel

① Push the front panel backward and lift it up to remove the two screws.
② The moment of lifting the both lower parts of panel front, you can hear sound of this panel caming out, In this time the front panel is separated
③ After pulling down this panel a bit, separate the connecting wire with product.



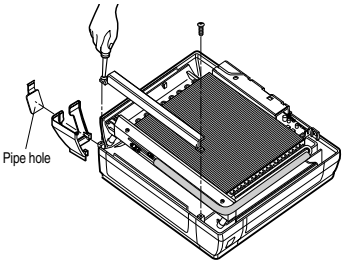


2) Removing pipe cover and side cover

① Remove two screws(fixing pipe cover)
② Pull up the cover side of desired connecting direction, then cover side is separated.
③ As per the pipe connecting direction on the left or right side, make a path through the hole on the side cover.

CAUTION

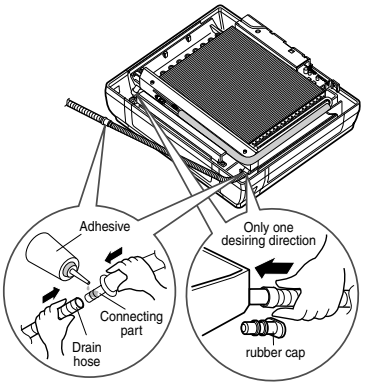
- After removing the pipe hole, cut the burr for safety.



When connecting pipe path through rear wall, don't remove the hole.

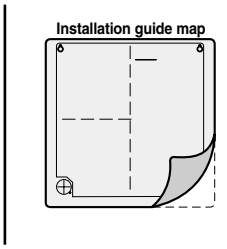
3) Drain hose junction

① Remove the rubber cap of desired drain direction.
② As per the following picture, insert drain hose in the handle of drain pan, and join drain hose and connecting hose.

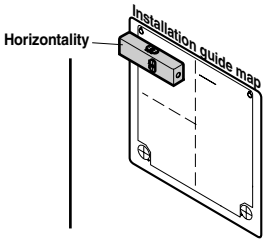


4) Sticking the installation guide map and fixing indoor unit

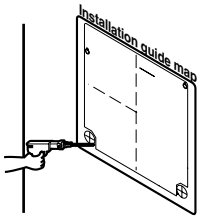
① Put up the installation guide map on the desired surface.



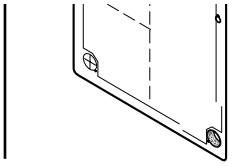
② Check the level by horizontal mete and fix lightly the map by adhesive tape.



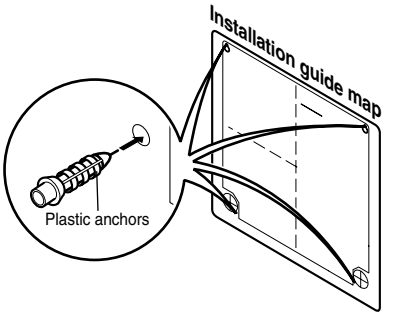
③ Make a hole with diameter of 6mm and depth of 30-35mm when piercing a screw point.



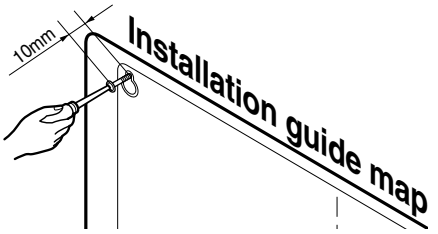
④ Drill the piercing part for connecting pipe as diameter 50mm. (In case of piercing rear surface)



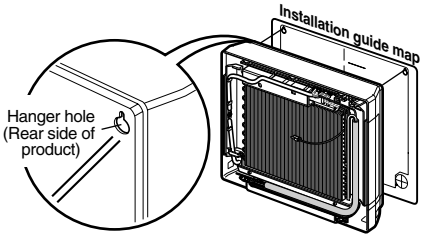
⑤ Drive the four plastic anchors into drilled points.



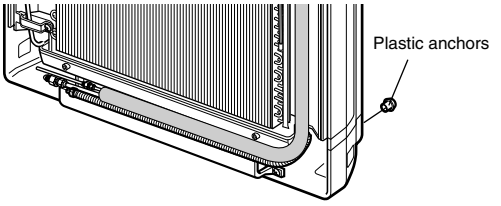
⑥ First, drive the two points of the upper parts by screws. (Leave 10mm for hanging product)



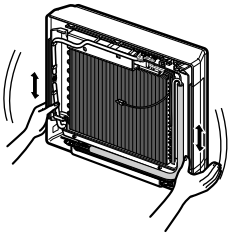
⑦ Hang the hole of product at the upper screws. (at this time, remove the map) (Make sure the product do not fall down)



⑧ Drive the lower parts after facing the hole of product with plastic anchors, and fix completely the upper screws.



⑨ Check if the product is fixed properly by slightly moving the product.

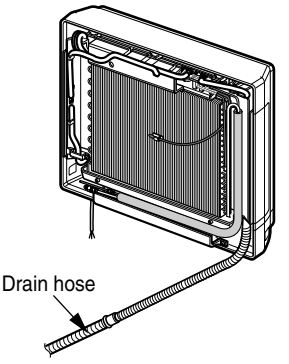


⑩ If nothing is wrong till now then connect the pipe and the wire.
(Refer to the installation manual reference)

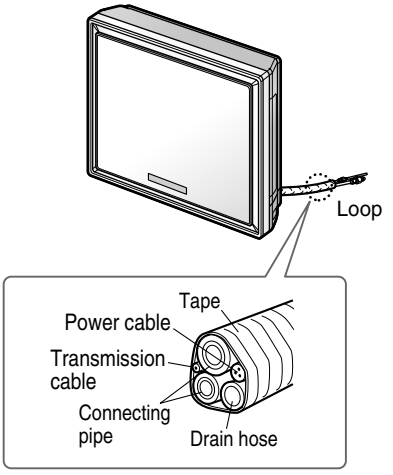
3.3.4 Connection of piping

• Preparing the indoor unit's piping and drain hose for installation through the wall.

1) Route the indoor tubing and the drain hose in the direction of rear left or right



2) Tape the tubing, drain hose and the connecting cable. Make sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause drain pan to overflow inside the unit.



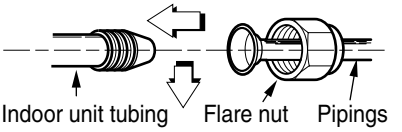
NOTE

If the drain hose is routed inside the room, insulate the hose with an insulation material* so that dripping from condensation will not damage furniture or floors.

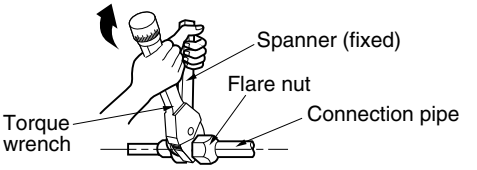
*Foamed polyethylene or equivalent is recommended.

3) Connecting the pipings to the in door unit and drain hose to drain pipe

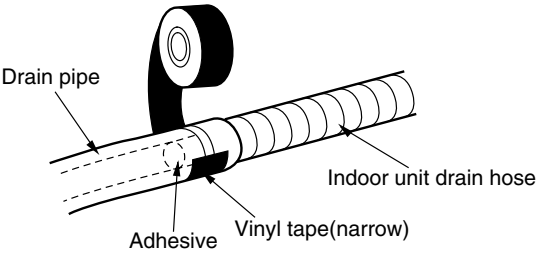
① Align the center of the pipings and sufficiently tighten the flare nut by hand.



② Tighten the flare nut with a wrench.

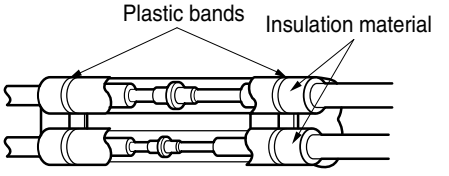


③ When extending the drain hose at the indoor unit, install the drain pipe.

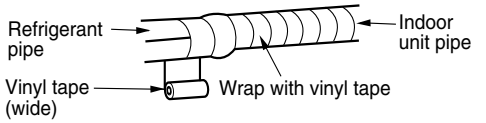


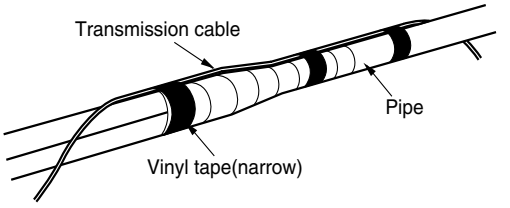
4) Wrap the insulation material around the connecting portion.

① Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there is no gap.

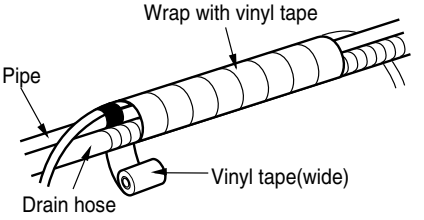


② Wrap the area which accommodates the rear piping housing section with vinyl tape.





③ Bundle the piping and drain hose together by wrapping them with vinyl tape over the range within which they fit into the rear piping housing section.



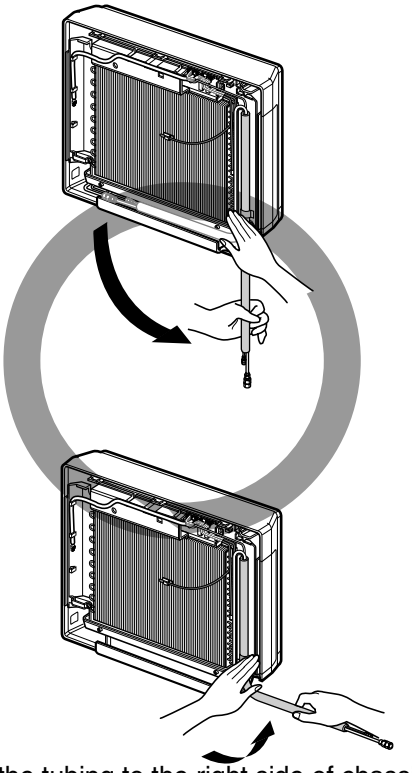
⚠WARNING

Installation Information (For right piping)

• Correct method

For right piping, follow the instruction given below.

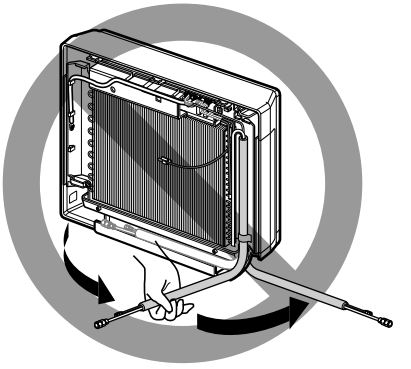
1 Press on the upper side of clamp and unfold the tubing to downward slowly.



2 Bend the tubing to the right side of chassis.

• Wrong method

1 Following bending type from left to right could cause problem of pipe damage.



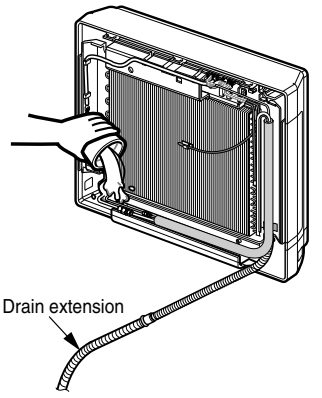
3.3.5 Checking the drainage

1) To check the drainage.

① Pour a glass of water on the evaporator.

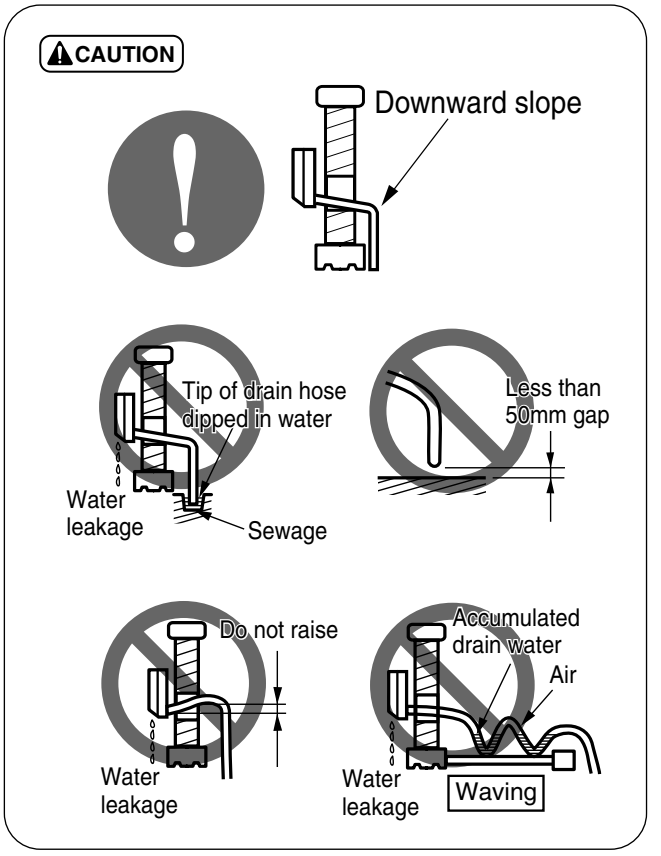
② Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out of the drain exit.

③ Do not use 'Anti freezing solution'

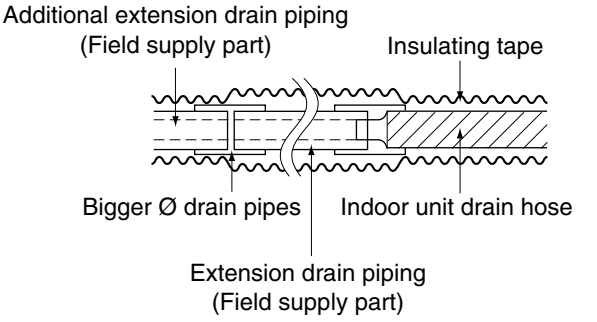


2) Drain piping

• The drain hose should point downward for easy drain flow.



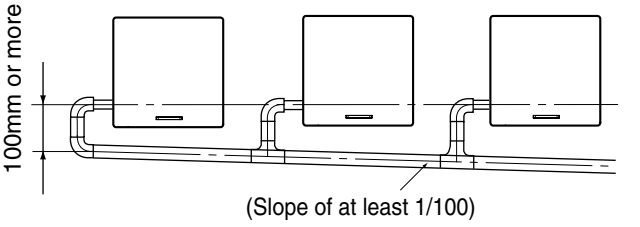
• When extending the drain hose, use a commercially available drain extension hose, and be sure to insulate the extended section of the drain hose which is indoors.



• Make sure the diameter of the extension drain piping is the same as the indoor unit drain hose size or bigger.

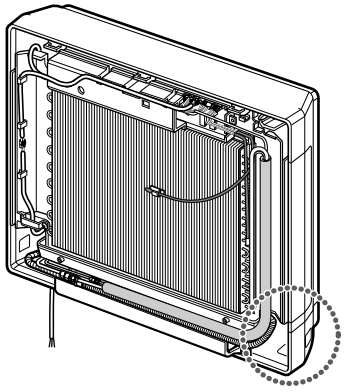
• In case of converging multiple drain pipes, install them referring to figure given below.

• Select diameter of drain piping which adapts to the capacity of the unit connected.

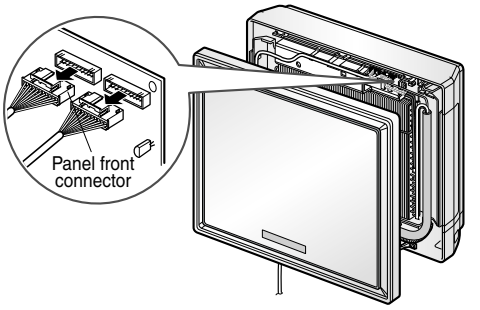


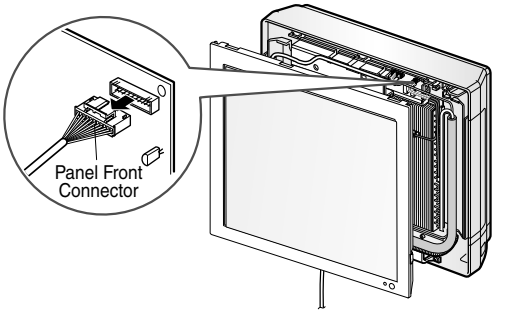
3.3.6 Front panel assembly

① **First, check the side cover assembly exactly then fix power cord in the bottom groove of cover's left side.**

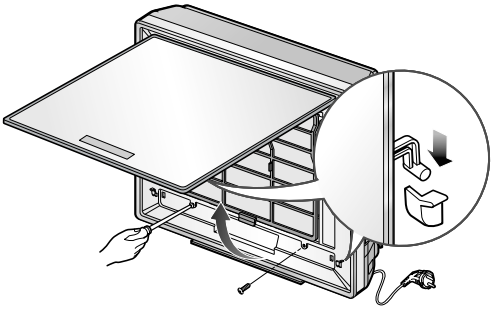


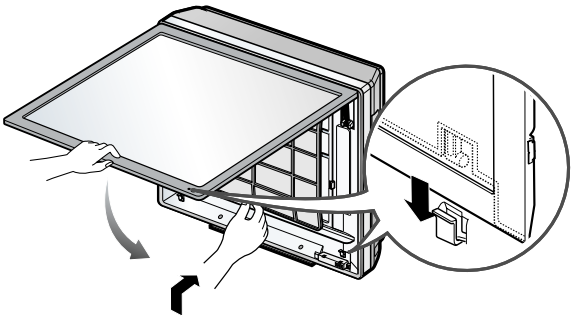
② **Assemble connecting lead wire with controller and first fix the upper part of panel front then match the lower part of panel front**





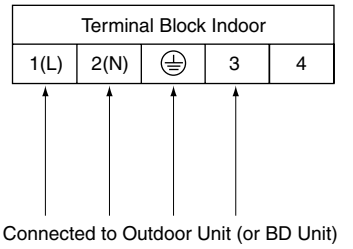
③ **Suspend the front panel by the hook in the groove and then tighten the 2 screws at the bottom.**





3.3.7 Connecting the cable

① Connect the cable to the indoor unit by connecting the wires to the terminals on the control board individually according to the outdoor unit connection. (Ensure that the color of the wires of the outdoor unit and the terminal no. are the same as those of the indoor unit.)
The earth wire should be longer than the common wires.



② When installing, refer to the circuit diagram on the control box of indoor unit.

- When installing, refer to the wiring diagram on the control cover inside outdoor unit.

⚠CAUTION

- The above circuit diagram is subject to change without notice.
- Be sure to connect wires according to the wiring diagram.
- Connect the wires firmly, so that it cannot be pulled out easily.
- Connect the wires according to color codes by referring to the wiring diagram.

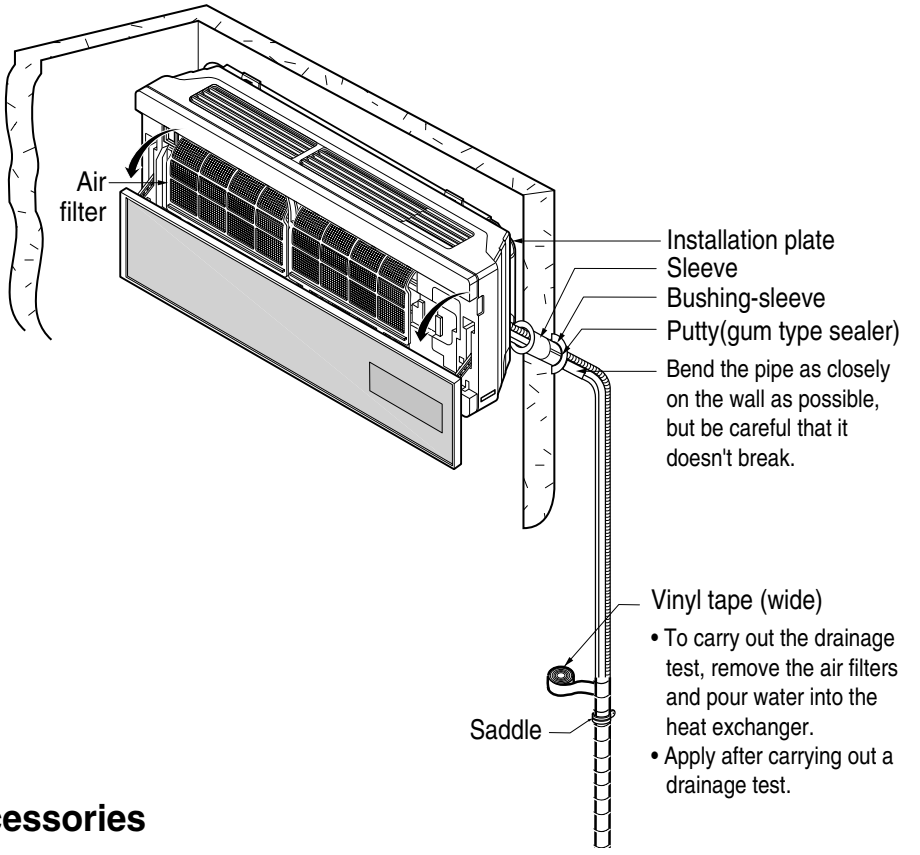
⚠CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

1) Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, be guided by the circuit diagram posted on the inside of control cover.
2) The screw which fasten the wiring in the casing of electrical fittings are liable to become lose due from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could cause burn-out of the wires.)
3) Confirm the specification of power source.
4) Confirm that electrical capacity is sufficient.
5) See to that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
6) Confirm that the cable thickness is as specified in the power source specification. (Particularly note the relation between cable length and thickness.
7) Never fail to equip a leakage breaker where it is wet and moist area.
8) The following would be caused by voltage drop.
• Vibration of a magnetic switch, which will damage the contact point, fuse breaking, disturbance of the normal function of the overload.
9) The means for disconnection from a power supply shall be incorporated in the fixed wiring and have an air gap contact separation of at least 3mm in each active(phase) conductors.

3.4 ART COOL Mirror

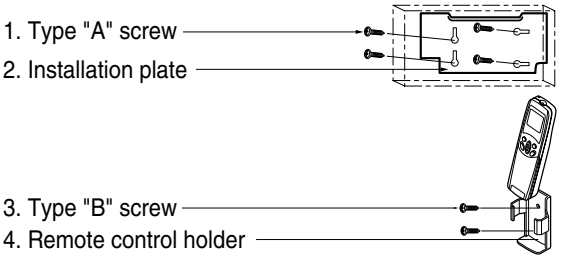
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.



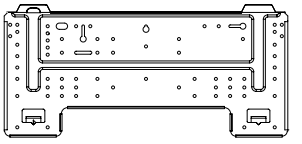
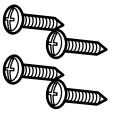
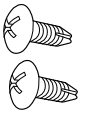
3.4.1 Accessories

Check the following accessories are included with your unit.

1) Standard accessories

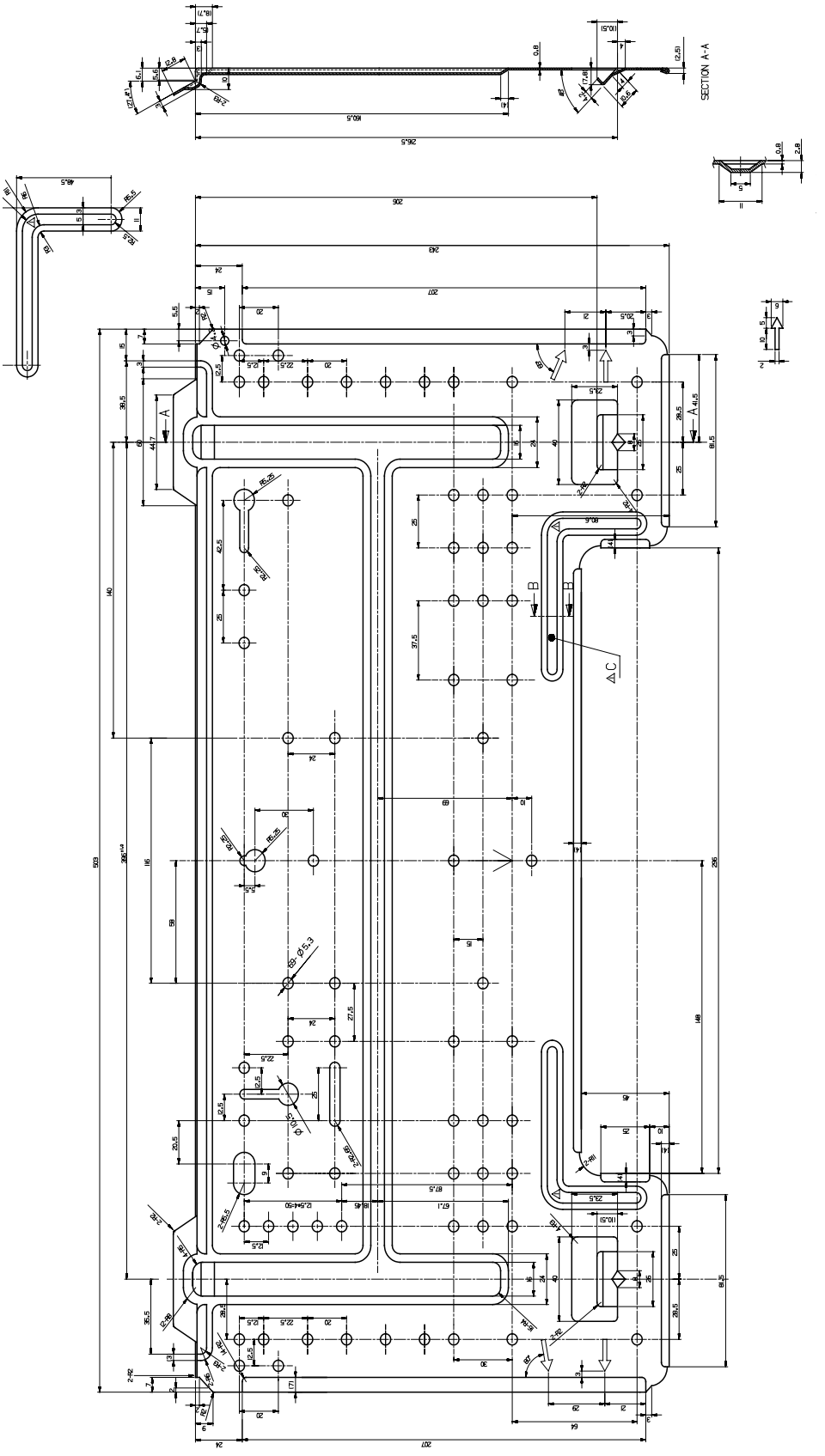


Cooling & heating model has included drain elbow.

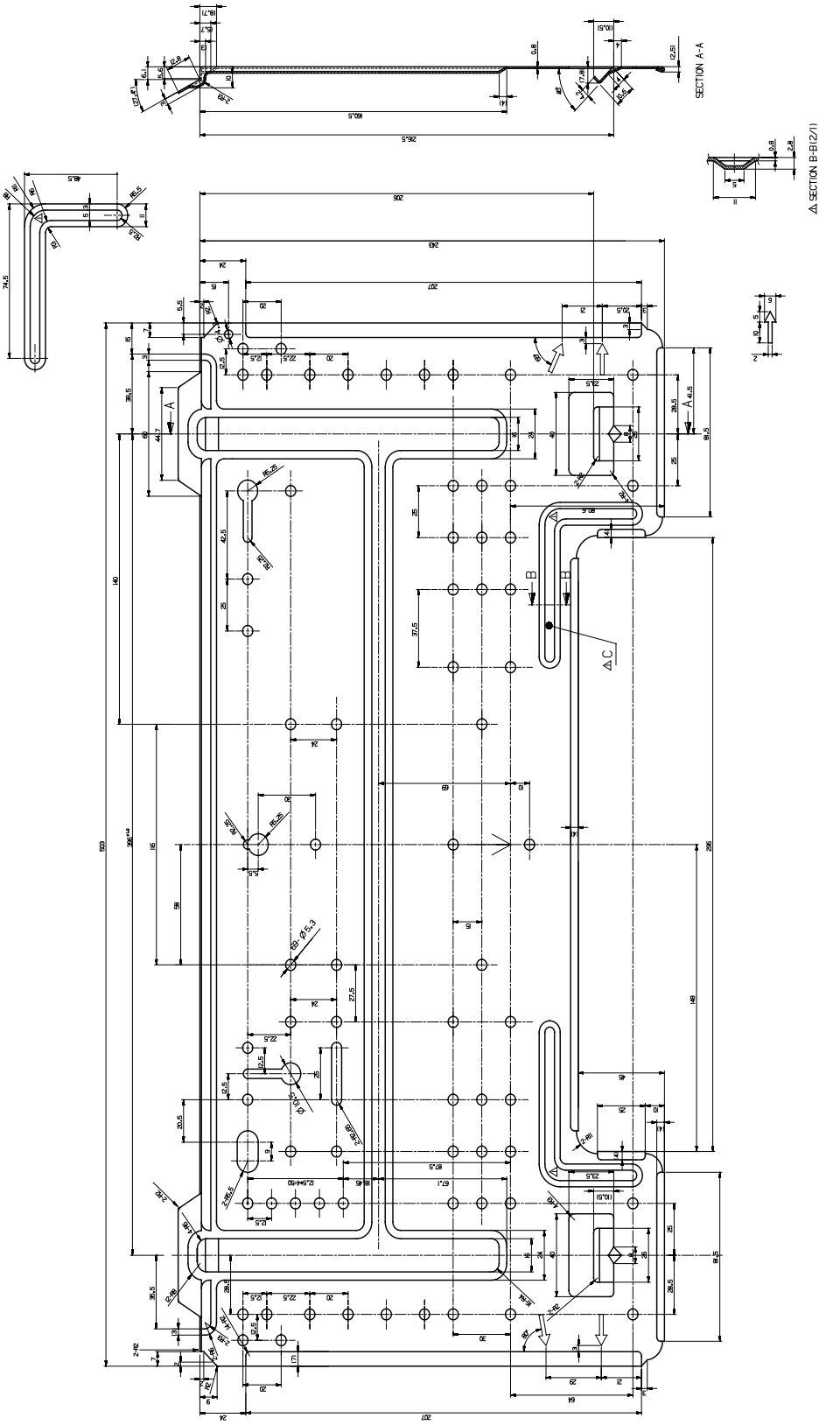
Name	Installation panel	Securing screws		(Other)
Quantity	1 set	4 EA	2 EA	
Shape		Type "A" screw 	Type "B" screw  M4 x 12L	• Owner's manual • Installation manual

2) Installation plates dimensions

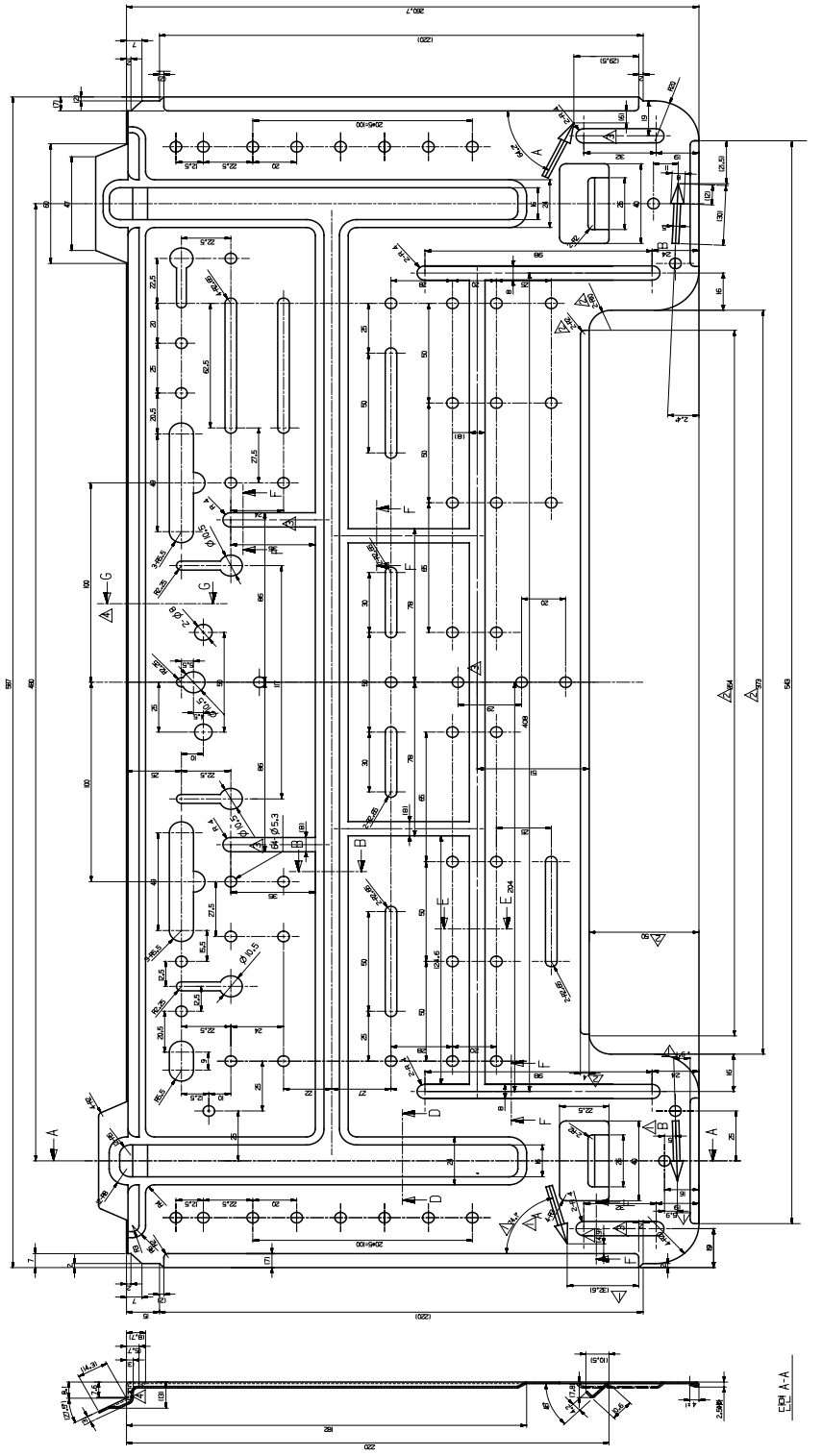
SZ chassis



SU chassis



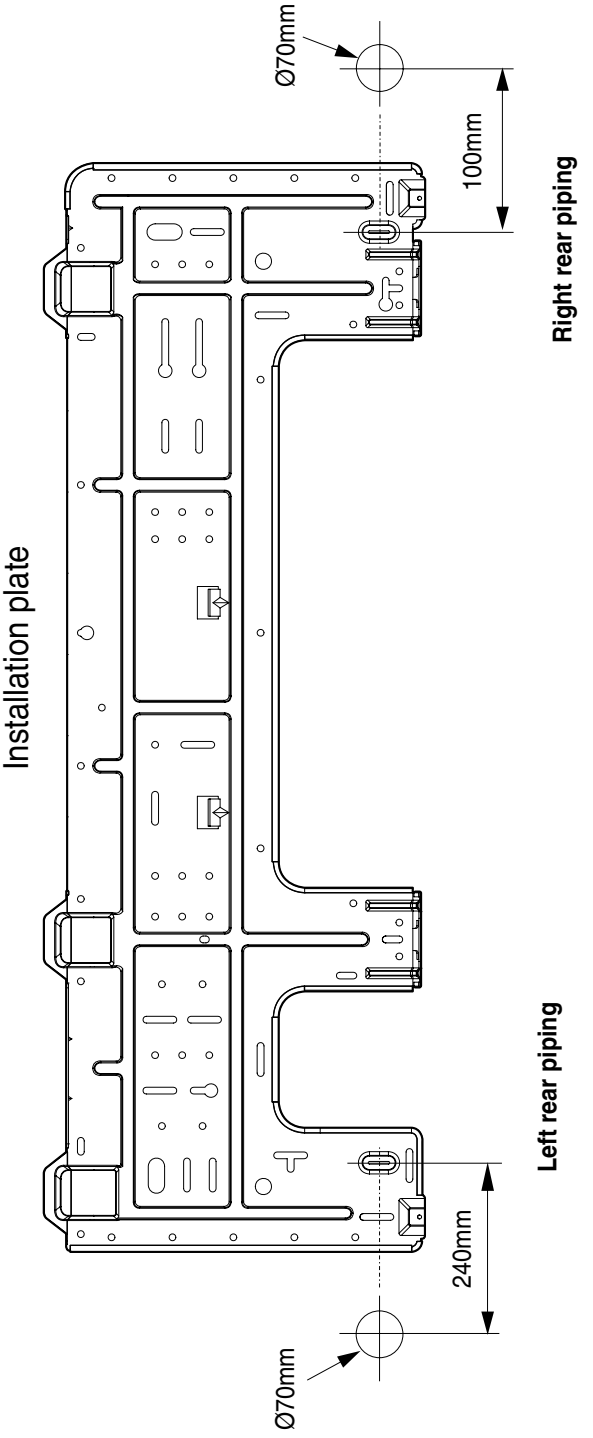
S3 chassis



CAUTION

- Use only those accessories (Standard or optional) which have designated specilications

S8 chassis

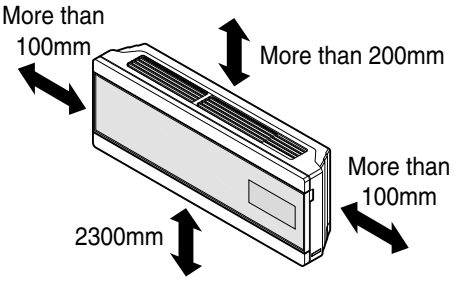


CAUTION

• Use only those accessories (Standard or optional) which have designated specilications

3.4.2 Selection of the best location

- Do not have any heat or steam near the unit.
- Select a place where there are no obstacles in front of the unit.
- Make sure that condensation drainage can be conveniently routed away.
- Do not install near to doorway.
- Ensure that the interval between a wall and the left (or right) of the unit is more than 100mm. The unit should be installed as high as possible on the wall, allowing a minimum of 200mm from ceiling.
- Use a stud finder to locate studs to prevent unnecessary damage to the wall.
- The mounting wall should be strong and solid enough too protect it from the vibration.



⚠CAUTION

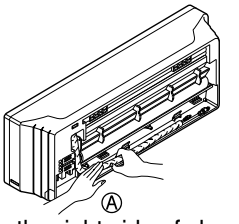
- Install the indoor unit on the wall where the height from the floors is more than 2.3 meters.

1) Preperation

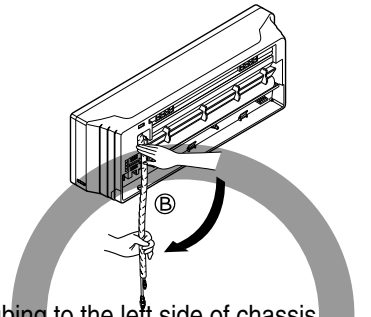
• Correct method

For right piping. Follow the instruction given below.

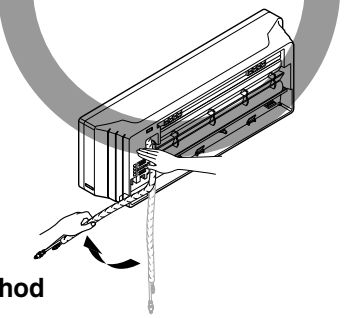
- Press on the upper side of clamp. (Ⓐ)



- Bend the tubing to the right side of chassis.

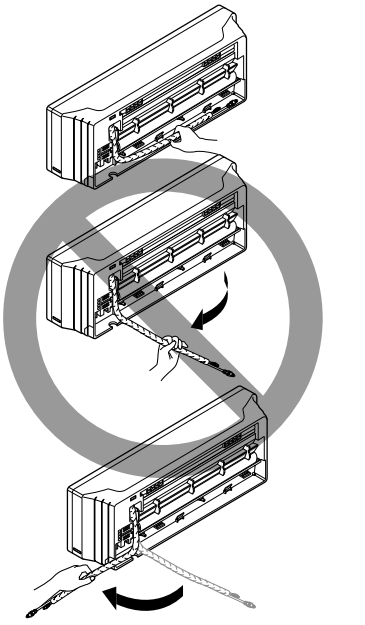


- Bend the tubing to the left side of chassis.



• Wrong method

- Following bending type from left to right could cause problem of pipe damage.

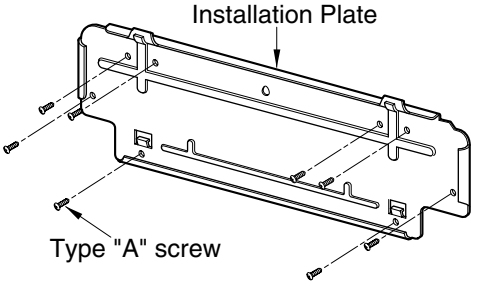


3.4.3 Fixing installation plate

The wall you select should be strong and solid enough to prevent vibration

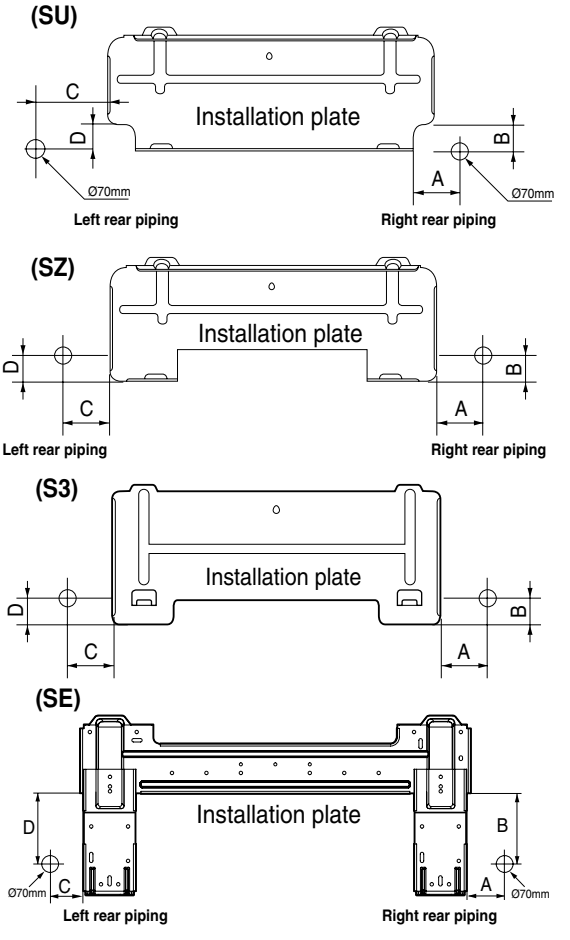
① Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.

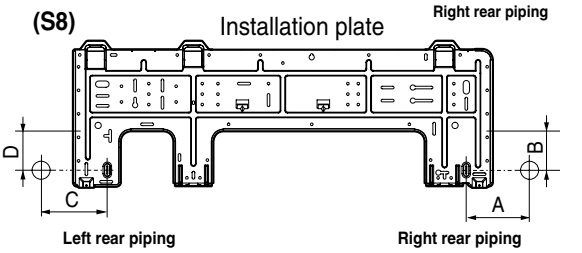
- Mount the installation plate horizontally by aligning the centerline using a level.



② Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate-routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.

- For S3 chassis, the center of the unit is different from that of the installation plate.





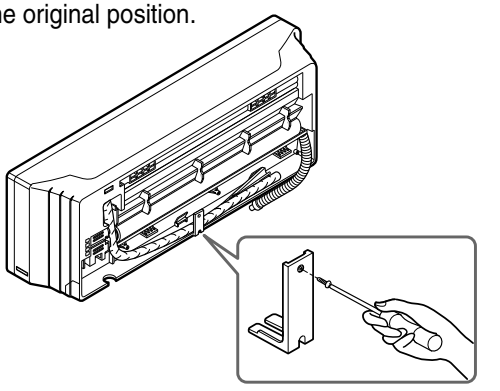
CHASSIS (Grade)	Distance (mm)			
	A	B	C	D
SU (9k~12k)	92	44	67	44
SZ (7k~9k)	35	33	156	33
S3 (18k~26k)	58	3	292	3
S8 (18k, 24k)	100	122	240	122
SE (7k~12k)	70	110	90	110

3.4.4 Connecting the piping

① Prepare the indoor unit's piping and drain hose for installation through the wall.

② Remove the plastic tubing retainer(Refer to the figure given below) and pull the tubing and drain hose away from chassis.

③ Replace only the plastic tubing holder 1, not the holder 2 in the original position.



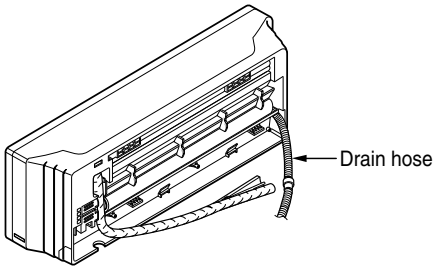
1) For right rear piping

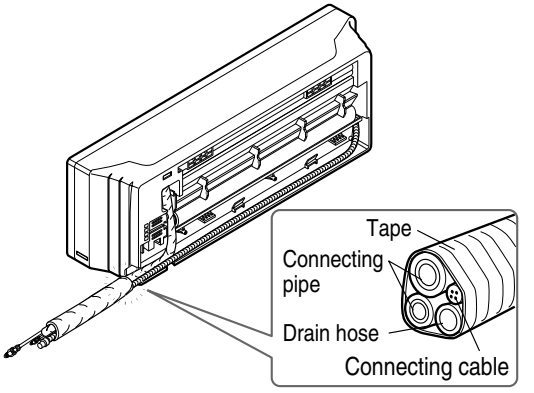
① Route the indoor tubing and the drain hose in the direction of rear right.

② Insert the connecting cable into the indoor unit from the outdoor unit through the piping hole.

※ Do not connect the cable to the indoor unit but make a small loop with the cable for easy connection later.

③ Tape the tubing, drain hose, and the connecting cable. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause drain pan to overflow inside the unit.





⚠CAUTION

- If the drain hose is routed inside the room, insulate the hose with an insulation material* so that condensation will not damage furniture or floors.
  *Foamed polyethylene or equivalent is recommended.

2) For left rear piping

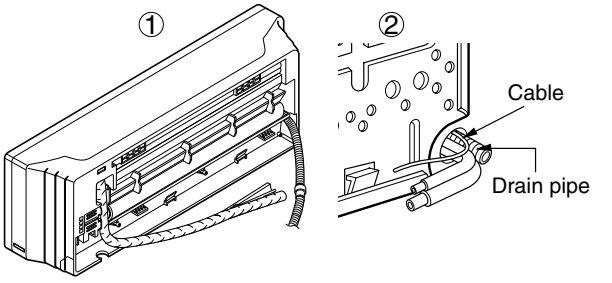
① Route the indoor tubing and the drain hose to the required piping hole position.

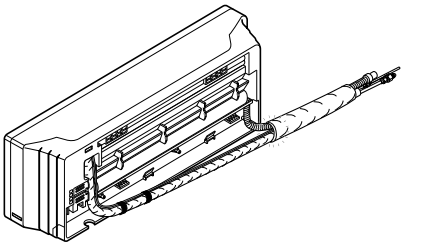
② Insert the piping, drain hose and the connecting cable into the piping hole.

③ Insert the connecting cable into the indoor unit.

- Don't connect the cable to the indoor unit but make a small loop with the cable for easy connection later.

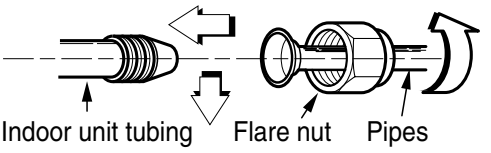
④ Tape the drain hose and the connecting cables.



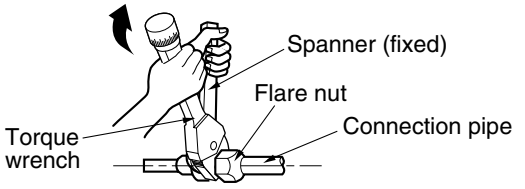


3) Connecting the piping to the indoor unit and the drain hose to drain pipe.

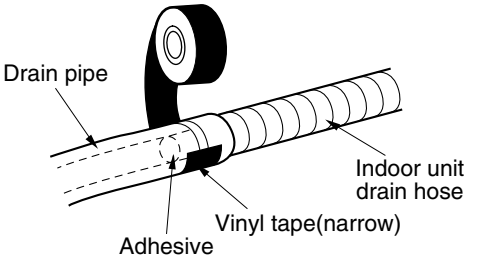
① Align the center of the pipes and tighten the flare nut by hand.



② Tighten the flare nut with a wrench.



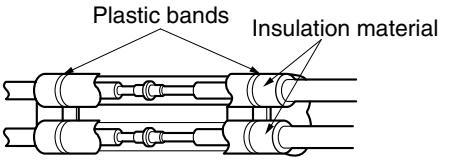
③ When extending the drain hose at the indoor unit, install the drain pipe.

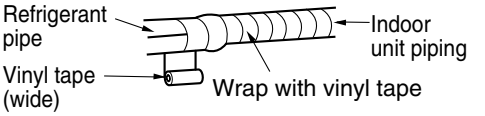


3.4.5 Wrap the insulation material around the connecting portion.

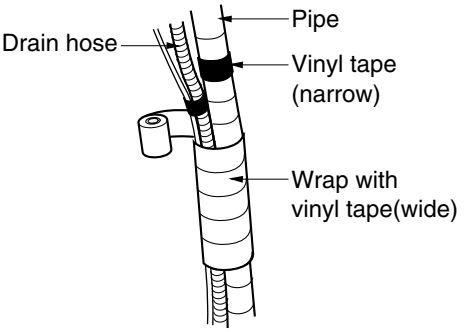
① Overlap the connection pipe heat insulation and the indoor unit pipe heat insulation material. Bind them together with vinyl tape so that there may be no gap.

② Wrap the area which accommodates the rear piping housing section with vinyl tape.





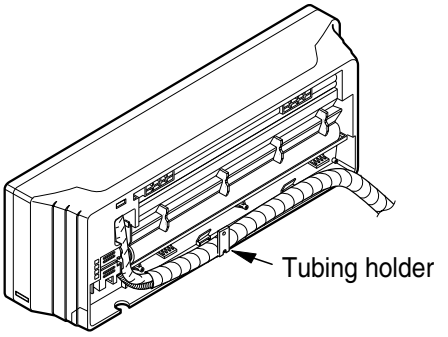
③ Bundle the piping and drain hose together by wrapping them with cloth tape over the range within which they fit into the rear piping housing section.



④ Reroute the pipings and the drain hose across the back of the chassis.

⑤ Set the pipings and the drain hose to the back of the chassis with the tubing holder.

⑥ Hook the edge of tubing holder to tap on chassis and push the bottom of tubing holder to be engaged at the bottom of chassis.

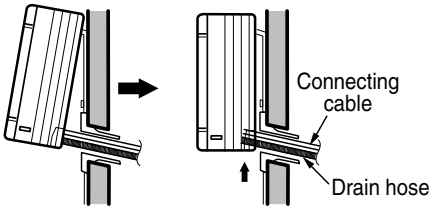


3.4.6 Indoor unit installation on the plate

① Remove the spacer.

② Ensure that the hooks are properly seated on the installation plate by moving it left and right.

③ Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots(clicking sound).

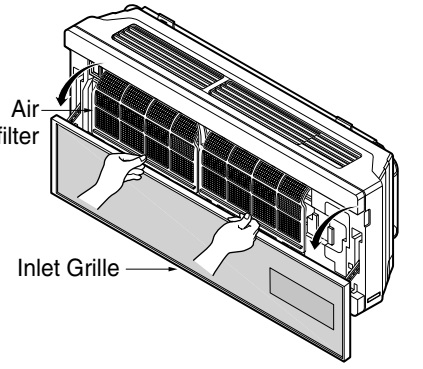


3.4.7 Connection of pipings

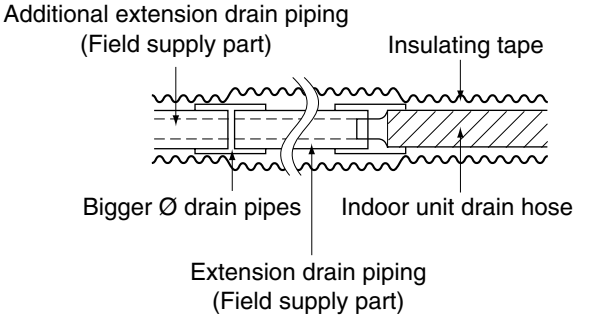
1) To remove the front panel from the indoor unit.

① Set the air direction louvers up-and-down to the position(horizontally) by hand.

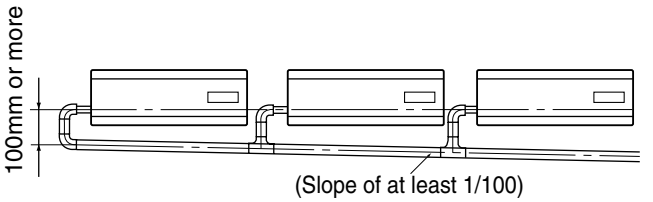
② Remove the securing screws that retain the front panel. Pull the lower left and right sides of the grille toward you and lift it off.
(2.1/7, 2.6/9, 3.5/12 kW/kBtu models: 2EA, 3.5/18 kW/kBtu models: 3EA)



• When extending the drain hose, use a commercially available drain extension hose, and be sure to insulate the extended section of the drain hose which is indoors. (Refer to the figure given below)

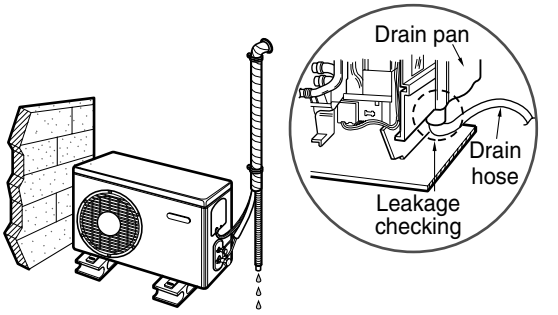


- Make sure the diameter of the extension drain piping is the same as the indoor unit drain hose (hard vinyl chloride, inner diameter 20mm) or bigger.
- In case of converging multiple drain pipes, install them referring to the figure given below.
- Select diameter of drain piping which adapts to the capacity of the unit connected.



3) Drain piping

① The drain hose should point downward for easy drain flow.

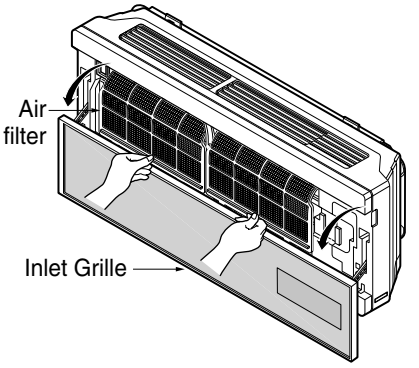


3.4.8 Checking the drainage

1) To remove the front panel from the indoor unit.

① Set the air direction louvers up-and-down to the position(horizontally) by hand.

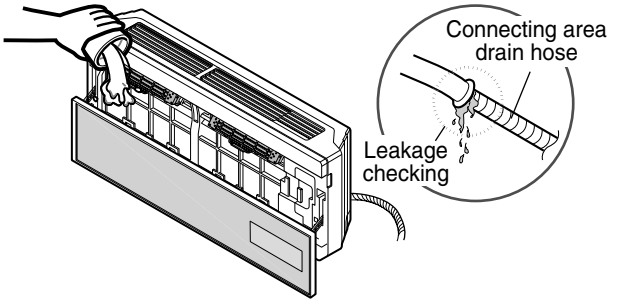
② Remove the securing screws that retain the front panel. Pull the lower left and right sides of the grille toward you and lift it off.



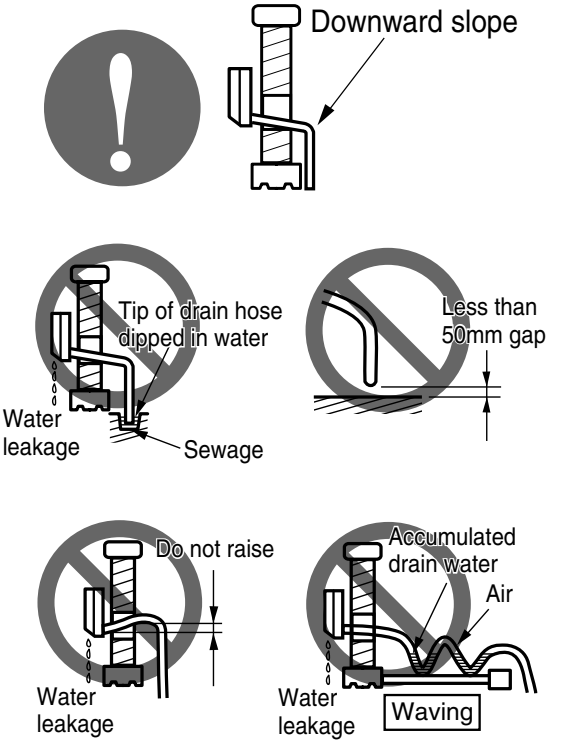
2) To check the drainage.

① Pour a glass of water on the evaporator.

② Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the through the drain exit.



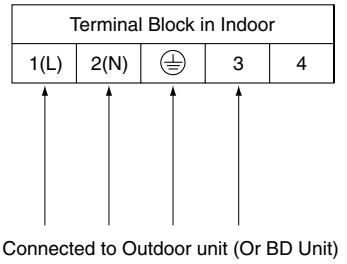
⚠CAUTION

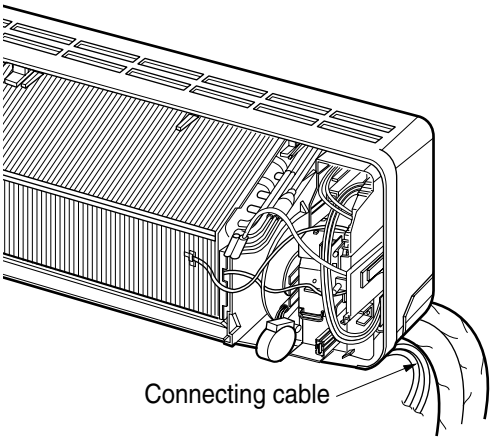


3.4.9 Connecting the cable

1) Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

① Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.

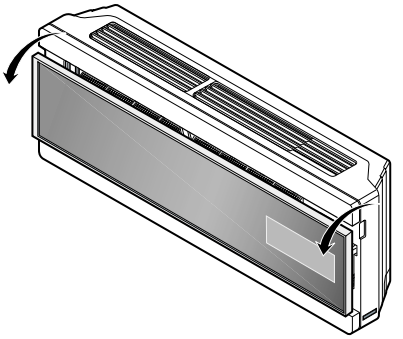




2) Attach the grille onto the cabinet.

① Grasp left and right side of the grille and engage four tabs on the top inside edge of the chassis.

② Press the grille toward the chassis until it will be back into place.



CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

1) Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, be guided by the circuit diagram posted on the inside of control cover.

2) The screw which fasten the wiring in the casing of electrical fittings are liable to become loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could cause burnout of the wires.)

3) Confirm the specification of power source.

4) Confirm that electrical capacity is sufficient.

5) See to that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.

6) Confirm that the cable thickness is as specified in the power source specification.
(Particularly note the relation between cable length and thickness.)

7) Always install an earth leakage circuit breaker in a wet or moist area.

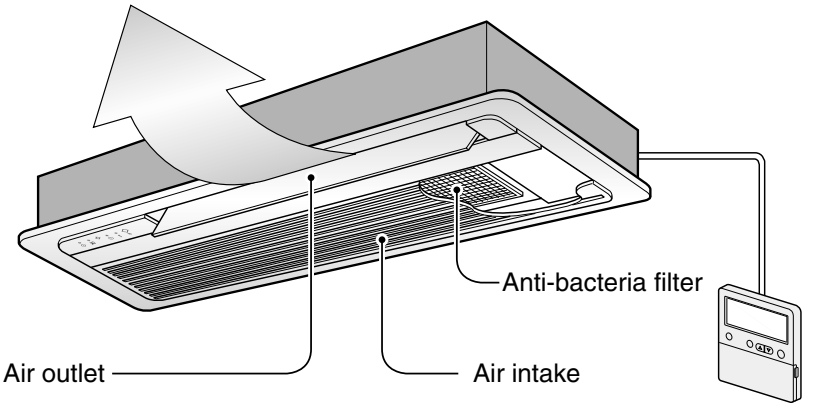
8) The following would be caused by voltage drop.

- Vibration of a magnetic switch, which will damage the contact point, fuse breaking, disturbance of the normal function of the overload.

9) The means for disconnection from a power supply shall be incorporated in the fixed wiring and have an air gap contact separation of at least 3mm in each active(phase) conductors.

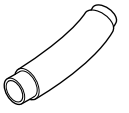
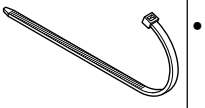
3.5 Ceiling cassette 1-way

- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized person only.
- Installation work must be performed in accordance with the national wiring standards by authorized person only.



3.5.1 Accessories

1) Standard accessories

Name	Clamp metal	Drain hose	Insulation for fitting	Washer for hanging bracket	Clamp	(Other)
Quantity	2 EA	1 EA	1 set	8 EA	7 EA	
Shape			 for gas pipe for liquid pipe			• Paper pattern for installation • Owner's manual • Installation manual

- Screws for fixing panels are attached to decoration panel.

3.5.2 Selection of the best location

① There should not be any heat source or steam near the unit.

② There should not be any obstacles to the air circulation.

③ There should be provision of easy condensate drain.

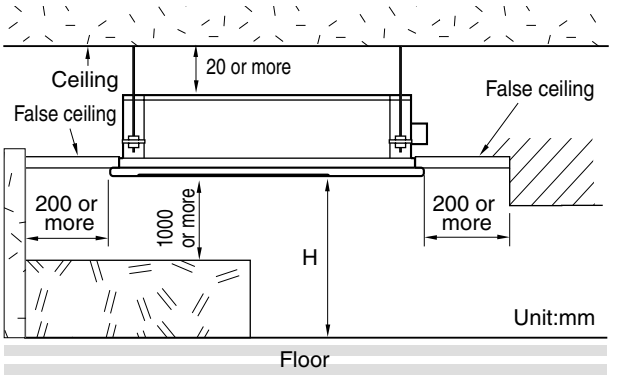
④ Taking into accounting the noise prevention criteria, spot the installation location.

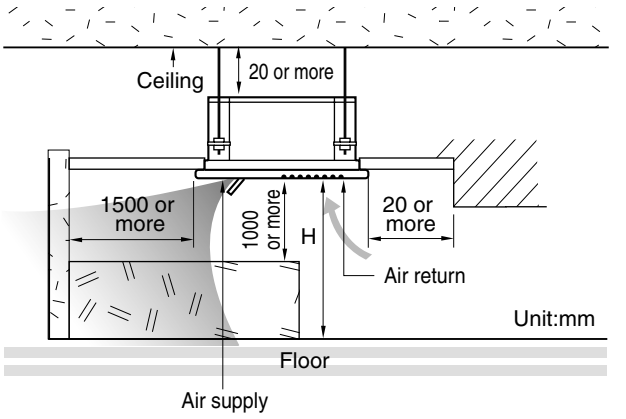
⑤ Do not install the unit near the door way.

⑥ Keep proper distances, of the unit, from ceiling, fence, floor, walls and other obstacles as shown in figure.

⑦ The indoor unit must have the maintenance space.

⑧ The mounting ceiling should be strong and solid enough protect it from the vibration.





NOTE

Above figure means minimum value. Please keep these value at least.

If H is 2700~3200: High ceiling operation control requied

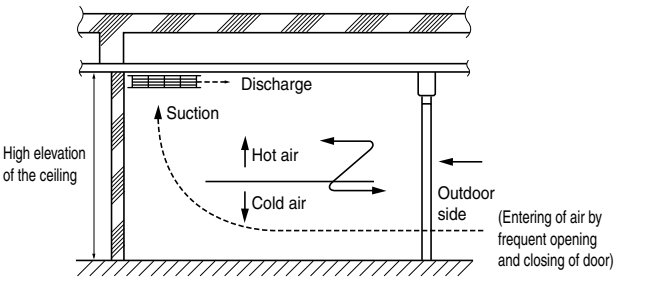
If H is ~2700: Normal operation

3.5.3 Precautions regarding cassette indoor unit installation

1) Main points about the indoor installation

- In case of high height ceiling

In general commercial places and offices though the height of the ceiling is 2.7 m, the ceiling height can be 3 m. In such cases because of the temperature difference with the floor the heating effect can fall down.



- Countermeasure method

① Air conditioner must be able to operate in high ceiling conditioner.

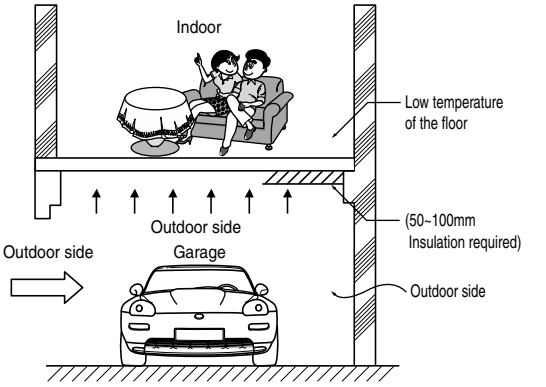
② Plan to install the circulator.

③ The air discharge port is made to give more airflow to the down wood directions.

④ The gate or exit of the building is protected by dual door system.

2) In case the floor or surfaces of the place to be air conditioned is in direct contact with the outdoor air

- The floor of the heating room in direct contact with the store room, garage or the outside air receives the cold air at the floor and the floor temperature decrease and will feel cold at the feet.



In such places where the feet comes in direct contact with floors will give a cold feeling to the foot.

- Countermeasure:

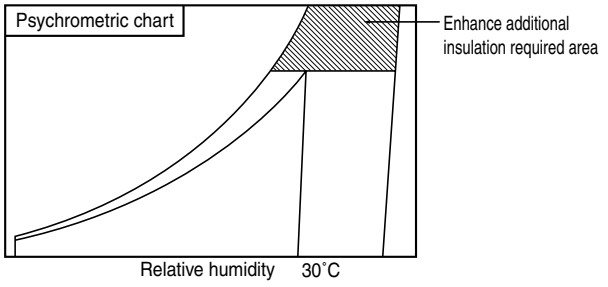
- Use the carpet on the floor (compared to the tiles the carpet over it will have a 3 degree rise in temperature)
- Insulating the floor.
- Floor heating

CAUTION

• Case of cold air intake:
The duct surface will have the dew drops so a insulation on the duct is a must.(Insulation material: a glass wool of thickness 25 mm will be appropriate.)

3) In case of high temperature or high humidity between the false ceiling and ceiling slab

- In case of temperature of 30 degree and humidity above 80%, the units body as well as the piping insulation should be strengthened. Refer to the picture given below.

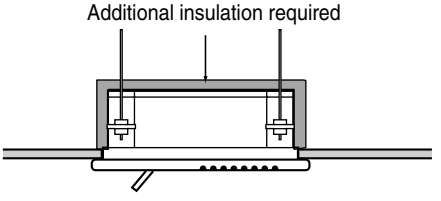


- Places having the temperature and humidity of the surrounding water sources(sea, river etc.)

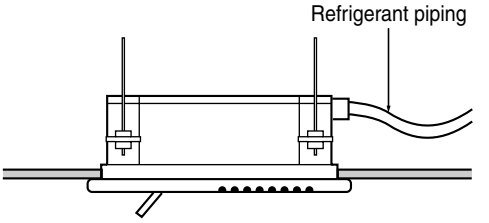
In case the steam is generated between the false ceiling and the ceiling slab

Due to some nearby by steam source.

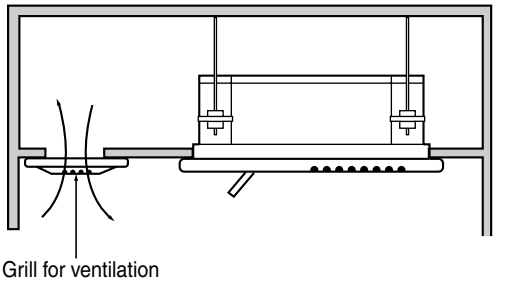
- Indoor unit: Insulate the unit body with some insulation like glass wool at least 10 mm in thickness.



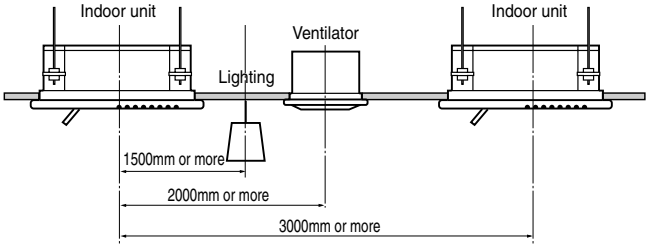
- Refrigerant piping: Increase the piping insulation thickness with thickness above 20 mm.



- Others: Inside the ceiling near th air tight seal places (To escape of the humidity inside false ceiling)

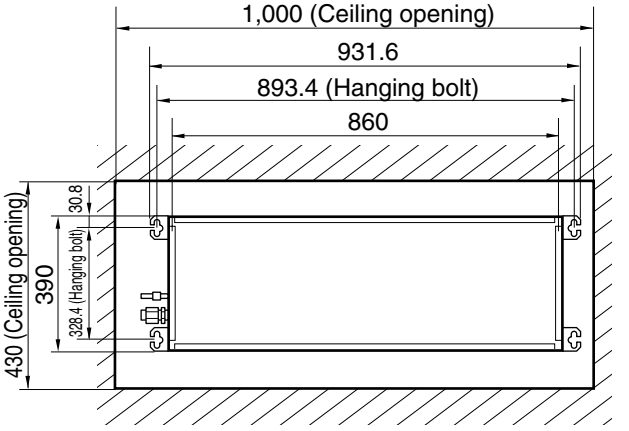


4) In case of multiple indoor cassette units (recommended)

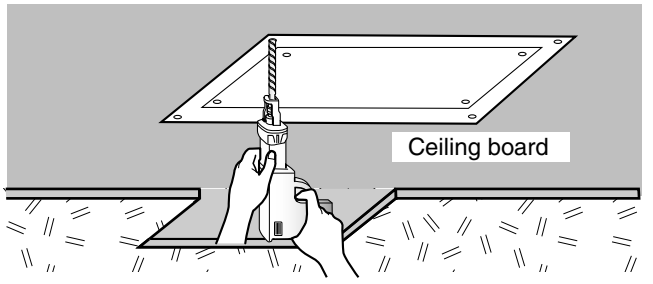


3.5.4 Ceiling opening dimensions and hanging bolt location

① The dimensions of the paper pattern for installation are the same as those of the ceiling opening dimensions.



(unit: mm)



② Select and mark the position for fixing bolts and piping hole.

③ Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.

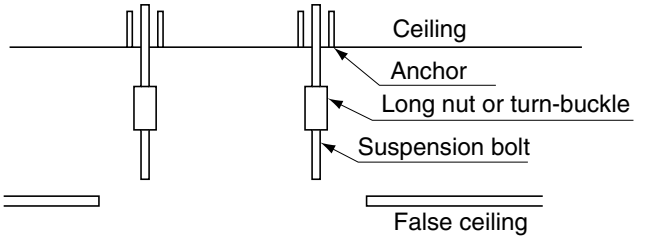
④ Drill the hole for anchor bolt on the wall.

⚠CAUTION

- This air-conditioner uses a drain pump.
- Install the unit horizontally using a level gauge.
- During the installation, care should be taken not to damage electric wires.

- Install the suspension bolts

(Use either a W3/8" or M10 size bolt) Use a hole-in anchor for existing ceilings, and a sunken insert, sunken anchor or other field supplied parts for new ceilings to reinforce the ceiling to bear the weight of the unit. Adjust clearance from the ceiling before proceeding further.

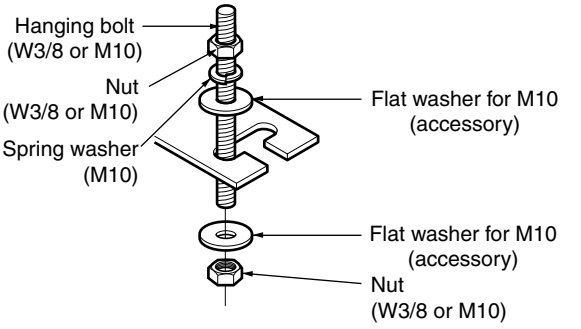


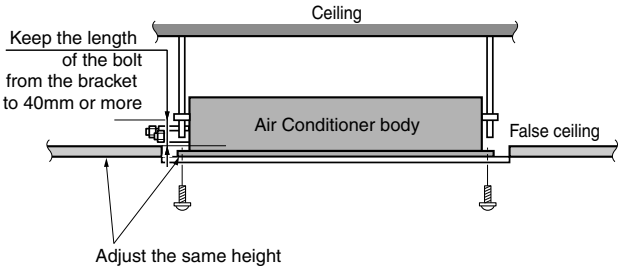
NOTE) All the above parts are field supplied.

3.5.5 Indoor unit installation

Installing of the accessories (except for the decoration panel) before installing the indoor unit is easier.

① Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and washer from the upper and lower sides of the hanger bracket.





• The following parts are local purchasing.

- Hanging Bolt - W 3/8 or M10
- Nut - W 3/8 or M10
- Spring Washer - M10
- Plate Washer - M10

3.5.6 Connection pipes to the indoor unit

1) Refrigerant piping work

please refer “REFRIGERANT PIPING WORK”.

2) Piping insulation

① Perform heat insulation work completely on both gas and the liquid pipe, because improper insulation will result due condensate formation over pipe.

② Use the heat insulation material for the refrigerant piping which has an enough heat resistance.

③ Precautions in high humidity circumstance:

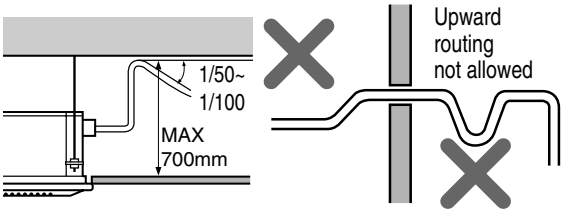
3) Indoor unit drain piping

① Drain piping must have downward slope (1/50 to 1/100): make sure not to provide up-and-down slope to prevent revese flow.

② During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.

③ The outside diameter of the drain connection on the unit is 32mm.

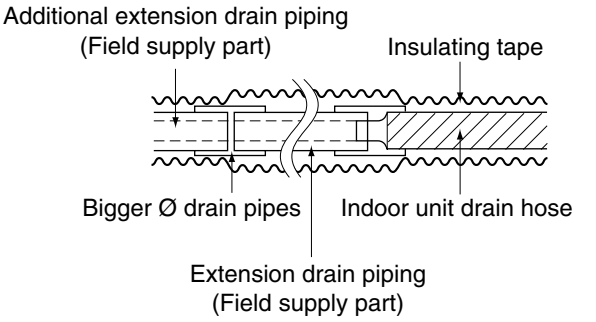
Piping material: Polyvinyl chloride pipe inner diameter Ø 25mm and pipe fittings



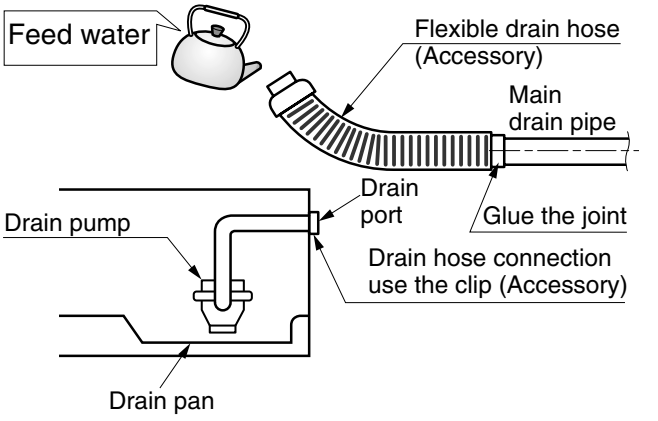
• Make sure to install heat insulation on the drain piping.

Heat insulation material: Polyethylene foam with thickness more than 10 mm.

• When extending the drain hose, use a commercially available drain extension hose, and be sure to insulate the extended section of the drain hose which is indoors. (Refer to the figure given below)



4) Drain test



3.5.7 Installation of decoration panel

NOTE

- The decoration panel has its installation direction.
- Before installing the decoration panel, always remove the paper template.

① Temporarily fix two decoration panel fixing screws (hexagon M5 screw) on the unit body. (Tighten by amount 10mm in length.)
The fixing screws (hexagon M5 screw) are included with the indoor unit box.

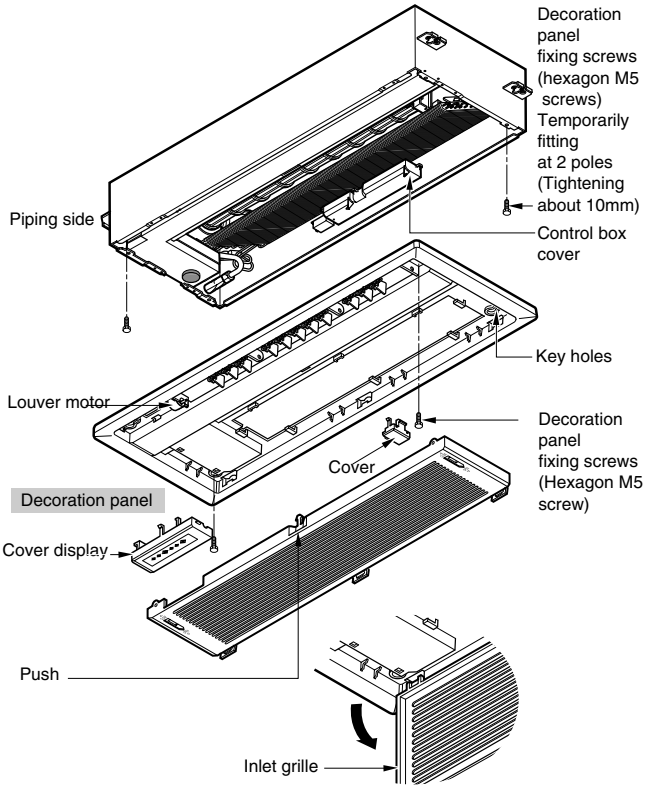
② Remove the air inlet grille from the decoration panel. (Remove the hook for the air inlet grille cord.)

③ Hook the decoration panel key hole (⊂⊃) on the screws fixed in step above, and slide the panel so that the screws reach the key hole edge.

④ Retighten completely two temporarily fixed screws and other two screws. (Total 4 screws)

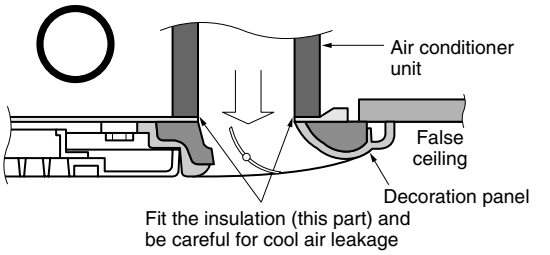
⑤ Connect the louver motor connector and display connector.

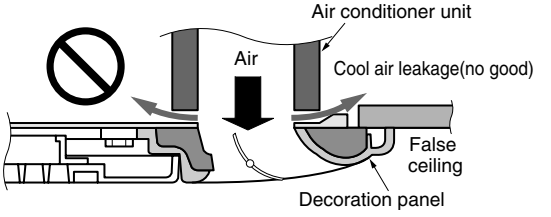
⑥ After tightening these screws, install the air inlet grille (including the air filter).



CAUTION

- Properly install decoration panel
  Because any slit or gab between unit and decoration panel will result cool air leakage which may responsible for water dribblling.





3.5.8 Electric wiring work

1) General instructions

① All field supplied parts and materials, electric works must conform to local codes.
Use copper wire only.

② Follow the "WIRING DIAGRAM" attached to the unit body to wire the outdoor unit, indoor units and the remote controller.

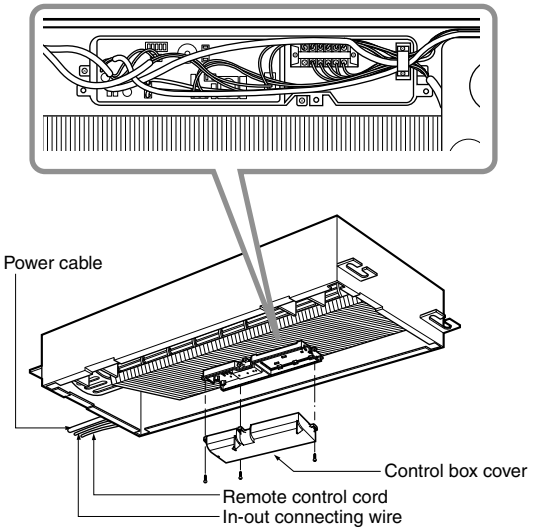
③ All wiring must be performed by an authorized electrician.

④ This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal board wiring to the outdoor unit and indoor unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

⑤ A circuit breaker capable of shutting down the power supply to the entire system must be installed.

2) Wiring connection

① Open the control box cover and connect the remote control cable and Indoor power cable.



Terminal block in indoor				
1(L)	2(N)	⏚	3	4

Connected to outdoor Unit (Or BD unit)

⚠WARNING

- Make sure that the screws of the terminal are not loose.

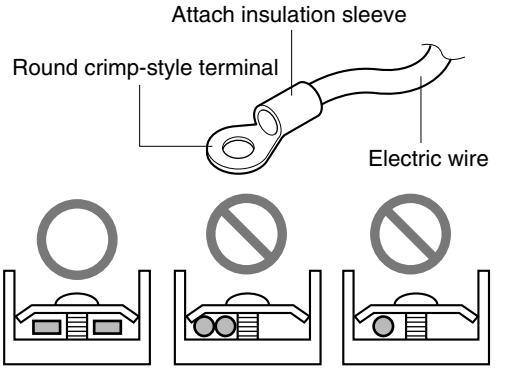
⚠CAUTION

- Be sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box
- When clamping the wires, make sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box lid firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

NOTE

① Use round crimp-style terminals for connecting wires to the power supply terminal block. If unavailable, observe the following points when wiring.

- Do not connect wires of different gauge to the same power supply terminal.
- Use the specified electric wire. connect the wire securely to the terminal. lock the wire down without applying excessive force to the terminal.



Connect wires of the same gauge to both sides

② Tightening torque for the terminal screws.

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.

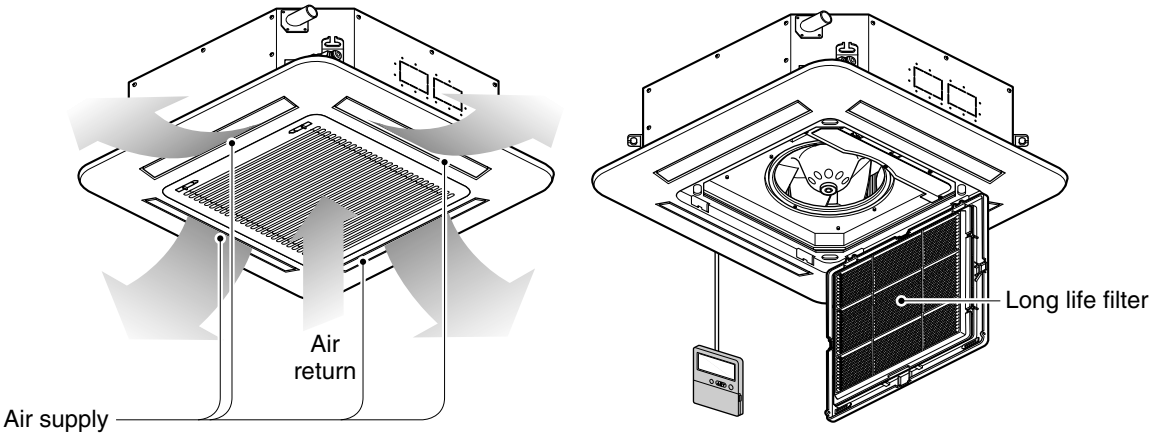
③ Do not connect wires of different gauge to the same grounding terminal. Loosen connection may deteriorate protection.

④ Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.

⑤ Use only specified wire and tightly connect wires to terminals. Be careful wires do not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other equipment. Make sure that the lid closes tight. Incomplete connections could result in overheating, and in worsl case, electric shock or fire.

3.6 Ceiling cassette 4-way

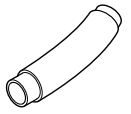
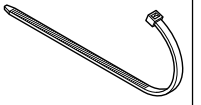
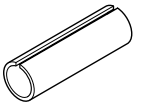
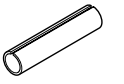
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.



3.6.1 Accessories

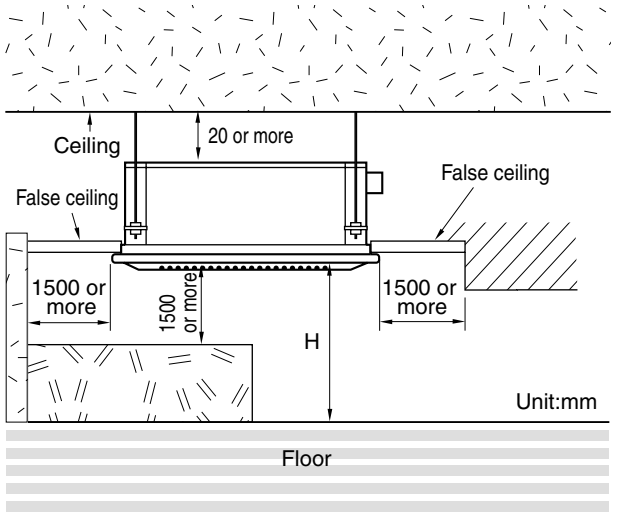
Check whether the following accessories are included with your unit.

1) Standard accessories

Name	Drain hose	Clamp metal	Washer for hanging backet	Clamp	Insulation for fitting	(Other)
Quantity	1 EA	1 EA	8 EA	8 EA	1 SET	
Shape					 for gas pipe  for liquid pipe	• Paper pattern for installation • Owner's manual • Installation manual

3.6.2 Selection of the best location

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to the air circulation.
- There should be provision of easy condensate drain.
- Taking into accounting the noise prevention criteria, spot the installation location.
- Do not install the unit near the door way.
- Keep proper distances, of the unit, from ceiling, fence, floor, walls and other obstacles as shown in figure.
- The indoor unit must have the maintenance space.

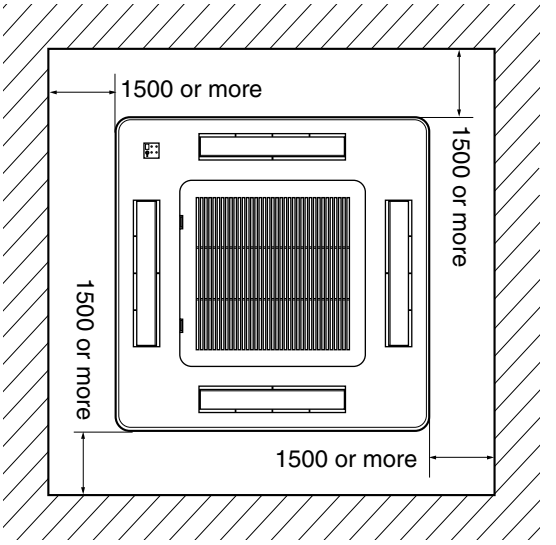


NOTE

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If H is 2700~3200: High ceiling operation control requied

If H is ~2700: Normal operation

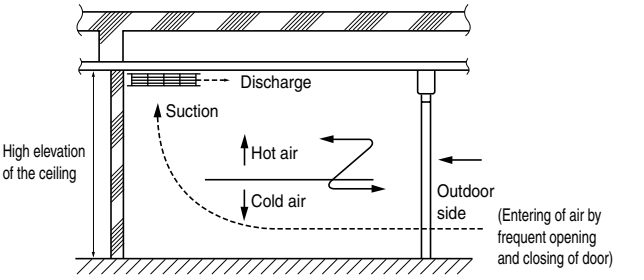


3.6.3 Precautions regarding cassette indoor unit installation

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In general commercial places and offices though the height of the ceiling is 2.7 m, the ceiling height can be 3 m. In such cases because of the temperature difference with the floor the heating effect can fall down.



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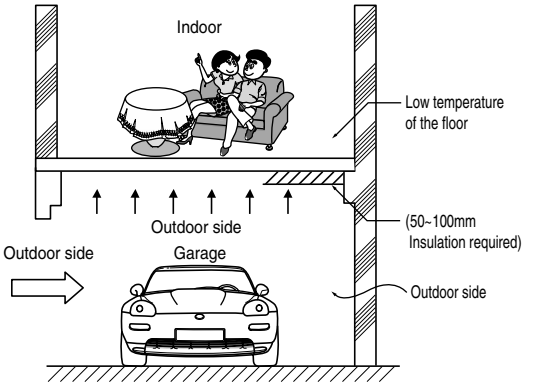
② Plan to install the circulator.

③ The air discharge port is made to give more airflow to the down wood directions.

④ The gate or exit of the building is protected by dual door system.

2) In case the floor or surfaces of the place to be air conditioned is in direct contact with the outdoor air

- The floor of the heating room indirect contact with the storeroom, garage or the outside air receives the cold air at the floor and the floor temperature decrease will feel cold at the feet.



In such places where the feet comes in direct contact with floors will give a cold feeling to th floor.

- Countermeasure:

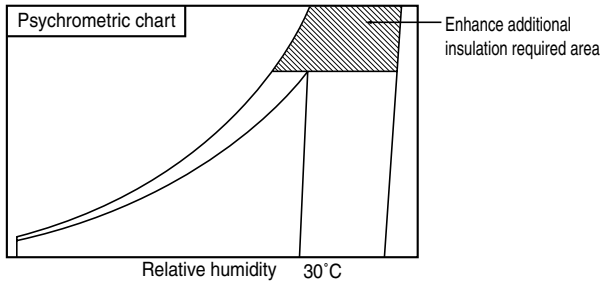
- Use the carpet on the floor (compared to the tiles the carpet over it will have a 3 degree rise in temperature)
- Insulating the floor.
- Floor heating

CAUTION

• Case of cold air intake:
The duct surface will have the dew drops so a insulation on the duct is a must.(Insulation material: a glass wool of thickness 25 mm will be appropriate.)

3) In case of high temperature or high humidity between the false ceiling and ceiling slab(near by the sea, river, lake, spa)

- In case of temperature of 30 degree and humidity above 80%, the units body as well as the piping insulation should be strengthened. Refer to the picture given below.

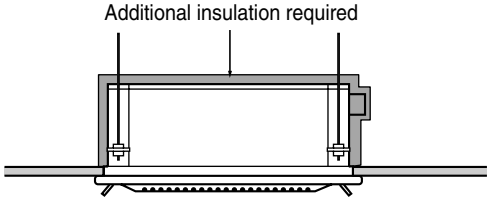


- Places having the temperature and humidity of the surrounding water sources(sea, river etc.)

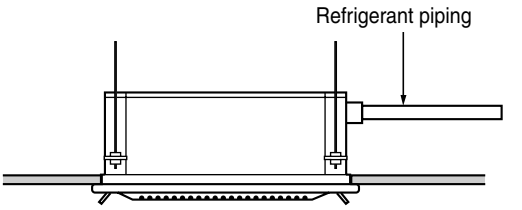
In case the steam is generated between the false ceiling and the ceiling slab

Due to some nearby by steam source.

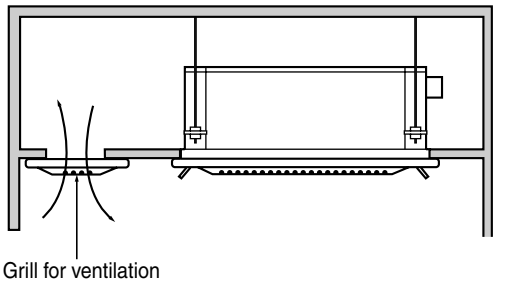
- Indoor unit: Insulate the unit body with some insulation like glass wool at least 10 mm in thickness.



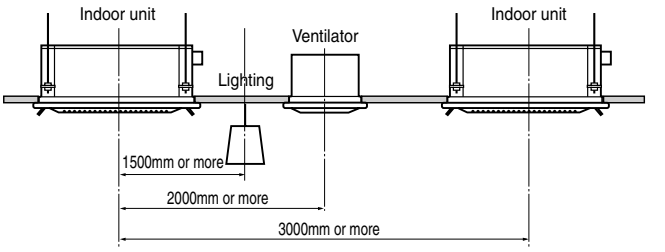
- Refrigerant piping: Increase the piping insulation thickness with thickness above 20 mm.



- Others: Inside the ceiling near th air tight seal places (To escape of the humidity inside false ceiling)



4) In case of multiple indoor cassette units (recommended)



3.6.4 Ceiling opening dimensions and hanging bolt location

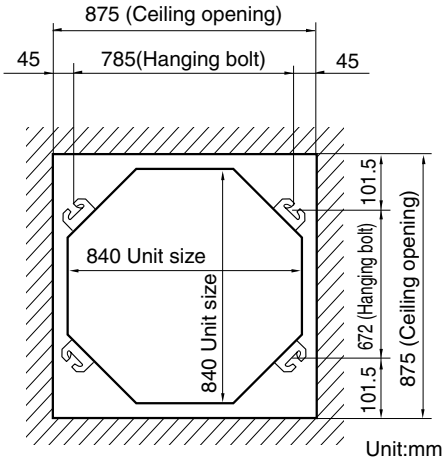
① The dimensions of the paper pattern for installation are the same as those of the ceiling opening dimensions.

② Select and mark the position for fixing bolts and piping hole.

③ Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.

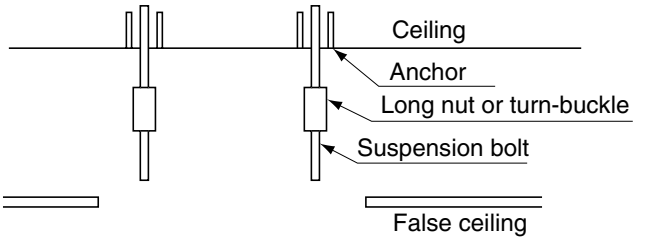
④ Drill the hole for anchor bolt on the wall.

TH Model



1) Install the suspension bolts.

(Use either a W3/8" or M10 size bolt) Use a hole-in anchor for existing ceilings, and a sunken insert, sunken anchor or other field supplied parts for new ceilings to reinforce the ceiling to bear the weight of the unit. Adjust clearance from the ceiling before proceeding further.



NOTE

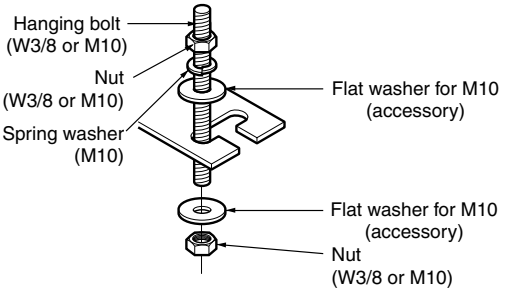
All the above parts are field suppiled.

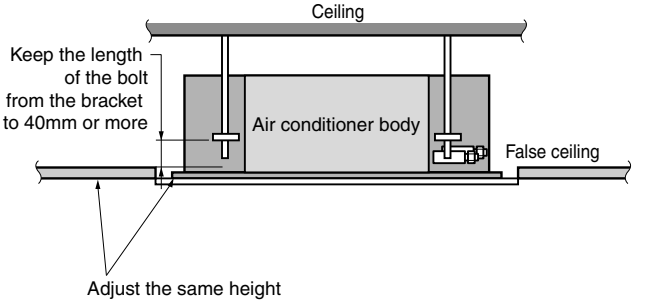
3.6.5 Indoor unit installation

- Installing of the accessories (except for the decoration panel) before installing the indoor unit is easier.

1) Install the indoor unit.

- Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and washer from the upper and lower sides of the hanger bracket.





• The following parts are local purchasing.

- Hanging Bolt - W 3/8 or M10
- Nut - W 3/8 or M10
- Spring Washer - M10
- Plate Washer - M10

2) For new ceilings

① Refer to the paper pattern for ceiling opening dimension.

• The center of the ceiling opening is indicated on the paper pattern for installation.
The center of the unit is indicated on the label attached to the unit and on the paper pattern for installation.

• First remove paper packaging material from the 4 corners of the paper pattern for installation , fix the paper pattern to the unit with screws.

• Ceiling height is shown on the side of the paper pattern for installation. Adjust the height of the unit according to this indication.

<Ceiling work>

② Adjust the unit to the right position for installation.

③ Assure that the unit is horizontal.

• The indoor unit is equipped with a built-in drain pump and float switch. At each of the unit's 3 corners, verify that it is level by using awater-level or a water-filled vinyl tube. (Otherwise it will result in the malfunctioning of unit and cause water to drip.)

④ Remove the washer fixing plate used for preventing the washer from falling and tighten the upper nut.

5) Remove the paper pattern for installation

2) For existing ceilings

① Adjust the height and position of the unit.

② Perform steps 3 and 4 in "5.1 For new ceilings".

3.6.6 Connecting pipes to the indoor unit

1) Refrigerant piping work

please refer “REFRIGERANT PIPING WORK”.

2) Piping insulation

① Perform heat insulation work completely on both gas and the liquid pipe. Because improper insulation will result condensate formation over pipe.

② Use the heat insulation material for the refrigerant piping which has an excellent heat resistance (over 120°C).

③ Precautions in high humidity circumstance:

④ Refer to insulation work

⚠CAUTION

• Make sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

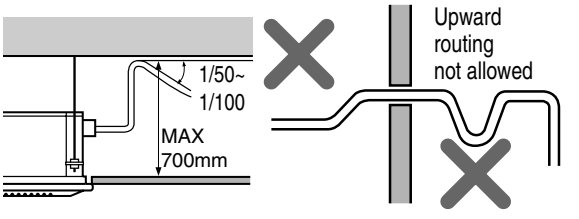
3) Indoor unit drain piping

• Drain piping must have downward (1/50 to 1/100): be sure not to provide up-and-down slope to prevent reverse flow.

• During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.

• The outside diameter of the drain connection on the inddor unit is 32mm.

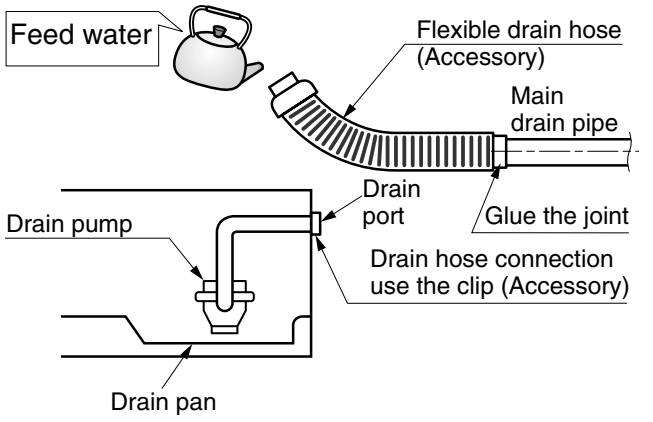
Piping material: Polyvinyl chloride pipe 25mm and pipe fittings



• Be sure to install heat insulation on the drain piping.

Heat insulation material: Polyethylene foam with thickness more than 10 mm.

4) Drain test



3.6.7 Installation of decoration panel

NOTE

• The decoration panel has its installation direction.

• Before installing the decoration panel, always remove the paper template.

① Temporarily fix two decoration panel fixing screws (hexagon M5 screw) on the unit body. (Tighten by amount 10mm in length.)
The fixing screws (hexagon M5 screw) are included with the indoor unit box.

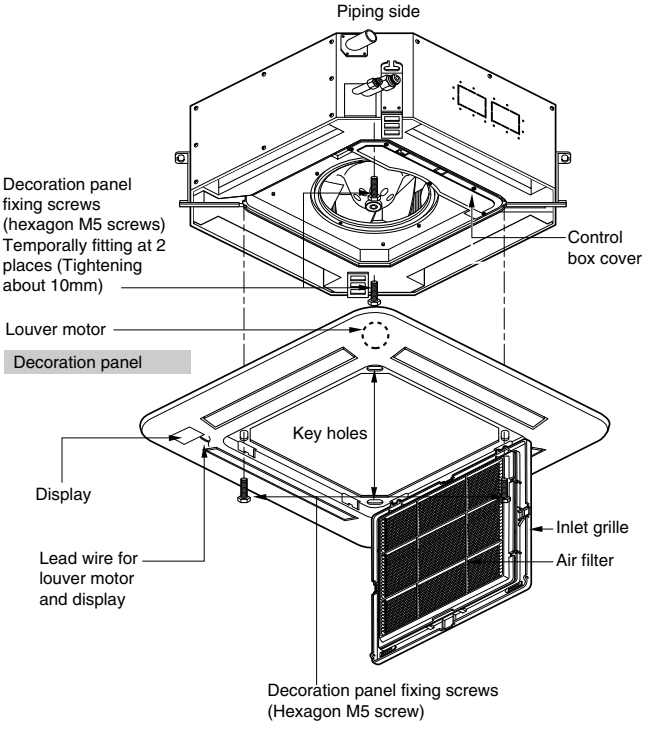
② Remove the air inlet grille from the decoration panel. (Remove the hook for the air inlet grille cord.)

③ Hook the decoration panel key hole (⊂⊃) on the screws fixed in step above, and slide the panel so that the screws reach the key hole edge.

④ Retighten completely two temporarily fixed screws and other two screws. (Total 4 screws)

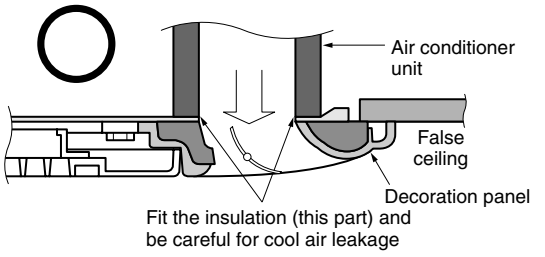
⑤ Connect the louver motor connector and display connector.

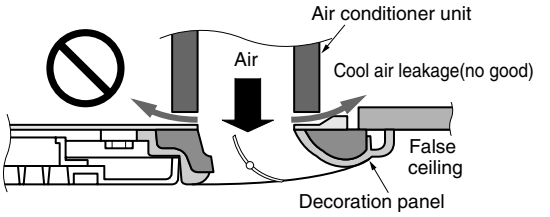
⑥ After tightening these screws, install the air inlet grille (including the air filter).



CAUTION

- Properly install decoration panel because any slit or gab between unit and decoration panel will result cool air leakage which may responsible for water dribblling.





3.6.8 Electric wiring work

1) General instructions

① All field supplied parts and materials, electric works must conform to local codes.
Use copper wire only.

② Follow the "WIRING DIAGRAM" attached to the unit body to wire the outdoor unit, indoor units and the remote controller.

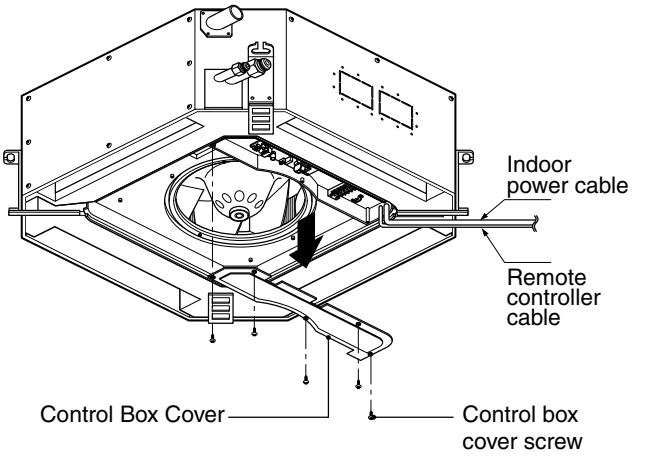
③ All wiring must be performed by an authorized electrician.

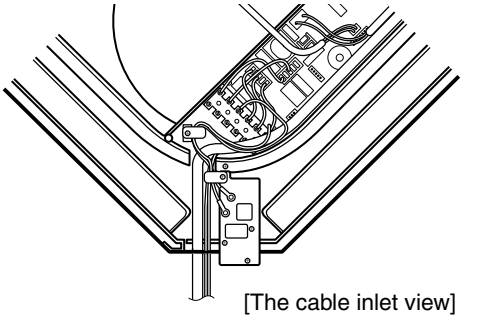
④ This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal board wiring to the outdoor unit and indoor units are properly matched. If wiring and piping between the outdoor unit and an indoor units are mismatched, the system may cause a malfunction.

⑤ A circuit breaker capable of shutting down the power supply to the entire system must be installed.

2) Wiring Connection

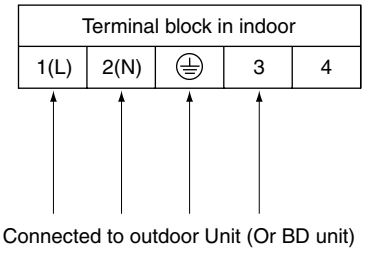
① Open the control box cover and connect the Remote controller cord and Indoor power wires.





[The cable inlet view]

■ 18k/24kBtu/h (1Ø)



② Make sure to attach the sealing material (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box

③ When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the holes to prevent damage to them.

④ Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

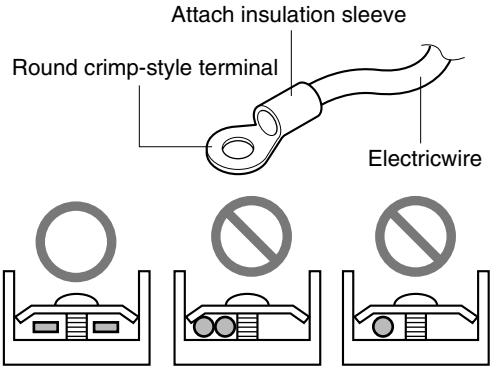
⚠WARNING

- Make sure that the screws of the terminal are not loose.

NOTE

1. Use round crimp-style terminals for connecting wires to the power supply terminal block. If unavailable, observe the following points when wiring.

- Do not connect wires of different gauge to the same power supply terminal. (Looseness connection may cause overheating.)
- Use the specified electric wire. Connect the wire securely to the terminal. Lock the wire down without applying excessive force to the terminal.



Connect wires of the same gauge to both sides

2. Tightening torque for the terminal screws.

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.

3. Do not connect wires of different gauge to the same grounding terminal. Loose connection may deteriorate protection.

4. At the unit, keep proper separation between transmissio and power supply wiring.
The equipment may malfunction if subjected to electrical (external) noise.

5. Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.

6. Use only specified wire and tightly connect wires to terminals. Be careful that wires should not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other equipment such as popping open the electric parts box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in worst case, electric shock or fire.

3.7 Ceiling and floor

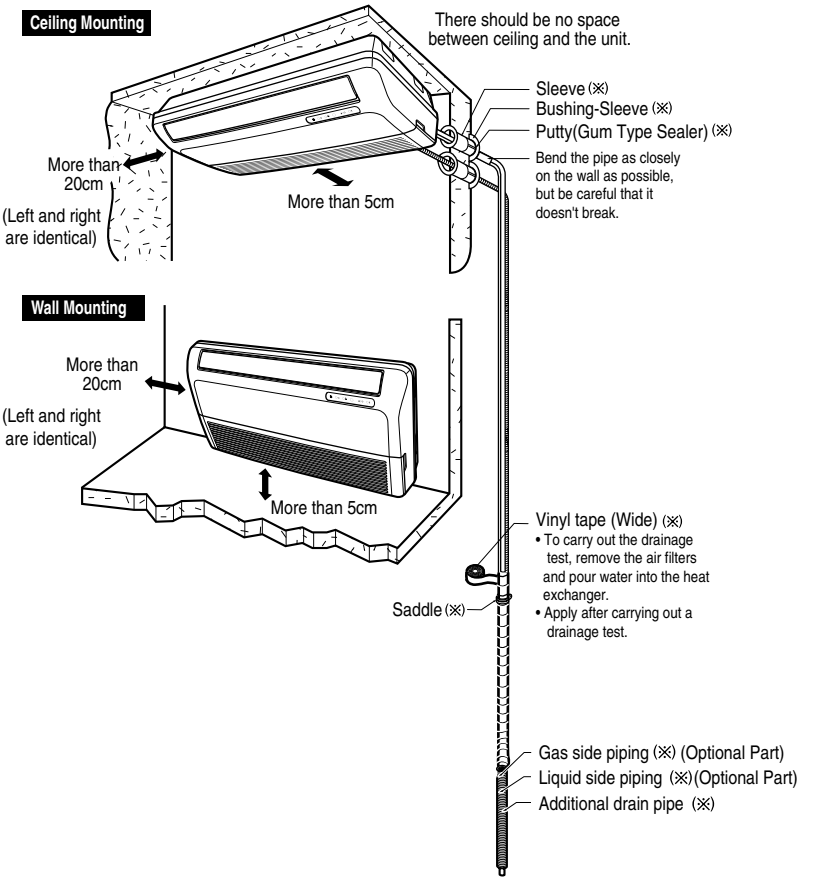
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.

1) Installation parts provided

- Installation Plate (VB, 2pcs)
- Installation Plate (VE, 1pcs)
- Washer Bolt (M8 ×L25, 4pcs, type "A")
- Floor Mount Bracket (1pcs)
- Drain Hose, Insulated
- Drain Hose Hanger and screw

2) The other installation parts needed

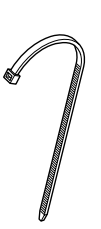
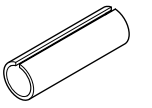
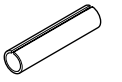
- Suspension Bolt
- Bolts for Mount Bracket
- Connecting Tube(mm)
  - Gas side : Ø9.52, Ø12.7
  - Liquid side : Ø6.35
- Connecting Cable
- Drain Hose Extended



7.1 Accessories

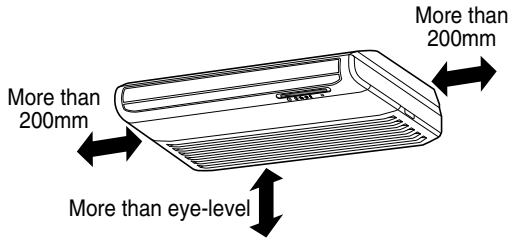
Check the following accessories are included with your unit.

1) Standard accessories

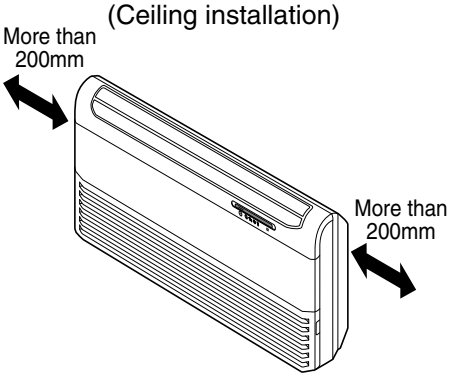
Name	Drain hose	Clamp metal	Washer for hanging backet	Clamp	Insulation for fitting	(Other)
Quantity	1 EA	1 EA	8 EA	6 EA	1 set	
Shape					 for gas pipe  for liquid pipe	• Owner's manual • Installation manual

3.7.2 Selection of the best location

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to the air circulation.
- There should be provision of easy condensate drain.
- Taking into accounting the noise prevention criteria, spot the installation location.
- Do not install the unit near the door way.
- Keep proper distances, of the unit, from ceiling, fence, floor, walls and other obstacles as shown in figure.
- The indoor unit must have the maintenance space.
- The mounting ceiling or wall should be strong and solid enough to protect it from the vibration.



(Ceiling installation)



(Floor/wall installation)

3.7.3 Installation

Models : SMNH-VB [MV-B]

1) Before Installing, prepare Installation Plates

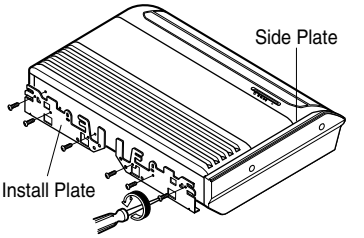
① Installation Plates' are attached at the bottom of indoor unit. Detach them by removing each 3 screws at both sides.

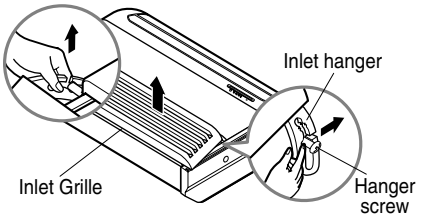
② Pull the upper right and left side of 'Inlet Grille' to the front, and it will stop at slightly tilted position.

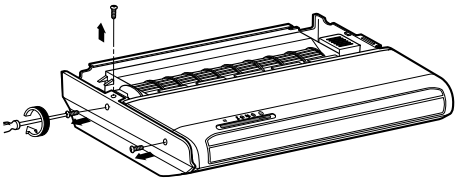
③ Unhook the 'Inlet hanger' from the 'Hanger screw' on the both left and right side.

④ Detach the 'Inlet Grille' from the Indoor Unit.

⑤ Detach 'Side Plate (R,L)' by removing each 3 screws on both sides.





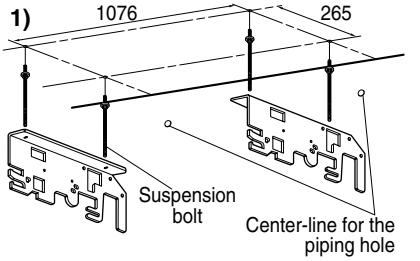


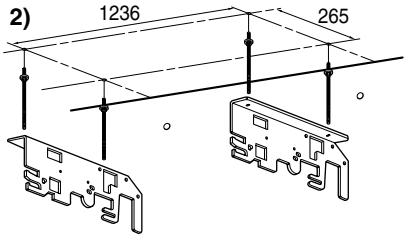
2) Installation on the ceiling

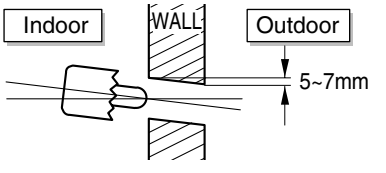
① Measure and mark the position for the Suspension bolts and the piping hole.

② Drill the hole for anchor nut on the ceiling.
Drill the piping hole on the wall slightly tilted to the outdoor side using a ø70 hole-core drill.

❊ Before secure the Installation Plates, select the bent direction of the Installion Plate to the inside or the outside according to the installation circumstances.



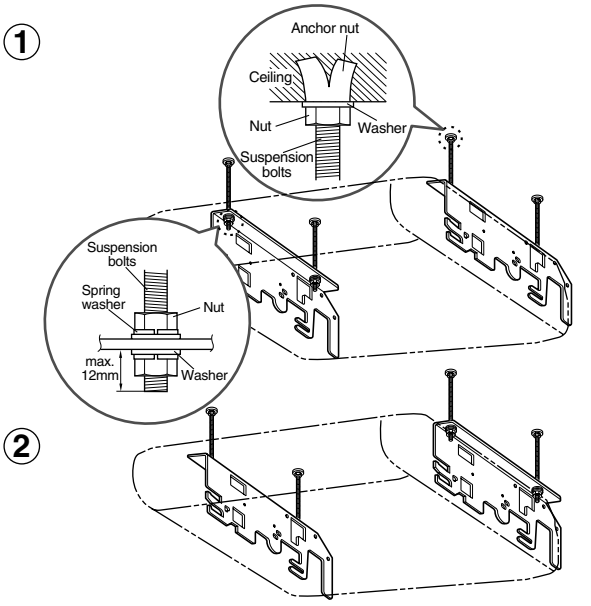




③ Insert the nuts and washer onto the suspension bolts for locking the suspension bolts on the ceiling.

④ Mount the suspension bolts to the anchor-nuts firmly.

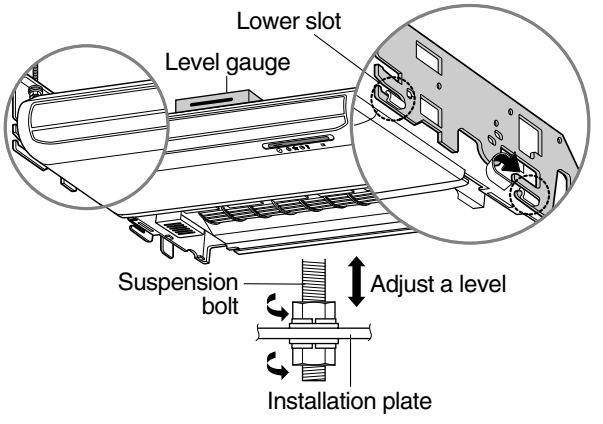
⑤ Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.

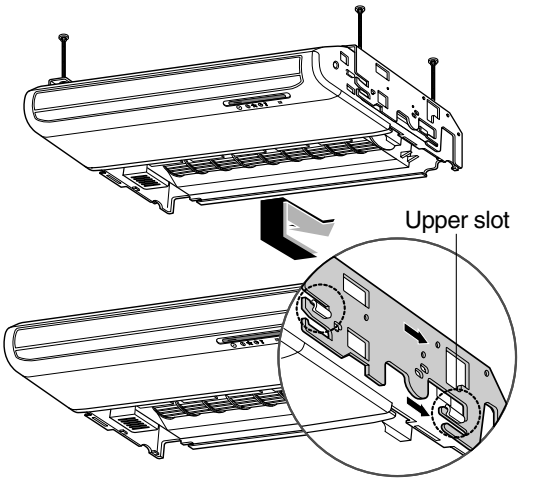


⑥ Engage 2 hooks on the both left and right side of the unit to the lower slot of Installation plates.

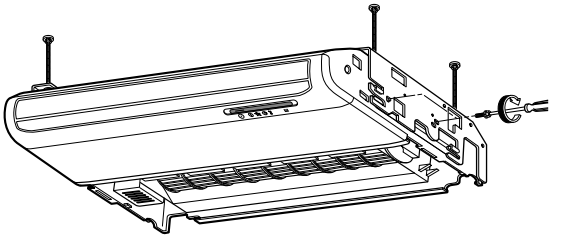
⑦ Adjust a level with a level gauge on the direction of left-right, back-forth by adjusting suspension bolts.

⑧ Move the hooks on the unit to the upper slot of installation plates. Then the unit will be declined to the bottom-side so as to drain well.



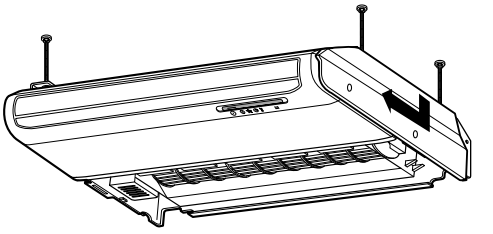


⑨ Secure the unit to the installation plates with four M8 bolts and washers.

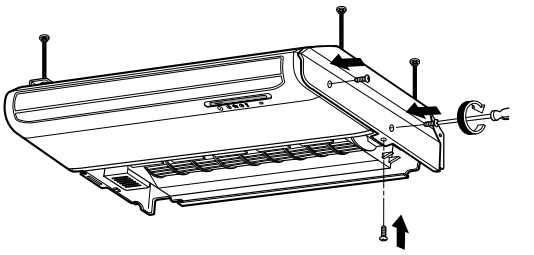


⑩ Before working, refer to 'Connecting pipe and cable to indoor unit.

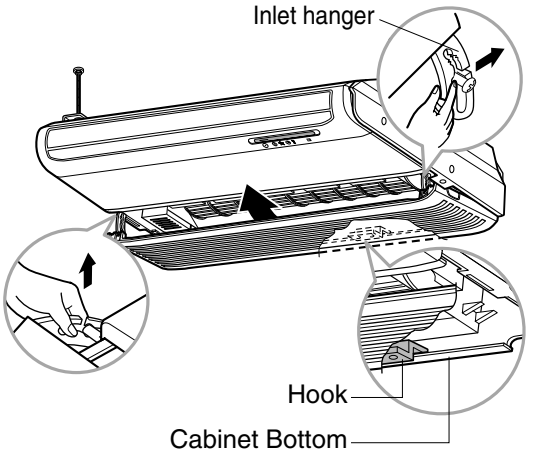
⑪ Fit the projection hooks of the side plates to the 'Side Panel'



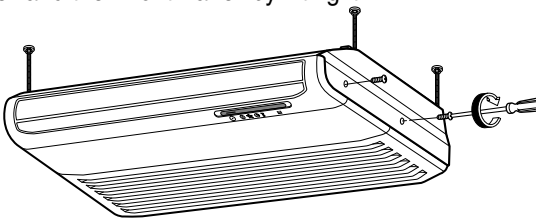
⑫ Fasten the screws.



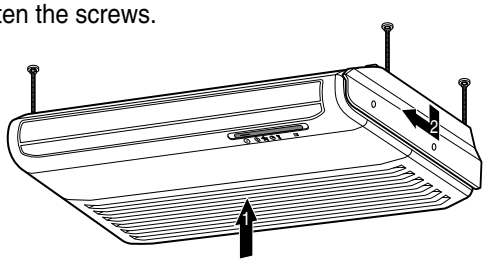
⑬ Hook up the Inlet Grille Hook to the cabinet.



• Fit the projection hooks of the side plates to the 'Side Panel' and the 'Front Panel' by lifting it.



• Fasten the screws.

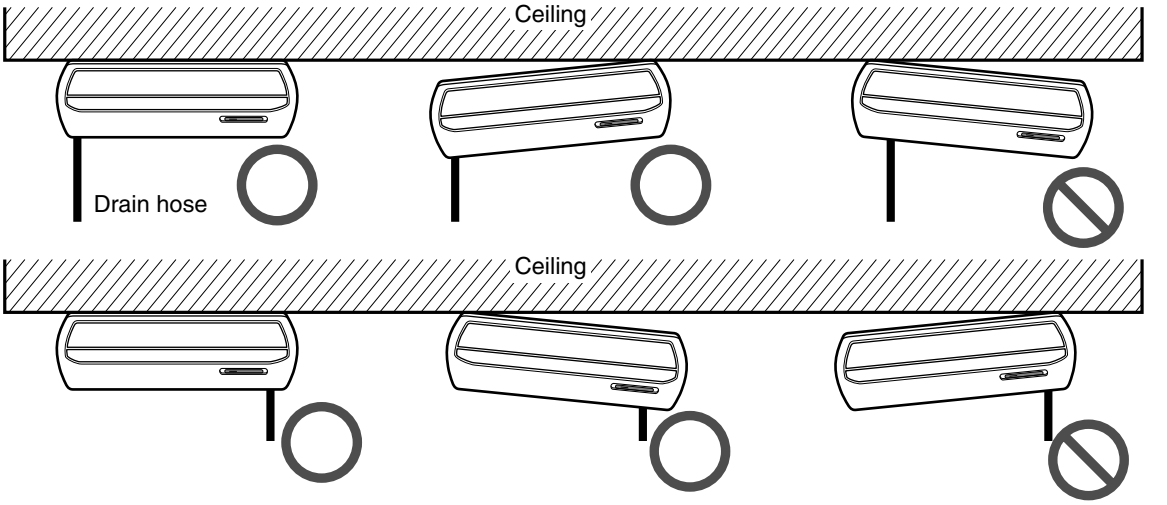


⚠CAUTION

1. **Install declination** of the indoor unit is very **important for the drain** of the convertible type air conditioner.
2. If the Installation Plates are fixed to horizontal line, the indoor unit after installing will be declined to the bottomside.

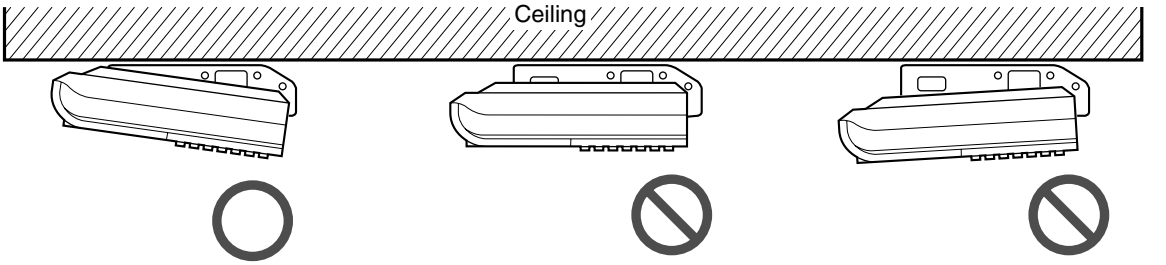
Front view

• The unit must be horizontal or declined to the drain hose connected when finished installation.



Side view

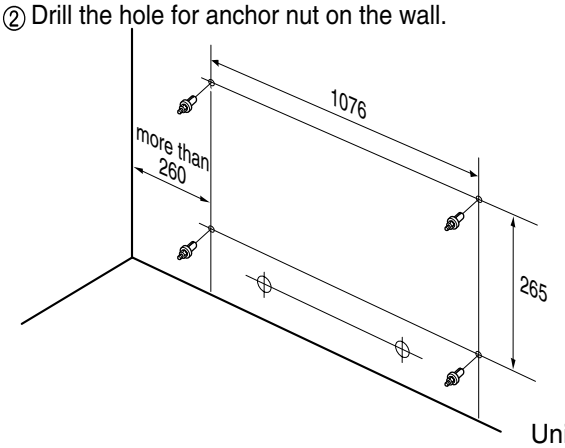
• The unit must be declined to the bottomside of the unit when finished installation.



3) Installation on the Wall

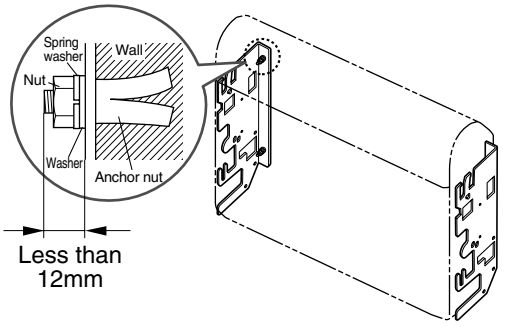
① Select and mark the position for fixing bolts and piping hole.
Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.

② Drill the hole for anchor nut on the wall.

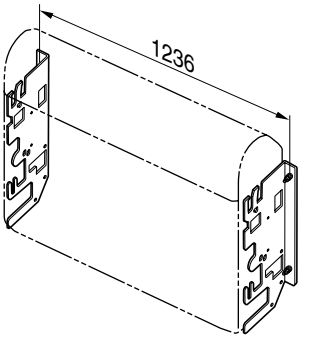


Unit: mm

③ Secure the 'Install plate' onto the wall with four anchor bolts, washers and spring washers.



※ Before securing the installation plates, select the bent direction of the 'Installation plates' to the inside or outside according to the installation circumstances.

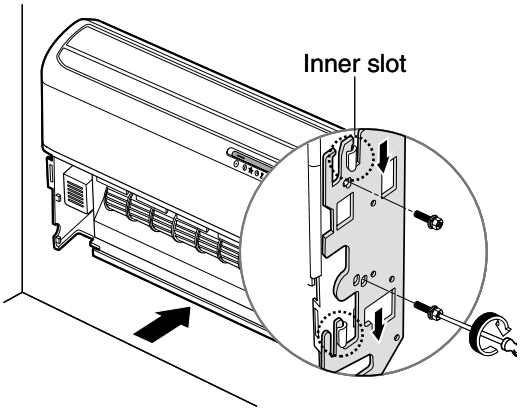


Unit: mm

4) Install the indoor unit on the installation plate.

① Insert 2 hooks on the both left and right side of the unit to the inner slot (wall side) of the Installation Plate.

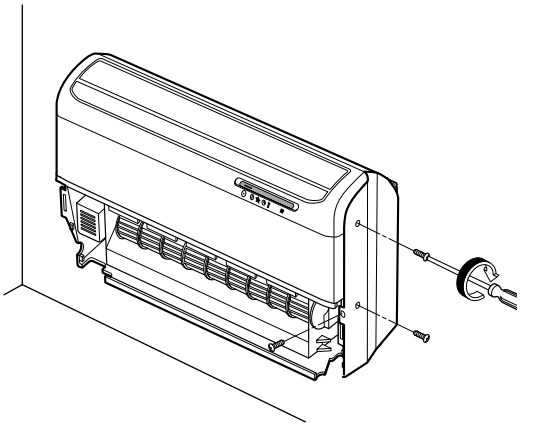
② Secure the unit to the Installation Plate with four M8 bolts and washers.



• Before working, refer to "Connecting pipe and cable to Indoor Unit".

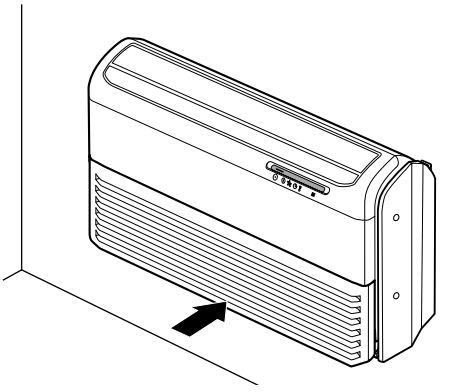
③ Fit the projection hooks of the side plates to the 'Side Panel' and the 'Front Panel' by lifting it.

④ Fasten the screws.



⑤ Hook up the Inlet Grille Hook to the cabinet.

⑥ Hang the Inlet Hanger to the screw.



5) Installation on the floor

Installation of mount bracket.

① Select and mark the position for Mount Brackets and the piping hole.

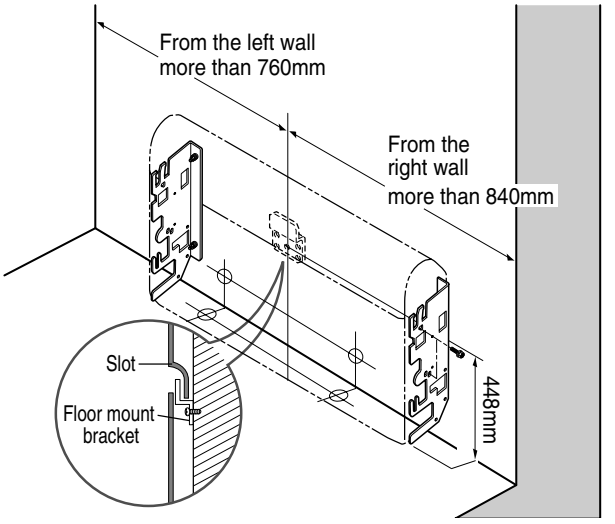
② Drill the hole for the anchor nut on the wall.

③ Drill the piping hole using a ø70 hole-core drill.

④ Secure the mount brackets on the wall with four M4 screws.

6) Install the indoor unit on the mount brackets.

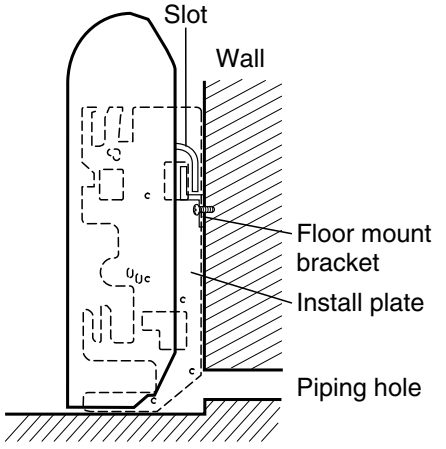
① Engage the slot at the back of the unit with mount bracket.



7) After installing, reassemble detached parts.

① Hang the 'Inlet grille' and hook the 'Inlet hanger' to the hanger screw.

② Assemble the 'Side plates(R,L)' with 2 screws on both left and right side.



Models : AMNH-VE[MV-E]

8) Installation on the ceiling

① Prepare 4 suspension bolts (Each bolts length should be same.)

② Measure and mark the position for the suspension bolts and the piping hole.

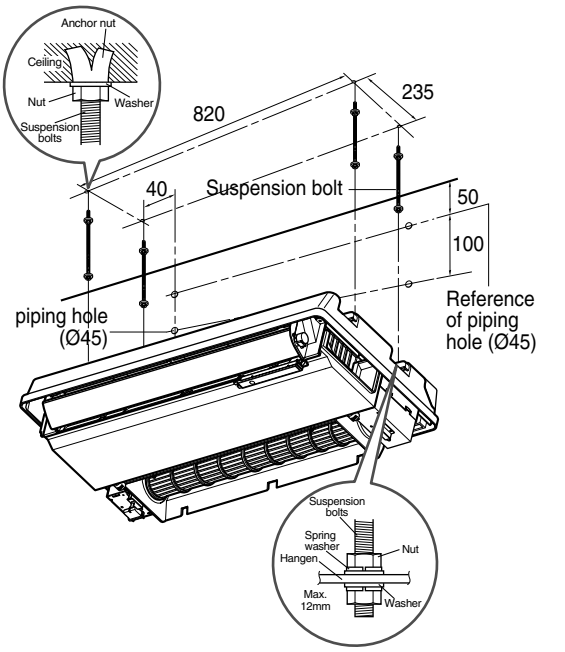
③ Insert the nuts and washer onto the suspension bolts for locking the suspension bolts on the ceiling.

④ Mount the suspension bolts to the anchor-nuts firmly.

⑤ Secure the hangers onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.

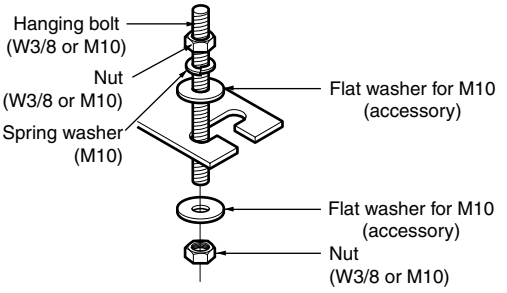
⑥ Adjust a level with a level gauge on the direction of left-right, back-forth by adjusting suspension bolts.

⑦ Adjust a level on the direction of top-bottom by adjusting supension bolts. Then the unit will be declined to the bottomside so as to drain well.



⚠CAUTION

- Tighten the nut and bolt to prevent unit from falling.

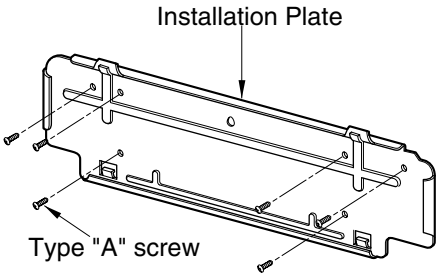


9) Installation on the wall

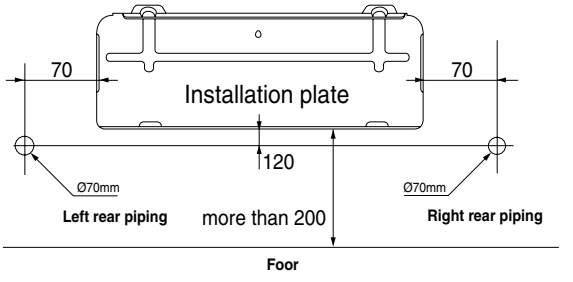
The wall you select should be strong and socover enough to prevent vibration

① Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.

② Mount the installation plate horizontally by aligning the centerline using a level.



③ Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate-routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.



3.7.4 Piping and drainage

1) Installation on the ceiling

• Connecting the pipes to the indoor unit

The pipe can be connected to right side, bottom or back of the unit.

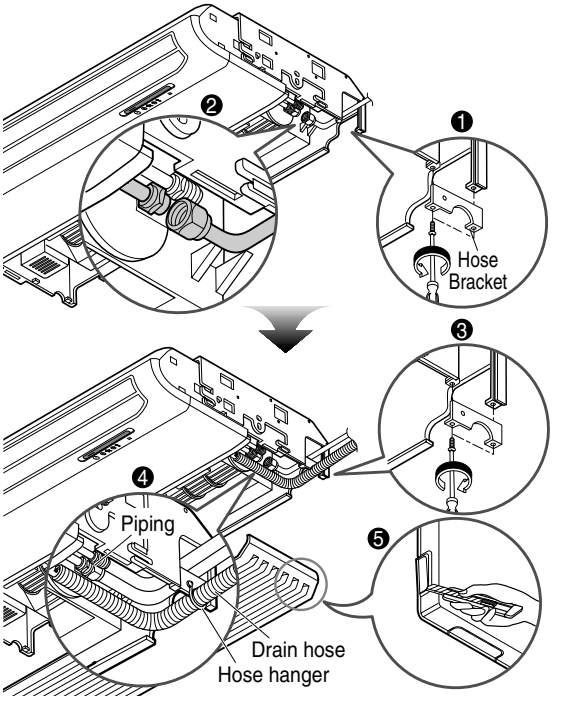
- For the right side piping

① After bending an end of the connecting tube, align the center of the pipings and sufficiently tighten the flare nut with fingers.

② Finally, tighten the flare nut with torque wrench until the wrench clicks.

③ Connect the drain hose insulated to the drain outlet. Drain hose should go under the hose bracket as shown in figure ❹.

④ Hang the drain hose on the hose hanger and fix it to the hole of the hose bracket with a screw.



- For the bottom side piping

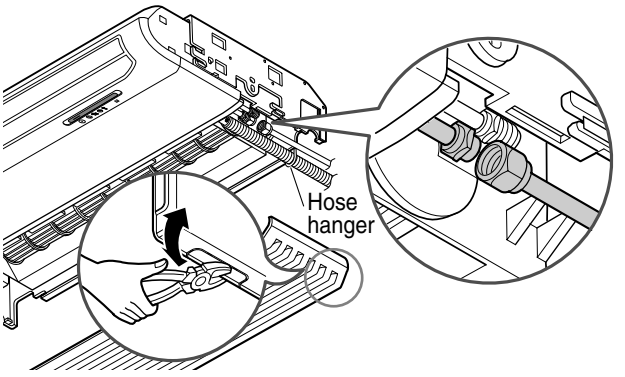
① Remove the knock-out from the bottomside of inlet grille

② Align the center of the pipings and sufficiently tighten the flare nut with fingers.

③ Finally, tighten the flare nut with torque wrench until the wrench clicks.

④ Connect the drain hose insulated to the drain outlet.

⑤ Hang the drain hose on the hose hanger and fix it to the hole of cabinet bottom with a screw.

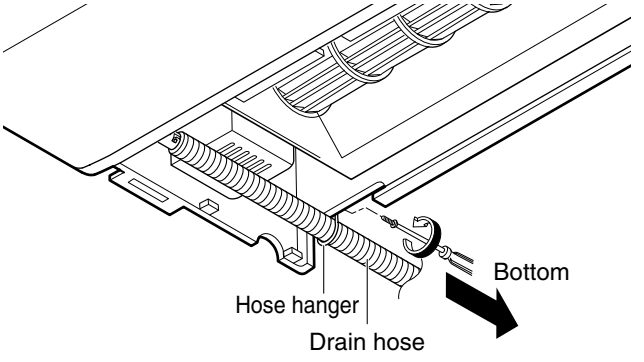


• Connecting the drain hose

① The drain hose can be connected to not only the right side but also left side of the unit.

② If the drain hose is connected to the left side, it should go through the cabinet bottom.

③ Hang the drain hose on the hose hanger and fix it to the hole of cabinet bottom with a screw.



2) Installation on the wall or floor

• Connecting the pipes to the indoor unit

- For the right rear piping

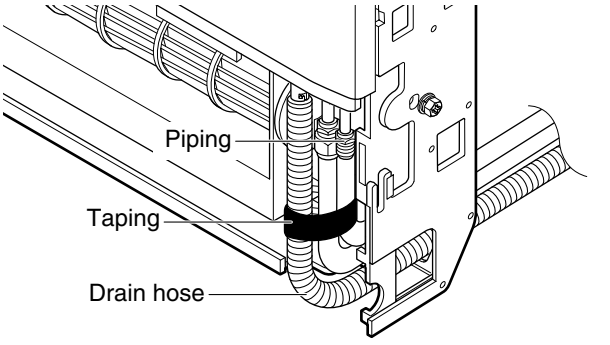
① Remove the knock-out from the back side of the cabinet.

② After bending an end of the connecting tube, align the center of the pipings and sufficiently tighten the flare nut with fingers.

③ Finally, tighten the flare nut with torque wrench until the wrench clicks.

④ Connect the drain hose to the drain outlet.

⑤ Tape the drain hose to the pipings to avoid coming off of the drain-outlet.



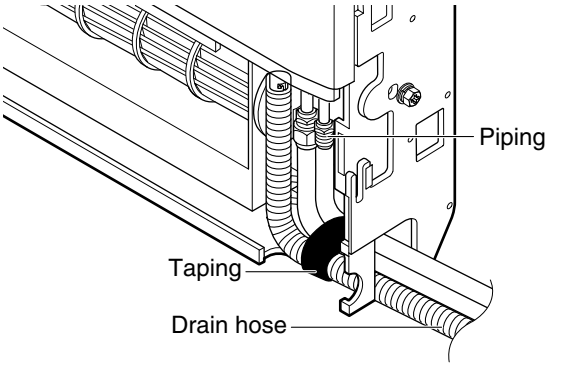
- For the right side piping

① After bending an end of the connecting tube, align the center of the pipings and sufficiently tighten the flare nut with fingers.

② Finally, tighten the flare nut with torque wrench until the wrench clicks.

③ Connect the drain hose to the drain outlet.

④ Tape the drain hose to the pipings to avoid coming off the drain-outlet.

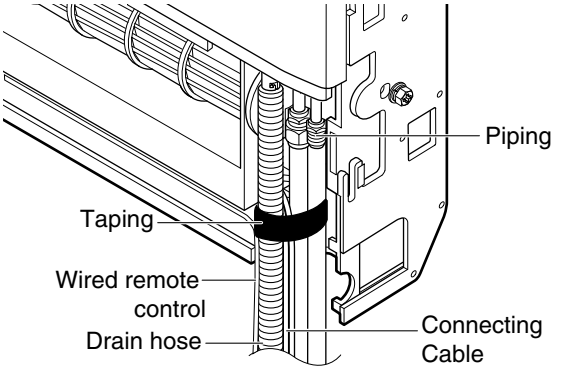


- For the right bottom piping

① Align the center of the pipings and sufficiently tighten the flare nut with fingers.

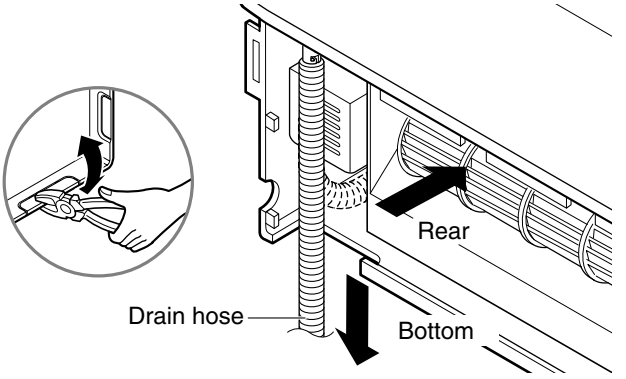
② Finally, tighten the flare nut with torque wrench until the wrench clicks.

③ Connect the drain hose to the drain outlet.



• Connecting the drain hose

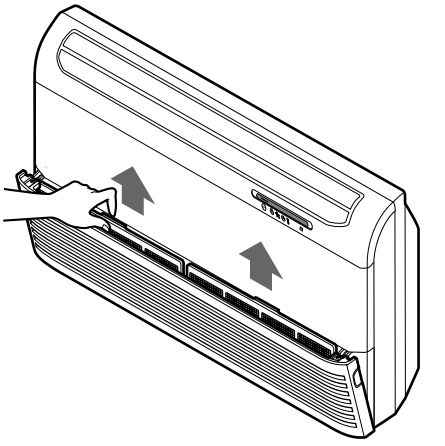
① The drain hose can be connected to not only right side but also left side of the unit.



3) Checking the drainage

- Remove the air filter.

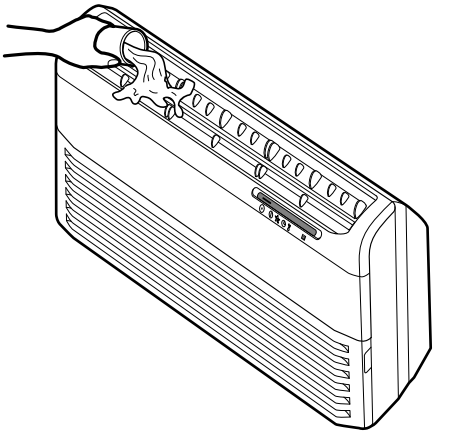
① To remove air filter, take hold of tab and pull slightly upwards.



- Check the drainage.

① Spray one or two glasses of water upon the evaporator.

② Ensure that water flows through drain hose of indoor unit without any leakage.



3.7.5 Electric wiring work

1) General instructions

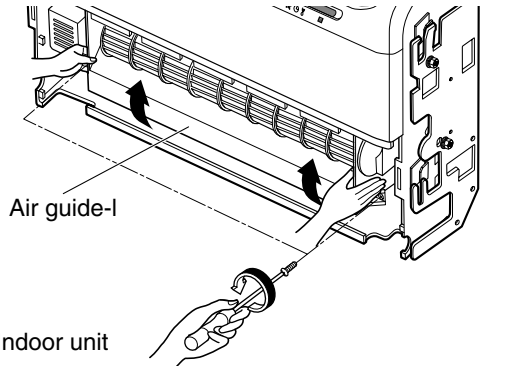
① All field supplied parts and materials, electric works must conform to local codes.
Use copper wire only.

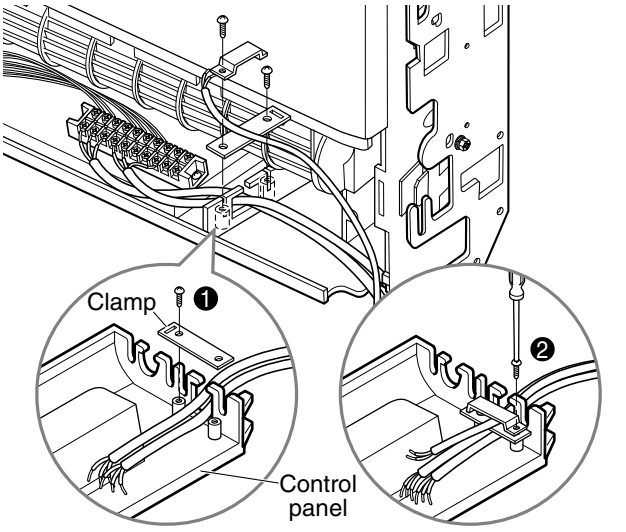
② Follow the "WIRING DIAGRAM" attached to the unit body to wire the outdoor unit, indoor units and the remote controller.

③ All wiring must be performed by an authorized electrician.

③ This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B...., and be sure the terminal board wiring to the outdoor unit and indoor unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

④ A circuit breaker capable of shutting down the power supply to the entire system must be installed.





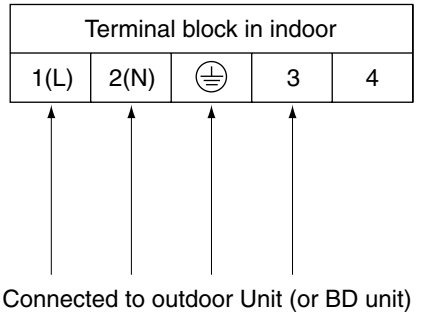
2) Wiring connection

- Connecting cables to the indoor unit

① Remove the air guide - L by loosening 2 screws after removing the inlet grille from the Indoor unit.

② Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively



⚠CAUTION

- Make sure that the screws of the terminal are fixed tightly.

⚠CAUTION

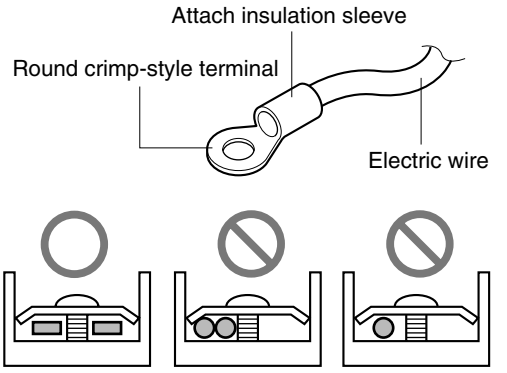
- Make sure to attach the sealing material (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause mistaken operation or breakage.

NOTE

1. Use round crimp-style terminals for connecting wires to the power supply terminal block. If unavailable, observe the following points when wiring.

① Do not connect wires of different gauge to the same power supply terminal.

② Use the specified electric wire. connect the wire securely to the terminal. Lock the wire down without applying excessive force to the terminal.



Connect wires of the same gauge to both sides

2. Tightening torque for the terminal screws.

① Use the correct screw driver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.

② If the terminal screws are tightened too hard, screws might be damaged.

3. Do not connect wires of different gauge to the same grounding terminal. Loose connection may deteriorate protection.

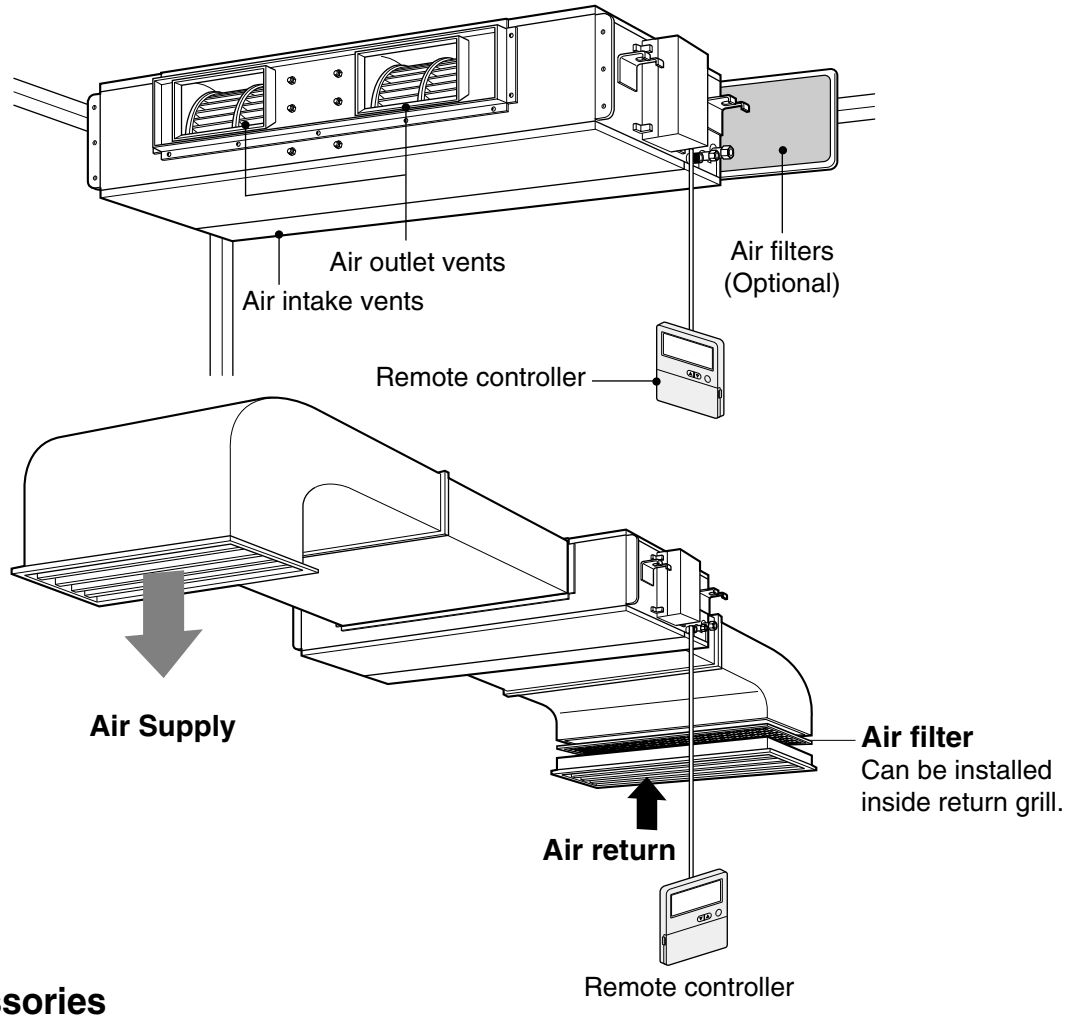
4. Outside of the unit, keep proper separation between transmission and power supply wiring. The equipment may malfunction if subjected to electrical (external) noise.

5. Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.

6. Use only specified wire and tightly connect wires to terminals. Be careful wires do not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other equipment such as popping open the electric parts box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in worse case, electric shock or fire.

3.8 Ceiling concealed duct (High static)

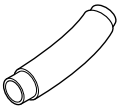
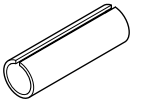
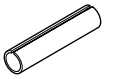
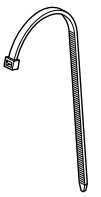
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.



3.8.1 Accessories

Check whether the following accessories are included with your unit.

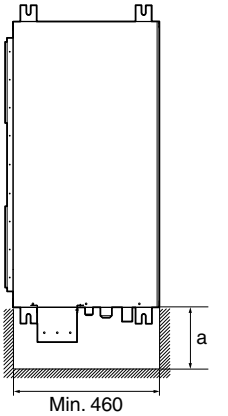
1) Standard accessories

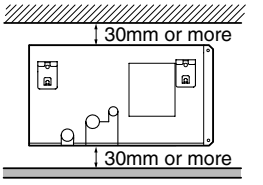
Name	Clamp metal	Drain hose	Insulation for fitting	Clamp	Screws for duct flanges	(Other)
Quantity	1 EA	1 EA	1 set	6 EA	1 set	
Shape			 for gas pipe  for liquid pipe			• Owner's manual • Installation manual • Washers(8 pcs.)

3.8.2 Selection of the best location

Install the air conditioner in the location that satisfies the following conditions.

- The place shall easily bear a load of the indoor unit.
- The place should have enough area for inspection as shown in figure.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage.(Suitable dimension “H” is necessary to get a slope to drain as figure.)
- The place shall easily connect with the outdoor unit.
- The place where the unit is not affected by an electrical noise.
- The place where air circulation in the room will be good .
- There should not be any heat source or steam near the unit.



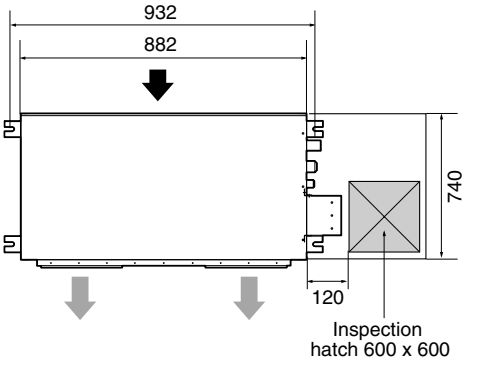


Model	a
AMN186BHA0 [MB18AH NH0]	900
AMN246BHA0 [MB24AH NH0]	

NOTE

If the service panel is at the top of the unit, then provide sufficient service clearance as per convenience.

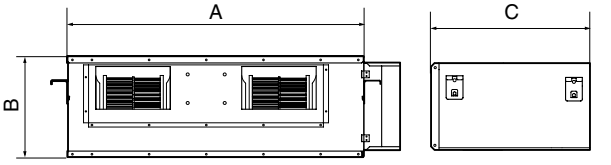
2) Relative positions of indoor unit, suspension bolt and inspection hatch size



3.8.3 Ceiling dimension, also hanging bolt location and service space

1) Select an installation site where the following conditions are fulfilled and also that meets with your customer's approval.

- If supporting structural members are not strong enough to take the units weight, the unit could fall out of place and cause serious injury.
- Where sufficient clearance of maintenance and service can be ensured.
- Where optimum air distribution can be ensured.
- Where nothing blocks the air passage.
- Where condensate can be properly drained.
- Where piping between indoor and outdoor units is possible within the allowable limit (Refer to the installation manual of the outdoor unit.)
- Keep the indoor and outdoor units, power cable and transmission wiring, at least 1 m from TVs and radios, to prevent distorted pictures and static.(Depending on the type and source of the electrical waves, static may be heard even when more than 1 m away.)



Model	A	B	C
AMN186BHA0 [MB18AH NH0]	880	260	450
AMN246BHA0 [MB24AH NH0]			

3) Install a canvass duct to the air discharge outlet and air inlet so that vibration from the machine body is not transmitted to the duct or ceiling. You should also apply acoustic (insulation material) to the inside of the duct, and vibration insulation rubber to the suspension bolts.

4) Install suspension bolts.
(Use bolts of 10 mm diameter.)

- Install the equipment where supporting structures are strong enough to bear the equipment's weight. Use embedded inserts or anchor bolts with new buildings and hole-in-anchors with old buildings.

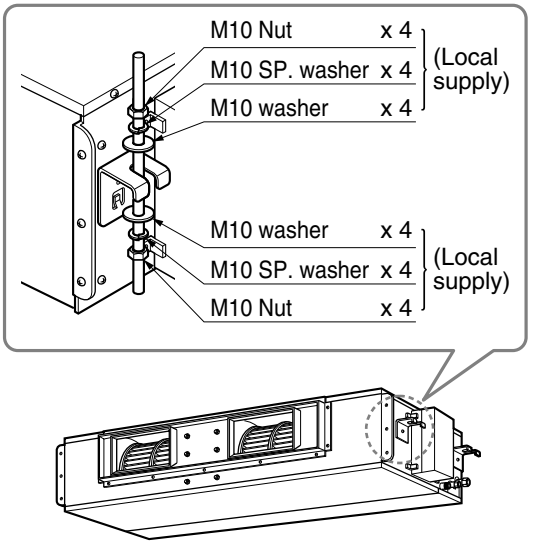
3.8.4 Position of suspension bolt

① Install the unit leaning to a drainage hole side as given in the figure above for easy water drainage.

② A place where the unit will be leveled and that can support the weight of the unit.

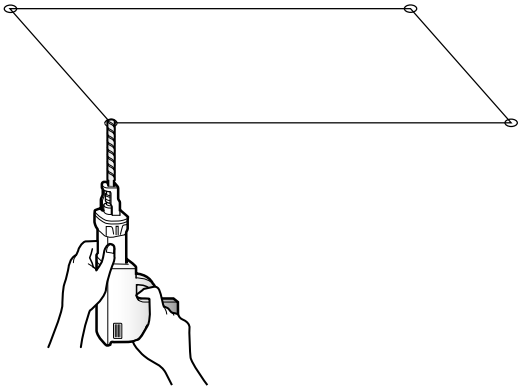
③ A place where the unit can withstand its vibration.

④ A place where service can be easily performed.



⑤ Select and mark the position for fixing bolts.

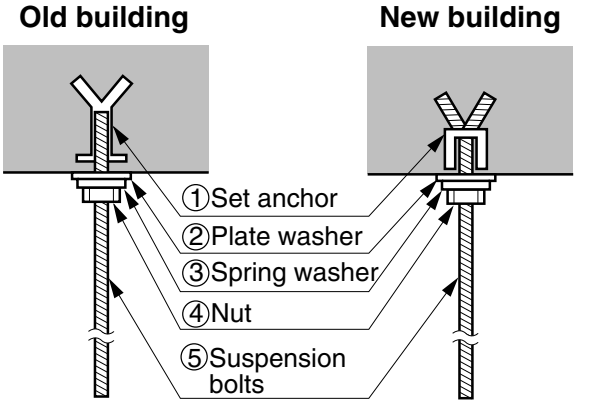
⑥ Drill the hole for set anchor on the face of ceiling.



⑦ Insert the set anchor and washer on the suspension bolts for locking the suspension bolts on the ceiling.

⑧ Mount the suspension bolts to the set anchor firmly.

⑨ Secure the installation plates on the suspension bolts (adjust level roughly) using nuts, washers and spring washers.



⚠CAUTION

- Tighten the nut and bolt to prevent unit from falling.

3.8.5 Connection pipes to the indoor unit

1) Refrigerant piping work

please refer “REFRIGERANT PIPING WORK”.

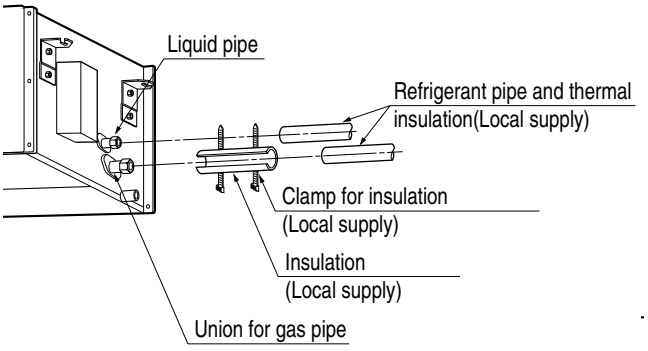
2) Piping insulation

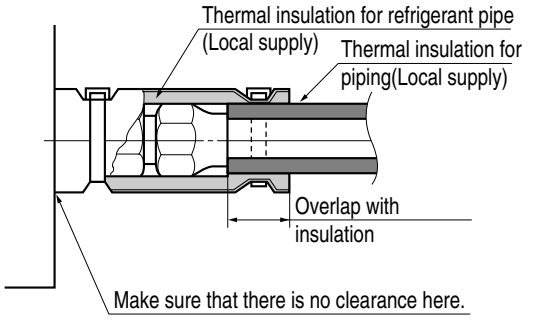
① Perform heat insulation work completely on both gas and the liquid pipe. Because improper insulation will result due condensate formation over pipe.

② Use the heat insulation material for the refrigerant piping which has an excellent heat resistance (over 120°C).

③ Precautions in high humidity circumstance.

④ Refer to the insulation works.





⚠CAUTION

- Make sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

3) Indoor unit drain piping

① During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.

② The outside diameter of the drain connection on the indoor unit is 32mm.

Piping material: Polyvinyl chloride pipe inner diameter Ø 25mm and pipe fitting

⚠CAUTION

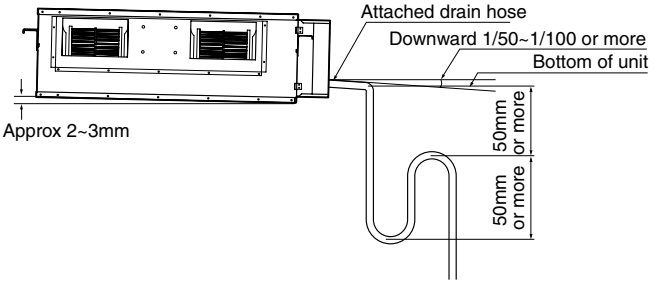
1. Decline Installation of indoor unit is very important for the drain of the duct type air conditioner.
2. Minimum thickness of the insulation for the connecting pipe should be 5mm.

4) Caution for gradient of unit and drain piping

- Without drain pump

① Always lay the drain with downward inclination (1/50 to 1/100).
Prevent any upward flow or reverse flow in any part.

② 10mm or thicker formed thermal insulation shall always be provided for the drain pipe.



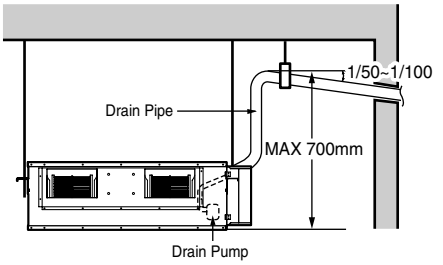
※ U-trap is not required for low static model in which the external static pressure is below 50 pa(5mm Aq)

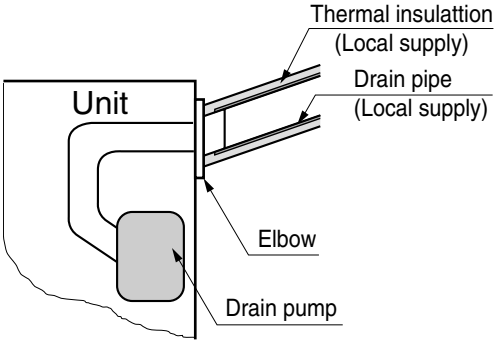
- With drain pump

① Possible drain head is upto 700mm.

② Keep the drain pipe downward stope upto 1/50~1/100. Prevent any upward flow or reverse flow in any part.

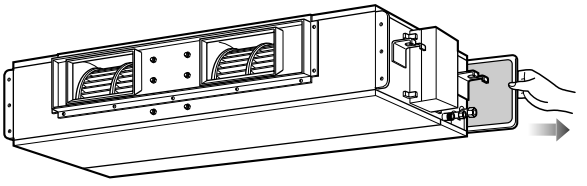
③ 10mm or thicker insulation should be provided for the drain pipe.





5) Checking the drain

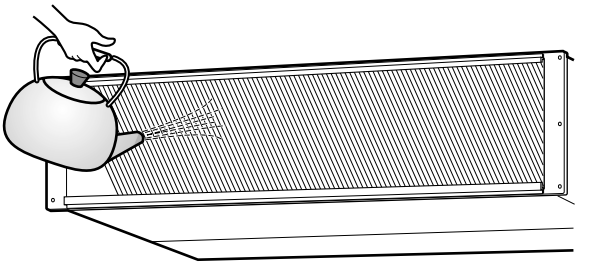
① Remove the air filter.



② Check the drain.

• Poor eough water on the drain pan.

• Ensure that water flows through the drain pipe from indoor unit without any leakage.



3.8.6 Electric wiring work

1) General instructions

① All field supplied parts and materials, electric works must conform to local codes.
Use copper wire only.

② Follow the "WIRING DIAGRAM" attached to the unit body to wire the outdoor unit, indoor units and the remote controller.

③ All wiring must be performed by an authorized electrician.

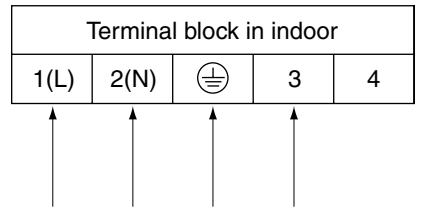
④ This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal board wiring to the outdoor unit and indoor unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

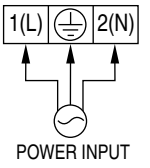
⑤ A circuit breaker capable of shutting down the power supply to the entire system must be installed.

2) Wiring connection

Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

① Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively 30k/36k/42k/48k/60k/72k/90k/100k Btu





② If the supply cord is damaged, it must be replaced by a special cord or assembly availible from the manufacturer of its service agent.

⚠WARNING

- Make sure that the screws of the terminal are fixed tightly.

⚠CAUTION

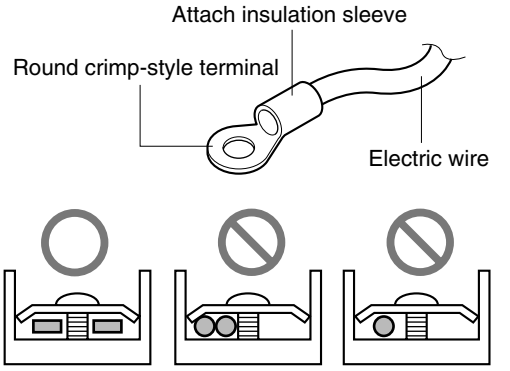
- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

NOTE

1. Use round crimp-style terminals for connecting wires to the power supply terminal block. If unavailable, observe the following points when wiring.

① Do not connect wires of different gauge to the same power supply terminal.

② Use the specified electric wire. Connect the wire securely to the terminal. Lock the wire down without applying excessive force to the terminal.



Connect wires of the same gauge to both sides

2 Tightening torque for the terminal screws.

① Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.

② If the terminal screws are tightened too hard, screws might be damaged.

3. Do not connect wires of different gauge to the same grounding terminal. Loose connection may deteriorate protection.

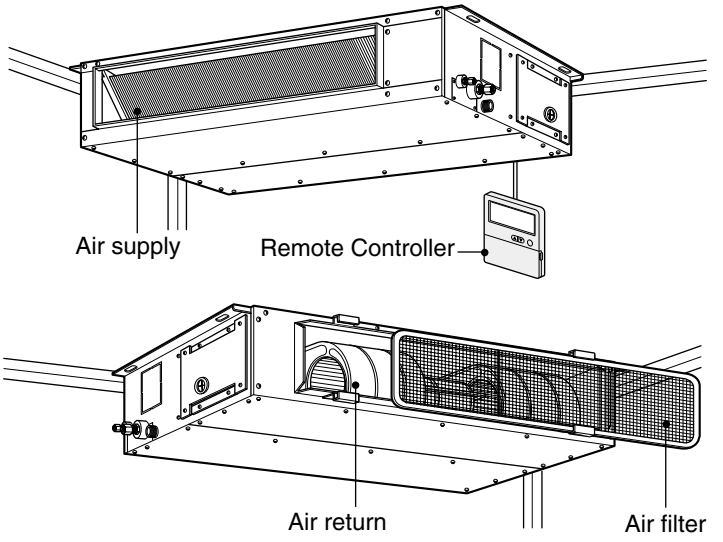
4. Outside of the unit, keep proper separation between transmission and power supply wiring. The equipment may malfunction if subjected to electrical (external) noise.

5. Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.

6. Use only specified wire and tightly connect wires to terminals. Be careful wires do not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other equipment such as popping open the electric parts box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in worse case, electric shock or fire.

3.9 Ceiling concealed duct (Low static)

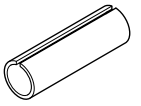
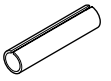
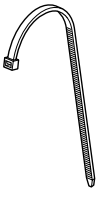
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.



3.9.1 Accessories

Check the following accessories are included with your unit.

1) Standard accessories

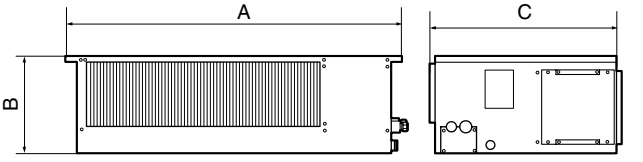
Name	Clamp metal	Insulation for fitting	Screws for duct flanges	Clamp	(Other)
Quantity	1 EA	1 set	1 set	8 EA	
Shape		 for gas pipe  for liquid pipe			• Owner's manual • Installation manual

3.9.2 Selection of the best location

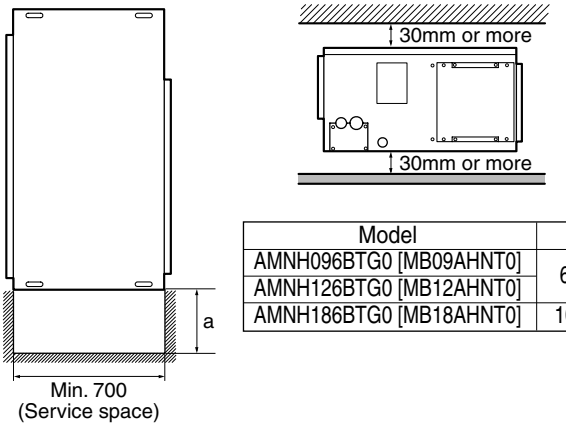
Install the air conditioner in the location that satisfies the following conditions.

- The place shall easily bear a load exceeding four times the indoor unit's weight.
- The place shall be able to inspect the unit as the figure.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage.(Suitable dimension "H" is necessary to get a slope to drain as figure.)
- The place shall easily connect with the outdoor unit.
- The place where the unit is not affected by an electrical noise.
- The place where air circulation in the room will be good .
- There should not be any heat source or steam near the unit.

• BT Chassis



	A	B	C
AMNH096BTG0 [MB09AHNT0]	650	230	535
AMNH126BTG0 [MB12AHNT0]			
AMNH186BTG0 [MB18AHNT0]	1000	230	535



Model	a
AMNH096BTG0 [MB09AHNT0]	670
AMNH126BTG0 [MB12AHNT0]	
AMNH186BTG0 [MB18AHNT0]	1020

3.9.3 Ceiling dimension and hanging bolt location and service space

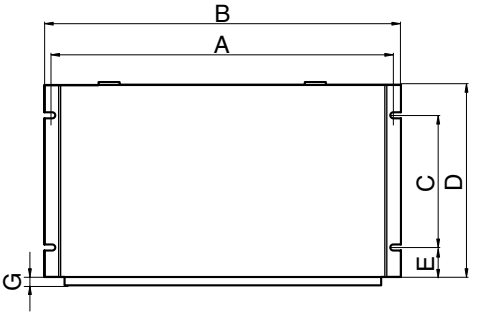
1) Select an installation site where the following conditions are fulfilled and that meets with your customer's approval.

- If supporting structural members are not strong enough to take the units weight, the unit could fall out of place and cause serious injury.
- Where sufficient clearance of maintenance and service can be ensured.
- Where optimum air distribution can be ensured.
- Where nothing blocks the air passage.
- Where condensate can be properly drained.
- Where piping between indoor and outdoor units is possible within the allowable limit (Refer to the installation manual of the outdoor unit.)
- Keep the indoor and outdoor units, power cable and transmission wiring, at least 1 m from TVs and radios, to prevent distorted pictures and static.(Depending on the type and source of the electrical waves, static may be heard even when more than 1 m away.)

NOTE

If the service panel is at the top of the unit, then provide sufficient service clearance as per convenience.

• B1/B2 Chassis

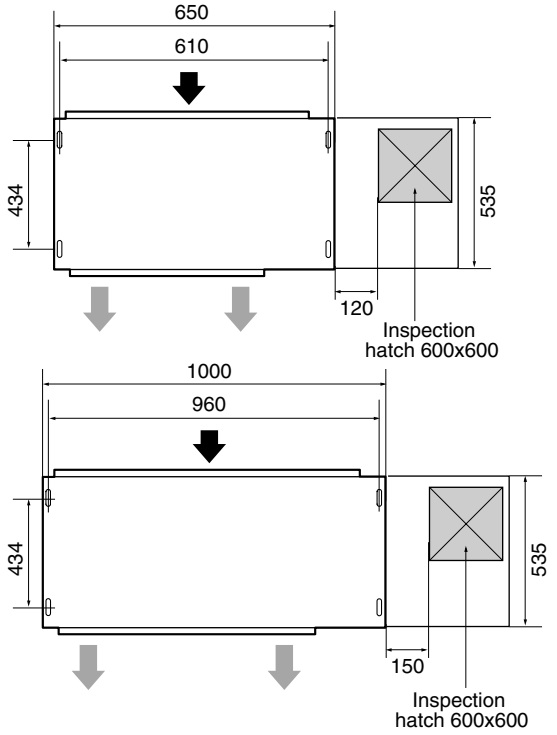


(Unit:mm)

Dimension / Capacity	A	B	C	D	E	F	G	H	I
9/12k Btu/h	850	900	383	570	93.5	190	20.6	795	163
18/24k Btu/h	1130	1180	383	570	93.5	190	20.6	1065	163

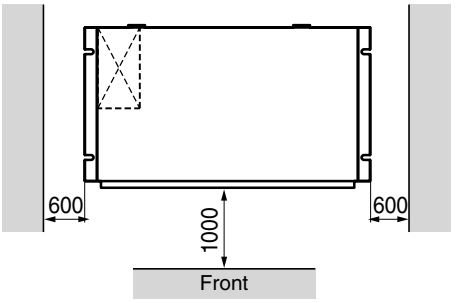
2) Relative positions of indoor unit, suspension bolt and inspection hatch size

• BT Chassis

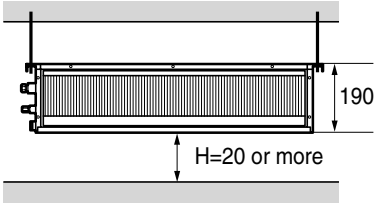


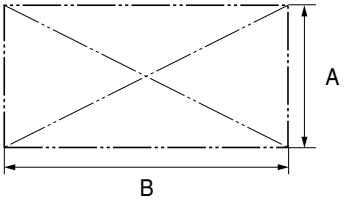
• B1/B2 Chassis

Top view (unit: mm)



Front view

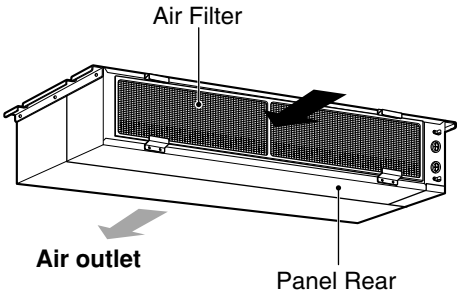




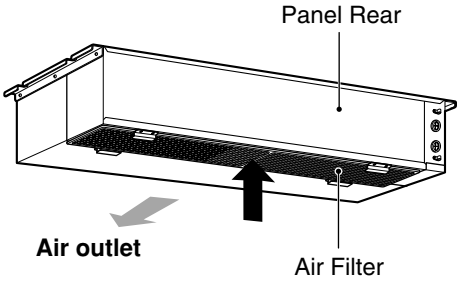
(Unit: mm)

Model	A	B
9/12k	600	900
18/24k	600	1100

• Low static duct type in case of suction from back side.



• Low static duct type in case of suction from bottom side



3) Install a canvass duct to the air discharge outlet and air inlet so that vibration from the machine body is not transmitted to the duct or ceiling. You should also apply acoustic (insulation material) to the inside of the duct, and vibration insulation rubber to the suspension bolts.

4) Install suspension bolts. (Use bolts of 10 mm diameter.)

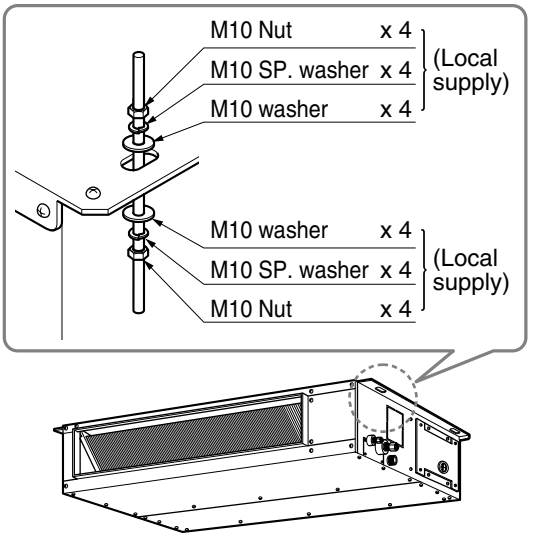
• Install the equipment where supporting structures are strong enough to bear the equipment's weight. Use embedded inserts or anchor bolts with new buildings and hole-in-anchors with old buildings.

3.9.4 Position of suspension bolt

① A place where the unit will be leveled and that can support the weight of the unit.

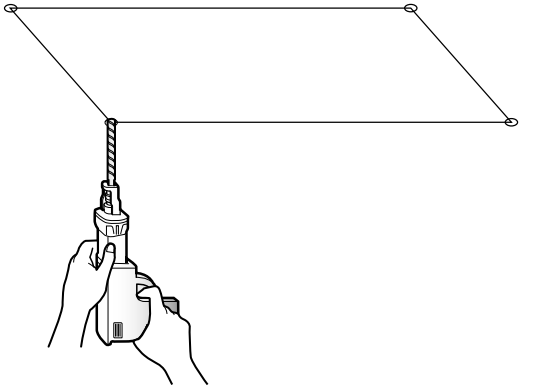
② A place where the unit can withstand its vibration.

③ A place where service can be easily performed.



④ Select and mark the position for fixing bolts.

⑤ Drill the hole for set anchor on the face of ceiling.



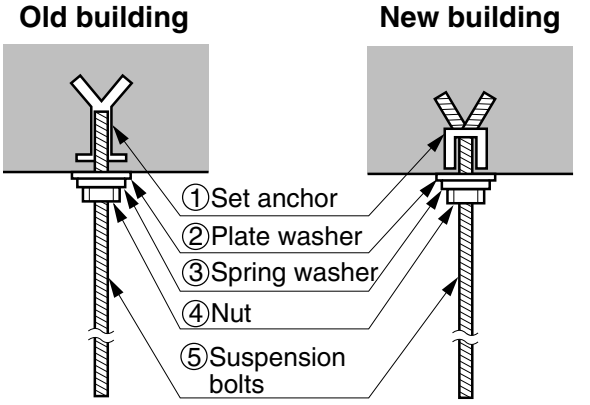
CAUTION

- Tighten the nut and bolt to prevent the unit falling.

⑥ Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.

⑦ Mount the suspension bolts to the set anchor firmly.

⑧ Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.



3.9.5 Connecting pipes to the indoor unit

1) Refrigerant piping work

please refer “REFRIGERANT PIPING WORK”.

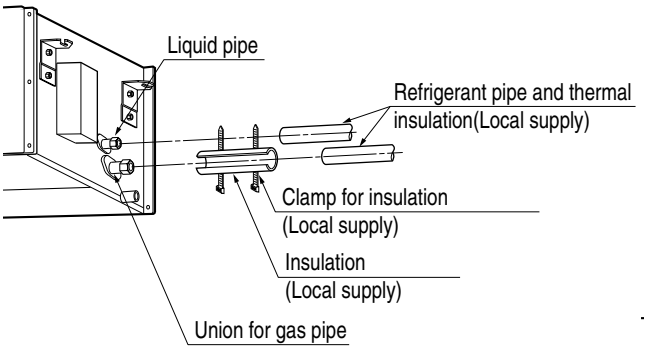
2) Piping insulation

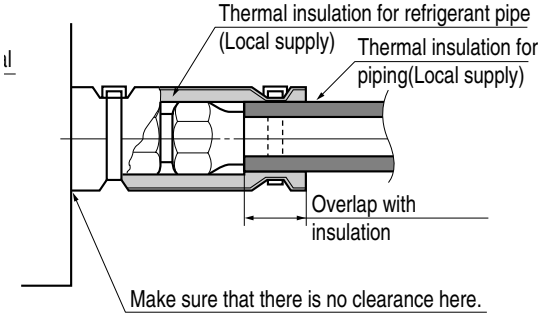
① Perform heat insulation work completely on both gas and the liquid pipe. Because improper insulation will result condensate formation over pipe.
Use the heat insulation material for the refrigerant piping which has an excellent heat resistance (over 120°C).

② Precautions in high humidity circumstance: This air conditioner has been tested according to the "KS Conditions" and confirmed that there is not any default. However, if it is operated for a long time in high humid atmosphere (dew point temperature: more than 23°C), water drops are liable to fall. In this case, add heat insulation material according to the following procedure:

③ Heat insulation material : Adiabatic glass wool with thickness 10 to 20mm.

④ Stick glass wool on all air conditioners that are located in ceiling atmosphere.





⚠CAUTION

- Make sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

3) Indoor unit drain piping

① Drain piping must have down-slope (1/50 to 1/100): be sure not to provide up-and-down slope to prevent reversal flow.

② During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.

③ The outside diameter of the drain connection on the indoor unit is 32mm.

Piping material: Polyvinyl chloride pipe inner diameter Ø 25mm and pipe fittings

⚠CAUTION

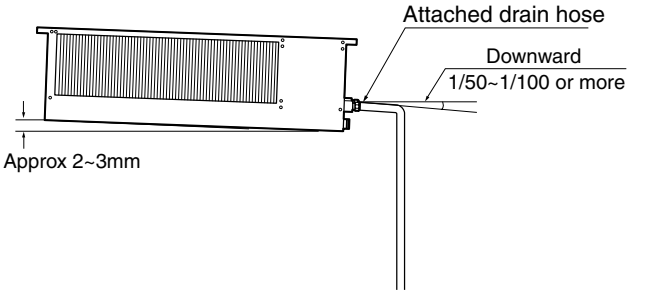
1. Decline Installation of indoor unit is very important for the drain of the duct type air conditioner.
2. Minimum thickness of the insulation for the connecting pipe should be 5mm.

4) Caution for gradient of unit and drain piping

- Without drain pump:

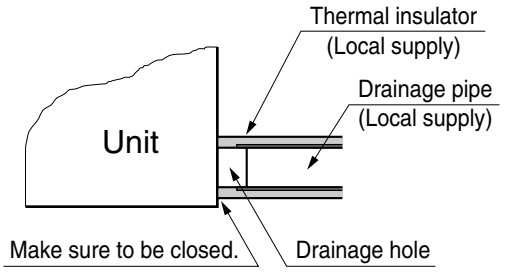
- Always lay the drain with downward inclination (1/50 to 1/100).
  Prevent any upward flow or reverse flow in any part.
- 5mm or thicker formed thermal insulation shall always be provided for the drain pipe.

Correct method

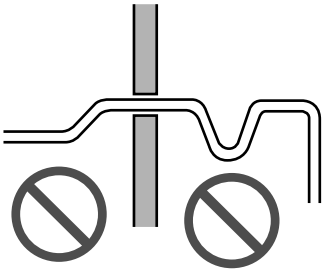


※ U-trap is not required for low static model in which the external static pressure is below 50 pa(5mm Aq)

• Lay the drain hose with a downware inclination so water will drain out.



Wrong method

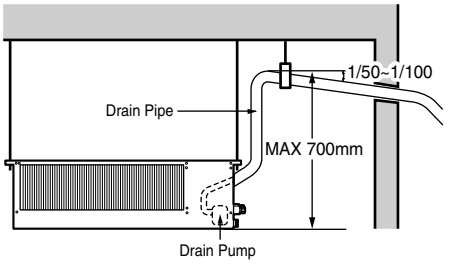


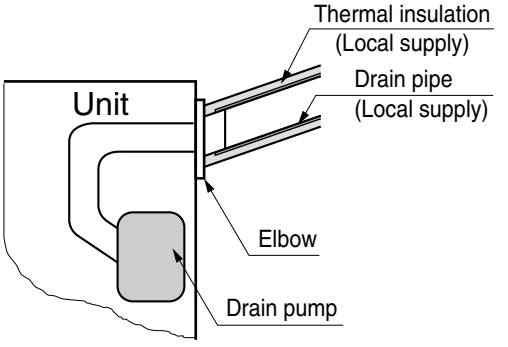
- With drain pump

① Possible drain head height is upto 700mm. So the drain head should be below 700mm.

② Keep the drain hose downward upto 1/50~1/100 inclination.
Prevent any upward flow or reverse flow in any part.

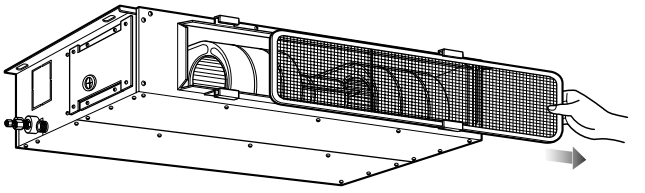
③ 5mm or thicker insulation should be provided for the drain pipe.





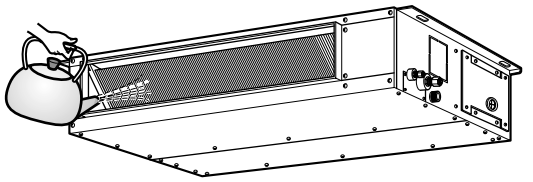
5) Checking the drainage

① Remove the air filter.



② Check the drainage

- Spray one or two glasses of water on the evaporator.
- Ensure that water flows through the drain hose from indoor unit without any leakage.



3.9.6 Electric wiring work

1) General instructions

① All field supplied parts and materials, electric works must conform to local codes.
Use copper wire only.

② Follow the "WIRING DIAGRAM" attached to the unit body to wire the outdoor unit, indoor units and the remote controller.

③ All wiring must be performed by an authorized electrician.

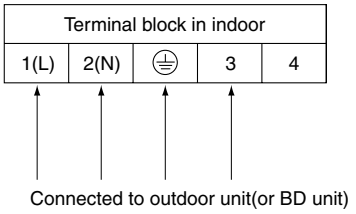
④ This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal board wiring to the outdoor unit and ID unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

⑤ A circuit breaker capable of shutting down the power supply to the entire system must be installed.

2) Wiring connection

Connect the wires to the terminals on the control board ind vidually according to the outdoor unit connection.

- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively



Clamping of cables

① Arrange 2 power cables on the control panel.

② First, fasten the steel clamp with a screw to the inner boss of control panel.

③ For the cooling model, fix the other side of the clamp with a screw strongly. For the heat pump model, put the 0.75mm^2 cable (thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel.

④ In Australia, the length of power supply cord measured from the entry of the power supply cord to the middle of live pin on the power plug should be over 1.8m.

⚠CAUTION

- Make sure that the screws of the terminal are fixed tightly.

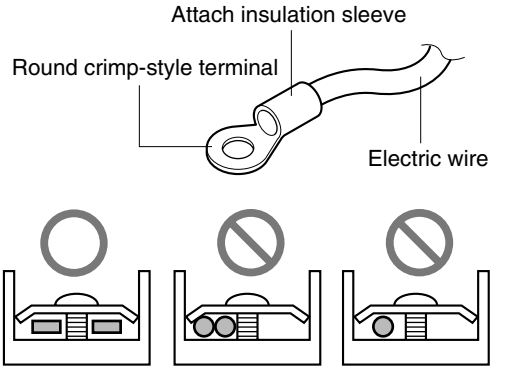
⚠CAUTION

- Make sure to attach the sealing material or (field supplied) to hole of wiring to prevent the infiltration of foreign particle from outside. Otherwise a short-circuit may occur inside the electric parts box
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the cover on the electric parts box fits snugly by arranging the wires neatly and attaching the electric parts box cover firmly. When attaching the electric parts box cover, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them properly, otherwise electrical noise (external static) could cause product malfunction.

NOTE

1. Use round crimp-style terminals for connecting wires to the power supply terminal block. If unavailable, observe the following points when wiring.

- Do not connect wires of different gauge to the same power supply terminal.
- Use the specified electric wire. Connect the wire securely to the terminal. Lock the wire down without applying excessive force to the terminal.



Connect wires of the same gauge to both sides

2. Tightening torque for the terminal screws.

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.

3. Do not connect wires of different gauge to the same grounding terminal. Loose connection may deteriorate protection.

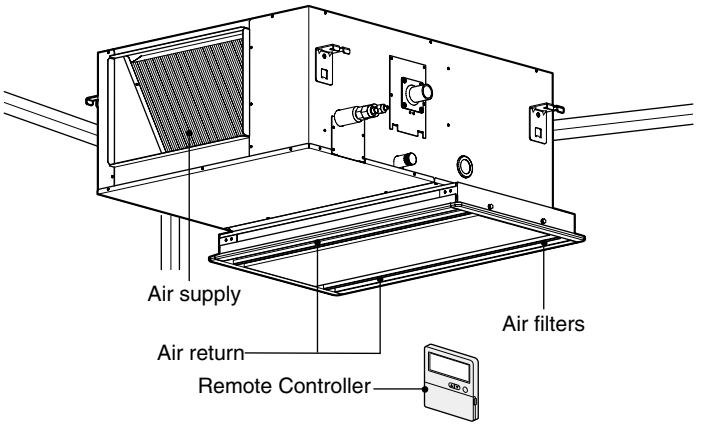
4. Outside of the unit, keep proper separation between transmission and power supply wiring. The equipment may malfunction if subjected to electrical (external) noise.

5. Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.

6. Use only specified wire and tightly connect wires to terminals. Be careful wires do not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other equipment such as popping open the electric parts box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in worse case, electric shock or fire.

3.10 Ceiling concealed duct (Built in)

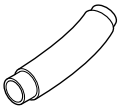
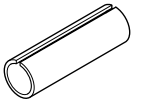
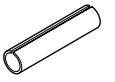
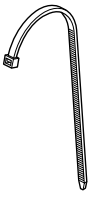
- Please read the instruction sheets completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards.



3.10.1 Accessories

Check the following accessories are included with your unit.

1) Standard accessories

Name	Clamp metal	Drain hose	Insulation for fitting	Clamp	Screws for duct flanges	(Other)
Quantity	1 EA	1 EA	1 set	6 EA	1 set	
Shape			 for gas pipe  for liquid pipe			• Owner's manual • Installation manual • Washers(8 pcs.)

3.10.2 Selection of the best location

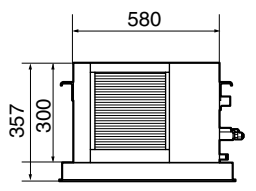
Install the air conditioner in the location that satisfies the following conditions.

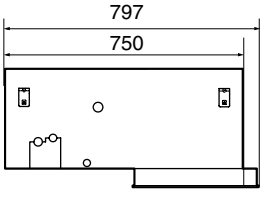
- The place shall easily bear a load exceeding four times the indoor unit's weight.
- The place shall be able to inspect the unit as the figure.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage.(Suitable dimension "H" is necessary to get a slope to drain as figure.)
- The place shall easily connect with the outdoor unit.
- The place where the unit is not affected by an electrical noise.
- The place where air circulation in the room will be good .
- There should not be any heat source or steam near the unit.

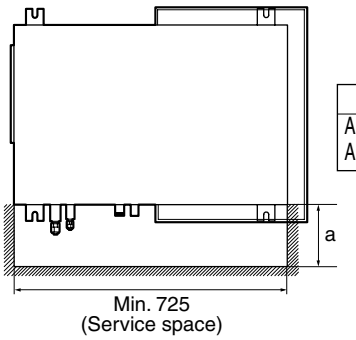
3.10.3 Ceiling dimension and hanging bolt location and service space

1) Select an installation site where the following conditions are fulfilled and that meets with your customer's approval.

- If supporting structural members are not strong enough to take the units weight, the unit could fall out of place and cause serious injury.
- Where sufficient clearance of maintenance and service can be ensured.
- Where optimum air distribution can be ensured.
- Where nothing blocks the air passage.
- Where condensate can be properly drained.
- Where piping between indoor and outdoor units is possible within the allowable limit (Refer to the installation manual of the outdoor unit.)
- Keep the indoor and outdoor units, power cable and transmission wiring, at least 1 m from TVs and radios, to prevent distorted pictures and static.(Depending on the type and source of the electrical waves, static may be heard even when more than 1 m away.)

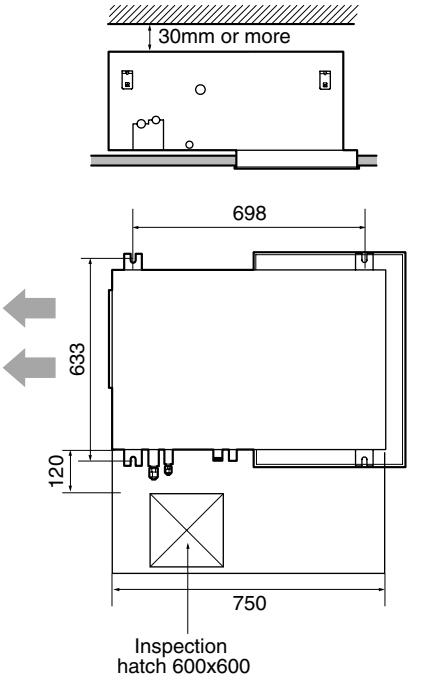






Model	a
AMNH096 [MB09AHB NP0] AMNH126 [MB12AHB NP0]	600

2) Relative positions of indoor unit, suspension bolt and inspection hatch size



NOTE

If the service panel is at the top of the unit, then provide sufficient service clearance as per convenience.

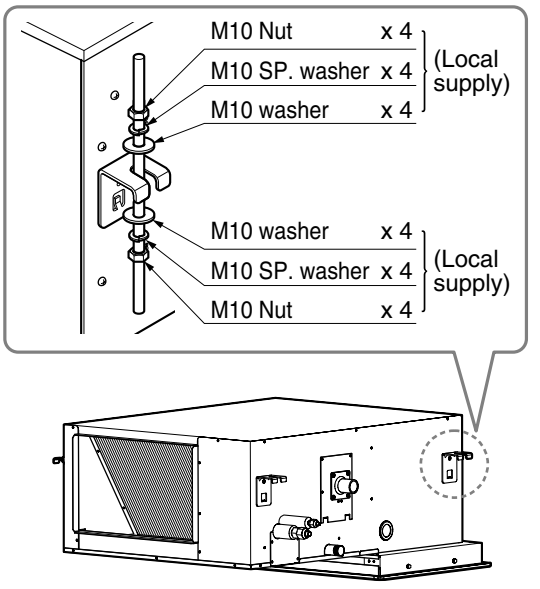
3) Install a canvass duct to the air discharge outlet and air inlet so that vibration from the machine body is not transmitted to the duct or ceiling. You should also apply acoustic (insulation material) to the inside of the duct, and vibration insulation rubber to the suspension bolts.

4) Install suspension bolts.
(Use bolts of 10 mm diameter.)

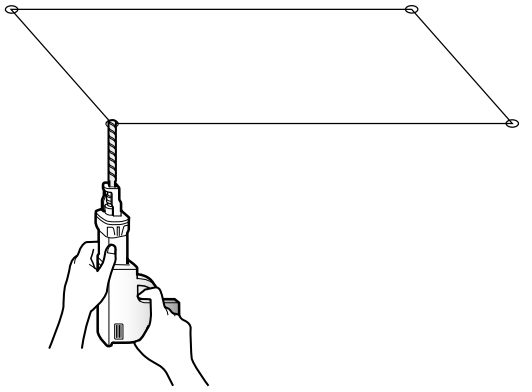
- Install the equipment where supporting structures are strong enough to bear the equipment's weight. Use embedded inserts or anchor bolts with new buildings and hole-in-anchors with old buildings.

3.10.4 Position of console Bolt

- A place where the unit will be leveled and that can support the weight of the unit.
- A place where the unit can withstand its vibration.
- A place where service can be easily performed.



- Select and mark the position for fixing bolts.
- Drill the hole for set anchor on the face of ceiling.

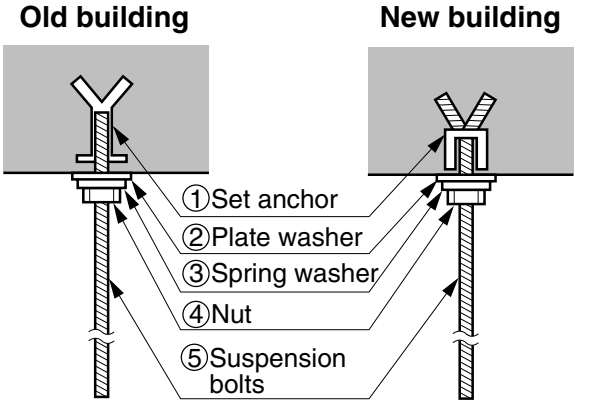


⚠CAUTION

- Tighten the nut and bolt to prevent the unit from falling.

Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.

- Mount the suspension bolts to the set anchor firmly.
- Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.



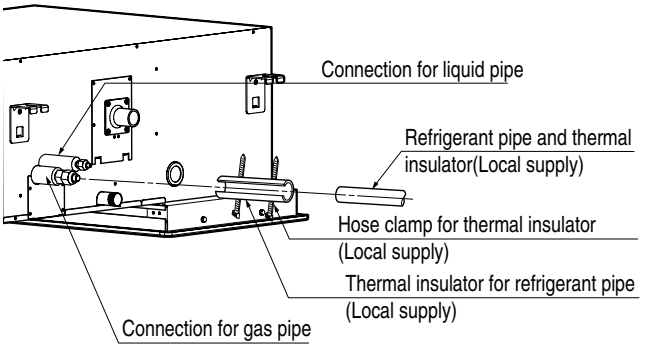
3.10.5 Connection pipes to the indoor unit

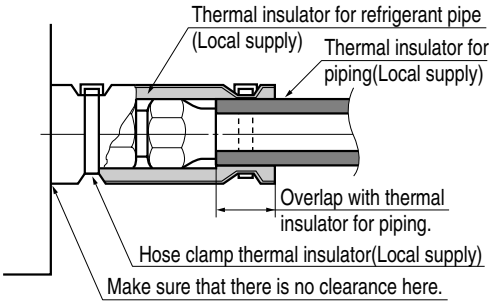
1) Refrigerant piping work

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- Precautions in high humidity circumstance:
- Refer to the insulation works.





CAUTION

- Make sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

3) Indoor unit drain piping

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Piping material: Polyvinyl chloride pipe inner diameter Ø 25mm and pipe fitting

CAUTION

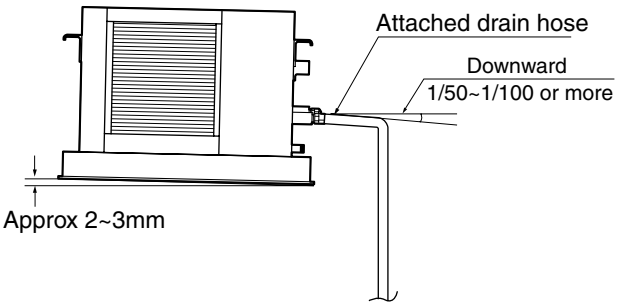
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- Without drain pump

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② 10mm or thicker formed thermal insulation shall always be provided for the drain pipe.



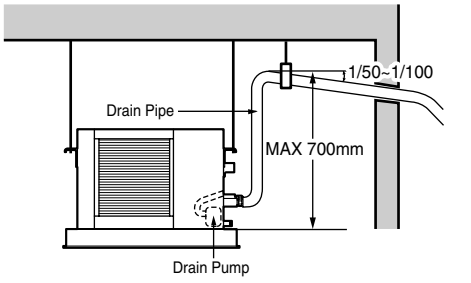
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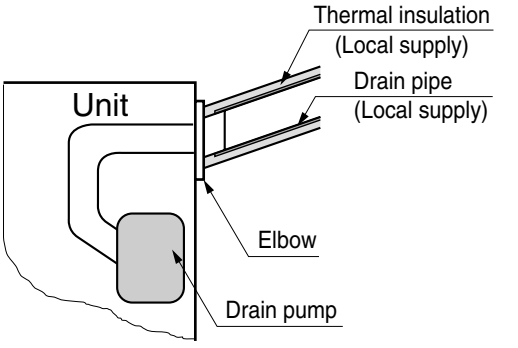
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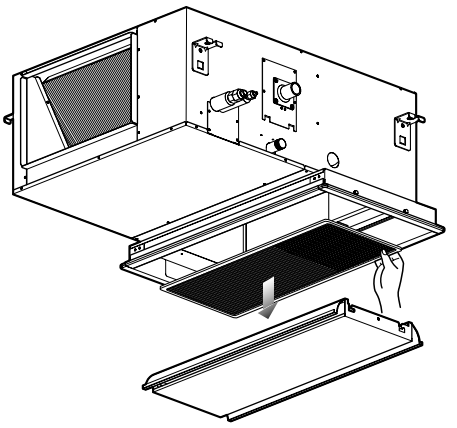
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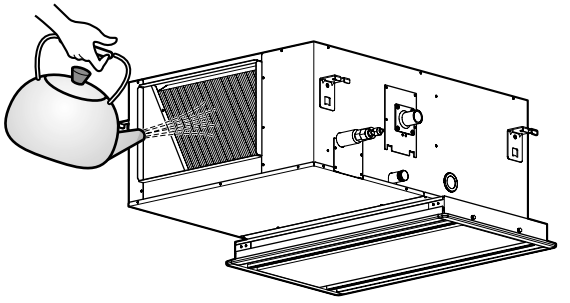
5) Checking the drainage

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② Check the drainage.

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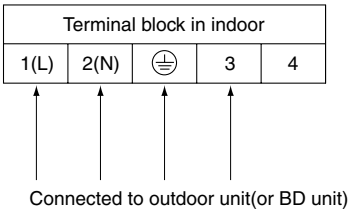
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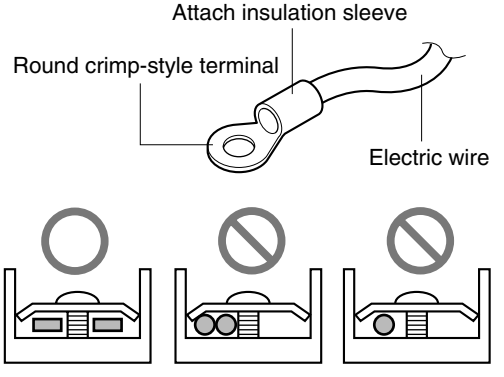
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Connect wires of the same gauge to both sides

2. Tightening torque for the terminal screws.

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.

3. Do not connect wires of different gauge to the same grounding terminal. Loose connection may deteriorate protection.

4. Outside of the unit, keep proper separation between transmission and power supply wiring. The equipment may malfunction if subjected to electrical (external) noise.

5. Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.

6. Use only specified wire and tightly connect wires to terminals. Be careful wires do not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other equipment such as popping open the electric parts box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in worse case, electric shock or fire.

4. Installation of outdoor unit
4.1 Safety precautions

Please strictly follow the instructions given in the Installation manual .Improper installation by ignoring the instructions can lead to damage to life and property.
Make sure to read the following safety instructions very carefully and throughly .

⚠WARNING	This symbol indicates the possibility of death or serious injury.
⚠CAUTION	This symbol indicates the possibility of injury or damage to properties.

■ The meanings of the symbols used in this manual are as shown below.

⃠	**Be sure not to do.**
❗	**Be sure to follow the instruction.**

⚠WARNING

Do not use a defective or underrated circuit breaker.
• There is risk of fire or electric shock.

Do not use a multi consent. Always use this appliance on a dedicated circuit and breaker.
• Otherwise it can cause electric shock or fire.

For electrical work, contact the dealer, seller, a qualified electrician, or an authorized service center. Do not disassemble or repair the product by yourself.
• There is risk of fire or electric shock.

Always ground the product as per the wiring diagram. Do not connect the ground wire to gas or water pipes lightening rod or telephone ground wire.
• There is risk of fire or electric shock.

Install the panel and the cover of control box securely.
• There is risk of fire or electric shock due to dust , water etc.

Use the correctly rated breaker or fuse.
• There is risk of fire or electric shock.

If the power cable or cord has scratches or skin peeled off or deterioted then immediately replace it.
• There is risk of fire or electric shock.

For installation, removal or reinstall, always contact the dealer or an authorized service center.
• There is risk of fire, electric shock, explosion, or injury.

Do not install the product on a defective foundation. Be sure that the installation area does not deteriorate with age.
• If the foundation collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.

Never install the outdoor unit at a place from where it can fall down.
• The falling outdoor unit can cause damage or injury or even death of a person and also damage or malfunctioning of the product itself.

When the product is soaked (flooded or submerged) in water, contact an authorized service center for repair before using it again.
• There is risk of fire or eletric shock.

In outdoor units the the step up capacitor supplies high voltage electricity to the electrical components. Be sure to discharge the capacitor completely before conducting the repair work.
• An charged capacitor can cause electrical shock.

Be sure to use only those parts which are listed in the svc parts list. Never attempt to modify the equipment.
• The use of inappropriate parts can cause an electrical shock, excessive heat generation or fire.

Indoor/outdoor wiring connections must be secured tightly and the cable should be routed properly so that there is no force pulling the cable at the connection terminals.
• Improper or loose connections can cause excessive heat heat generation or fire.

Safely dispose off the packing materials.
• Things like screws, nails, batteries, broken things etc after installation or svc can cause injury to small kids. Tear away and throw away the plastic packaging bags so that children will not play with them.

Make sure to check that the power cable plug is not dirty, loose or broken, then only insert the plug completely.
• Dirty,loose or broken power plug can cause electric shock or fire.

During svc be sure to check the refrigerant to the used.
• Incorrect refrigerant used can prevent the normal operation of the unit.

When installing the unit, use the installation kit provided with the product.
• Otherwise the unit may fall and cause severe injury .

Do not touch, operate, or repair the product with wet hands.
• There is risk of electric shock or fire.

Do not place a heater or other appliances near the power cable.
• There is risk of fire and electric shock.

Do not allow water to run into electric parts. Install the unit away from water sources
• There is risk of fire, failure of the product, or electric shock.

Do not store or use or even allow flammable gas or combustibles near the product.
• There is risk of fire or failure of product.

If strange sounds, smell or smoke comes from the product, immediately turn the breaker off or disconnect the power supply cable.
• There is risk of electric shock or fire.

Do not open the front grill of the product during operation. (Do not touch the electrostatic filter, if the unit is so equipped.)
• There is risk of physical injury, electric shock, or product failure.

Turn the main power off when cleaning or repairing the product.
• There is risk of electric shock.

When the product is not to be used for a long time, turn off the circuit breaker.
• There is risk of product damage or failure, or unintended operation.

Take care to ensure that nobody especially kids could step on or fall onto the outdoor unit.
• This could result in personal injury and product damage.

⚠CAUTION

Use two or more people to lift and transport the product.
• Avoid personal injury.

Do not install the product where it will be exposed to sea wind (salt spray) directly.
• It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.

Keep level even when installing the product.
• To avoid vibration or noise.

Do not install the product where the noise or hot air from the outdoor unit could damage or disturb the neighborhoods.
• It may cause a problem for your neighbors and hence dispute.

Always check for gas (refrigerant) leakage after installation or repair of product.
• Low refrigerant levels may cause failure of product.

Do not block the inlet or outlet of air flow.
• It may cause product failure.

Do not step on or put anyting on the product.
• There is risk of personal injury and failure of product.

Do not insert hands or other objects through the air inlet or outlet while the product is operating.
• There are sharp and moving parts that could cause personal injury.

Be cautious when unpacking and installing the product.
• Sharp edges could cause injury. Be especially careful of the case edges and the fins on the condenser and evaporator.

If the refrigerant gas leaks during the repair, do not touch the leaking refrigerant gas.
• The refrigernat gas can cause frostbite (cold burn).

Do not tilt the unit when removing or uninstalling it.
• The condensed water inside can cause spill and wet the furniture and the floor.

Do not mix air or gas other than the specified refrigerant used in the system.
• If air enters the refrigerant system, an excessively high pressure results, causing equipment damage or injury.

If the refrigerant gas leaks during the installation or operation ventilate the area immediately.
• Otherwise it can be harmfull for your health.

Do not expose your skin or kids or plants to the cool or hot air draft.
• This could harm to your health.

Use a firm stool or ladder when cleaning, maintaining or repairing the product at an height.
• Be careful and avoid personal injury.

Dismantling the unit , treatment of the refrigerant oil, oil and eventual parts should be done in accordance with local and national standards.

4.1.1 Points for explanation about operations

The items with WARNING and CAUTION marks in the operation manual are the items pertaining to possibillties for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask your customers to read the operation manual.

4.1.2 Note to the installer

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

4.1.3 Selecting installation site for outdoor units

Select an installation site where the following conditions are fulfilled and that meets with your customer's approval.

① Location strong enough to bear the weight of the unit.

② Location accessible and having enough clearance for inspection and service in the future.

③ Location allowing easy condensate drainage suitable gradient of the unit and the drain pipe.

④ Piping between the indoor and outdoor unit is possible within the allowable limits.

⑤ Location free from electrical noise.

⑥ Location allowing optimum air distribution without any blocking to air flow.

⑦ Location having no risk of flammable gas leakage.

⑧ Location free from mineral oil mist or an oil spray or vapor eg in kitchen .It could result in leakage .

⑨ Location free from corrosive gases such as sulphurous acid gas because it corrodes the copper pipes or soldered parts resulting in leakage .

⑩ Location free from any machinery emitting electromagnetic waves which may disturb the control system thus causing malfunction of the unit .

⑪ Location free from flammable gases , carbon fibre , or ignitable dust suspensions in the air or where volatile flames are handled like gasoline or thinner. Operating in such conditions may result in fire .

⑫ Install the indoor and outdoor units, power supply wiring and connecting wires at least 1m. away from televisions or radios in order to prevent image interference or noise. (Depending on the radio waves, a distance of 1m. may not be sufficient enough to eliminate the noise.)

⑬ Consider whether the place where the unit will be installed can support the full weight of the unit, and reinforce it with boards and beams, etc. if needed before proceeding with the installation. Also, reinforce the place to prevent vibration and noise before installing. (The installation pitch can be found on the paper pattern for installation (3), so refer to it when considering the necessity for reinforcing the location.)

⑭ Obey the local and national regulations and limits regarding airconditioner installation.

⑮ Location free from lavatory (NH3.etc.). NH3 gas will cause corrosion of outdoor unit metallic parts.

4.1.4 For the following items, take special care during construction and check after installation is finished

1. Items to be checked after completion of work

Items to be checked	If not properly done, what is likely to occur	Check
Are the indoor and outdoor unit fixed firmly?	The units may drop, vibrate or make noise.	
Is the gas leak test finished?	It may result in insufficient cooling.	
Is the unit fully insulated?	Condensate water may drip.	
Does drainage flow smoothly?	Condensate water may drip.	
Does the power supply voltage correspond to that shown on the name plate?	The unit may malfunction or the components burn out.	
Are wiring and piping correct?	The unit may malfunction or the components burn out.	
Is the unit safely grounded?	It may be dangerous at electric leakage.	
Is wiring size according to specifications?	The unit may malfunction or the components burn out.	
Is something blocking the air outlet or inlet of either the indoor or outdoor units?	It may result in insufficient cooling.	
Are refrigerant piping length and additional refrigerant charge noted down?	The refrigerant charge in the system is not clear.	

⚠CAUTION

- **Be very careful about product transportation.**
  Some products use PP bands for packaging. Do not use any PP bands for a means of transportation. It is dangerous.
- **Safely dispose of the packing materials.**
  Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
  Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

NOTE

- **Install the indoor and outdoor units, power supply wiring and connecting wires at least 1m. away from televisions or radios in order to prevent image interference or noise.**
  (Depending on the radio waves, a distance of 1m. may not be sufficient enough to eliminate the noise.)

4.1.5 Before installation

- **During product unpacking and removing it from the packing case, be sure to lift it without exerting any pressure on other parts, especially, horizontal flaps, the refrigerant piping, drain piping, and other resin parts.**
- Be sure to remove a cushion (corrugated paper) located between the heat exchanger and the right air filter.
- Be sure to check the type of R410A refrigerant to be used before installing the unit. (Using an incorrect refrigerant will prevent normal operation of the unit.)
- The accessories needed for installation must be retained in your custody until the installation work is completed. Do not discard them!
- Decide upon a line of transport.
- Leave the unit inside its packaging while moving, until reaching the installation site. Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the unit.
- For the installation of an outdoor unit, refer to the installation manual attached to the outdoor unit.
- When using the wireless remote controller, refer to the installation manual attached to the wireless remote controller.
- Entrust installation to the place of purchase or an authorized serviceman. Improper installation could lead to leaks and in worst cases, electric shock of fire.
- Use only parts provided with the unit or parts satisfying required specifications. Unspecified parts could cause the unit to fall out of place, or could lead to leaks and, in the worst cases, electric shock or fire.

4.2 Introduction

This installation guidance describes the procedures for outdoor unit installation, piping, wiring, and control between outdoor units, indoor units and controller.
Installation of the indoor units is not described in this part. Please refer to the installation guidance manual which supplied with indoor units for their respective installation.

4.2.1 Lifting method

① When carrying the unit suspended, pass the ropes under the unit and use the two fork lift slots each at the front and rear.

② Always lift the unit with ropes attached at four points so that impact is not applied to the unit.

③ Attach the ropes to the unit at an angle of 40° or less.

④ Use two ropes at least 7 m long.

⚠CAUTION

Be very careful when carrying the product.

- PP bands are used to pack some products. Do not use them as a mean for transportation because they are dangerous.
- Do not touch heat exchanger fins with your bare hands. Otherwise you may get a cut.
- Tear plastic packaging bag and scrap it so that children cannot play with it. Otherwise plastic packaging bag may suffocate children to death.
- When carrying in outdoor unit, be sure to support it at four points. Carrying in and lifting with 3-point support may make outdoor unit unstable, resulting in a fall of it.

4.2.2 Inspecting and handling the unit

At the time of delivery, the package should be checked for any damage from out side and inside, If damaged then it should be reported to the carrier claims agent immediately . When handling the unit refer to following cautions:

① Handle the unit with care. Keep the unit upright in order to avoid inside components damage.

② If a forklift is to be used it should pass the forklift arms through the openings at the bottom of the unit.

③ If a crane is used, lift the unit preferably with 2 ropes of at least 7m length.

④ When lifting the unit with a crane, always use protectors to prevent belt damage and pay attention to the position of the unit's center of gravity.

⑤ Bring the unit in original package to prevent damage during local transport.

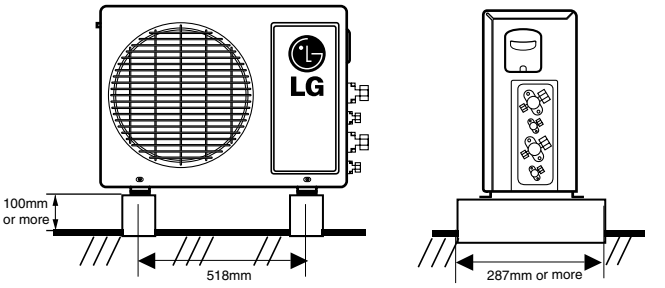
4.3 Foundation

MULTI F™

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A2UW166FA0 [FM17AH UL0]
A2UW166FA1 [FM17AH UL1]

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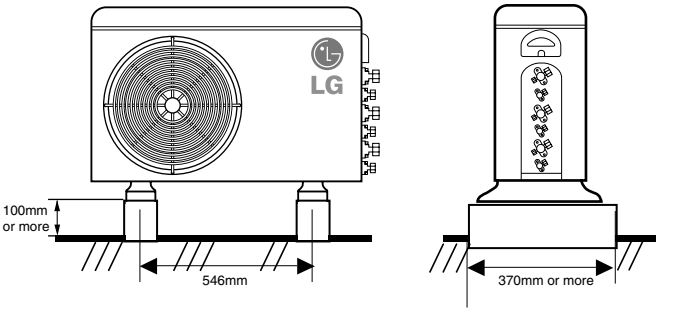
Bolt Factor	M10-J type
Concrete height	100mm or more
Bolt inserted depth	70mm or more



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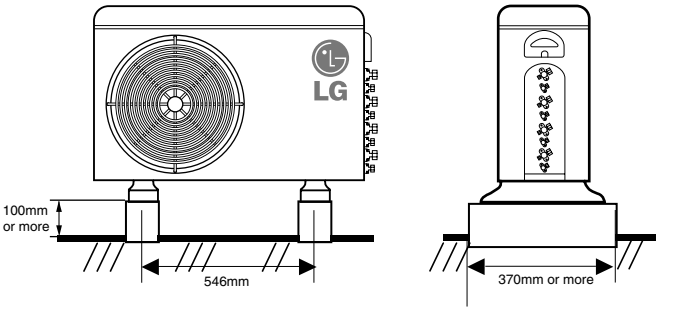
Bolt Factor	M10-J type
Concrete height	100mm or more
Bolt inserted depth	70mm or more



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A4UW276FA3 [FM27AH UE3]
A5UW306FA3 [FM30AH UE3]

<Basic intensity>

Bolt Factor	M10-J type
Concrete height	100mm or more
Bolt inserted depth	70mm or more

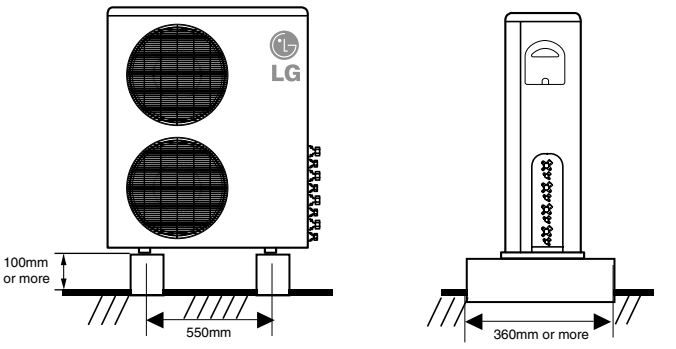


MULTI F™

A5UW406FA3 [FM38AH UH3]

<Basic intensity>

Bolt Factor	M10-J type
Concrete height	100mm or more
Bolt inserted depth	70mm or more

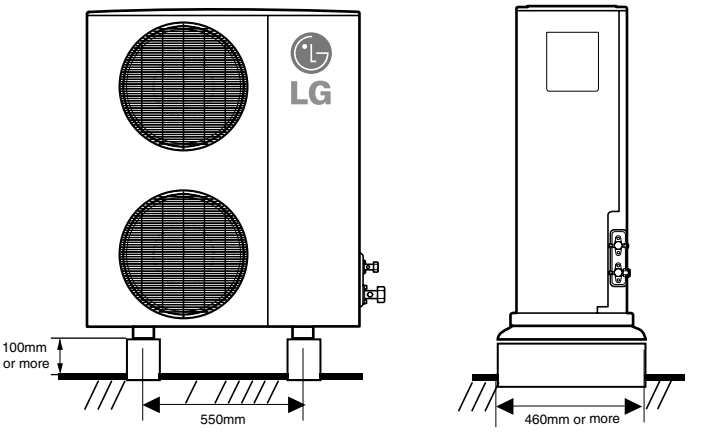


MULTI F DX™

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A6UW368FA0 [FM37AH UE0]

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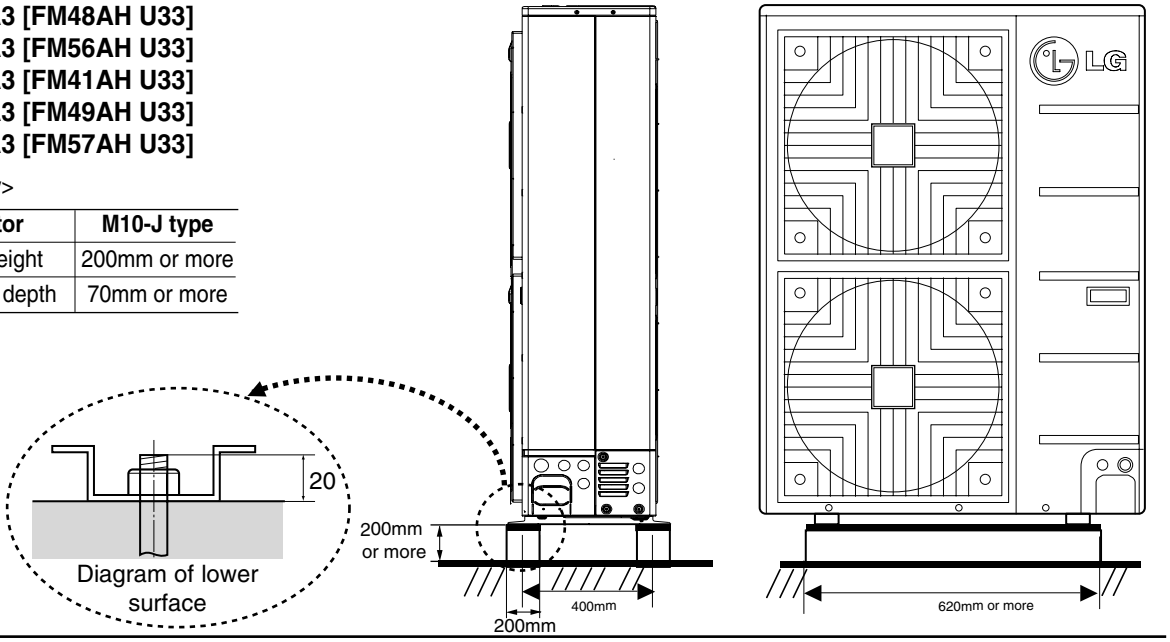
Bolt Factor	M10-J type
Concrete height	100mm or more
Bolt inserted depth	70mm or more



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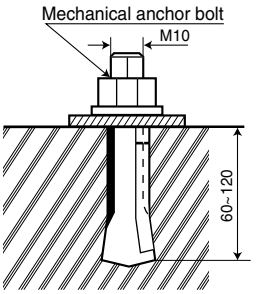
Bolt Factor	M10-J type
Concrete height	200mm or more
Bolt inserted depth	70mm or more



4.4 Settlement of the outdoor unit

- Anchor the outdoor unit with a bolt and nut tightly and horizontally on a concrete or rigid mount.
- When installing on the wall, roof or rooftop, anchor the mounting base securely with a nail or wire assuming the influence of wind and earthquake.
- In the case when the vibration of the unit is conveyed to the house, secure the unit with an anti-vibration rubber.

Bolt construction work



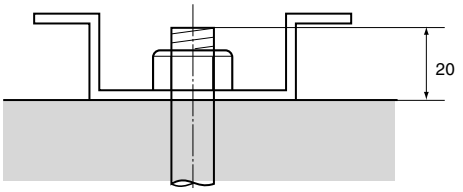
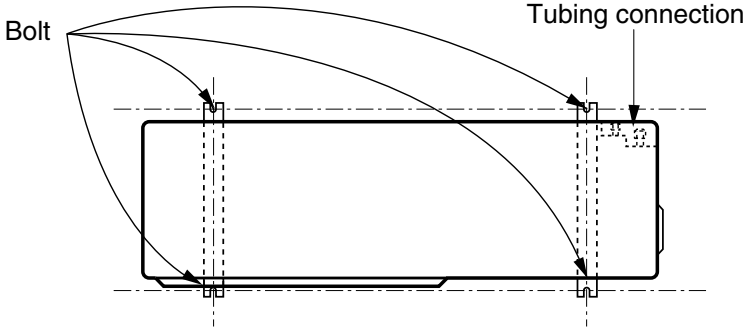


Diagram of lower surface

Settlement draw of outdoor units



⚠CAUTION

- The ingredients of foundation : Cement : Sand : Gravel for the concrete should 1 : 2 : 4 ratio
- The foundation surface should be finished with mortar.
- The edges of foundation should be rounded.
- A drain passage should be made around the foundation to thoroughly drain water away from the equipment installation area.
- If installing the outdoor units on the roof, the roof's strength have to be checked.
- Care should be taken for weather - proofing
- Blocking all gaps of outdoor unit, for passing piping and wiring, using sealing material (Field supply) (Animals and bugs might enter in the machine.)

4.5 Selection of the best location

This Multi F & Multi F DX unit is suitable for installation in a residential and commercial environmental situation.
If installed near a household appliance it can cause electromagnetic interference.
The units should be installed in a location that meets the following requirements:

① A robust and strong base which can support the weight of the unit and will not degrade easily

② If an awning is built over the unit to prevent direct sunlight or rain exposure, make sure that the discharge air of the condenser is not restricted.

③ It is recommended that the outdoor unit should be fenced to avoid animals or plants being exposed in the direct path of the discharged air .

④ Ensure proper spaces between the unit and its surrounding as given in the figure.

⑤ Ensure that the water shall not cause any damage by overflowing in case of water condensation

⑥ The noise, vibration and hot discharged air of the outdoor unit should not annoy the surrounding environment.

⑦ Ensure that there is no damage to the pipes in long run as it may cause the refrigerant leakage.

⑧ In case the outdoor may have heavy snow :
a. Make foundation at a suitable height.
b. Fit a suitable hood or a awning over the unit.

⑨ Rooftop Installations : If the outdoor unit is installed on a roof structure, be sure to level the unit. Ensure the roof structure and anchoring method are adequate for the unit location. Consult local codes regarding rooftop mounting.

⚠CAUTION

An inverter air conditioner can cause electronic noise generated from broadcasting frequency. Make sure to maintain proper distances between the products and electric wires keeping away from stereo, TV set or other appliances
1. Branch switch, over current breaker
2. Remote controller
3. Cool/heat selector
4. Radio or TV set
5. Wireless microphone

If frequency signal of AM broadcasting or TV Set is non stable, keep distances of 3m or more from product and use electric wire along with conduit tubes for power and transmission cable.

⚠CAUTION

1. Actually the R410A refrigerant is not toxic, nonflammable and odor free. Any how if the refrigerant is leaked then its concentration may exceed the allowable limit depending on the related space volume.
   Due to this, it is necessary to take measures for the volume size against leakage.
2. Do not install unit in following locations.
   - Locations where sulfurous acids or this kind of other corrosive gases might be help to corrode of copper piping and soldered joints, and can cause refrigerant leakage.
   - Locations such as kitchens or cuisine which contain a lot of hot oil or steam or where oil may splatter to the product. Can cause the unit to make leak or other serious problem.
   - Locations where electromagnetic waves is prevalent. The electromagnetic waves may cause the control system to malfunction or causing an abnormal operation.
   - Locations where inflammable gas might leak, where combined gasoline, methane or other volatile substances, carbon dust and other incendiary substances are found in the atmosphere. Leaked gas may accumulate around the unit, can cause an serious explosion.

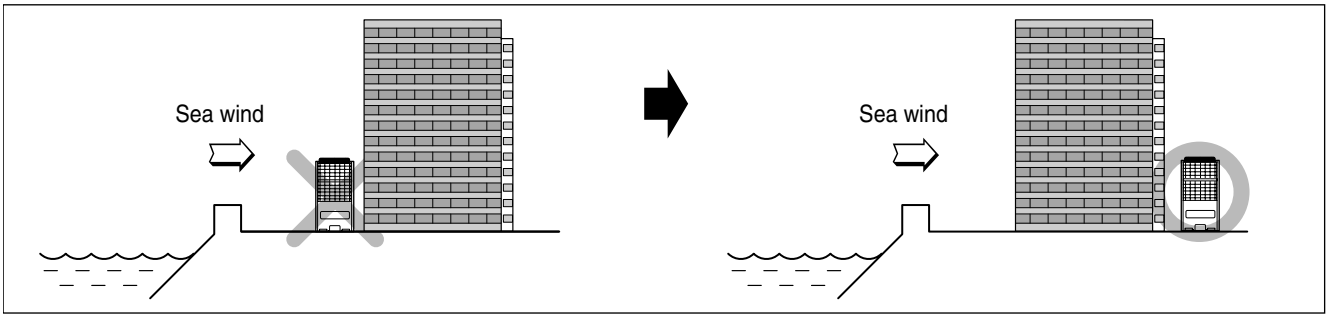
Installation guide at the seaside

⚠CAUTION

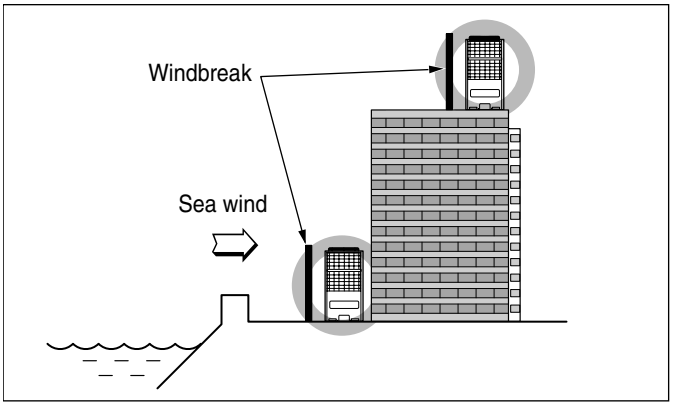
1. Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.
2. Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient performance.
3. If outdoor unit is installed close to the seaside, it should avoid direct exposure to the sea wind. Otherwise it needs additional anticorrosion treatment on the heat exchanger.

Selecting the location(Outdoor Unit)

1) If the outdoor unit is to be installed close to the seaside, direct exposure to the sea wind should be avoided. Install the outdoor unit on the opposite side of the sea wind direction.



2) In case, to install the outdoor unit on the seaside, set up a windbreak not to be exposed to the sea wind.



- It should be strong enough like concrete to prevent the sea wind from the sea.
- The height and width should be more than 150% of the outdoor unit.
- It should be keep more than 70 cm of space between outdoor unit and the windbreak for easy air flow.

3) Select a well-drained place.

1. If you can't meet above guide line in the seaside installation, please contact LG Electronics for the additional anticorrosion treatment.
2. Periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using water

Do not install the product where it will be exposed to sea wind (salt spray) directly.

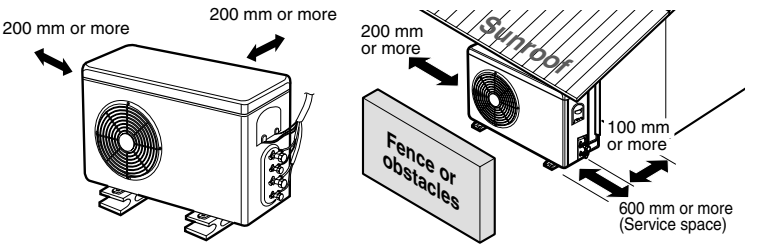
• It mayy cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.

4.6 Clearance space

4.6.1 Clearance around outdoor unit

MULTI F™

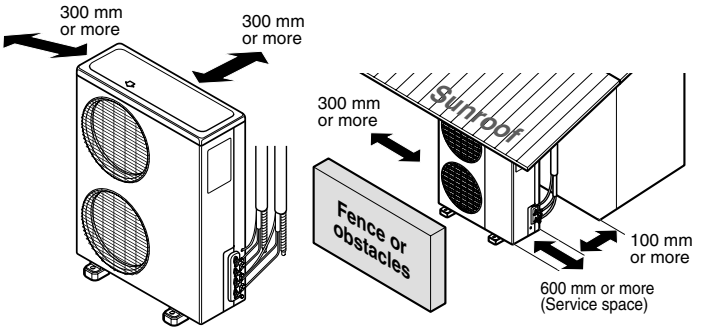
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A2UW166FA1 [FM17AH UL1]
A3UW186FA0 [FM19AH UE0]
A3UW216FA3 [FM21AH UE3]
A4UW246FA3 [FM25AH UE3]
A4UW276FA3 [FM27AH UE3]
A5UW306FA3 [FM30AH UE3]



- Ensure that the space around the back is more than 200 mm on the opposite to the PCB side and secure 600 mm space near the compressor and PCB side of the aircondition for service.

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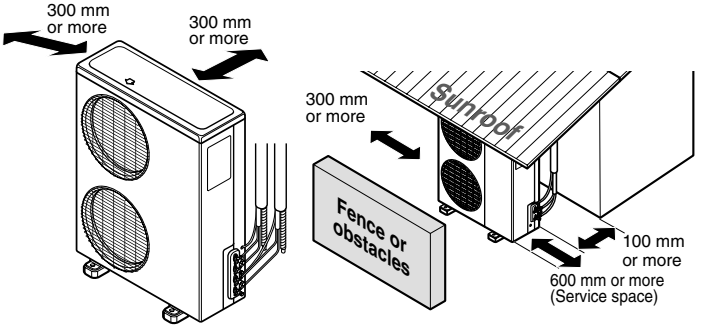
- Ensure that the space around the back is more than 300 mm on the opposite side to the PCB side and secure 600 mm space near the compressor and PCB side of the air conditioner for service.



MULTI F DX™

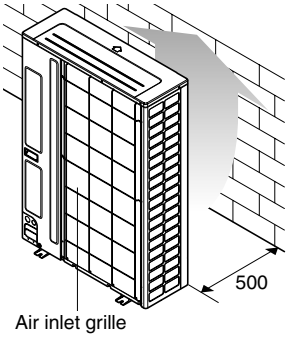
A7UW406FA3 [FM40AH UH3]
A6UW368FA0 [FM37AH UE0]

- Ensure that the space around the back is more than 300 mm on the opposite to the PCB side and secure 600 mm space near the compressor and PCB side of the aircondition for service.

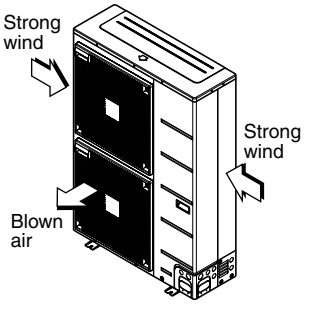


A8UW486FA3 [FM48AH U33]
A9UW566FA3 [FM56AH U33]
A7UW428FA3 [FM41AH U33]
A8UW488FA3 [FM49AH U33]
A9UW548FA3 [FM57AH U33]

- Install the unit so that its discharge port faces to the wall of the building.
  Keep a distance 500mm or more between the unit and the wall surface.
- Supposing the wind direction during the operation season of the air conditioner, install the unit so that the discharge port is set at right angle to the wind direction.



Turn the air outlet side toward the building's wall, fence or windbreak screen.



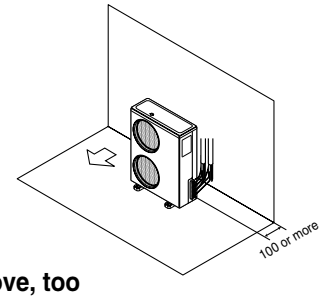
Set the otlet side at a rignt angle to the direction of the wind.

Clearance of side discharge unit (Unit:mm)

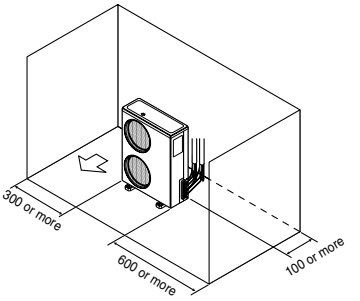
1) Where there is an obstacle on the air intake side:

■ **No obstacle above**

• Obstacle on the suction side only

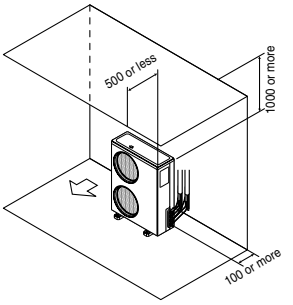


• Obstacle on the both sides

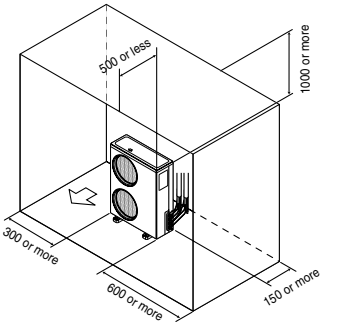


■ **Obstacle above, too**

• Obstacle on the air intake side, too

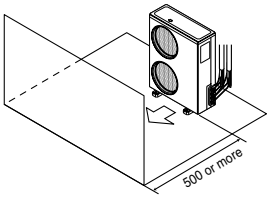


• Obstacle on the air intake side, and both sides

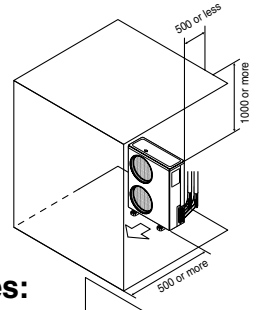


2) Where there is an obstacle on the discharge side:

■ **No obstacle above**



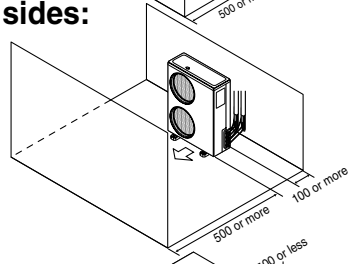
■ Obstacle above, too



3) Where there are obstacles on both suction and discharge sides:

■ **Where the obstacles on the discharge side is higher than the unit:**

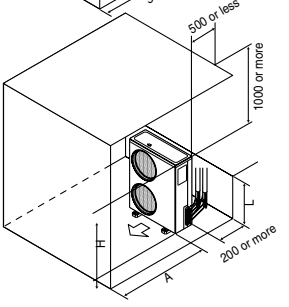
• No obstacle above



• Obstacle above, too

The relations between H, A and L are as follows:

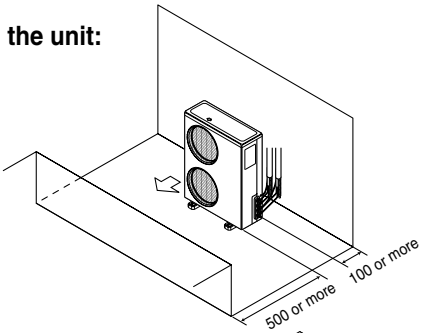
	L	A
L ≤ H	0 < L ≤ 1/2H	750
	1/2H < L	1000
H < L	Set the stand as: L ≤ H	



Close the bottom of the installation frame to prevent the discharged air from being bypassed.

■ **Where the obstacles on the discharge side is lower than the unit:**

• No obstacle above

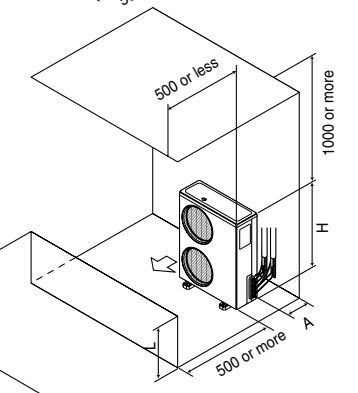


• Obstacle above, too

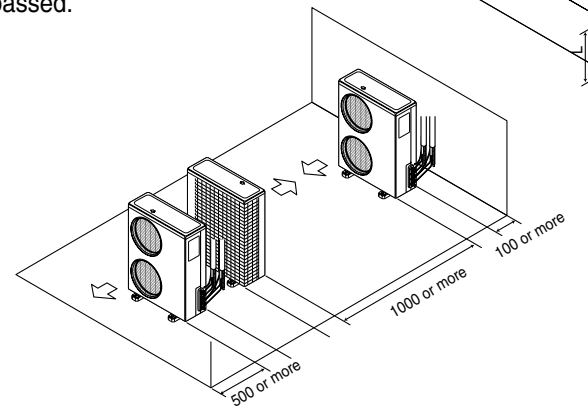
The relations between H, A and L are as follows:

	L	A
L ≤ H	0 < L ≤ 1/2H	100
	1/2H < L	200
H < L	Set the stand as: L ≤ H	

Close the bottom of the installation frame to prevent the discharged air from being bypassed.



4) Series installation



4.6.2 Air guide work

In case of out door unit is located outdoor cabin of apartment or flats, then the efficiency can drop and system pressure increases thus finally damaging the compressor or other components in the system by heat short circuit.

[Example]



<Without air guide>
Safety dorice activation

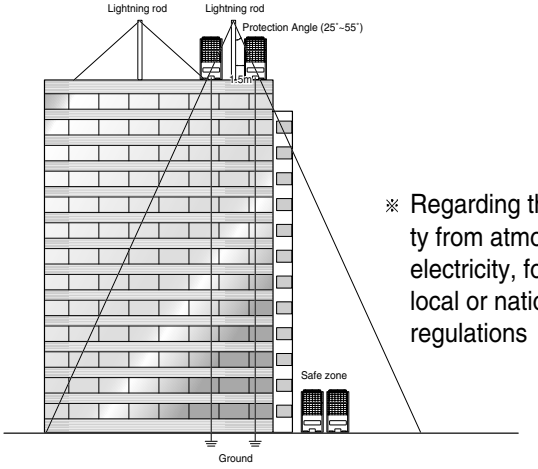
<With air guide>
Normal operation

4.6.3 Lightning safety zone

1) To protect outdoor unit from lightning, it should be placed within lightning safety zone.

Safety zone

Building Height [m]	20	30	45	60
Protection Angle [˚]	55	45	35	25



2) Power cable and communication cable should be 1.5m away from lightning rod.

3) High resistance grounded system should be performed against induced lightning or indirect stroke.

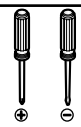
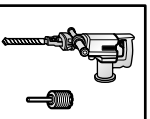
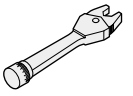
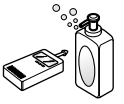
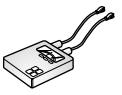
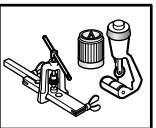
4) If the building has no lightning protection, outdoor may be damage from lightning. This should be informed to customer or building owner in advance.

※ Regarding the safety from atmosphere electricity, follow the local or national regulations

4.7 Outdoor unit piping

4.7.1 Outdoor unit piping

Required tools

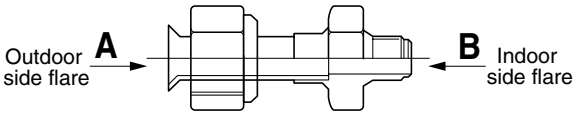
			
Screw Driver	Drill M/C f 3.5/F14.5	Measuring Tape, Blade	Core drill
			
Spanner	Torque Wrench	Soap Foam	Thermometer
			
Hexagonal wrench(4mm, 5mm)	Hook Meter	Multi Tester	Flare Set

4.7.2 Connecting piping

1) Connecting socket must be used when connecing the piping to the indoor and outdoor units

■ **Multi F connecting socket**

Indoor units	Gas		Liquid	
	A	B	A	B
18k, 24k	Ø9.52→Ø12.7		Not necessary	

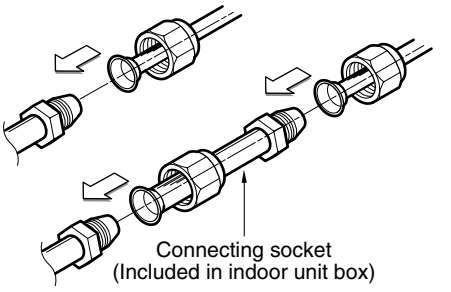


※ Connecting socket will be provided with indoor unit in same box.

■ **Multi FDX connecting piping size**

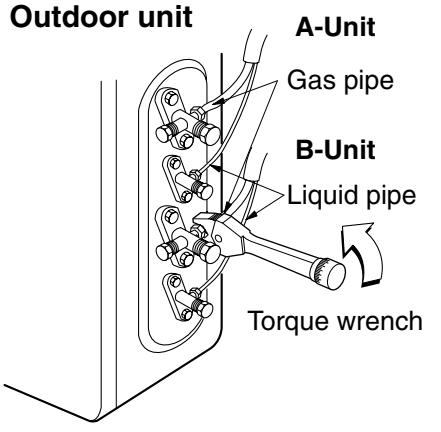
Indoor units	Gas side		Liquid side	
	A	B	A	B
18k, 24k	Ø9.52(3/8)→Ø12.7(1/2)		Not necessary	

2) Align the center of the piping and sufficiently tighten the flare nut by hand.



3) Finally, tighten the flare nut with torque wrench until the wrench clicks.

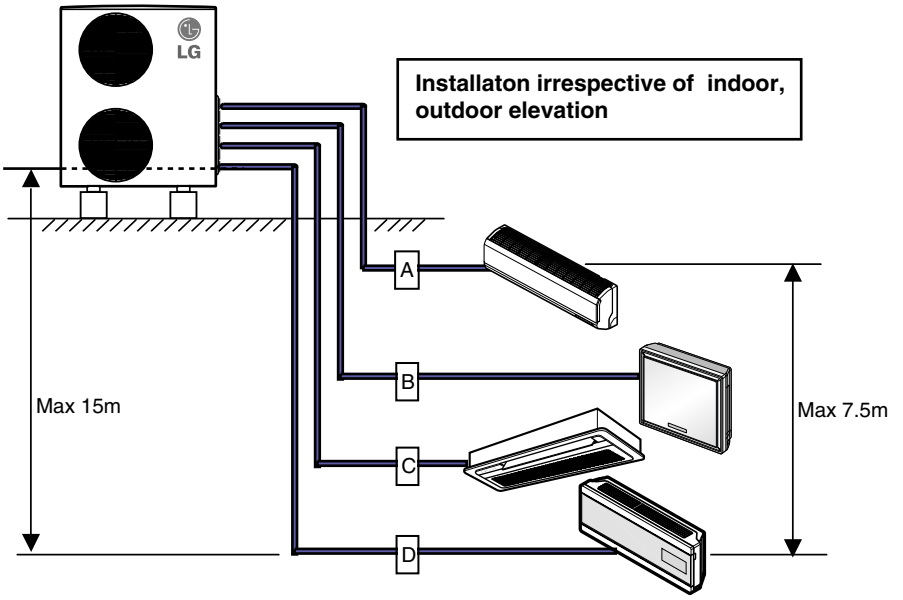
• When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.



4.8 Outdoor unit installation requirements

4.8.1 Piping elevation and length

MULTI F



Model [Outdoor unit]	Standard length	Max piping length each indoor unit					Max total piping length
	A,B,C,D(m)	A(m)	B(m)	C(m)	D(m)	E(m)	
A2UW146FA3 [FM15AH UL3] A2UW166FA0 [FM17AH UL0] A2UW166FA1 [FM17AH UL1]	7.5	20	20				30m(A+B)
A3UW186FA0 [FM19AH UE0] A3UW216FA3 [FM21AH UE3]	7.5	25	25	25			50m(A+B+C)
A4UW246FA3 [FM25AH UE3] A4UW276FA3 [FM27AH UE3]	7.5	25	25	25	25		70m(A+B+C+D)
A5UW306FA3 [FM30AH UE3]	7.5	25	25	25	25	25	75m(A+B+C+D+E)
A5UW406FA3 [FM38AH UH3]	7.5	25	25	25	25	25	85m(A+B+C+D+E)

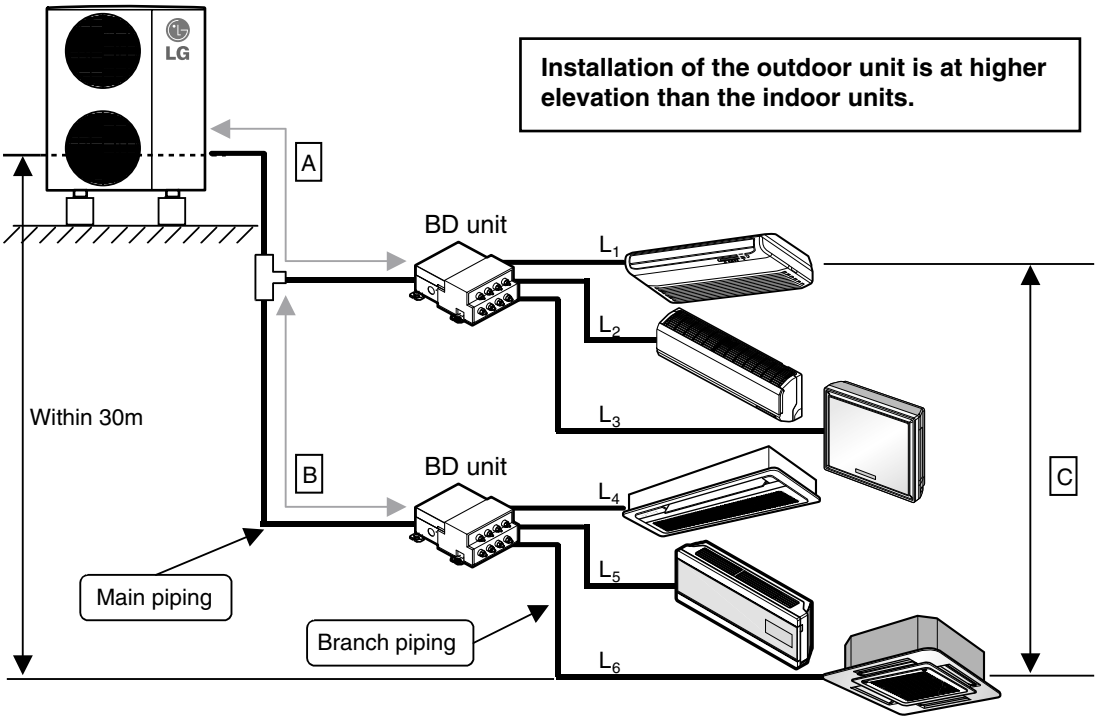
• The minimum piping length should be 5m.

Refrigerant charge

Model	Standard length (m)	Max. piping for one room(m)	Max. total piping length(m)	Additional charge(g/m)
A2UW146FA3[FM15AH UL3]	7.5	20	30	20
A2UW166FA0[FM17AH UL0]	7.5	20	30	20
A2UW166FA1[FM17AH UL1]	7.5	20	30	20
A3UW186FA0[FM19AH UE0]	7.5	25	50	20
A3UW216FA3[FM21AH UE3]	7.5	25	50	20
A4UW246FA3[FM25AH UE3]	7.5	25	70	20
A4UW276FA3[FM27AH UE3]	7.5	25	70	20
A5UW306FA3[FM30AH UE3]	7.5	25	75	20
A5UW406FA3[FM38AH UH3]	7.5	25	85	20

MULTI F DX

A6UW368FA0 [FM37AH UE0]
A7UW406FA3 [FM40AH UH3]

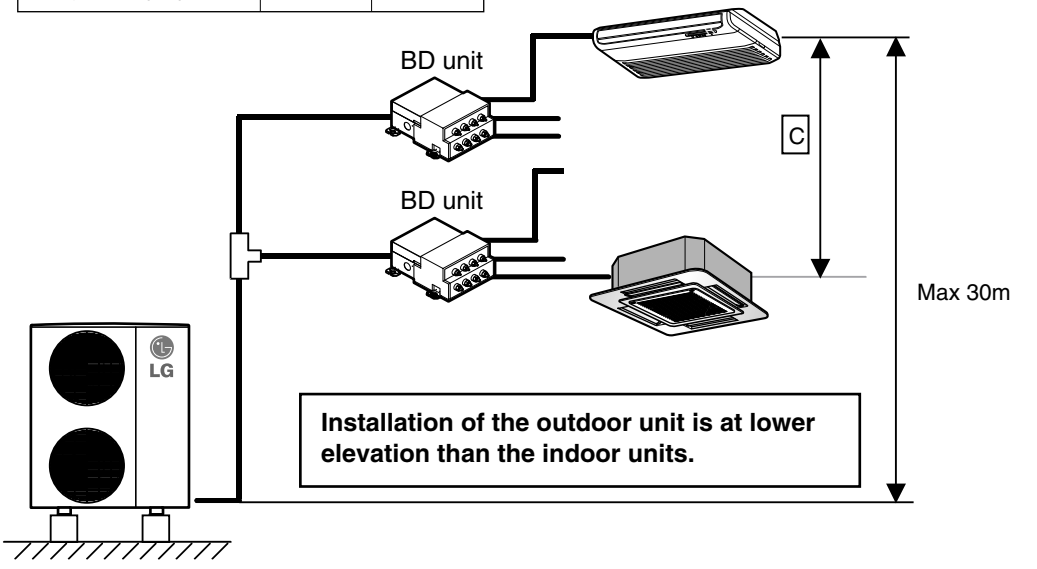


[Unit: m]

Piping	A7UW406FA3 [FM40AH UH3]	A6UW368FA0 [FM37AH UE0]
Total main piping length (A+B)	50	40
Total branch piping length (L_1+ L_2+ L_3+ L_4+ L_5+ L_6)	50	60
Each branch piping length (L_1 , L_2 , L_3 , L_4 , L_5 , L_6)	15	20
Total system piping length	100	100

[Unit: m]

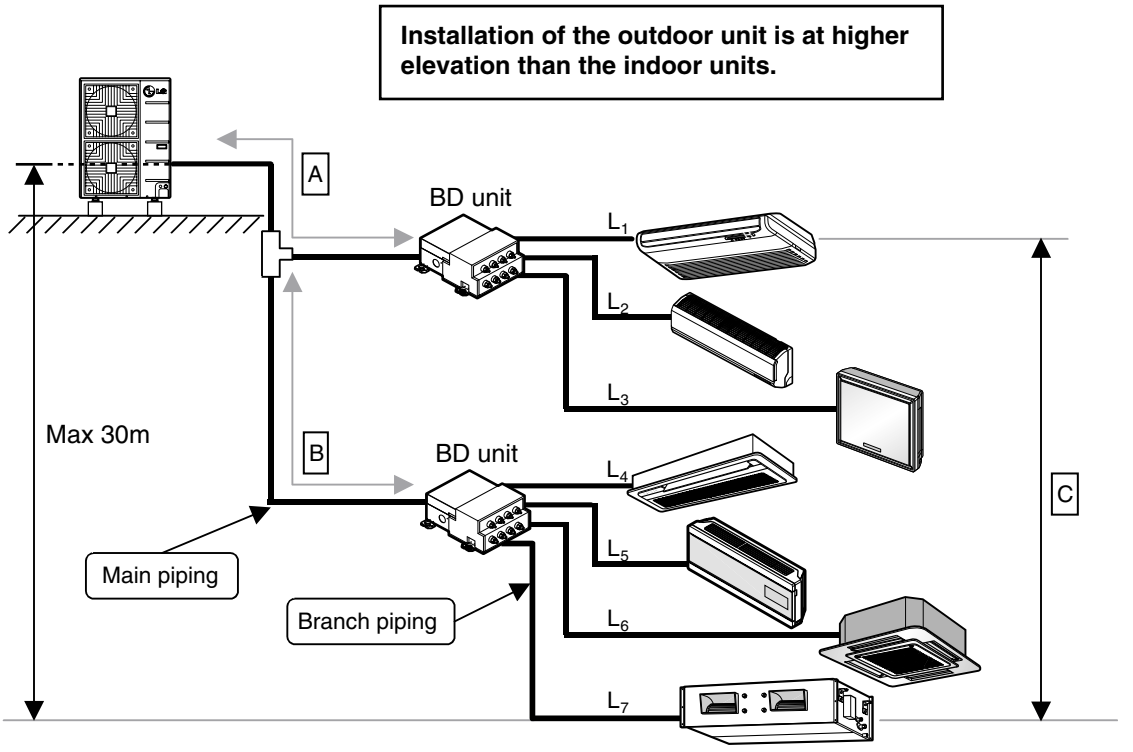
Maximum elevation difference	A7UW406FA3 [FM40AH UH3]	A6UW368FA0 [FM37AH UE0]
Indoor unit ↔ Outdoor unit	30	30
Indoor unit ↔ Indoor unit (C)	15	15
Indoor unit ↔ BD unit	15	15
BD unit ↔ BD unit	15	15



NOTE

•The minimum piping length should be 5m.
• A6UW- Models can be connected to Max. 2 BD Units.

A7UW428FA3 [FM41AH U33]

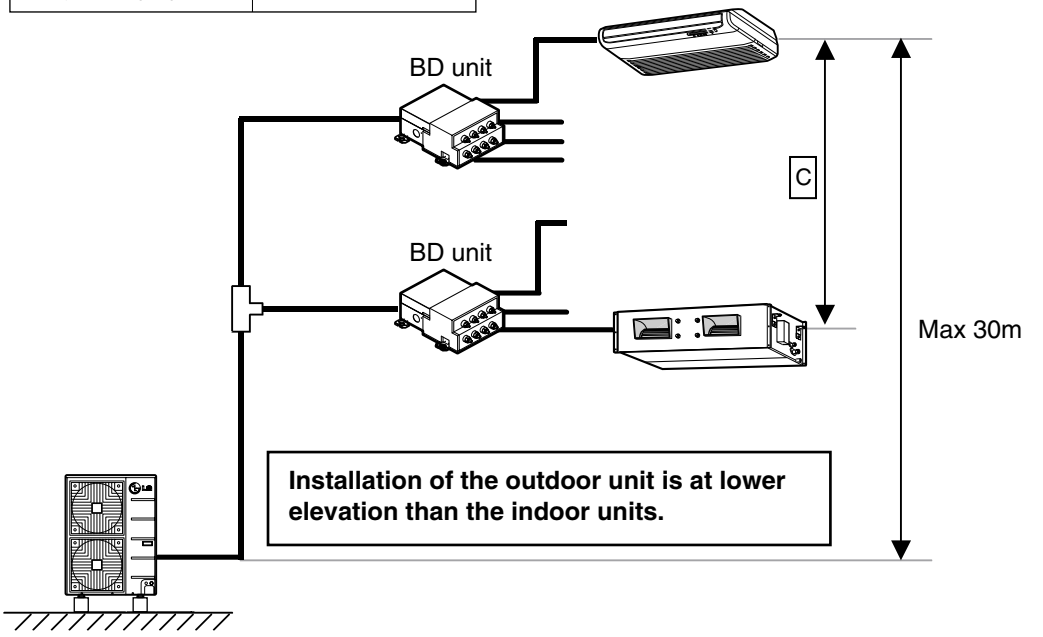


[Unit: m]

Piping	A7UW428FA3 [FM41AH U33]
Total main piping length (A+B)	55
Total branch piping length ($L_1+L_2+L_3+L_4+L_5+L_6+L_7$)	70
Each branch piping length ($L_1, L_2, L_3, L_4, L_5, L_6, L_7$)	15
Total system piping length	125

[Unit: m]

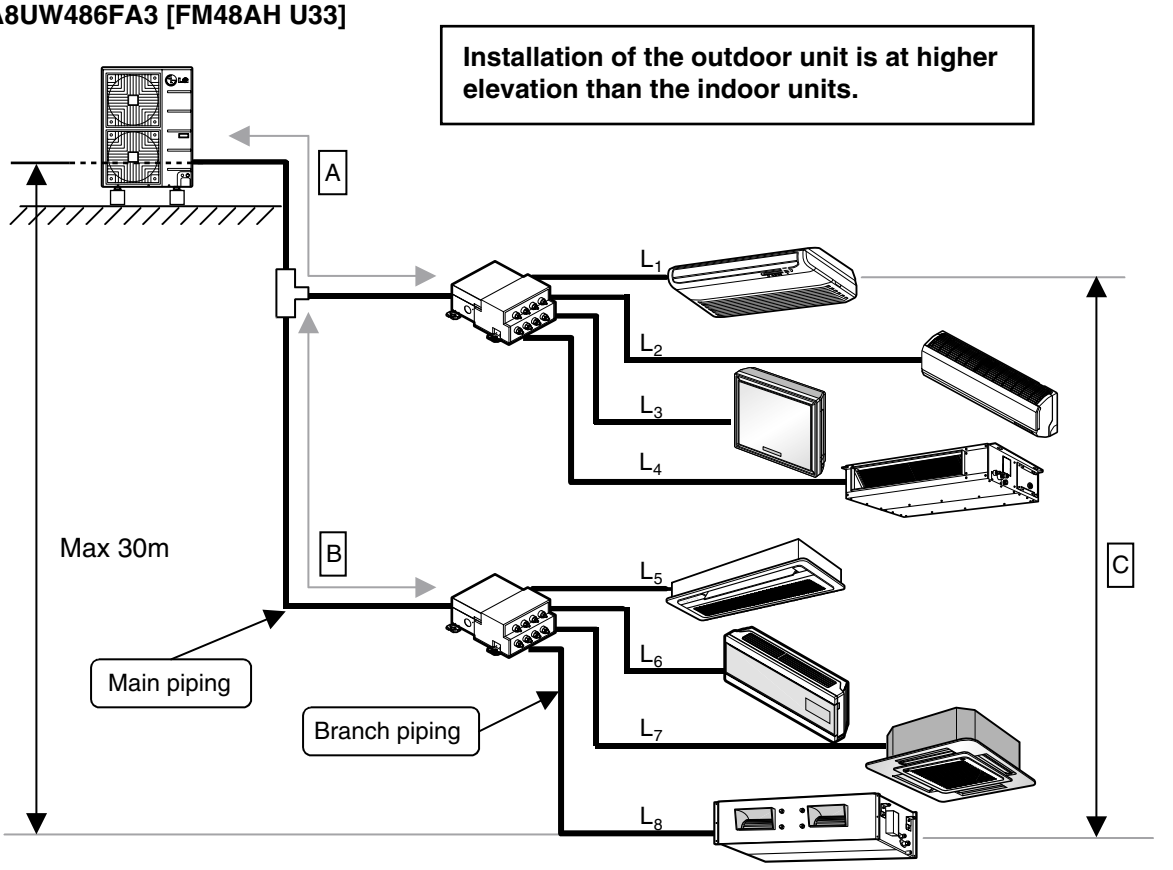
Maximum elevation difference	A7UW428FA3 [FM41AH U33]
Indoor unit ↔ Outdoor unit	30
Indoor unit ↔ Indoor unit (C)	15
Indoor unit ↔ BD unit	15
BD unit ↔ BD unit	15



NOTE

•The minimum piping length should be 5m.
• A7UW- Models can be connected to Max. 2 BD Units.

A8UW488FA3 [FM49AH U33]
A8UW486FA3 [FM48AH U33]

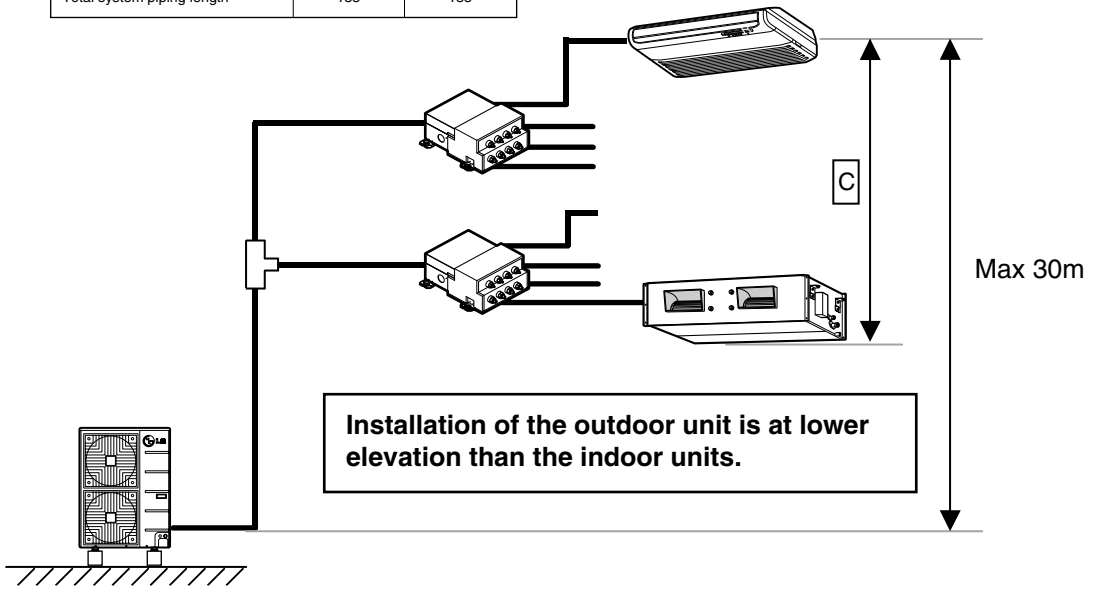


[Unit: m]

Piping	A8UW486FA3 [FM48AH U33]	A8UW488FA3 [FM49AH U33]
Total main piping length (A+B)	55	55
Total branch piping length ($L_1+L_2+L_3+L_4+L_5+L_6+L_7+L_8$)	80	80
Each branch piping length (L_1, L_2, L_3, L_4, L_5, L_6, L_7, L_8)	15	15
Total system piping length	135	135

[Unit: m]

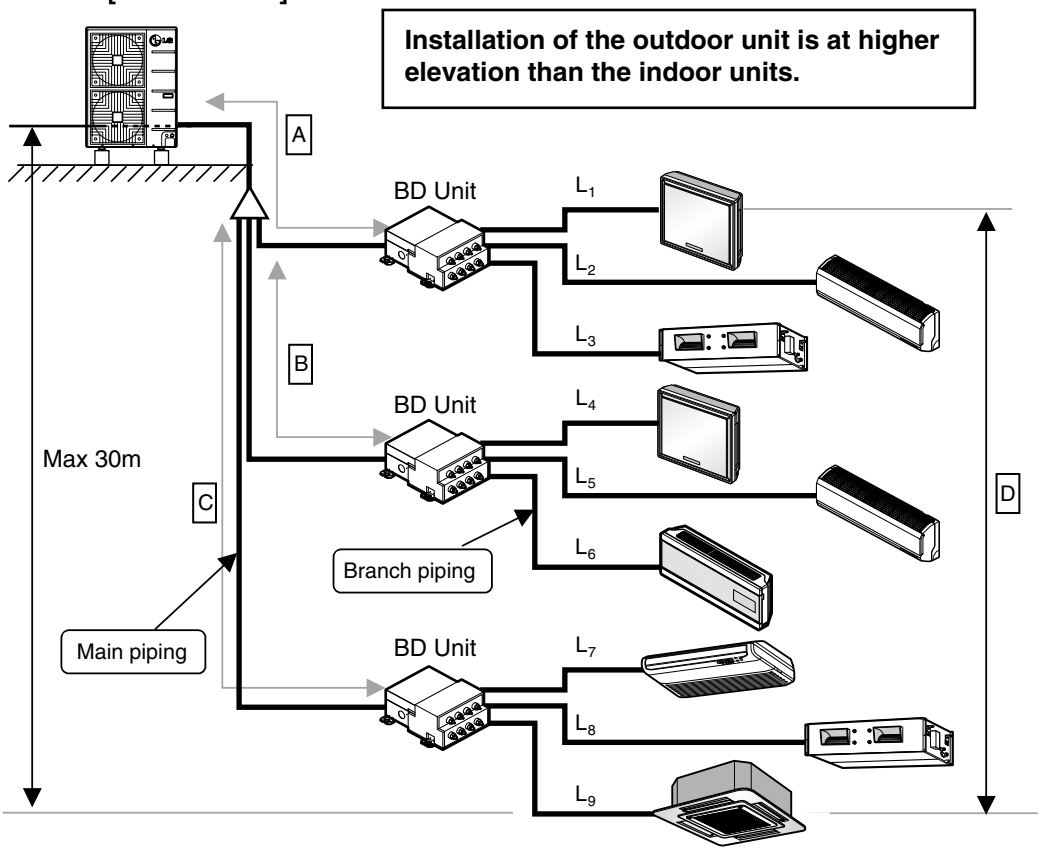
Maximum elevation difference	A8UW486FA3 [FM48AH U33]	A8UW488FA3 [FM49AH U33]
Indoor unit ↔ Outdoor unit	30	30
Indoor unit ↔ Indoor unit C	15	15
Indoor unit ↔ BD unit	15	15
BD unit ↔ BD unit	15	15



NOTE

•The minimum piping length should be 5m.
• A8UW- Models can be connected to Max. 2 BD Units.

A9UW566FA3 [FM56AH U33]
A9UW548FA3 [FM57AH U33]

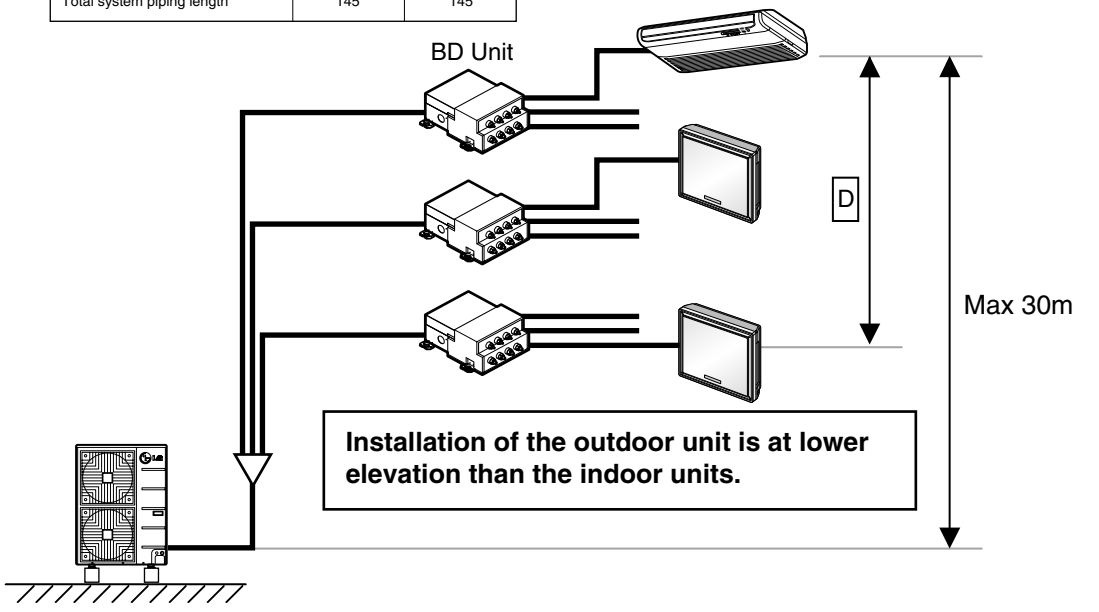


[Unit: m]

Piping	A9UW566FA3 [FM56AH U33]	A9UW548FA3 [FM57AH U33]
Total main piping length (A+B+C)	55	55
Total branch piping length ($L_1+L_2+L_3+L_4+L_5+L_6+L_7+L_8+L_9$)	90	90
Each branch piping length ($L_1, L_2, L_3, L_4, L_5, L_6, L_7, L_8, L_9$)	15	15
Total system piping length	145	145

[Unit: m]

Maximum elevation difference	A9UW566FA3 [FM56AH U33]	A9UW548FA3 [FM57AH U33]
Indoor unit ↔ Outdoor unit	30	30
Indoor unit ↔ Indoor unit D	15	15
Indoor unit ↔ BD unit	15	15
BD unit ↔ BD unit	15	15



NOTE

- The minimum piping length should be 5m.
- A9UW- Models can be connected to Max. 3 BD Units.

4.8.2 Refrigerant charge

The calculation of the additional charge should be taken into account for the additional length of pipe.

■ MULTI F (1Ø)

Additional charge (g) = ((A Room Installation Length – Standard Length) x 20g/m
+ (B Room Installation Length – Standard Length) x 20g/m +..)
- CF(Correction Factor) x 150

❉ CF = Max. number of connectable indoor unit – Total number of connected indoor unit

■ MULTI F DX (1Ø , 3Ø)

Additional charge (g) = ((Total Main piping Length - Main Standard Length) x 50g/m
+ (A Room Branch Length – Standard Length) x 20g/m
+ (B Room Branch Length – Standard Length) x 20g/m
+ (C Room Branch Length – Standard Length) x 20g/m +..)
- CF(Correction Factor) x 100

❉ CF = Max. number of connectable indoor unit – Total number of connected indoor unit

Model	Main piping length		Branch piping length	
	Standard length(m)	Additional refrigerant(g/m)	Standard length(m)	Additional refrigerant(g/m)
A7UW406FA3[FM40AH UH3]	5	50	35	20
A8UW486FA3[FM48AH U33]	5	50	40	20
A9UW566FA3[FM56AH U33]	5	50	45	20

Model	Main piping length		Branch piping length	
	Standard length(m)	Additional refrigerant(g/m)	Standard length(m)	Additional refrigerant(g/m)
A6UW368FA0 [FM37AH UE0]	5	40	30	25
A7UW428FA3 [FM41AH U33]	5	50	35	20
A8UW488FA3 [FM49AH U33]	5	50	40	20
A9UW548FA3 [FM57AH U33]	5	50	45	20

NOTE

If the total additional charge value after calculation comes out to be negative, then do not consider additional charge.

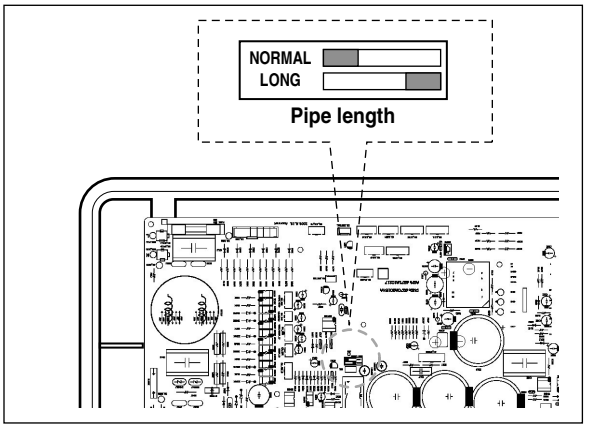
Long pipe setting

1) Open the top cover of outdoor unit.
2) Select one of the two selectable modes as follows.
   • If total additional charge value after calculation comes out to be positive, move the slide switch to "LONG" position.
3) Close the top cover and check whether the product works normally.

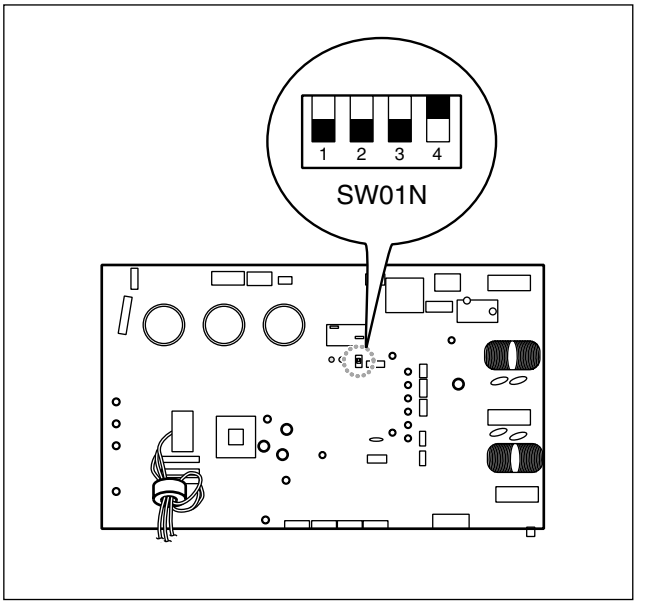
⚠CAUTION

Do not open the top cover or set the pipe length when operating the product.

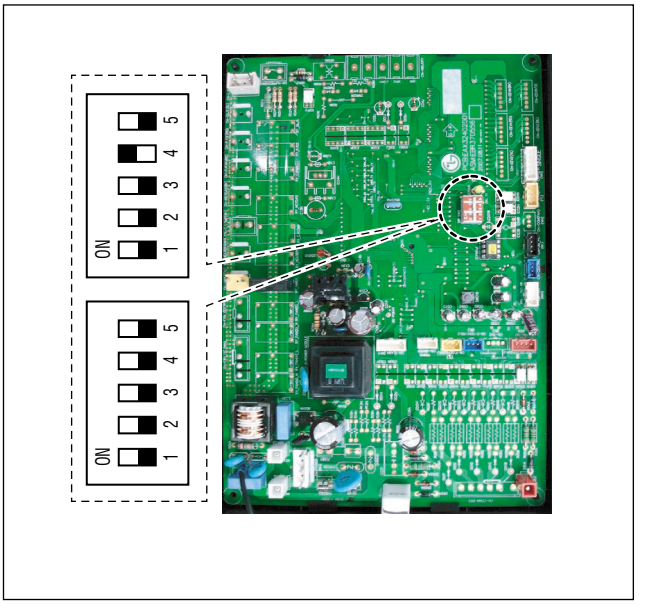
A2UW146FA3[FM15AH], A3UW186FA0[FM19AH], A3UW216FA3 [FM21AH], A4UW246FA3 [FM25AH]



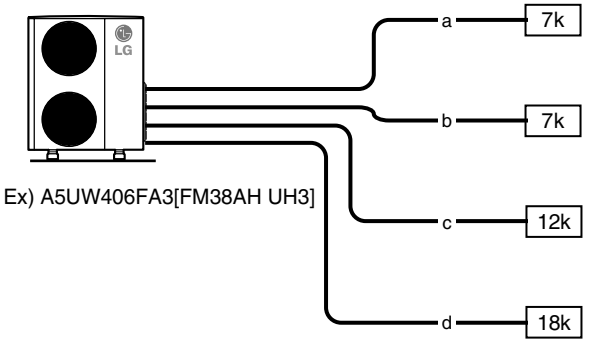
A4UW276FA3[FM24AH]
A5UW306FA3[FM30AH]
A5UW406FA3[FM38AH]
A7UW406FA3[FM40AH]



A8UW486FA3[FM48AH]
A9UW566FA3[FM56AH]
A7UW428FA3[FM41AH]
A8UW488FA3[FM49AH]
A9UW548FA3[FM57AH]



Additional refrigerant charge calculation example - 1



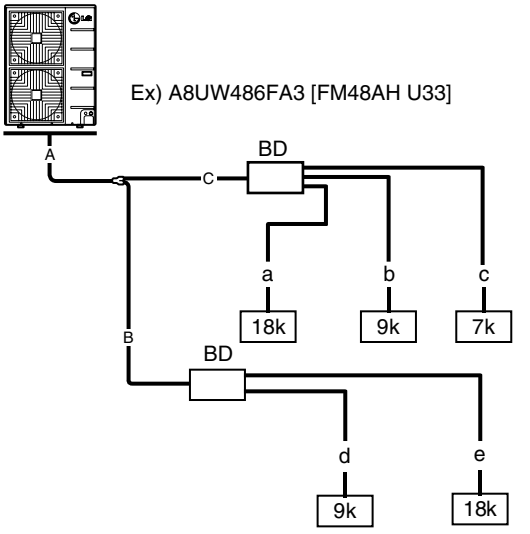
Ex) A5UW406FA3[FM38AH UH3]

- Each branch pipe
  a = 5m
  b = 10m
  c = 15m
  d = 25m

❖ Additional Charge
= (5-7.5) x 20
+ (10-7.5) x 20
+ (15-7.5) x 20
+ (25-7.5) x 20
– (5-4) x 150

= 0+50+150+350-150 = 400g

Additional refrigerant charge calculation example - 2



Ex) A8UW486FA3 [FM48AH U33]

- Total main pipe(A+B+C) = 20m
- Each branch pipe
  a = 15m
  b = 5m
  c = 5m
  d = 3m
  e = 7m

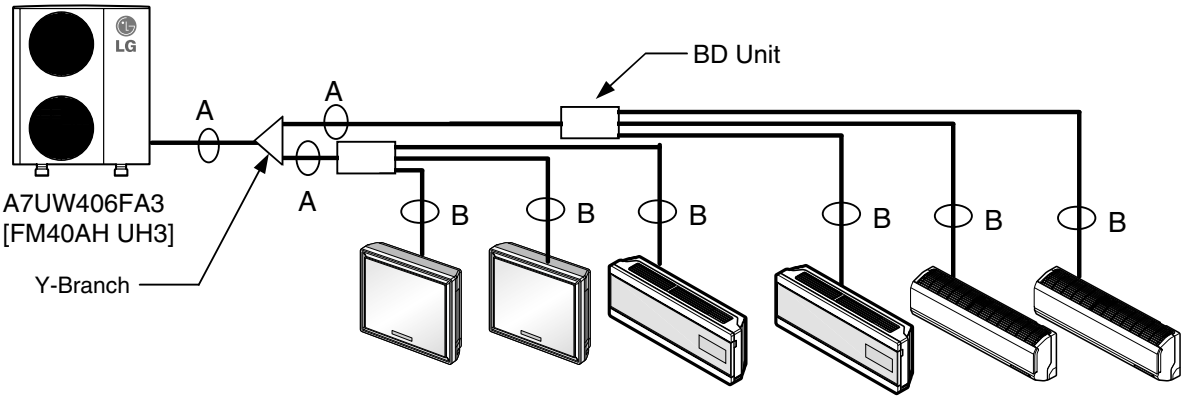
❖ Additional Charge
= (20-5) x 50
+ (15-5) x 20
+ (5-5) x 20
+ (5-5) x 20
+ (3-5) x 20
+ (7-5) x 20
– (8-5) x 100

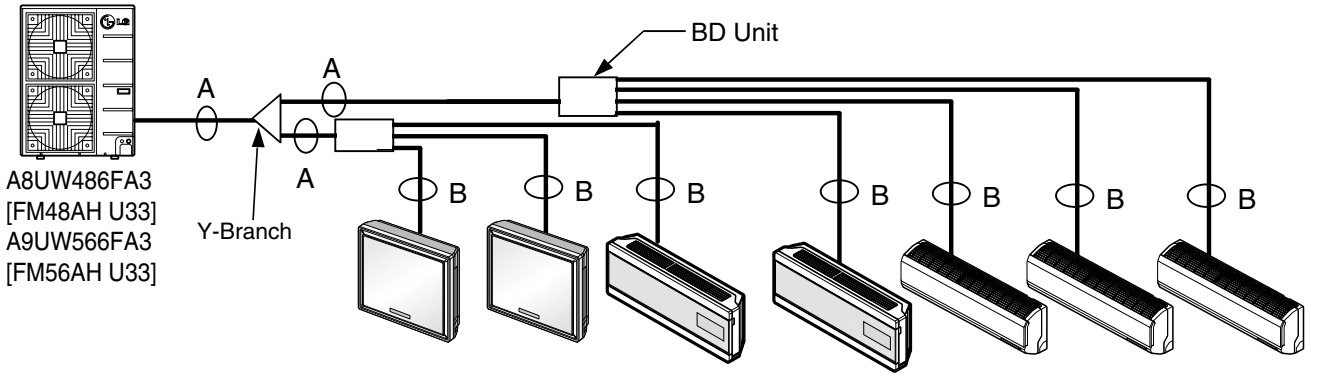
= 750+200+0+0+0+50-300 = 700g

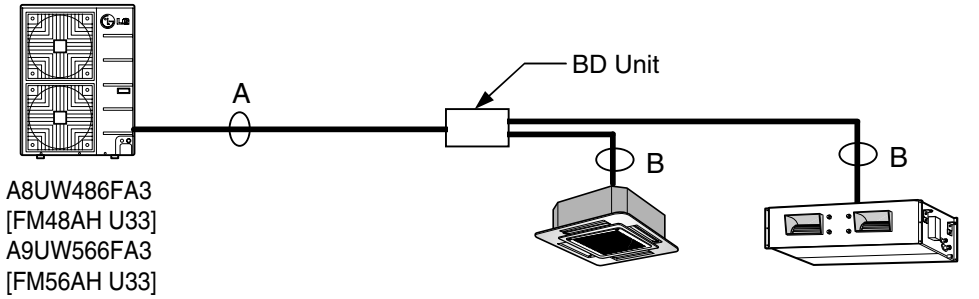
4.8.3 Piping connection size

MULTI F DX™ (1 phase)

		A	B
Liquid	mm	Ø 9.52	Adjust to indoor unit piping size
Gas	mm	Ø19.05	

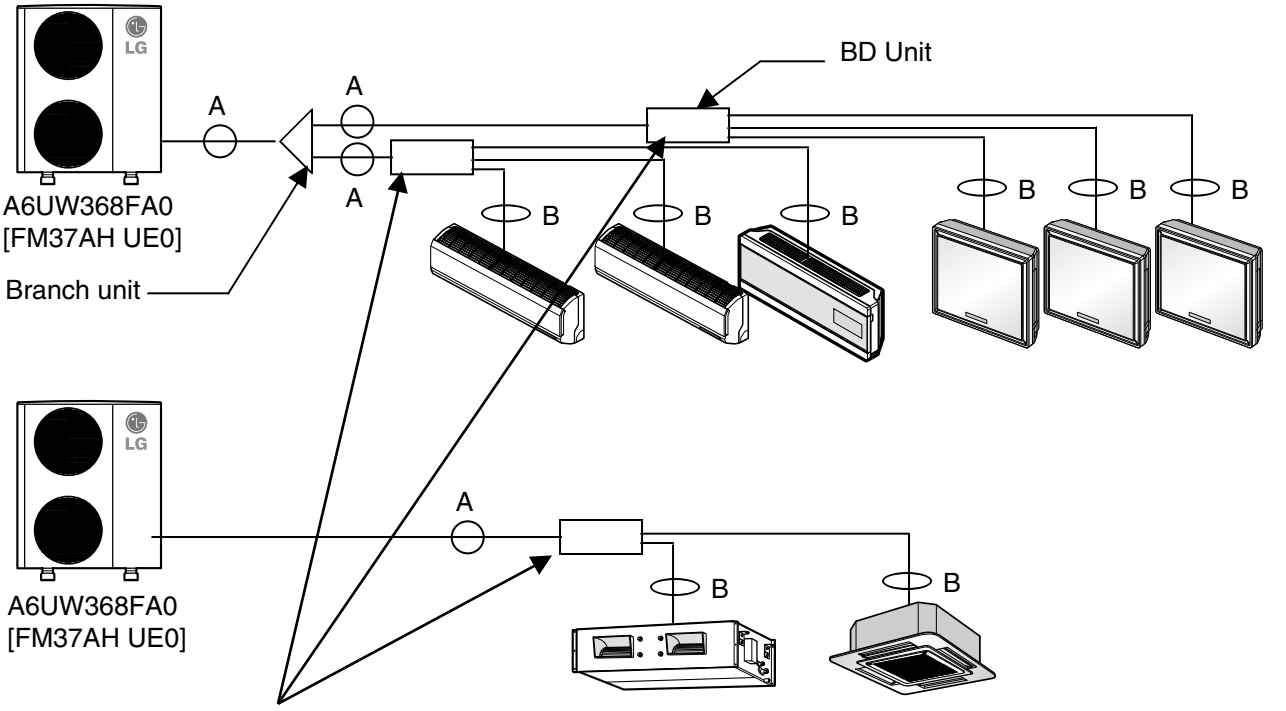






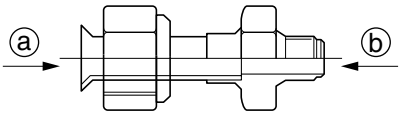
MULTI F DX (3 phase)

		A	B
Liquid	mm	Ø6.35	Adjust to indoor unit piping size
Gas	mm	Ø15.88	



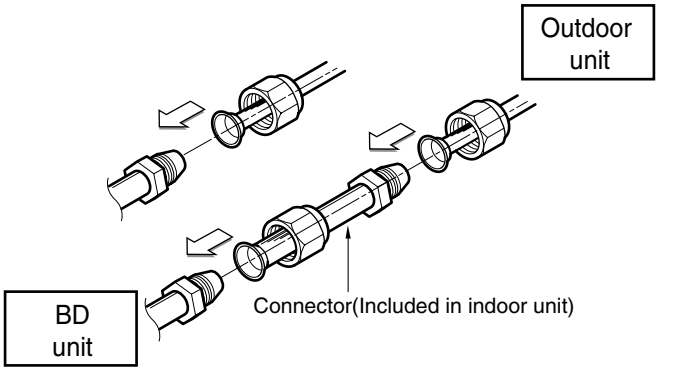
1) While piping installation you must use the connector

Gas		Liquid	
ⓐ	ⓑ	ⓐ	ⓑ
Ø19.05 ➔ Ø15.88		Ø9.52 ➔ Ø6.35	



[Connector]

2) Align the center of the pipings and sufficiently tighten the flare nut by hand

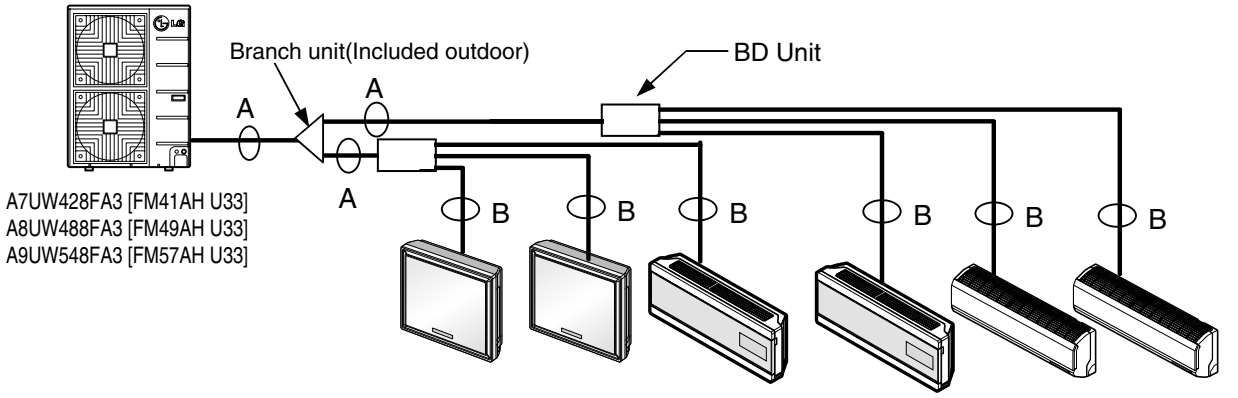


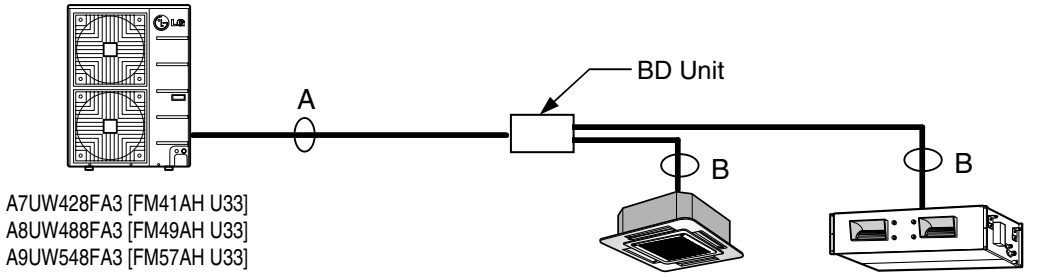
3) Finally, tighten the flare nut with torque wrench until the wrench clicks.

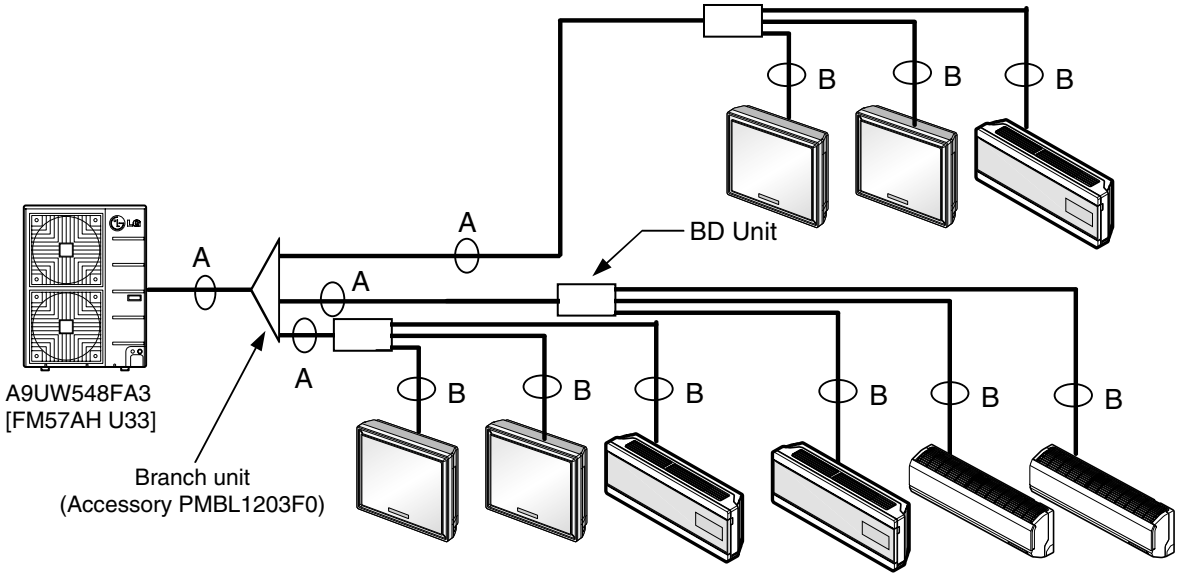
■ When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.

MULTI F DX™ (3 phase)

		A	B
Liquid	mm	Ø 9.52	Adjust to indoor unit piping size
Gas	mm	Ø19.05	





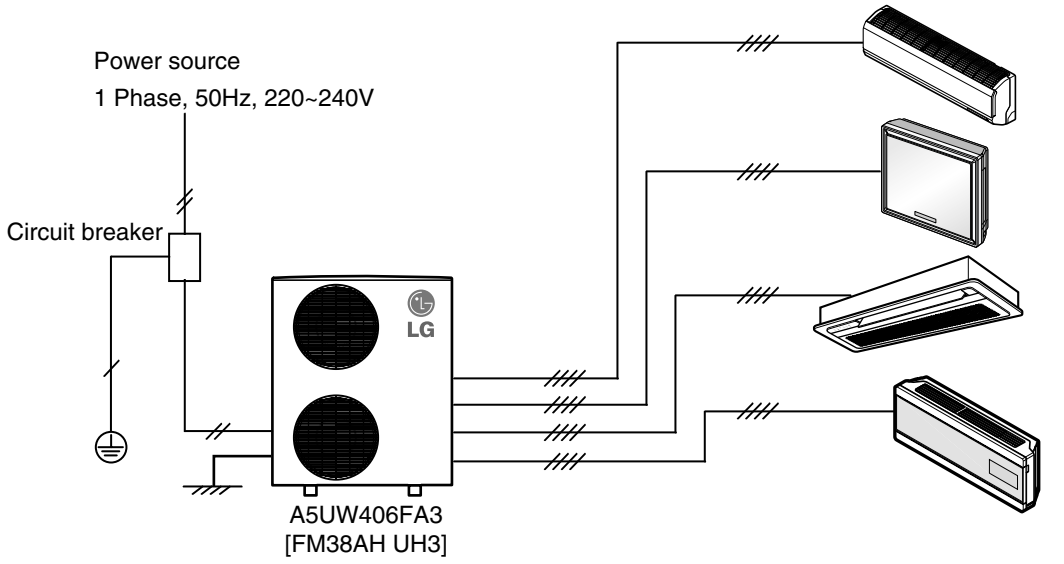


4.8.4 Transmission and power cable connection

1) Example for the connection of transmission and power cable

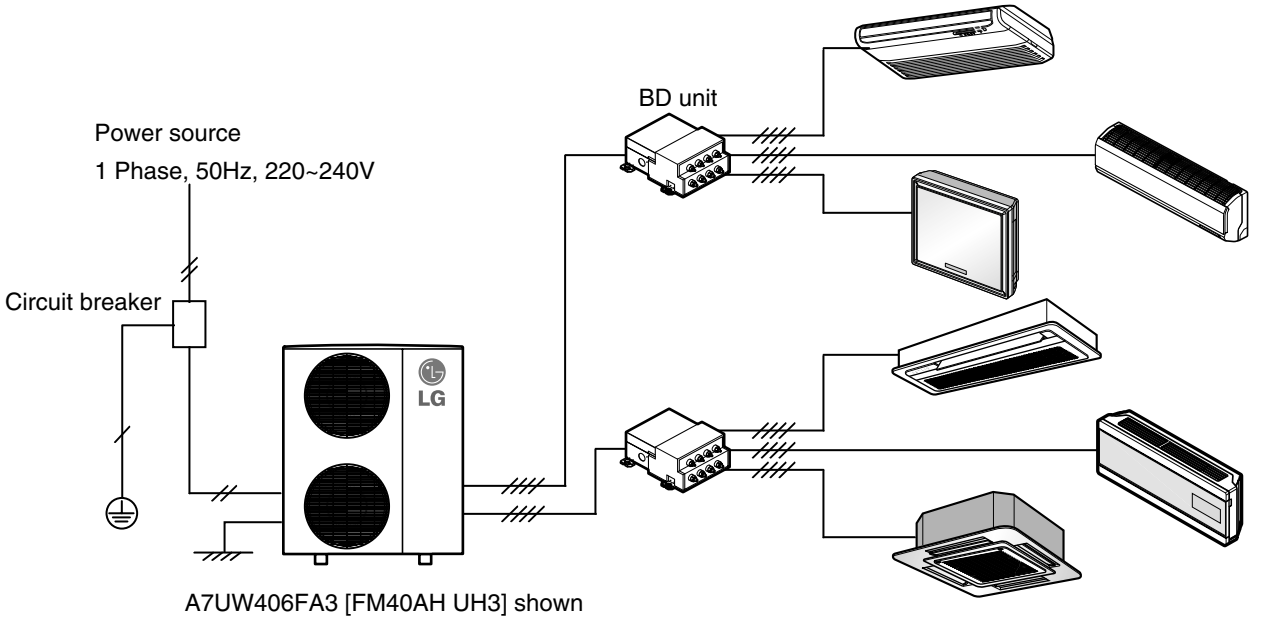
MULTI F™

- No need of independent power supply for the indoor units.



MULTI F DX™ (1 phase)

- Power branching with BD unit
- No need of independent power supply for the indoor units.

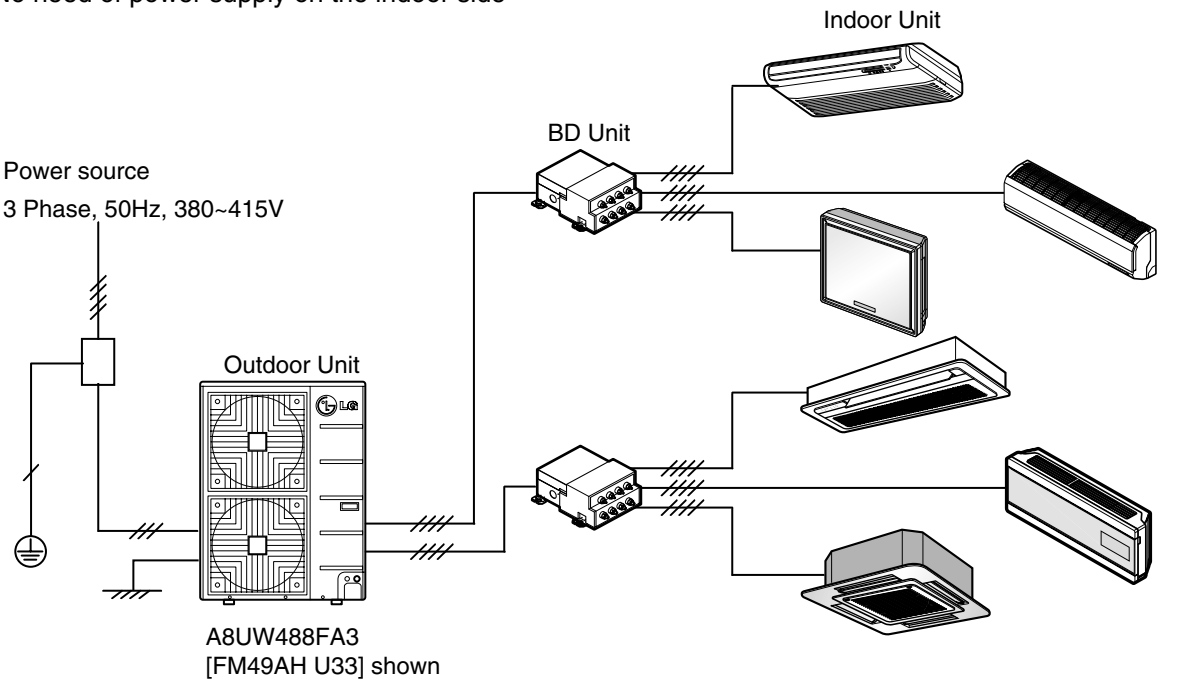


NOTE

*** //// : The 4 slashed lines represent 2 power line, 1 earth line and 1 transmission cable.**

MULTI F DX (3 phase)

- Power branching with BD unit
- No need of power supply on the indoor side

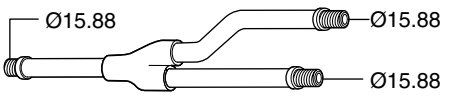
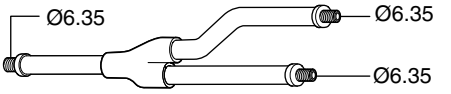
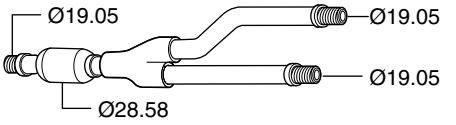
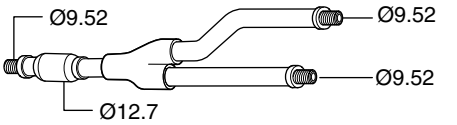


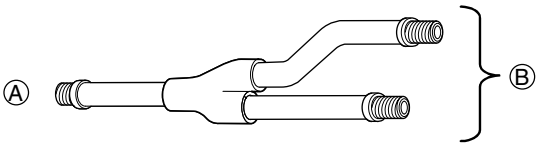
4.9 Y-Branch and branch distributor(BD) unit

4.9.1 Branch (Accessory)

Y- Branch

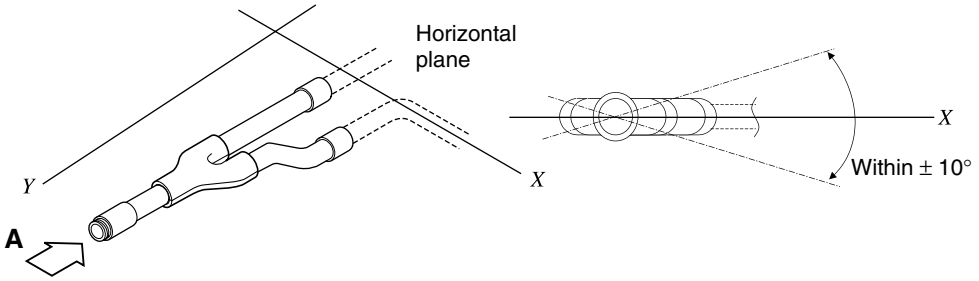
[unit:mm]

Model Name	Gas Pipe	Liquid Pipe
PMBL3620		
PMBL5620		

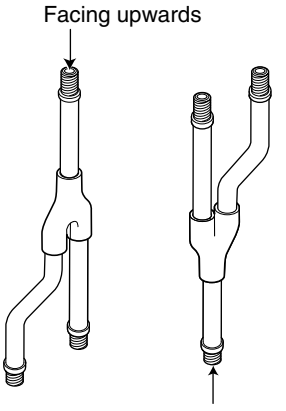


Ⓐ To outdoor unit
Ⓑ To BD unit

• Ensure that the branch pipes are attached horizontally or vertically (see the diagram below.)



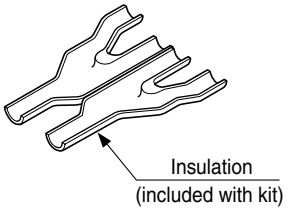
Viewed from point A in direction of arrow

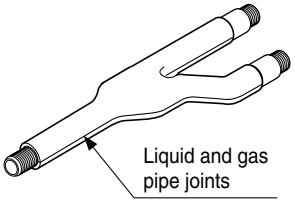


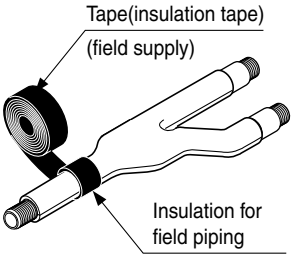
• There is no limitation on the joint mounting configuration.

• If the diameter of the refrigerant piping selected by the procedures described is different from the size of the joint, the connecting section should be cut with a pipe cutter.

• Branch pipe should be insulated with the insulation in each kit.





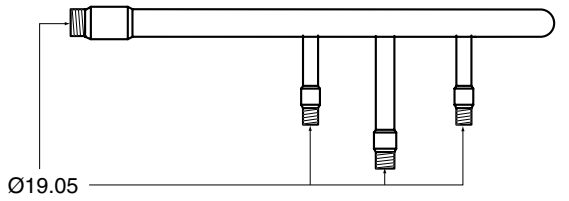
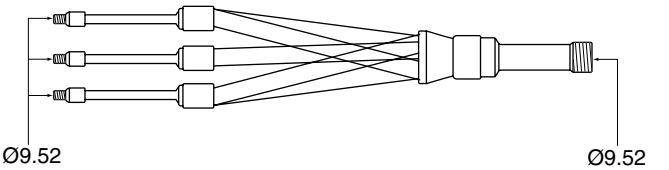


⚠CAUTION

Do not use general electrical insulation tape, because it may get loose or get detached.

Branch kit(PMBL1203F0)

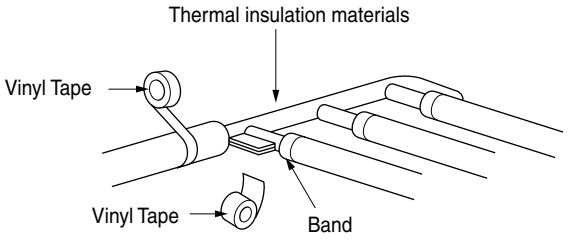
[unit:mm]

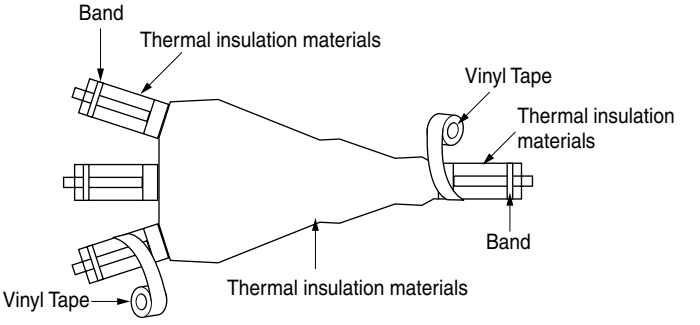
Gas Pipe	Liquid Pipe
	

- When installing the branch pipe, direction and angle of installation is not limited.
- Take care so that burrs and foreign material may not enter into the cutting surface when connecting.

Thermal insulation work

- Securely wrap the refrigerant and the branch pipe by using thermal insulation materials provided. When using thermal insulation materials released, use withstand heat insulation materials.(thickness of more than 10mm)
- Securely adhere thermal insulation materials wrapping the branch pipe so that they do not widen. After wrapping them with auxiliary materials , bound them with a band .
- Finish the work by wrapping with a vinyl tape after the insulation material work.





4.9.2 Branch distributor(Accessory)

1) General information

Model name:

BD unit	Product
PMBD3620	Multi FDX
PMBD3630	
PMBD3640	
PMBD7220	
PMBD7230	

Functional description:

- Distribution of refrigerant to various indoor uits.
- 3 types available (2, 3, 4 indoor units)
- Consists of EEV's inside
- Controlling PCB inside the unit
- Internally insulated
- Flare joints for easy installation and labour cost saving
- Compact design

2) Specifications :

Model			PMBD3620	PMBD3630	PMBD3640
Connectable indoor units	Number of indoor units		1~2	1~3	1~4
	Capacity	Btu/h	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k
Powre source		(ø, Hz, V)	1, 50, 220~240	1, 50, 220~240	1, 50, 220~240
Power consumption		W	10	10	10
Runing current		A	0.05	0.05	0.05
Dimensions	W*H*D	mm(inch)	302*143*252(11.9*5.6*9.9)	302*143*252(11.9*5.6*9.9)	302*143*252(11.9*5.6*9.9)
Net Weight		kg	4.8	4.9	5.0
Connecting cable	Direction indoor unit	No. * mm²	4*0.75 (including earth)	4*0.75 (including earth)	4*0.75 (including earth)
	Direction outdoor unit	No. * mm²	4*1.25 (including earth)	4*1.25 (including earth)	4*1.25 (including earth)
Piping connection	Liquid(ø)	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)
(To outdoor unit)	Gas(ø)	mm(inch)	19.05(3/4)	19.05(3/4)	19.05(3/4)
Piping connection	Liquid(ø)	mm(inch)	6.35(1/4)*2EA	6.35(1/4)*3EA	6.35(1/4)*4EA
(To indoor unit)	Gas(ø)	mm(inch)	9.52(3/8)*2EA	9.52(3/8)*3EA	9.52(3/8)*4EA
Accessories	Hanger	EA	4	4	4
	Screw	EA	8	8	8
	Manual	EA	1	1	1

Model			PMBD7220	PMBD7230
Connectable indoor units	Number of indoor units		1~2	1~3
	Capacity	Btu/h	18k/24k/30k/36k	18k/24k/30k/36k
Powre source		(ø, Hz, V)	1, 50, 220~240	1, 50, 220~240
Power consumption		W	10	10
Runing current		A	0.05	0.05
Dimensions	W*H*D	mm(inch)	302*143*252(11.9*5.6*9.9)	302*143*252(11.9*5.6*9.9)
Net Weight		kg	5.0	5.0
Connecting cable	Direction indoor unit	No. * mm²	4*0.75 (including earth)	4*0.75 (including earth)
	Direction outdoor unit	No. * mm²	4*1.25 (including earth)	4*1.25 (including earth)
Piping connection	Liquid(ø)	mm(inch)	9.52(3/8)	9.52(3/8)
(To outdoor unit)	Gas(ø)	mm(inch)	19.05(3/4)	19.05(3/4)
Piping connection	Liquid(ø)	mm(inch)	6.35(1/4)*2EA	6.35(1/4)*3EA
(To indoor unit)	Gas(ø)	mm(inch)	12.7(1/2)*2EA	12.7(1/2)*3EA
Accessories	Hanger	EA	4	4
	Screw	EA	8	8
	Manual	EA	1	1

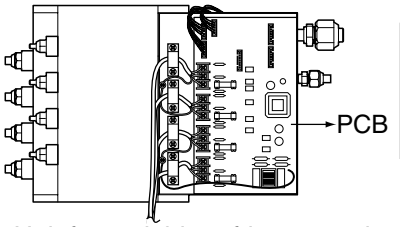
NOTE

1. The maimum height between any two BD units or any tow indoor units should be 10m.
   Set up the BD unit and indoor unit within 15m.
2. The piping connection must suit the piping sizes of the indoor unit which will be connected.
   (If need, use the connector which is included in the indoor unit)
3. The BD unit should be installed inside the building.
4. Wiring cable size must comply with the applicable local and national code.

3) Installation of BD unit

① Branch distributor unit

We recommend BD unit installation at indoor side. but, if you install it outdoor side, care should be taken against water and other factors which may damage the pcb.



Available condition
Temp : Max. 54
Humidity : Max.80%

- Unit for variable refrigerant volume system

② Connection of piping (flare work)

• No brazing & easy installation

NOTE

• **Be sure to mark all the local refrigerant piping(liquid pipes, gas pipes, etc.) for each indoor unit designating clearly to which room it belongs to. (A, B, C, D)**

③ Installation of BD unit

• This unit may be installed suspended from the ceiling or mounted on the wall.

• This unit may only be installed horizontally , as shown in the diagram below. (Side B is facing up) However, it may be freely installed in any direction, forward or backward, and to the sides.

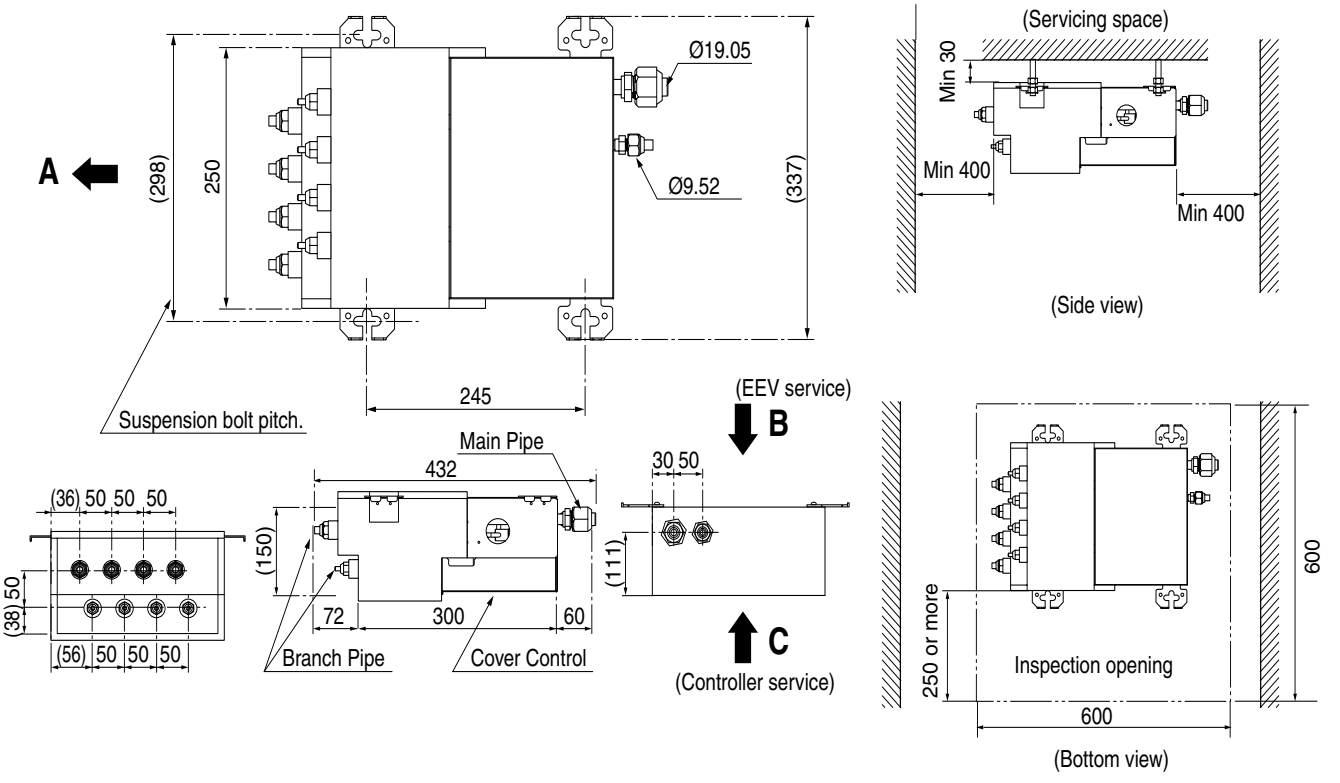
• Be sure to secure a 600mm square opening for service and inspection as shown in the diagram below, for both ceiling - suspended installation and wall-mounted installation.

• BD unit does not require drain treatment as it uses internal insulation.

• Service direction is the side B and C

• The piping for the indoor unit may be led around in direction A

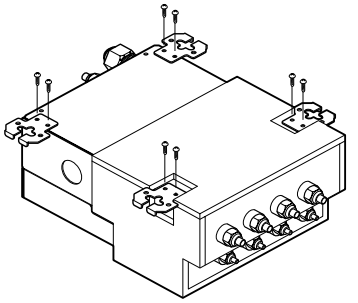
• The inclination of side B must be within ±5 degree forward or backward or to the sides.



NOTE

- This unit has two different installation types:
  (1) Ceiling-suspended type and (2) wall-mounted type.
- Choose the proper installation pattern according to the location of installation.

① Ceiling-suspended type



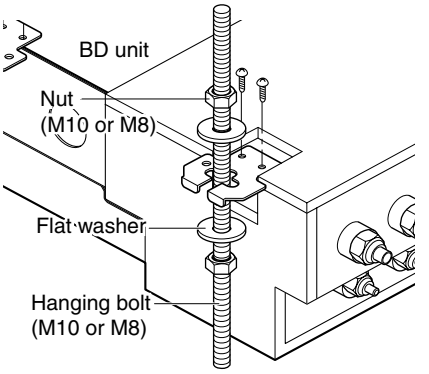
Procedure

(1) Fix the furnished hanger metal with two screws.(4 locations in total).

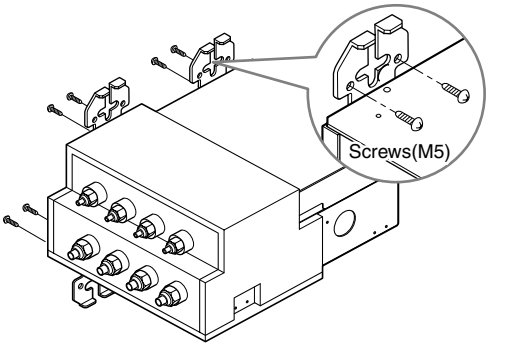
(2) Using an insert-hole-in- anchor, hang the hanging bolt.

(3) Install a hexagon nut and a flat washer (locally-procured)to the hanging bolt as shown in the figure.

(4) After checking the level of the unit, tighten the hexagon nut.



② Wall-mounted type



Procedure

(1) Fix the furnished hanger metal with two screws.
(3 locations in total).

(2) After checking with a level that the unit is level, fix the unit

* Block up the parts of hanger holes (2 places) by using insulation polyethylene form after installing the hanger.(This is to prevent condensation)

⚠CAUTION

• Do not install near bedrooms, the sound of refrigerant flowing through the piping may sometimes be audible.

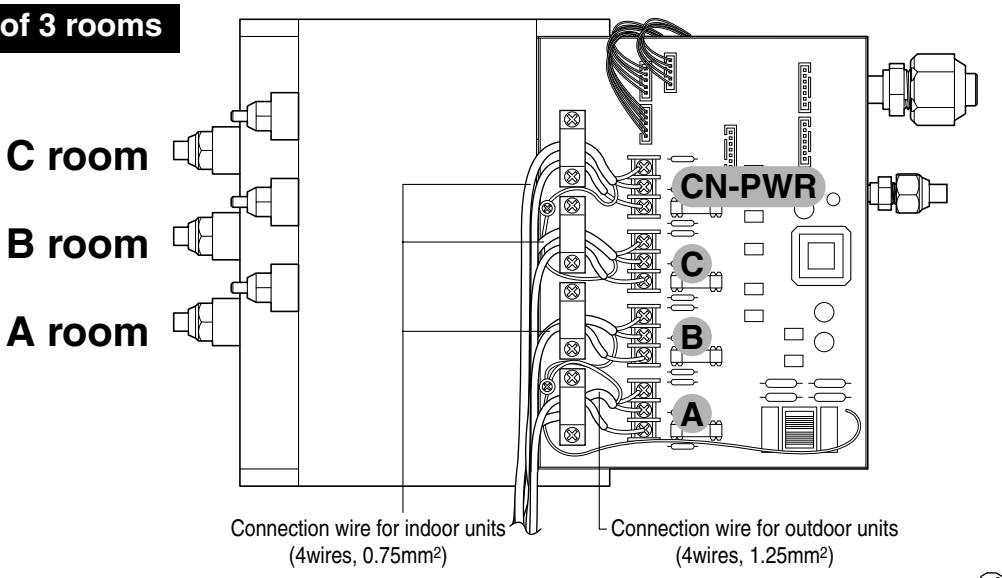
③ Electrical Wiring of BD Unit

- Connect refrigerant pipes and connection wires to the appropriate ports maked with matching alphabets (A, B and C) on this unit.
- Follow the instructions on the wiring nameplate to connect the connection wires of indoor/outdoor units to terminal board numbers.(A, B and C) Always fix each ground wire separately with a ground screw.(See the figure below.)
- After completing the wiring, fix the outer coating of wires securely with wire clamps. The wire clamp on indoor unit side is furnished. Follow the procedure below to install.
- Refer to the circuit diagram on the control cover inside outdoor unit.

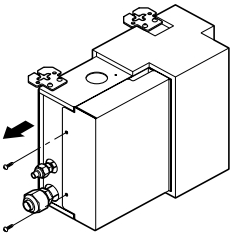
NOTE

The terminal board numbers are arranged from top to bottom in order of A, B and C. But the refrigerant pipe connecting to indoor units are arranged from top to bottom in order to C, B and A.

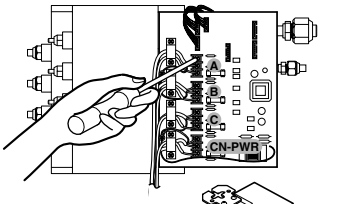
In case of 3 rooms



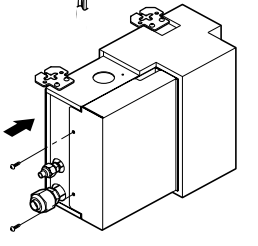
a) Remove the control cover, unscrew the two screws and slide the cover in the direction of the arrow given below.



b) Perform wiring with reference to the wiring diagram on a control cover of the outdoor unit. Secure 300 mm for the pulling-out section of harness. Fix the wires completely with wire clamps.



c) Put in the cover in the direction of the arrow then tighten the screws.

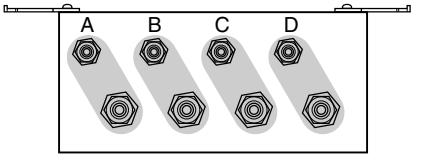


④ Connection of piping

• When connecting indoor units, make sure to connect refrigerant pipes and connection wires to the appropriate connection ports maked with matching alphabets. (A, B, C, D)

NOTE

• Be sure to mark all the local refrigerant piping(liquid pipes, gas pipes, etc.) for each indoor unit designating clearly which room it belongs in. (A, B, C, D)



NOTE

For flaring work the piping, follow the instructions in the installation manual to each unit.

a) Align the center of the pipings and sufficiently tighten the flare nut by hand.

b) Tighten the flare nut with a wrench.

c) Wrap the insulation material around the connecting portion.

① Overlap the Refrigarant cable insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there is no gap.

② Wrap the area which accommodates the rear piping housing section with vinyl tape.

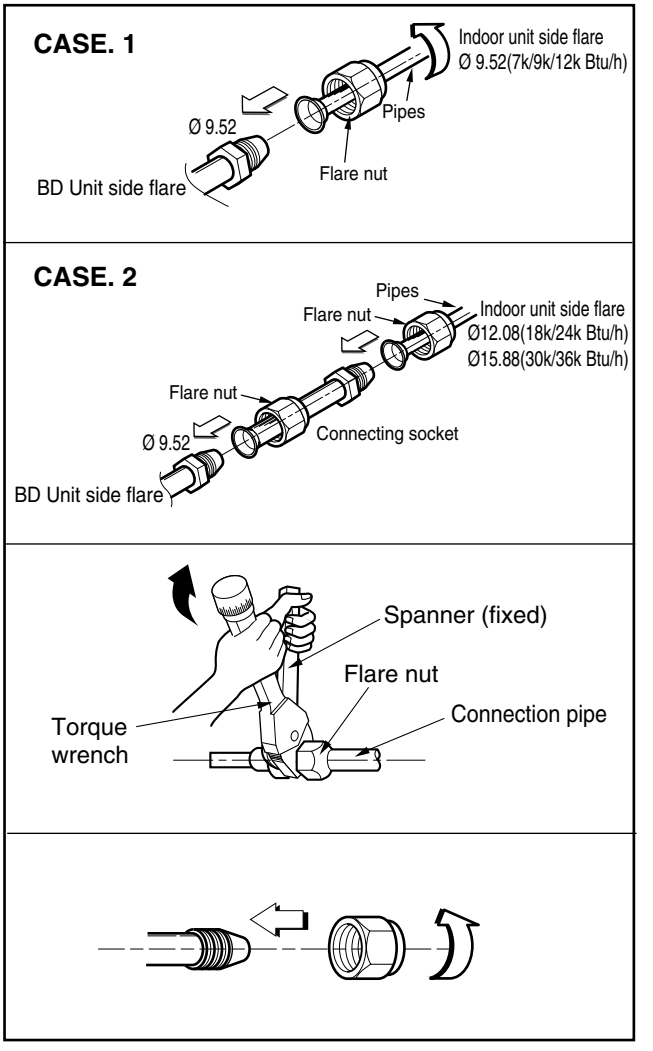
③ Align the center of the piping and sufficiently tighten the brass cap by hand.

④ Tighten the brass cap with a wrench.

⑤ Wrap the joint part with insulation.

⚠CAUTION

• Never use the plastic cap for sealing.
• Make sure to use brass cap with the end of pipe sealed or welded tightly.



⑤ Branch pipe connection (BD unit ↔ indoor unit)

a) While piping installation you must use the connector.

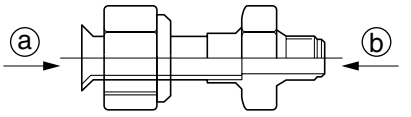
• PMBD36** BD Unit

Indoor Units	Gas		Liquid	
18k, 24k	ⓐ	ⓑ	ⓐ	ⓑ
	Ø9.52→Ø12.7		Not necessary	

• PMBD7230 BD Unit

Indoor Units	Gas		Liquid	
48k	ⓐ	ⓑ	ⓐ	ⓑ
	Ø15.88→Ø19.05		Ø6.35→Ø9.52	
30k, 36k	Connector is not necessory			

b) Align the center of the pipings and sufficiently tighten the flare nut by hand



[Connector]

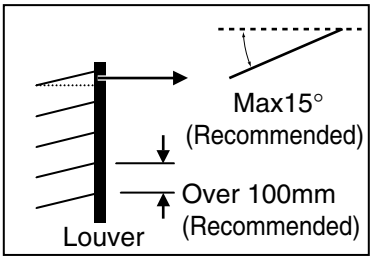
***Connecting pipe size**

Indoor Units	Gas side	Liquid side
7k	Ø9.52(3/8)	Ø6.35(1/4)
9k	Ø9.52(3/8)	Ø6.35(1/4)
12k	Ø9.52(3/8)	Ø6.35(1/4)
18k	Ø12.7(1/2)	Ø6.35(1/4)
24k	Ø12.7(1/2)	Ø6.35(1/4)
30k	Ø15.88(5/8)	Ø6.35(1/4)
36k	Ø15.88(5/8)	Ø6.35(1/4)
48k	Ø19.05(3/4)	Ø9.52(3/8)

4.10 Outdoor unit cabin

4.10.1 Outdoor cabin louver requirement

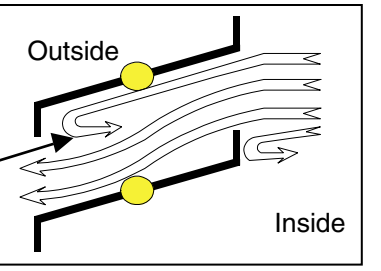
1) Outdoor cabin type : Manual door open type
2) Louver angle : less than 15° on the horizontal base
3) Louver interval: over 100mm (recommend)
4) Louver shape : wing type or plane type



Section

CAUTION

- Opening rate and suction should be considered for louvered outdoor room.
- Do not use 'S' type louver.



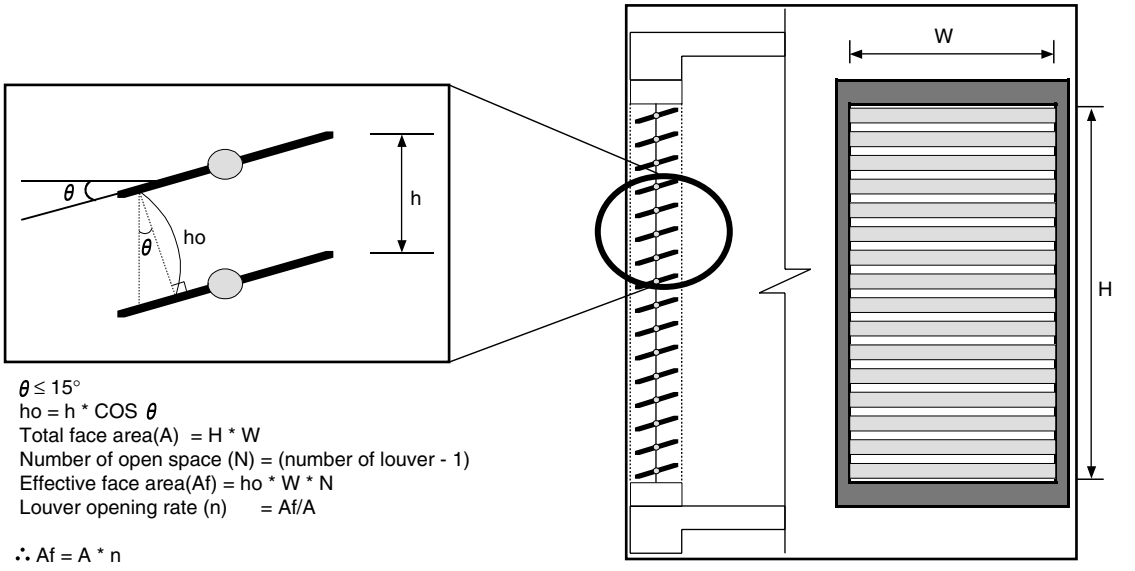
Noise can occur due to the backward flow of the air passing through the louver blade

NOTE

The problem in case the louver opening rate is small.

1. Noise can occur due to the increased velocity of the air passing through louver blade.
2. Noise can occur due to the louver blade vibrations.
3. Drop in outdoor fan performance (Excess static pressure damage can cause drop in the performance as well as outdoor heat exchange efficiency).
4. In case the louver opening rate is small or there is insufficient air flow exchange, it might stop the air conditioner.

Opening rate by louver radian



$\theta \leq 15°$
ho = h * COS θ
Total face area(A) = H * W
Number of open space (N) = (number of louver - 1)
Effective face area(Af) = ho * W * N
Louver opening rate (n) = Af/A

$\therefore$ Af = A * n

Effective face area of cross section

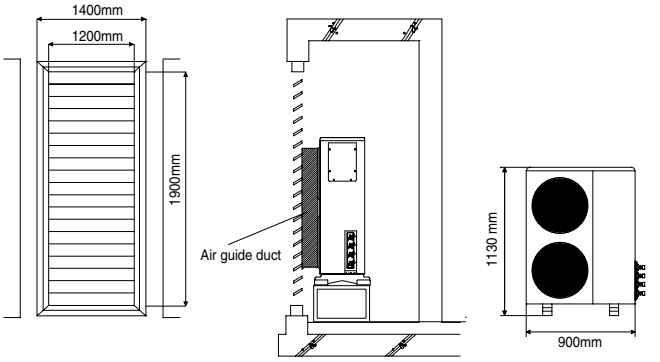
[Side view] **[Front view]**

4.10.2 Air flow rate confirmation

Example. 1

■ Application Model : A7UW406FA3 Airflow rate 106CMM

[Total opening rate]



■ Case : velocity of discharging air: 5m/s,
velocity of suction air: 2.5m/s

■ Openness rate = 80% or more

※ Openness rate = $\frac{\text{Effective face area(Af)}}{\text{Total face area(A)}}$

■ Air guide of discharging air part should be equipped.

■ Louver total dimension (excluding frame)	(A) = 1.2 m x 1.9 m = 2.28 m^2
■ Louver shielding dimension by product	(B) = 0.9 m x 1.13 m = 1.02 m^2
■ Suction able louver dimension	(A-B) = 1.26m^2
■ Equivalent suction dimension (Opening rate 80%)	= 1.26 m^2 x 0.8 = 1.01 m^2
■ Equivalent suction air volume	= 1.2816 m^2 x 2.5 m/s x 60s/m = 152 CMM
■ Required air volume / equivalent voloume	= 152 CMM / 106 CMM(product airflow rate) = 142 %
	➡ OK

Part 4 Network solution

Introduction

1. Individual controller 598

1.1 Wired remote controller 598

1.2 Wireless remote controller 600

1.3 Simple wired remote controller 601

2. Central controller 602

2.1 Simple central controller 602

2.2 Deluxe central controller 620

2.3 PC central controller 659

3. Others 695

3.1 Interface device 695

3.2 Power distributor indicator(PDI) 703

3.3 Home automation 717

3.4 BMS gateway 725

Introduction

Functions & features

Control Method		Objective/ Use	Unit Name and Model	Function	Parts	Features
Central Control	Simple Central Controller	• On/Off operation of all indoor units just like remote controller	PQCSB101S0 	• Remote control • Monitoring • 16 indoor unit / 1 Simple controller	• Controller • Manual • Screw 4EA	• 16 Indoor Units On/Off Control • Max 16 Central controller expansion • Connectable with Function Controller
	Function Controller	• Function control conneted with Simple central controller (PQCSB101S0)	PQCSC101S0 	• Fan Speed • Mode • Set Temp • Search	• Controller • manual • Screw 6EA • Install • supporter	• Joint with max. 8 Simple central controller 8*16 = 128 indoors
	Deluxe Central Controller	• To control all indoor units just like remote controller	PQCSW501A0 	• Remote Control • Monitoring • Max 256 Indoor units	• Web Pad • Cradle • Power Supply • Manual	• Touch Screen • Individual/Integrated • Operation/Monitoring • Group Management • Self-diagnosis Function
		• To control all indoor units just like remote controller	PQCSW502A0 	• Remote control • Monitoring • Schedule control • Max. 256 indoor units	• Web pad • Cradle • Power supply • Manual	• Touch screen • Individual/Integrated Operation/Monitoring • Group management • Self-diagnosis function • Schedule automatic operation
	PC Central Control Software	• To control all indoor units just like remote controller	PQCSS501A0 	• Remote control • Monitoring • Max. 2048 indoor units	• PC S/W (CD) • Lock key • Manual	• PC based (PC not provided) • Individual/Integrated Operation/Monitoring • Group Management • Self-diagnosis Function
		• To control all indoor units just like remote controller	PQCSS502A0 	• Remote control • Monitoring • Schedule control • Max. 2048 indoor units	• PC S/W (CD) • Lock key • Manual	• PC based (PC not provided) • Individual/Integrated Operation/Monitoring • Group management • Self-diagnosis function • Schedule automatic operation

NOTE

All the central control devices listed above are optional accessories. So these should be purchased separately when needed.

Parts details

Control Method		Objective/ Use	Unit Name and Model	Function	Parts	Features
Interface Device	CNU (I-Gateway)	• To connect PI485 to PC or Deluxe Central controller	PQNFG00A0 	• RS485 To Ethernet Protocol Converter	• Interface Assembly	• 1 Deluxe Central / 1 CNU (1 CNU / 16 PI 485) • 1 PC Central /16 CNU (1 CNU / 8 PI 485)
	PI 485	• To connect Outdoor unit to CNU or simple Central controller	PMNFP14A0 	• RS485 converter with software • For max.16 indoor units	• PCB Assembly • Bracket • Lead wire: 3ea • Screw 4EA • Tie wrap • Clamp • Manual	• Multi V Plus • 1set/1 Outdoor
			PMNFP14A1 	• RS485 converter with software • For max. 48 indoor units		
	Dry Contact	• To connect indoor unit to other forced on/off controller	PQDSB 	• Contact signal interface unit.	• PCB Assembly • Top case • Bottom case • Screw • Lead wire 3 • Sub PCB set (1leadwire+1sub PCB) • Manual	• 1set/1 Indoor unit

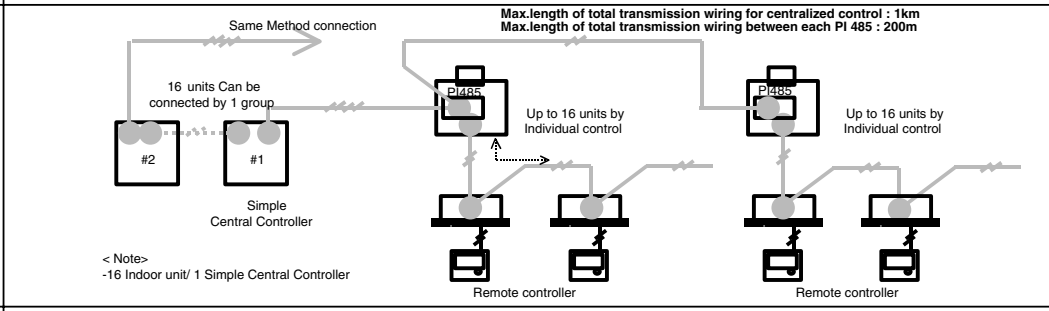
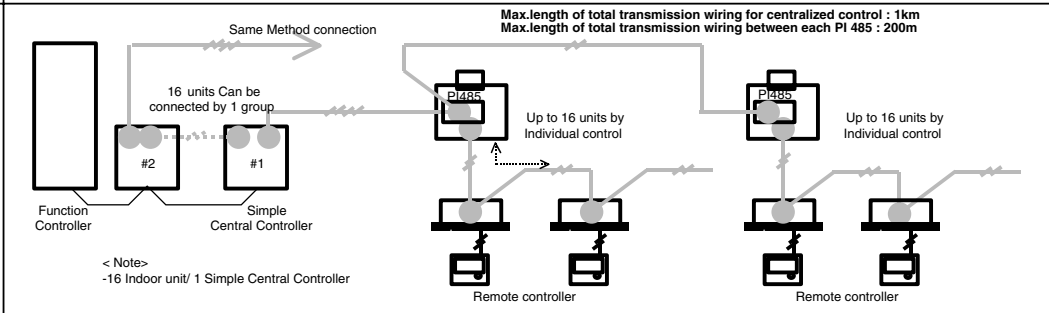
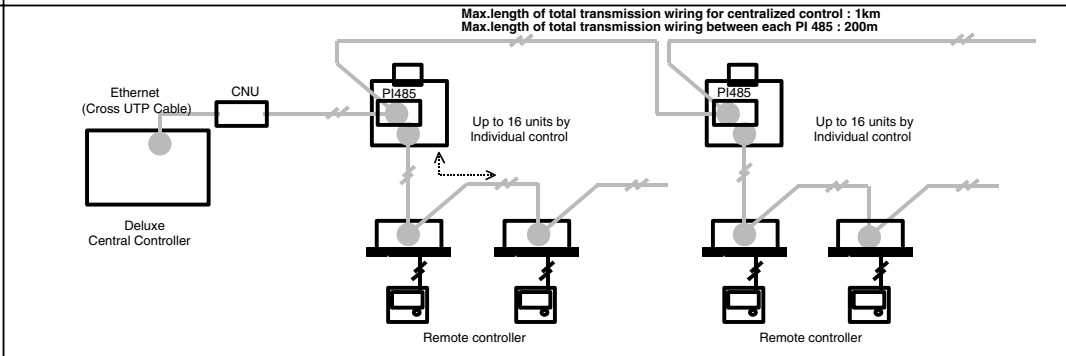
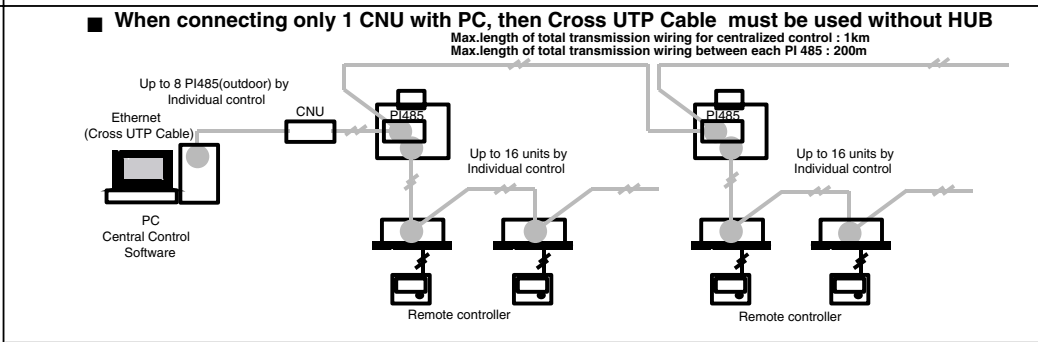
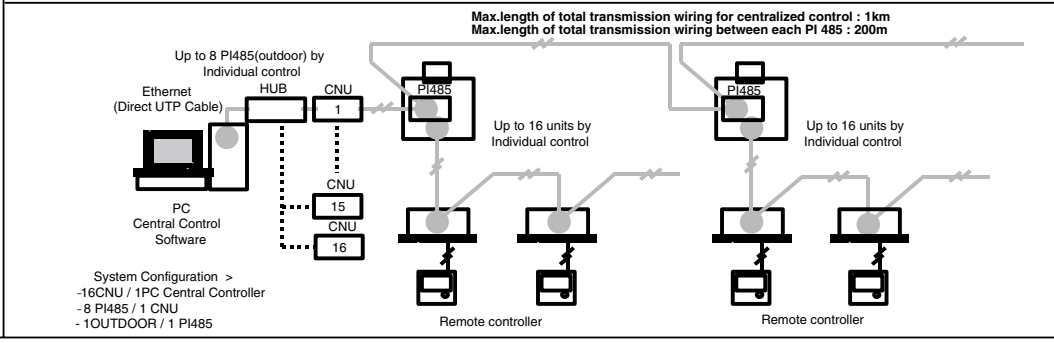
1) CNU:Central control Network interface Unit

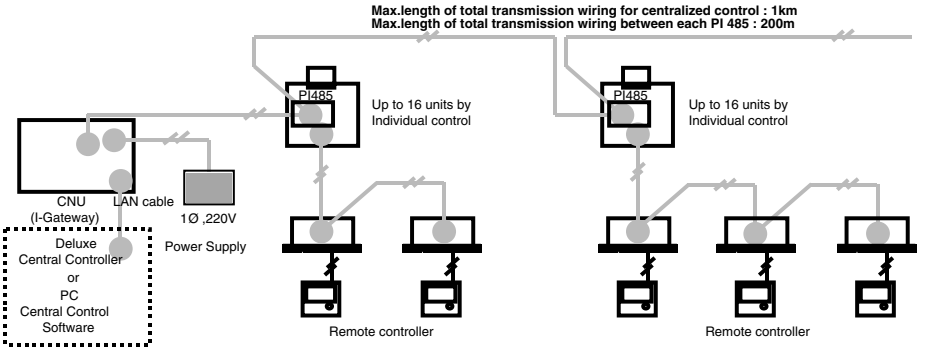
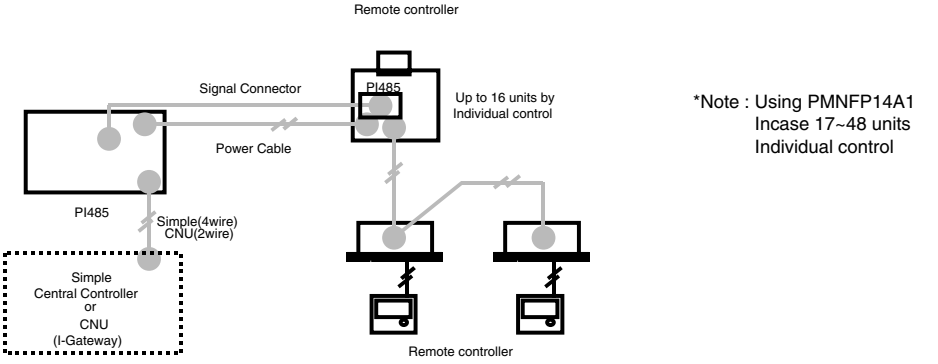
2) PI 485:Product Interface unit for RS 485 transmission

NOTE

All the central control devices listed above are optional accessory, so these should be purchased separately when needed.

Installation

Control Method		Outline of System
Central Control	Simple Central Controller	
	Function Controller	
	Deluxe Central Controller	
	PC Central Control Software	■ When connecting only 1 CNU with PC, then Cross UTP Cable must be used without HUB 
		

Control Method		Outline of System
Interface Device	CNU (I-Gateway)	
	PI485	

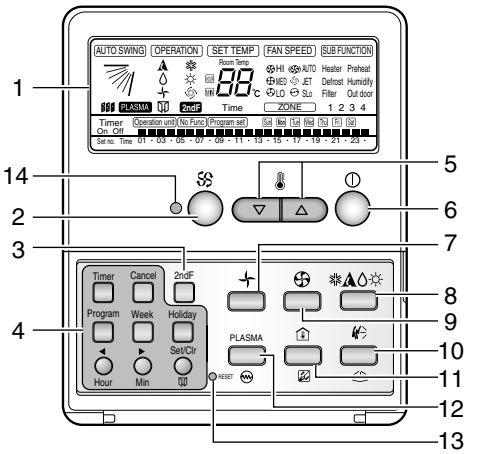
NOTE

All Central controllers can not be used at the same time.

1. Individual controller
1.1 Wired remote controller

PCRCUSZ0 (Except Duct, Floor standing units)

Appearance

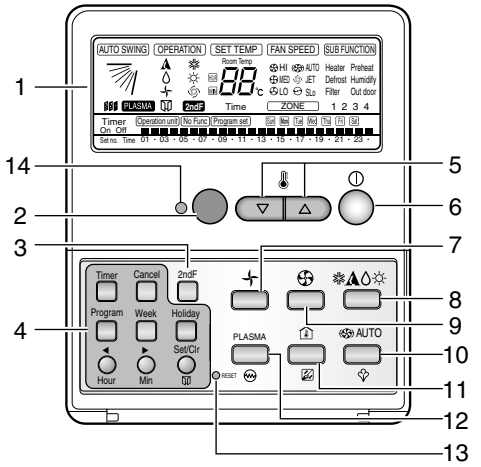


Functions (Button Descriptions)

No.	Name	Function
1.	Operation indication screen	Displays the operation condition.
2.	Swirl button	
3.	2ndF button	
4.	Timer set/cancel Program/Week/Holiday Hour/Min/SET/Clr/Ventilator	
5.	Set temperature button	Used to select the set the temperature.
6.	ON/OFF button	Operation starts when this button is pressed, and stops when the button is pressed again.
7.	Fan operation	Used to circulate room air without cooling or heating.
8.	Operation mode selection button	Used to select the operation mode.
9.	Fan speed button	Used to set the desired fan speed
10.	Horizontal/Vertical air flow direction button	
11.	Room temperatur/filter sign release button	Used to check the room temperature and release the filter in second function mode.
12.	Plasma/Heater button	Used plasma and saved power in Second Function
13.	Time reset button	Used to set the current time and clear the setting time.
14.	Operation lamp	

PDRCUSZ0 (Duct, Floor standing units)

Appearance

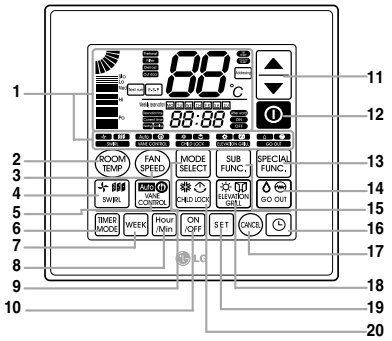


Functions (Button Descriptions)

No.	Name	Function
1.	Operation indication screen	Display the operation condition.
2.	Wireless remote controller receiver	
3.	2ndF button	
4.	Timer set/cancel Program/Week/Holiday Hour/Min/SET/Clr/Ventilator	
5.	Set temperature button	Used to select the set temperature.
6.	ON/OFF button	Operation starts when this button is pressed, and stops when the button is pressed again.
7.	Fan operation	Used to circulate room air without cooling or heating.
8.	Operation mode selection button	Used to select the operation mode.
9.	Fan speed button	Used to set the desired fan speed
10.	Fan auto/Humidification button	
11.	Room temperatur/filtersign release button	Used to check the room temperature and release the filter in second function mode.
12.	Plasma/Heater button	Used plasma and saved power in Second Function
13.	Time reset button	Used to set the current time and clear the setting time.
14.	Operation lamp	

PQRCUDS0

Appearance

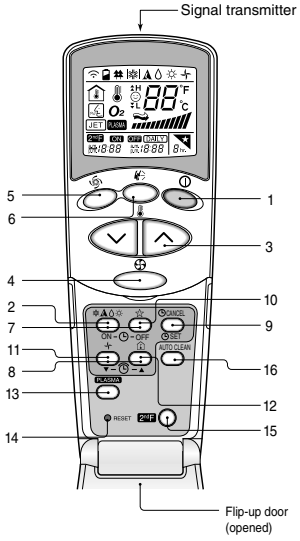


Functions (Button Descriptions)

No.	Name	Function
1	Operation display panel	Displays the operation condition.
2	Indoor temperature button	Used to check the room temperature
3	Fan speed button	Used to set the desired fan speed.
4	Fan/Plasma/Swirl swing button	Fan: used to circulate room air without cooling orheating
		Plasma : plasma function(starts).
		Swirl swing : use swirl swing(starts).
5	Automatic / Power saving/ Vane control button	Automatic : used to set mode by room temperatureautomatically
		Saving : use to save the power.
		Vane control : used to set louver angle
6	Reservation mode button	Used to set reservation
7	Date selection button	Used to set data for current time and reservation.
8	Hour/Minute button	Used to set hour and minute for current time and reservation.
9	Mode Selection button	Used to select the operation mode.
10	On/Off Button for reservation	Operation starts and stops.
11	Temperature control button	Used to set the temperature.
12	On/Off button	Operation starts and stop
13	Special function button	Used to use special function
14	Dehumidification/ Heating/ Timer button	Dehumidification : used to operate fordehumidification.
		Heating : used to operate heater.
		Go-OUT; use to operate when user go outs.
15	SUB function button	Used to select Function
16	Simple reservation button	Used to set simple reservation.
17	Unsetting button	Cancel the all reserved time.
18	Heating/Ventilation/Elevation grill button	Feating: used to set heating mode.
		Ventilation: used to set ventilation
		Elevation Grill: used to operate front grill mainly for filter cleaning.
19	Setting Button	Used to set the reservation.
20	Cooling / Auto Swing / Child lock button	Cooling : used to set cooling mode
		Auto Swing : used to swing the louver up and down
		Child Lock: : used that children can not use thecontreller

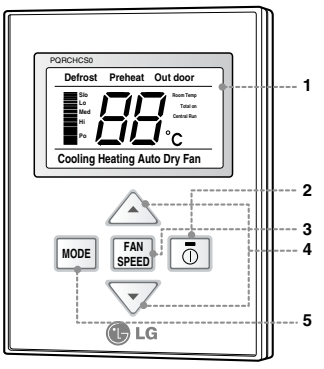
1.2 Wireless remote controller

H/P:PQWRHSF0 C/O:PQWRCSF0

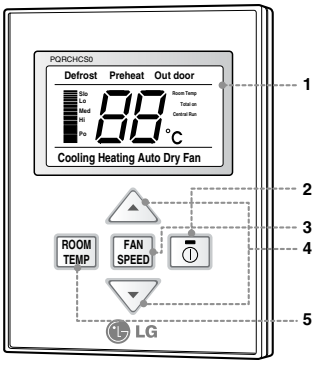
Appearance	Functions (Button Descriptions)		
	No.	Name	Function
	1	Start/Stop	Operation starts when this button is pressed and stops when the button is pressed again.
	2	Operation mode selection	Used to select the operation mode.
	3	Room temperature setting	Used to select the room temperature.
	4	Fan speed selector	Used to select fan speed in four steps (low, medium, high, or CHAOS.)
	5	Jet cool	Used to start or stop the speed cooling/heating. (Speedcooling/heating operates super high fan speed in cooling mode.)
	6	Chaos swing	Used to stop or start louver movement and set the desired up/down airflow direction.
	7	On/Off timer	Used to set the time of starting and stopping operation.
	8	Time setting	Used to adjust the time.
	9	Timer set/cancel	Used to set the timer when required and to cancel the Timer operation.
	10	Sleep mode auto	Used to set Sleep mode Auto operation.
	11	Air circulation	Used to circulate the room air without cooling or heating (turns indoor fan on/off).
	12	Room temperature checking	Used to check the room temperature.
	13	Plasma (optional)	Used to start or stop the plasma-purification function.
	14	Reset button	Used prior to resetting time or after replacing batteries.
	15	2nd F button	Used prior to using modes printed in blue at the bottom of buttons.
	16	Auto clean	Used to set Auto clean mode.

1.3 Simlpe wired remote controller

PQRCUCA0

Appearance	Functions(Button Descriptions)		
Simple wired remote controller (normal) 	No.	Name	Function
	1	Operation display	Displays the operation conditions.
	2	On/Off	Operation starts when this button is pressed, and stops when the button is pressed again.
	3	Fan speed	Used to set the desired fan speed.
	4	Room temperature setting	Used to select the set temperature.
	5	Operation mode selection	Used to select the operation mode.
	6	Address setting	Used to set units address

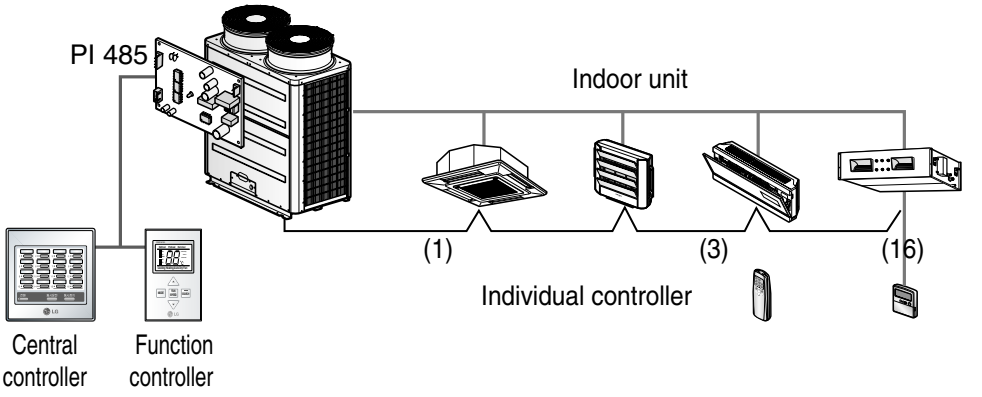
PQRCFCS0

Appearance	Functions(Button Descriptions)		
Simple wired remote controller for hotel. 	No.	Name	Function
	1	Operation display	Displays the operation conditions.
	2	On/Off	Operation starts when this button is pressed, and stops when the button is pressed again.
	3	Fan speed	Used to set the desired fan speed.
	4	Room temperature setting	Used to select the set temperature.
	5	Room temperature checking	Used to check the room temperature.

2. Central controller
2.1 Simple central controller
2.1.1 Controller details
(1) Before Use
• System Drawing

Up to 128 indoor units can be controlled by simple central controller using function controller along with.

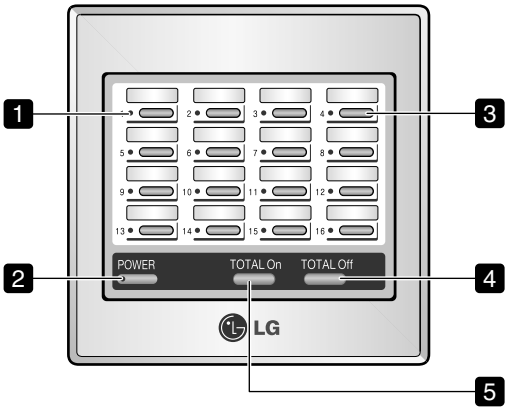
Function controller is connected as shown below.



• Function controller and PI 485 are sold separately.

• Name of Each Part

Central controller



1. On/Off status display LED (total 16EA)
Displays the status of the indoor unit if individual On/Off button is pressed.
- Cooling/dehumidification/blowing operation: Green
- Heating operation: Orange
- Failure of product: Red
- Stop: Off

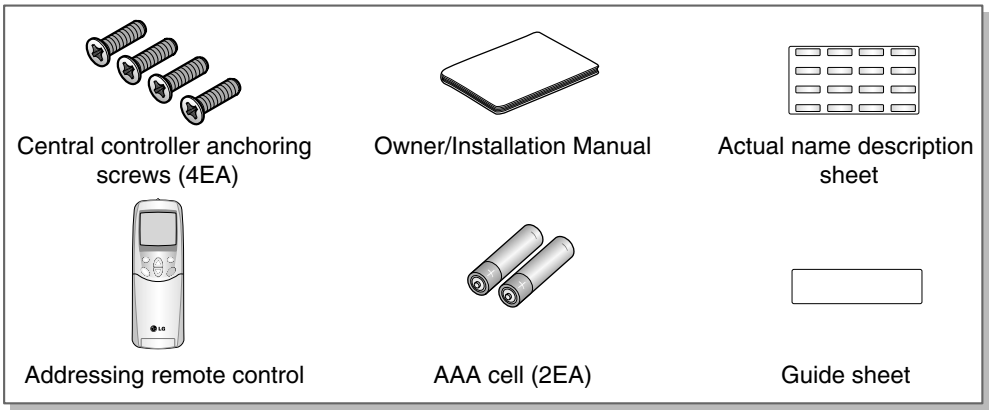
2. Power display LED
- Application of power: Green
- No power: Off
- During control: Flickering

3. Individual On/Off button (total 16EA)
On/Off control of the connected indoor units.

4. Total Off button
Sequentially turns off all indoor units connected to it.

5. Total On button
Sequentially starts all indoor units connected to it.

Annexed parts

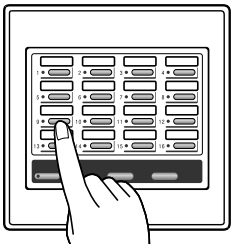


(2) Operation Tips

Control of On/Off operation

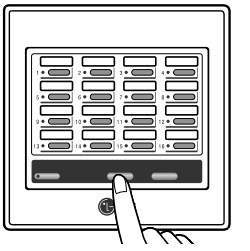
• Individual Operation

1. Press the individual On/Off button, then the equivalent unit starts and it's LED is On.
2. If pressing the individual On/Off button, equivalent unit stops and it's LED is Off.

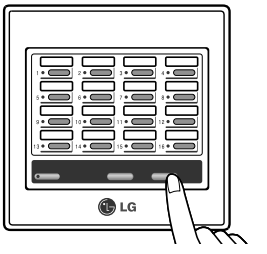


• Total Control for Each Group

• Press Total On button, then all units of that group start sequentially and their LED turn On.

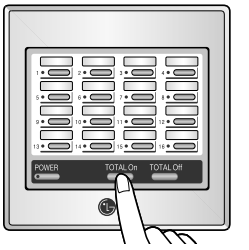


• Press Total Off button, then each group units stop sequentially and their LED turn Off.

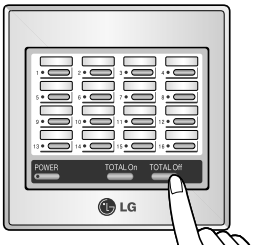


• Total On/Off Operation (Master & slave combination case)

1. Press Total On button for more than 2sec, then all linked units start sequentially and their LEDs turn on.



2. Press Total Off button for more than 2sec, then all linked units stop sequentially and their LEDs turn off.



• Mode change function doesn't work when the function controller is connected to the system.

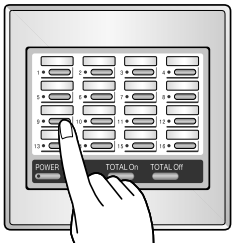
• Mode Change

Operating mode change for individual indoor unit

While changing the operating mode of the indoor unit, press the individual On/Off button for 2 seconds and the operating mode of the applicable indoor unit will change from cooling to heating mode or from heating to cooling mode.

When the indoor unit is running in the cooling mode, the status indicator LED would be green and when the indoor unit is running in the heating mode, it will be orange.

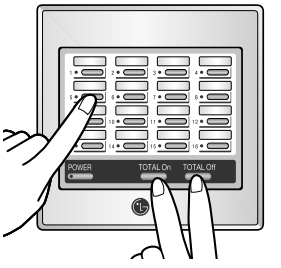
This is applicable to heatpump models only.



Operating mode change for group of indoor units

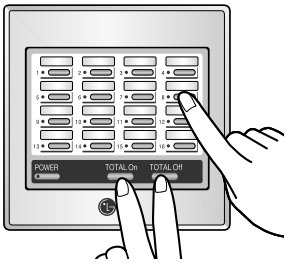
1. Cooling operation of group of indoor units

Press the Total On, Total Off and no. 5 button simultaneously to change all indoor units to cooling mode through the Central controller and the LEDs will turn green.



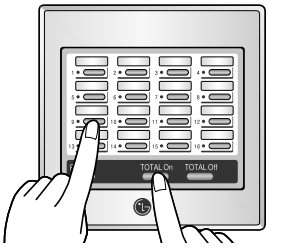
2. Heating operation of group of indoor units

Press the Total On, Total Off and no. 8 button simultaneously to change all indoor units to heating mode through the Central controller and the LEDs will turn orange.



• Control is available only by central controller & control by individual remote controller is impossible

• Setting Individual Lock

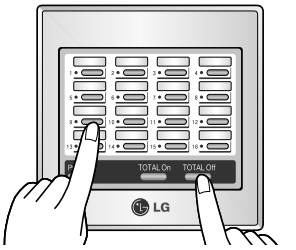


Setting individual lock

Press Total On and individual On/Off button at the same time.

• In this case, equivalent unit is controlled only by Central controller.
After lock function is set, the respective LED of locked unit blinks for 5 sec.

Cancellation

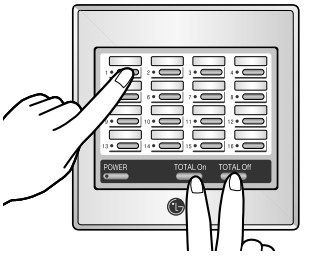


Press, Total Off and individual On/Off button at the same time to cancel the lock function.

• After lock function is canceled, the respective LED of unlocked unit blinks for 5 sec.

• Setting Total Lock for Each Group

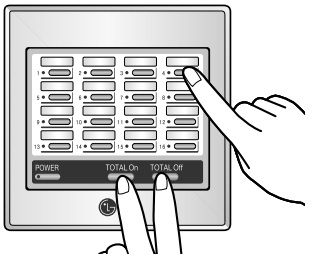
Setting total lock



Press Total On, Total Off and no. 1 button at the same time.

• All linked units are now controlled only by Central controller, and control by remote controller is impossible. After lock function is set, LEDs of all locked units blink for 5 sec.

Cancellation



Press Total On, Total Off and no. 4 button at the same time.

• Lock of all units is cancelled and the LEDs of all unlocked units blink for 5 sec.

Check of the locked units

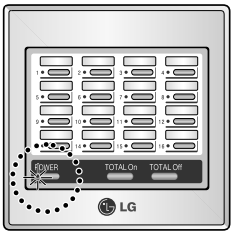
Press Total On and Total Off

• LED of locked units blinks for 5 sec.

• Connected Indoor Unit Search Function

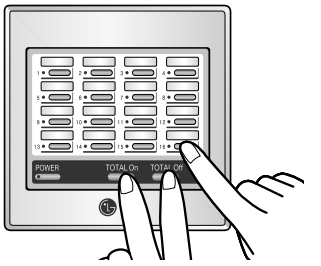
Automatic search

When power is connected to the Central controller set as master, LEDs from no. 1 to 16 will light up in sequence and automatically runs a search for all the connected indoor units for 3 minutes. This is generally the operation just after the installation of the controller.



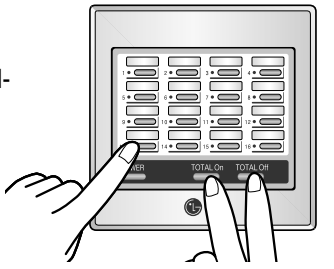
Indoor unit re-search

If all indoor units have not been searched during the automatic search, press the Total On, Total Off and no. 16 button simultaneously to re-search all the connected indoor units from no. 1 to 16 by lighting up the LEDs in sequence.



Connected indoor unit indication

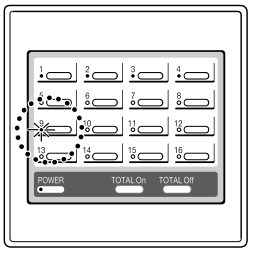
Press the Total On, Total Off and no. 13 button simultaneously and all LEDs of the indoor units connected to a group/central controller and the power LEDs will flash simultaneously to notify which indoor units are connected to the central controller.



• Self Diagnosis for Indoor unit

Normal

The On/Off status indicator LED of individual indoor unit is On/Off (depends upon unit state)



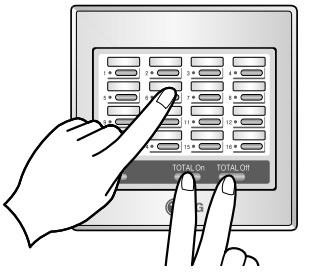
Error condition

If there is an error in the indoor unit, the On/Off status indicator LED of the that indoor unit turns red and when it recovers normal condition, the LED will turn green or orange depending on the operating mode.

• Set Group Inquiry

Press the Total On, Total Off and no. 6 button simultaneously.
The On/Off status indicator LED equivalent to the group number set in the controller will flash.

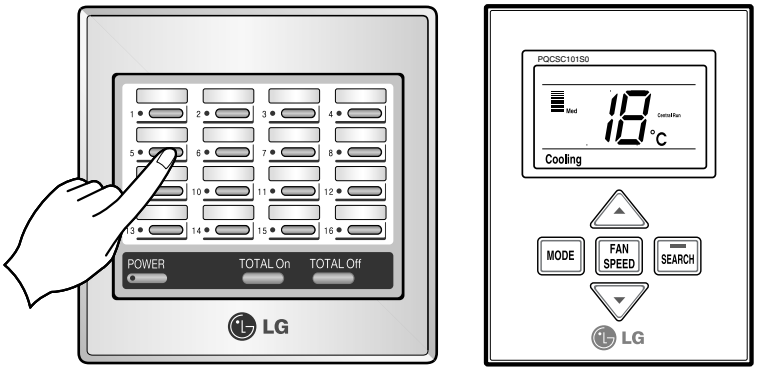
e.g. If LED 2 blinks, the group no. is 1.



• Function Controller Connection

Individual indoor unit control

1. Press the individual On/Off button of the Central controller and select the indoor unit to be controlled.
   Now the applicable indoor unit will start or stop.
2. Function controller indicates the operating status of the selected indoor unit and can be used to change fan speed, set temperature, mode etc. of the indoor unit.

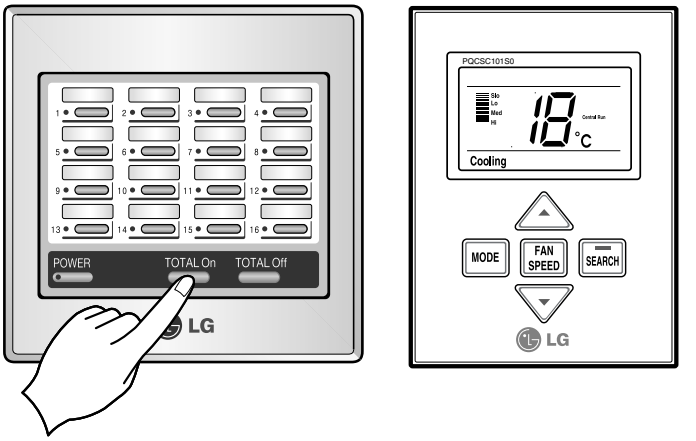


Group indoor unit control(1 group)

1. Press Total On/Total Off button of the Central controller. Then all the connected units will start/stop.
2. Function controller indicates the operating statue of the first indoor unit of that group if no settings have been made at the functional controller.
3. However all indoors can also work under same running conditions as a group by making settings at the functional controller.

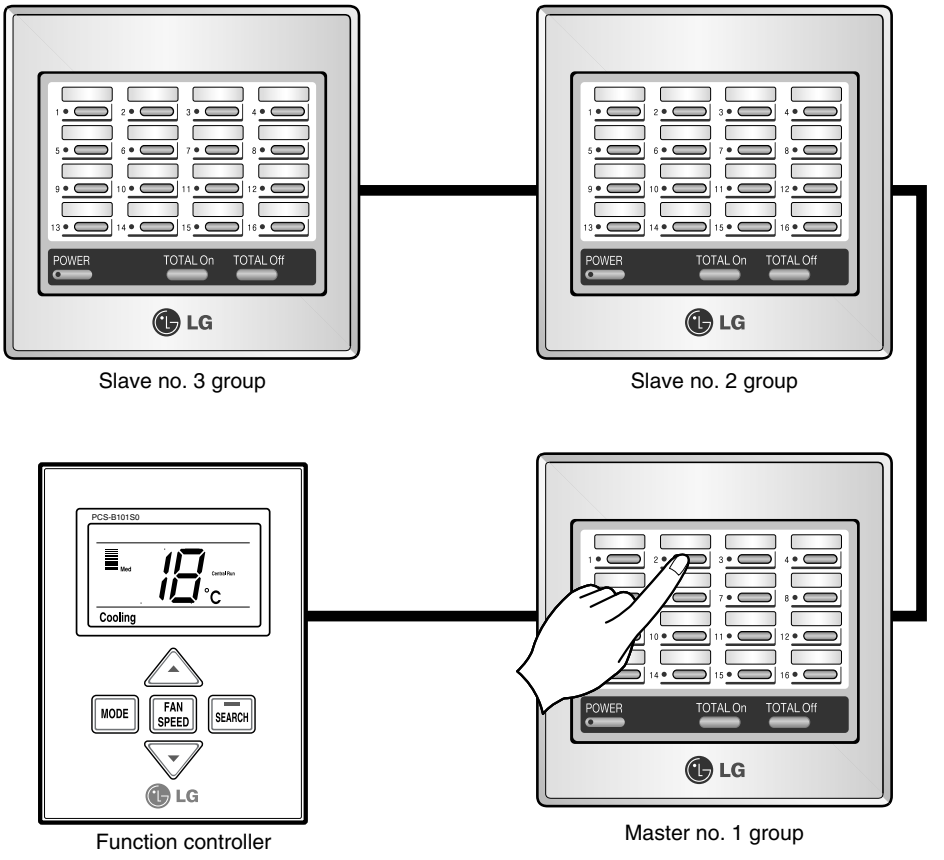
All group(master & slave) indoor unit control

1. Press Total On/Total Off button for more than 3 seconds. Then all indoor units conected to whole network will start/stop.
2. Function control displays the operating status of the first indoor unit of master controller only. It also display "Total on" on its screen. Now the settings can be done for all groups using function controller.



Group selection from master central controller

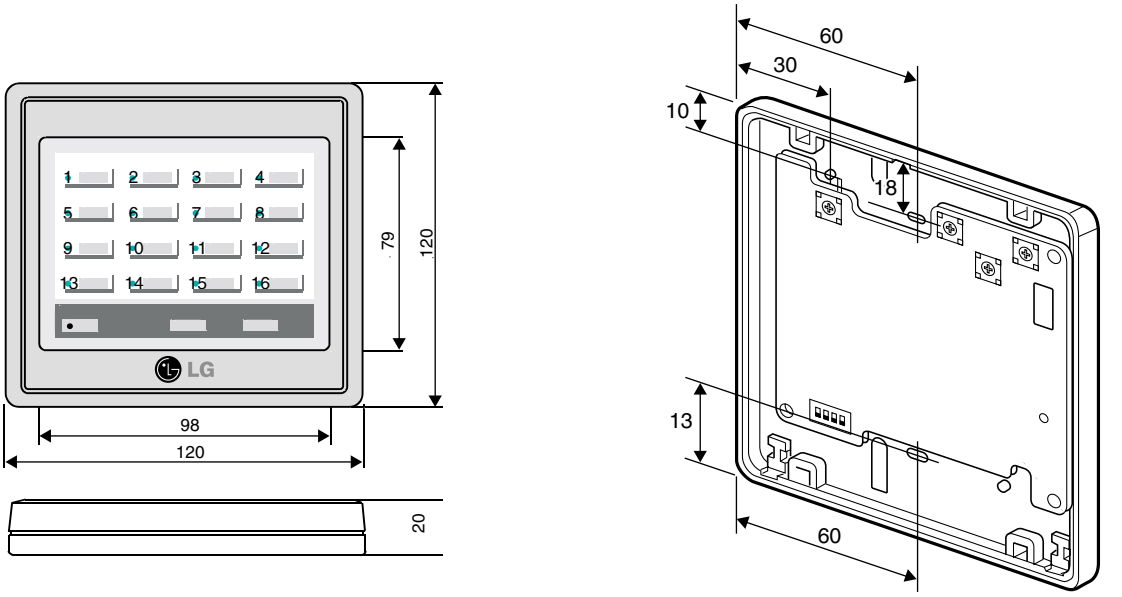
1. Press the On/Off button for more than 3 seconds on the master Central controller equivalent to the group no. of slave controller whose indoor units you want to turn On.
   ex) Press the no. 2 button on master Central controller for more than 3 seconds. Now all the indoor units of slave/group 1 will be turned on.
2. Function controller of the selected slave controller displays the operating status of the first indoor unit. It also displays "Total on" on its screen. Now the setting can be done for whole group/slave indoor units using function controller.



Indoor unit search

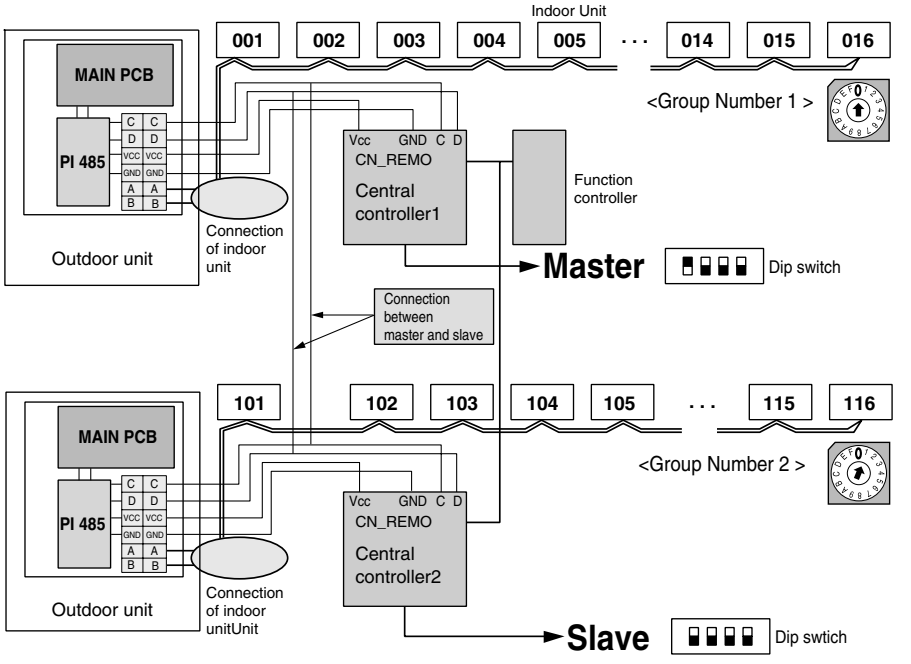
1. Select the search button of the function controller.
2. The On/Off status indicator LED of the applicable indoor unit of the central controller will flash for 5 seconds to indicate that the function control is in progress.

2.1.2 Dimensional Drawing



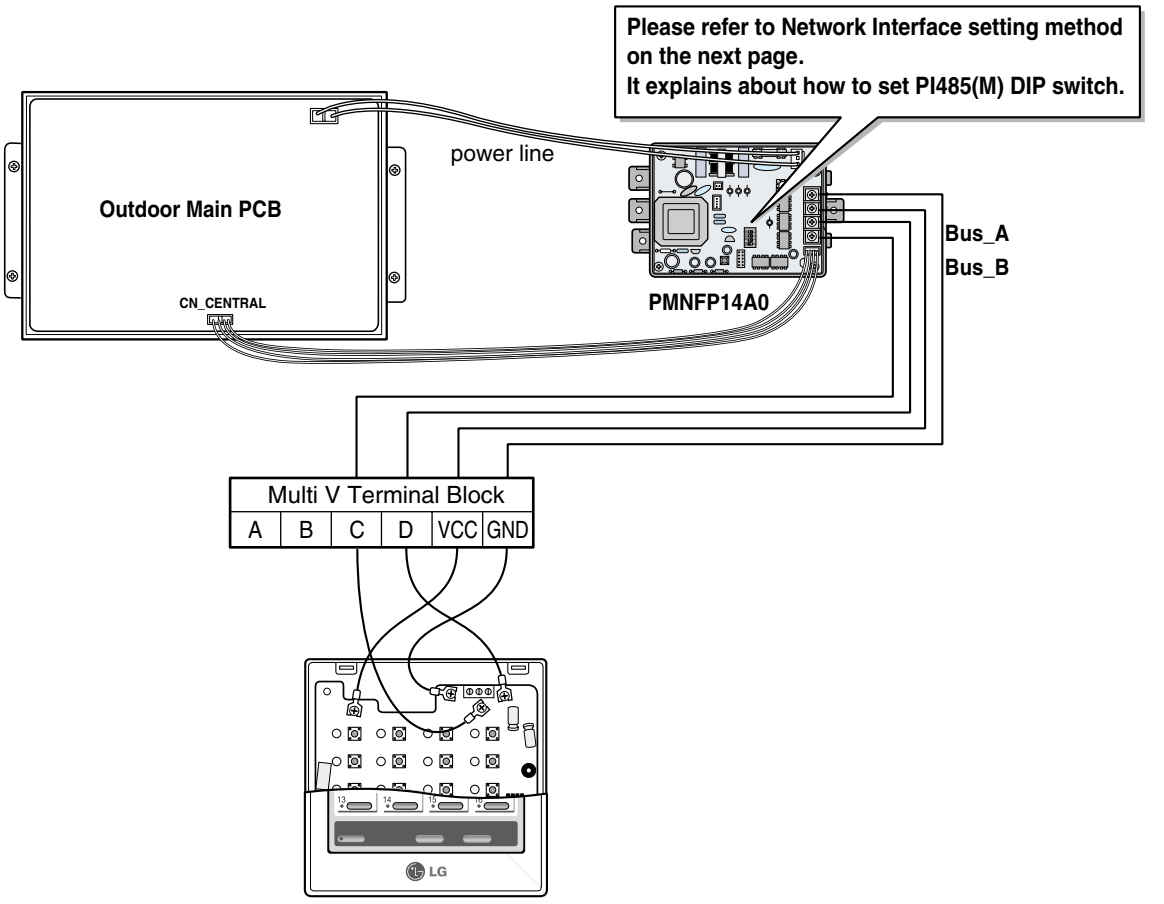
2.1.3 System Wiring Drawing

1. Simple central controller installation (for Multi V unit).
   Multi V (CRU CN)



Function controller and PI 485 are sold separately.

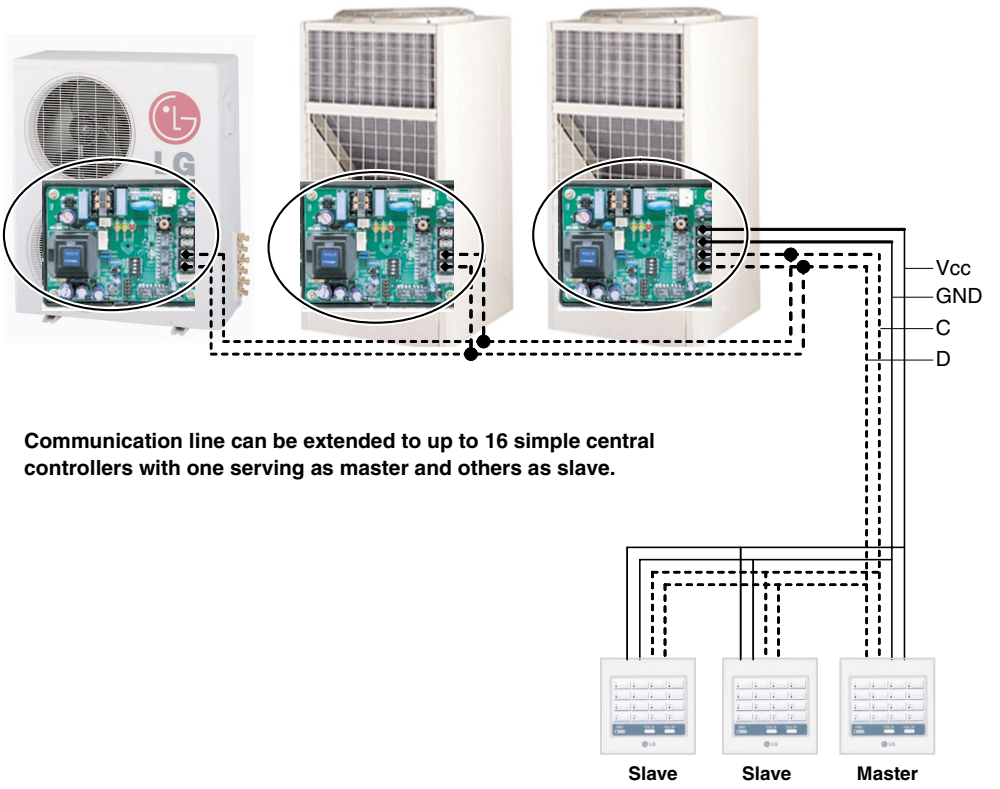
2.1.4 Multi V PLUS & Multi product



NOTE

Use of terminal block in case of Multi V, Multi and other models may or may not be needed. If it is not present, make direct connections.

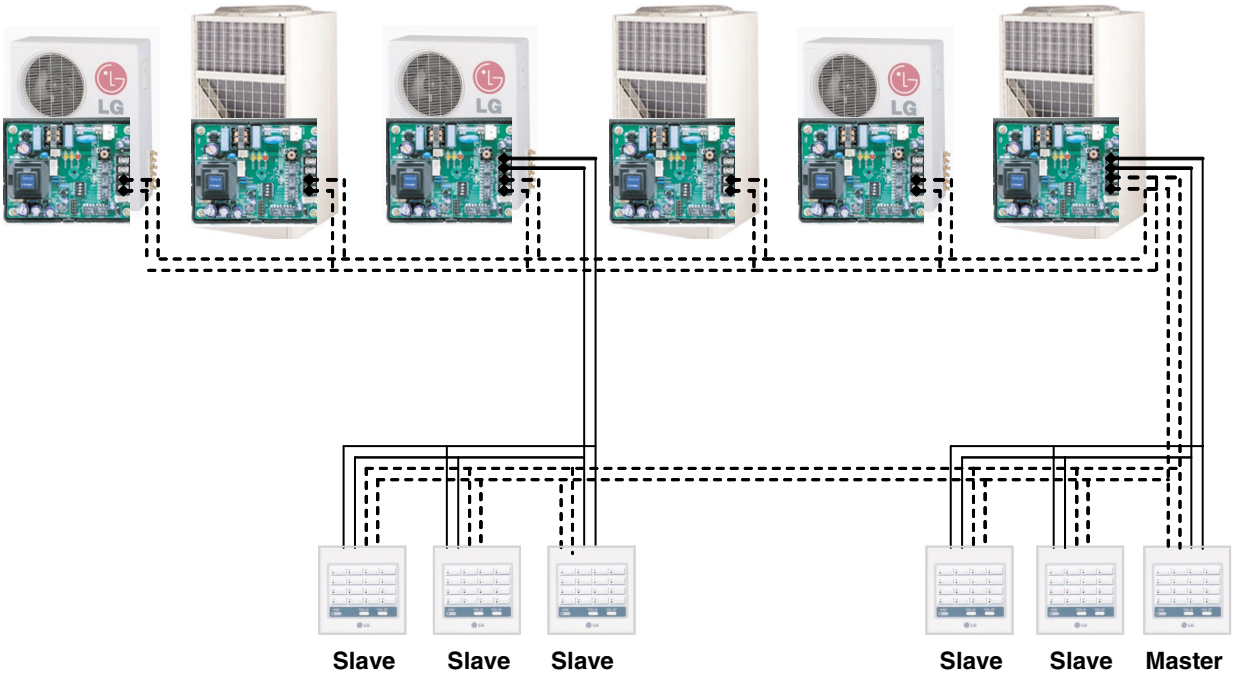
2. Simple central controller installation case 2



Installation method

1. Connect 4 wires to only one remote control from any one outdoor unit. (black lines are Vcc & GND, dotted lines are communication line C & D)
2. Then individually connect line C & D to the each of PI 485 controller without connecting Vcc & GND line.
3. For controller jump all 4 wires for interconnecting the controllers.
4. This saves installation wiring, cost and time.
5. One PI 485 can supply power to maximum 3 controllers only.

3. Simple central controller installation case 3

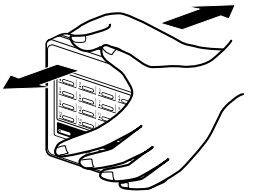


Installation method

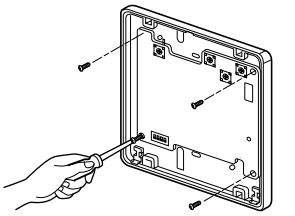
1. Set of three simple central controller are clubbed together in cascade for common power sharing line from the same outdoor.
2. Communication line can be commonly shared among all controllers (dotted lines).
3. Maximum of 16 controller can be clubbed in cascade system i.e. maximum 256 indoor units can be controlled.
4. One PI 485 can supply power to maximum 3 controllers only.

2.1.5 Method of Installation

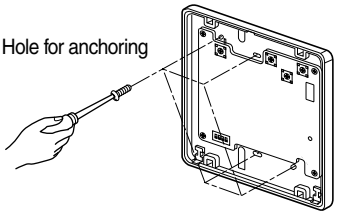
1. Hold the front/rear central part of the central controller with both hands and then separate the case by pulling it ahead or behind while lightly pressing the front case.



2. Loose 4 screws anchoring PCB and then separate the rear case and PCB.



3. Anchor the rear case on the installation surface at holes using anchor screws and then join the rear case and PCB.

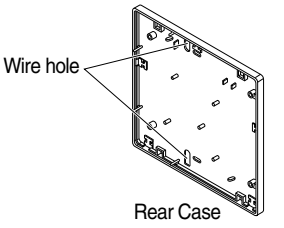


⚠CAUTION

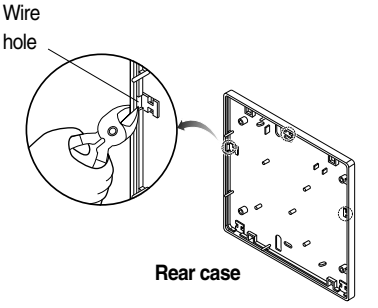
1. Install the product on flat surface and install anchoring screws at more than 2 places. Otherwise the Central controller may not be anchored properly.
2. Do not tighten the anchoring screws too tightly. It may cause deformation of the case.
3. Do not deform the case at random. It may cause malfunction of the central controller.

4. Connect the connection wires according to the instructions (See chapter 2.5)

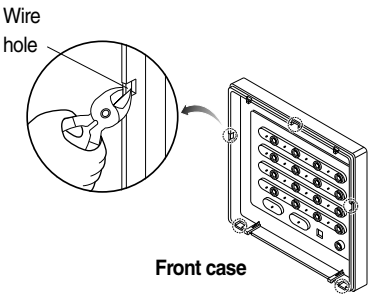
• To take out connecting wires from back side of case, use the wire hole on the rear case.



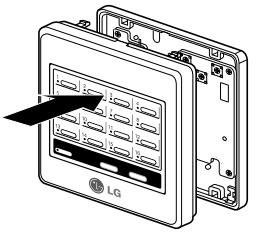
• To take out connecting wires from front sides of case, puncture the dotted spots as shown in the picture and take out the connecting wires out fo it.



5. Perform the switch setting according to switch setting method.
   (See chapter 2.7)



6. Properly push and insert the front case into the rear case.



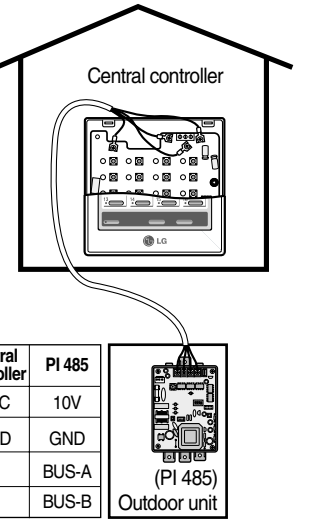
7. Check operation after applying power.

⚠CAUTION

Always check addressing of the indoor units before turning On. If setting is not done properly, it may cause malfunction.

2.1.6 Method to Connect Wires

1. Make connection between PI 485 installed on the outdoor unit and Central controller.



Central controller	PI 485
VCC	10V
GND	GND
C	BUS-A
D	BUS-B

2. To supply power to the central controller, supply it from the terminal block Vcc and GND terminal of PI 485 or supply it through a separate DC 10V power supply unit.

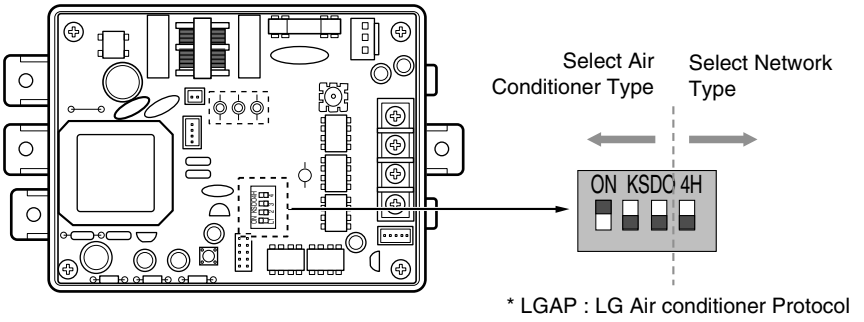
• Where multi Central controllers are installed, refer to system wiring drawing.
(See chapter 2.3 and 2.7)

⚠CAUTION

1. For supplying DC10V power from PI 485, the power can be supplied to max. 3 central controllers per PI 485. When supplying power to more than 3 central controllers, failure may occur in operation of the Central controller.
2. For expanding and connecting PI 485 communication lines C, D up to 16 Central controllers can be connected. (In case if functional controller is also connected, then only 8 controllers can be connected.)
3. Use the 0.75 Square Shield wires for connection wires between PI485 and Central controller wires.
4. For length of connection wires, observe the following regulations.
   - Length of connection wires between Central controllers: Less than 1m
   - Length of connection wires between outdoor unit and Central controller: Less than 200m
   - Length of whole connection wires: Less than 1Km.

2.1.7 Network Interface Connection

• P1485(M) Dip Switch Configuration



MULTI V PLUS & MPS multi products.



➡ 1 On, All others Off: MULTI V PLUS & Multi inverter product



➡ 2 On, All others Off: Multi variable product

⚠CAUTION

The wrong setting of air-conditioner switch causes malfunctioning of the system.
Switch setting must be done carefully.

2.1.8 Method to Set Switch

• Group Setting

Select the group using rotary switch in the PCB of the Central controller.

Group number	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Setting of rotary switch	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

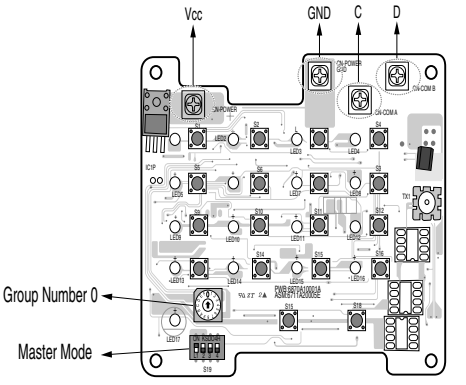
• Setting of Master/Slave

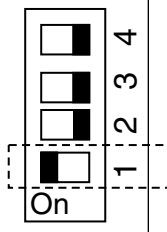
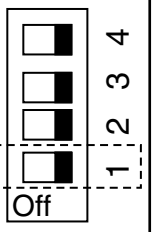
Using dip switch no.1 located in the front of controller PCB, set the relevant central controller as master/slave as per the requirement.

Installation of 1 central controller: Dip switch no. 1 On and no. 2, 3, 4 Off (Master)

Installation of more than 2 central controllers:
Dip switch no. 1 On/no.2, 3, 4 Off (Master)

Dip switch no. 1, 2, 3, 4 Off of remaining central controller (Slave)



Master/ Slave Class	Master controller	Slave controller
Setting of dip switch		

CAUTION

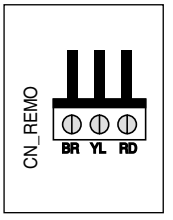
1. For setting of Group/Master, use precise driver [(-) 20mm(W)] and set applied weight to 198N (2kg) or less. When applying unreasonable force, PCB and switch may be damaged due to shock.
2. Do not set more than 1 master. Where multiple of Master is set, communication with the outdoor unit is not done and thus it becomes impossible to control the indoor unit.
3. Always initialize power after setting the switches. If power is not initialized, it becomes impossible to recognize the settings of group and master/slave.

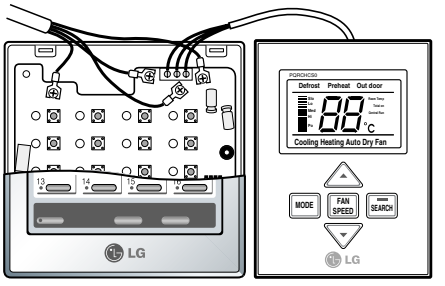
• Connection Method of Function Controller

Power should always be off while connecting function controller to the Central controller.

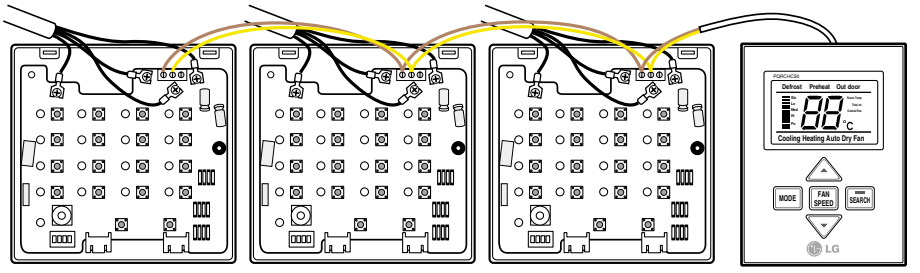
1 Connect the function controller as shown below. Symbols shown as CN_REMO at the terminal block of the Central controller and color of cable connecting the function controller must correspond.

Central controller CN_REMO	Function controller cable
RD terminal (12V)	Red
YL terminal (signal)	Yellow
BR terminal (GND)	Brown





2 Connect red wires and brown wires to the relevant terminals of the Central controller at CN_REMO respectively a where a function controller is also connected as shown below.



3 Close the central controller case and check the operation after application of power.

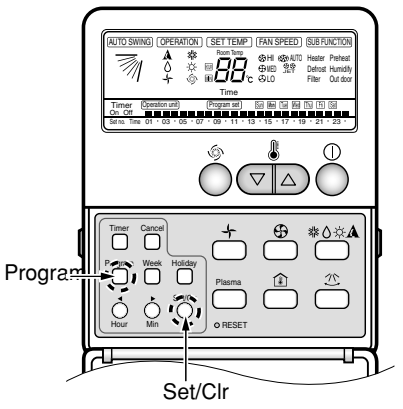
CAUTION

1. Adhere the communication cable between function controller and Central controller.
2. Use 3P-0.75 square wires where cable extension is required.
3. Installed cable length should be within 1m.
4. If wiring is not proper, the product may be damaged or not operate when the power is applied.

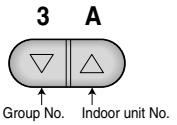
2.1.9 Addressing of Indoor Unit

• Addressing of Indoor Unit

Using wired remote controller

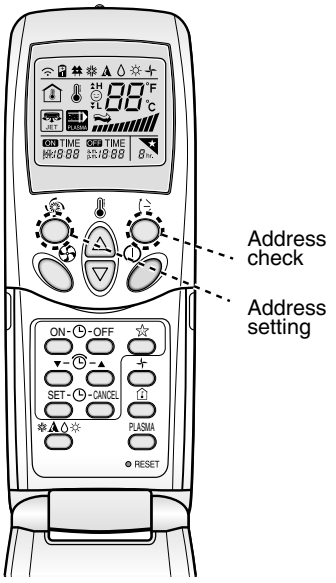


1. Press the Program & Set/Clr keys at the same time to activate the settings.
2. Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



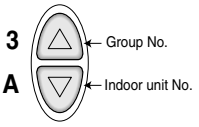
3. To complete the address setting, press the Program & Set/Clr keys at the same time for 3 seconds.

Using wireless remote controller



A. Address setting mode

1) Keep pressing upper left side key continuously and press RESET button once. Now the system is ready for address setting.(The left key should be pressed over 3 seconds)
2) Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



3) After setting address, press ON/OFF key once towards indoor unit.
4) The indoor unit shows the set address and it means completion of address setting process. (The address displaying time and its way can depend upon the type of indoor unit)

B. Address check mode

1) Keep pressing upper right side key continuously and press RESET button once. Now the system is ready for address checking.(The right key should be pressed over 3 seconds)
2) Press ON/OFF key once towards the indoor unit which shows set address on the display(The address displaying time and its way can depend upon the type of indoor unit)
3) Reset the remote controller to use it in the normal operation mode.

❉ Some remote controllers may not be supported by above functions according to the production date of wired/wireless remote controllers. As it has no concern with customers' use, use the remote controller available for the address setting during installation.

❉ It would be added how to set address of the simple central-control indoor unit.

2.1.10 Troubleshooting

1. Cross check again, if all connection are made as per instructions given in the installation manual.
2. In case, if multi products (Multi-V, Multi etc.) are connected to the controller (to one network), first finish the settings for all products & only then start the system.
3. Dip switch setting of PI 485 pcb as per the product type & the group no. mismatch between controller & its respective indoor units are the most common mistake usually happen.
4. Group no. set at rotary switch of SCC connected to outdooor unit must exactly match with all indoor units connected. Incase any indoor units have same address settings, the system will not take them into its network.
5. Turn on the system & give sufficient time to the system to check the whole network connectivity. In some cases, it takes time to show all indoor units connected on the controller. Also the display can be random.
6. Using PI 485 pcb also, we can check if no. of indoor units connected matches exactly with no. of indoor units installed. Press the refresh button on PI 485. A little later, its red LED (LED01G) would blink no. of times equal to no. of indoor units installed. If the numbers doesn't match, check again the address settings of all indoor units.
7. Never ever change the settings while the system is running. Stop the system & then make the required settings.
8. For new settings to take place, sometimes, it is advisable to turn off indoor units and then the main power. After a short while, restart the system. (This is not a fixed guideline but be considered case by case)

Defect phenomena and inspection method

Defect	All units connected to the central controller are not controlled .	Only some special indoor unit is not controlled
Inspection Method	• Press "Total On + Total Off and no. 16 button" together. check all connected units to. Trial operation sequence may be wrong or sequence may stop /install place change, indoor inspection may be wrong . • Confirm whether the indoor unit address (rotary switch of the central controller) set at is matching with group number. If the group number is different there will be no communication . • Confirm whether the selected master controller's (for the 16 units) DIP switch number Off] (Slave Selection mode). In case of many central controllers are installed, only one will be the master and the remaining will be slaves . • Confirm the wiring between the outdoor and PI 485 wiring and PI 485 with 16 room central controller. 485 communication wire's A/B if exchanged with one another will not do any control. • Confirm whether the communication shield wire is connected exactly. • Confirm whether the PI 485 LED is blinking (confirm whether it is in communication). In case, the LED is not blinking then may be there is no signal at PI 485. Check the PI485 and outdoor condition.	• Press "Total On + Total Off and no. 16 button" together will check the connected indoor units. In case the initial indoor unit is not checked then conform the following contents. • Operate the indoor unit and check the communication between the indoor and the outdoor. In case of no communication between the indoor and the outdoor unit then it means that there is no communication with Central controller. • Address setting confirmation In case there is same address of more than 1 indoor unit, then there is communication overlapping between the central controller and the address overlapping indoor units. • The Central controller will not recognize the indoor unit which is not registered with the central controller.
Defect	• In a Central controller, 2 LEDs are blinking simultaneously for the indoor operation and the power .	Central controller power LED is Off.
Check method	• Check the wired remocon for the concerned indoor unit . In case of the above defect, an error code appears in the wired remocon .Repair the concerned indoor unit for which the remocon is showing the error code .	• Check the voltage difference between the Vcc and the GND In case the difference is less than DC 10V, then check the Central controller connection with PI 485.
Defect	• Units stop operating in case of CH07 error code.	When pressing the button on the wired remocon, there is "HL"(display with no operation)
Check method	• Different mode of operation? Multi system is a product having single outdoor and many indoors . Thus all indoor units have to operate in the same mode ie either heating mode or the cooling mode Both modes cannot be operated at the same time. The CH07 error will disappear if you put all indoor units in same operation mode (either heating or cooling mode)	• HL (Hard Lock)? HL is abbreviation for "hard lock" and it means the unit is locked from Central controller not to be operate by wired controller. • Check up: Check if the concerned indoor unit is locked from the Central controller. In this case, cancel the locking from the Central controller to operate the unit.

2.2. Deluxe Central Controller

2.2.1 Overview

• Deluxe Central Controller abstract

LG Deluxe Central Controller (DCC) is a unique controller developed for LG Air Conditioning which has both individual as well as whole system monitoring function to control up to 256 units at a time.

Being incorporated with touch screen, a variety of functions like operation mode, fan speed, temperature setting etc can be set & displayed individually on controller's screen. With simple structure & easy usage, it offers a user friendly centralized control of the system matching all kinds of field applications.

Even during abnormal operation conditions like frequent power failures, it works properly due back up to inside battery. It can prevent the use of individual remote controller as the full control of system can be administered from a central location. The system can be locked which disables the use of individual remote controller. This helps to prevent unnecessary usage / tampering the settings of air conditioning system.

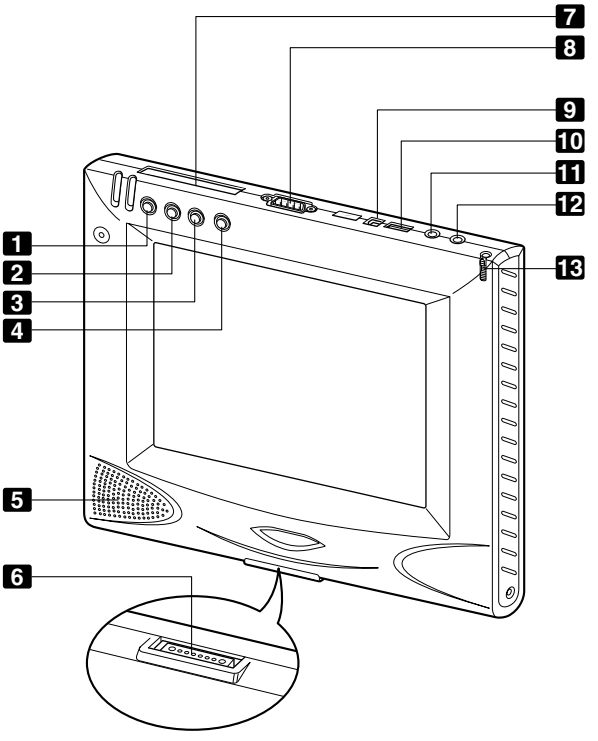
Through Weekly scheduler, we can set the system operating intervals for one week. Using this, the system will be operated automatically as per the settings made. Such application is useful at Schools, Offices etc which has intermittent working intervals. The schedule contents are set graphically & up to 3 confirmations are possible.

Since there is no additional equipment other than the controller itself, so its easy to install and the system can be easily updated with latest configuration whenever needed.

LG also offers to supplement the controller with additional features based on customer's specific needs.

2.2.2 Deluxe Central Controller configuration

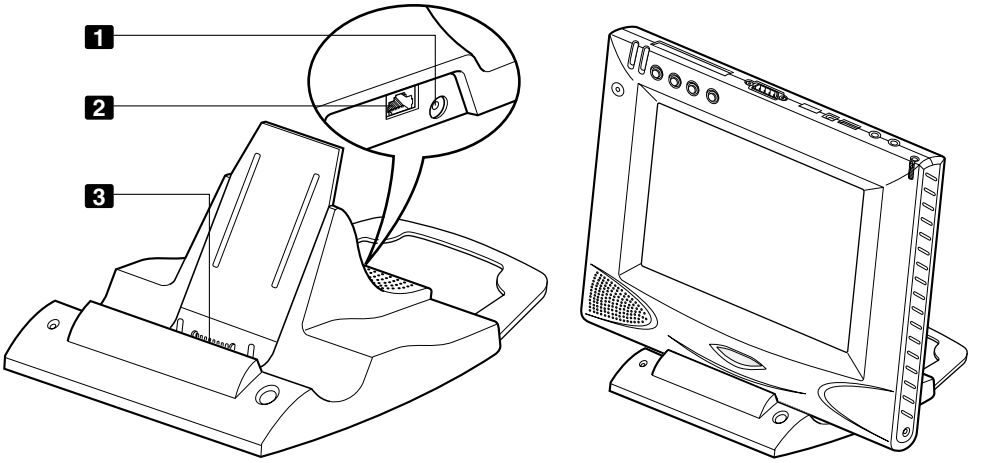
• Deluxe Central Controller



Deluxe Central Controller

1. Power-On/Off
2. Help
3. Screen Key Board Panel Pop-up and Keyboard appears.
4. Deluxe Central Controller IP setting
5. Speaker
6. Cradle holder
7. PCMCIA type II slot
8. RS-232C serial port
9. USB(Host)
10. USB(Slave)
11. Microphone
12. Headphone
13. Stylus pen

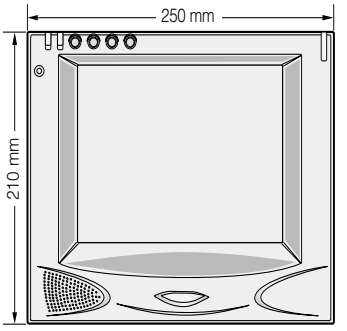
• Cradle



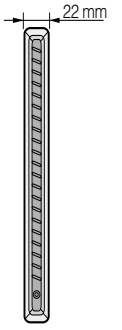
Cradle

1. All Connector DC 12V, 1.5A
2. RJ45 Connector
3. Deluxe Central Controller Holder/Connector

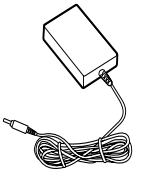
• Deluxe Central Controller accessory parts



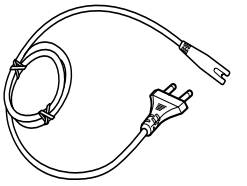
Web Pad Frontview



Sideview



Power Supply External S.M.P.S



International standard
IEC320 C8 TYPE

Power Cord : 100~250 VAC
50/60 Hz Input
*** Note : Not Provided**

• Major Characteristics of Deluxe Central Controller



1. Individual/Integrated Operation & Monitoring

User can easily identify existing operating parameters such as operation mode, fan speed, locking etc of air conditioner by individually selecting the relative unit. Whole set up is displayed on the screen including detailed explanation of functions.

Hence it easy for the controlling person to use the controller from a central location to control whole air conditioning system in a place where a variety of units have been installed.

2. Group Management

Managing the system for a group is also possible here. As per location, size or type, the system can be divided into a number of groups. Each group can be named separately to distinguish between themselves. This allows easy management.

3. Self Diagnosis

There is an in-built self diagnosis feature which monitors the proper working of the system & in case of error, the respective error code is displayed making it easy for the user to know the error cause. This reduces overall troubleshoot period.

4. Semi-permanent Life/Convenient Maintenance

The controller & its components have been designed & assembled is such a way that it ensures a long working life of the Controller, almost semi-permanent.

5. Overall Management Cost Down

It greatly helps to reduce overall system management cost. In its absence, the user must control many units individually which requires a great deal of time & efforts. Specially it can be more painful if we are controlling the systems installed at different places. However a central control offered by this controller guarantees easy & effective control in a short duration & with less efforts.

6. Convenient GUI/Touch Screen

There is no need of any special guidance or training to operate this controller. All functions can be easily understood with its intuitive pictogram. All the settings can be done directly at its touch screen. Especially the schedule setting can be done simply by dragging the screen. This process is patented and far better than conventional process which requires over 30 times to press the button for schedule setting.

7. Schedule Automatic Operation Management/Energy Saving

Weekly setting can be used to use this feature. The expected operating timings & conditions can be input for even one year along with exception on Holidays when the system should no work at all.

Such feature allows automatic control to avoid unnecessary system operation and to be used only during requirement. This directly has energy saving effect also. User can apply this kind of control in schools, colleges, universities etc.

8. Power Failure Backup Function/Power Stability

There is in-built battery for data back up in case of power failure. The battery is charged in 2 hrs and it ensures to keep the data intact and a stable system operation after power resumes.

9. Convenient Installation

As per conditions, the controller can be easily installed over a variety of locations from wall to stand. Small size, light weight & thin thickness makes it easy to to fix it on a table using it's cradle.

10. Stable Date Storage/Backup

As explained earlier, due to inbuilt battery, there is always data back up. Hence system always remembers the initial settings irrespective of power failures.

11. Upgrade

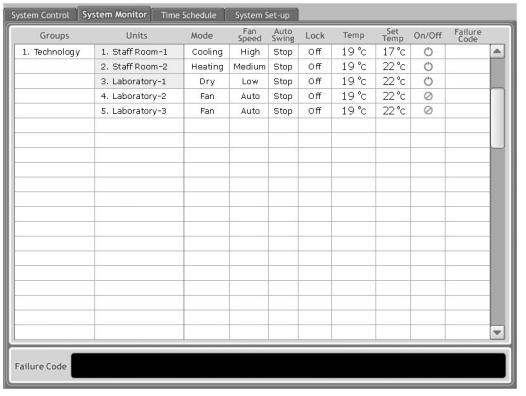
The system can be upgraded with any additional information or new software for extended service using CF memory card any time.This keeps the controller using latest control logics to give better performance with time.

• Main Functions of Deluxe Central Controller



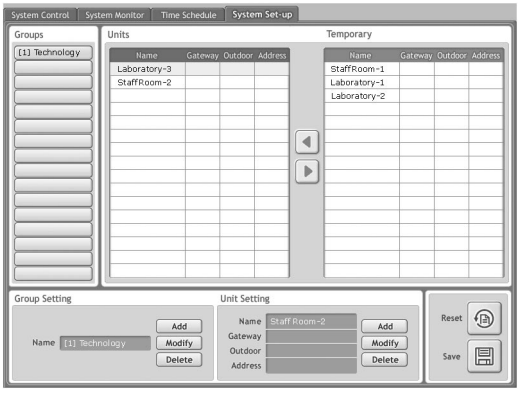
[System Control]

To check general monitoring functions of the Central controller system such as group selection and air-conditioner selection, air-conditioner control monitor function etc.



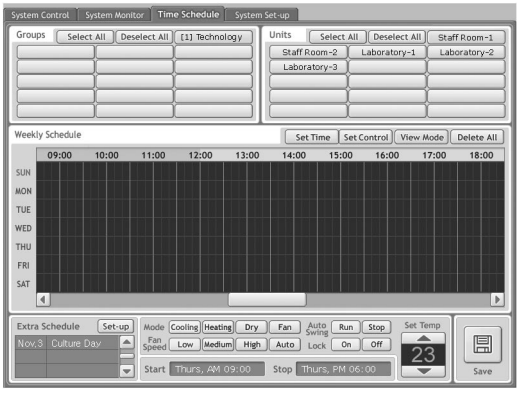
[System Monitor]

To check the actual status of the air-conditioner at the current time.



[System Set-up]

To manage the air-conditioners through grouping and record the setup of group and installation position, etc.



[Time Schedule]

Setup of a weekly schedule for all, group and individual air-conditioner enables operation of the system. Processing through enlist of extra schedule for a year is available.

PQCSW502A0

2.2.3 Configuration and Functions of Screen

• Main Screen

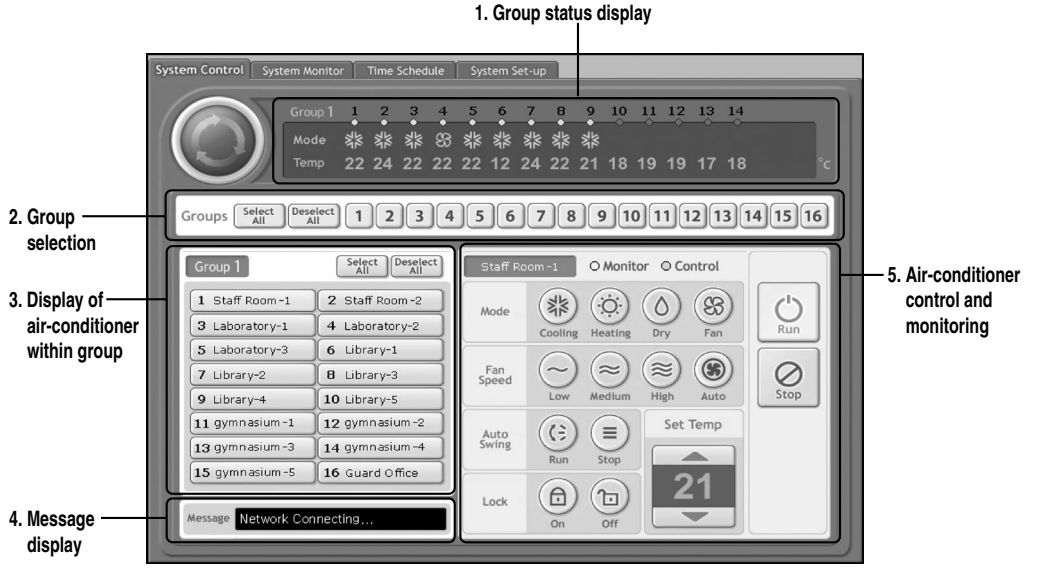


Main menu currently provided from the program is as follows:

- System Control
- System Monitor
- Schedule Control (PQCSW502A0)
- System Setting

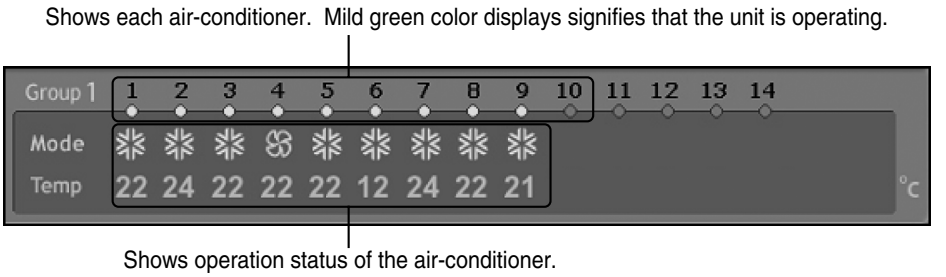
2.2.4 System Control

Let us understand about each part of system control and basic function of the Deluxe Central Controller and learn how to use it through an example.



• Explanation of Each Function

1. Group Status Display

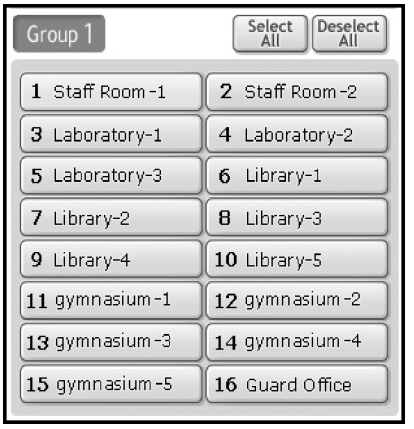


2. Group Selection Window



Shows all groups you can select/deselect any individual or all groups at a time, for individual control, directly click the group number. For all groups control, click Select All/Deselect All button.

3. Display of Air-Conditioner Within Group



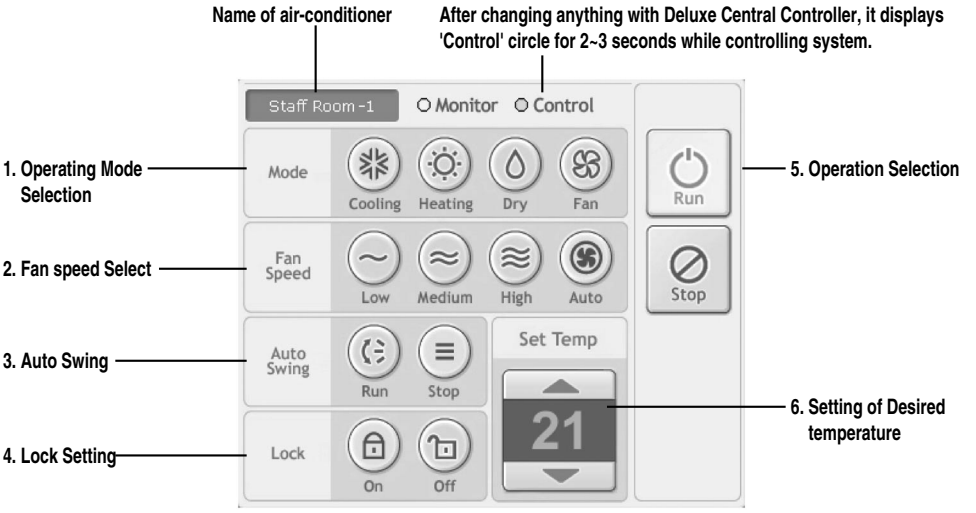
Here we can see any group, where a maximum of 16 air-conditioners can be set. Information for each air-conditioner complies with information enlisted on the Deluxe Central Controller. Individual selection or multiple selection of each air-conditioner is available as well as 'Select All' and also 'Deselect All' is available.

4. Message Window



Contents concerning air-conditioner connection status and error status appear in the message window. In addition, when the selected air-conditioner is operating, control status (operation mode, setting temperature, fan speed, operation status) can be seen at the window.

• System Control & Monitoring



■ Shows information of finally selected air-conditioner in the View Mode.

1. Operation mode selection

Cooling : You can select desired temperature in the range of 18 ~ 30˚C.

- Since excessive cooling is harmful to human health, please set appropriate desired temperature.
- Cooling operation is not carried out if the desired temperature is set more than indoor temperature in the cooling mode -> the unit operates in the blowing mode in such conditions. The desired temperature must be adjusted lower than indoor temperature.

Heating : You can select desired temperature 16 ~ 30˚C.

- Since excessive heating is harmful to human health, please set and use appropriate desired temperature.
- Heating operation is not done if the desired temperature is set less than indoor temperature in the heating mode -> the unit operates in the blowing mode in such conditions.
  The desired temperature must be adjusted higher than indoor temperature.

Dry(removal of moisture) : You can efficiently remove moisture if you use system in summer or at the high moisture conditions. During this mode, you can not set or change the temperature.

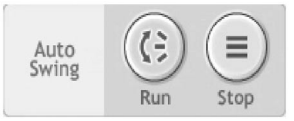
Fan(blowing) : This is an air blowing operation mode where wind comes out without cooling or heating effect. You may use air cleaning generally in spring or autumn season. During this mode, you cannot set or change the temperature.

2. Fan Speed Selection



Fan Speed: This is a function to adjust fan speed.
You can set fan speed by pressing this button.

3. Air Flow Selection



Auto Swing(air flow): Displays air flow of the current air-conditioner.

❉ Note: Some indoor units cannot support this function.

4. Lock Setting



Lock: To lock any indoor unit. If the lock mode is set, then control by a wired or wireless remote control is not possible.

5. Operation Selection



Run: To operate the selected air-conditioner. It can be used either to start any individual unit or all units of a group or all groups altogether. For whole group or all groups simultaneous control, use their Select all/Deselect all button respectively.



Stop: Stops the selected air-conditioner.

6. Setting of Desired temperature



Desired temperature: Set the desired temperature with the st button.
The desired temperature is adjustable 18 ~ 30°C for cooling and 16 ~ 30°C for heating.

Heterogeneous operation warning

Multi V air conditioning consists of several indoor units connected to one outdoor unit through a pair of refrigerant pipes.

It is impossible that one air conditioner is in cooling mode and others are in heating mode, because the unit through a pipe can not control cooling and heating at the same time.

There is one air conditioner is driving , available changing selection by all modes, but there is impossible changing running mode,in the structure, in case of running air conditioners more than 2.

This driving is called heterogeneity driving.

Dehumidification that is cooling (automatic) driving is operated though outdoor machine returns is included with heterogeneity driving.

Fan is not included with heterogeneity driving because is driven regardless of action mode of outdoor machine.

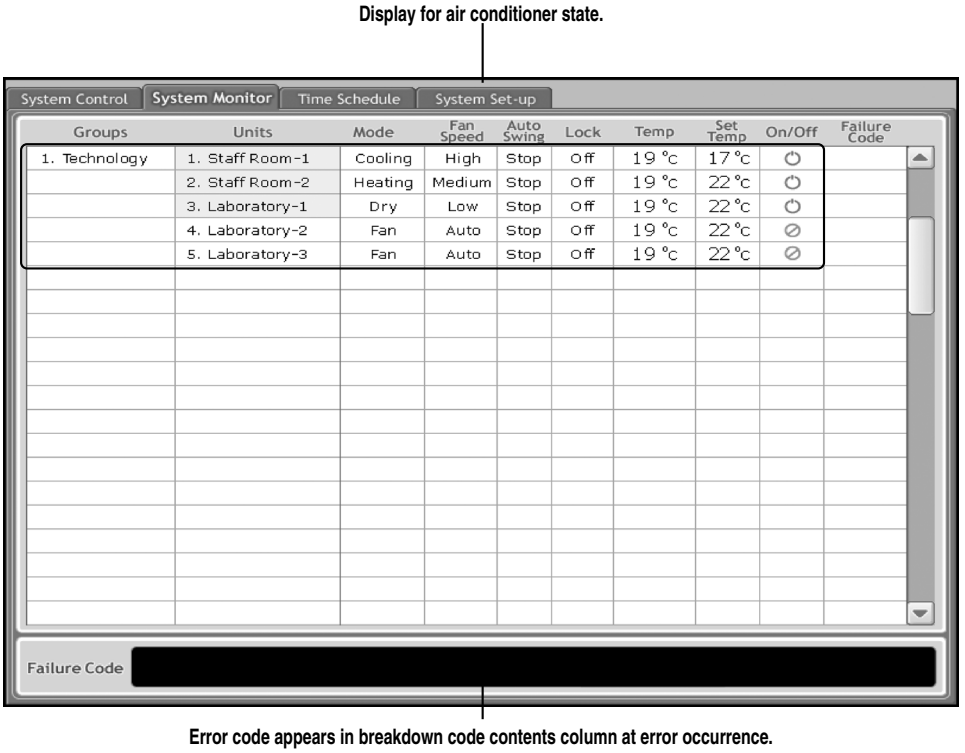
points to observe

When several air conditioners that have several control modes and functions setting are all selected and changed to one control mode, other functions setting except control mode will be remained . Therefore, when operating whole air conditioner, it is convenient to choose all control set that oneself always wants.

• Air conditioner that is not registered in system setting can't be controlled or monitored.

2.2.5 System Monitor

Operation mode, fan speed, Auto swing, Lock, Indoor temperature, Set temperature, Operation status, failure status of all groups can be seen using the scroll bar.

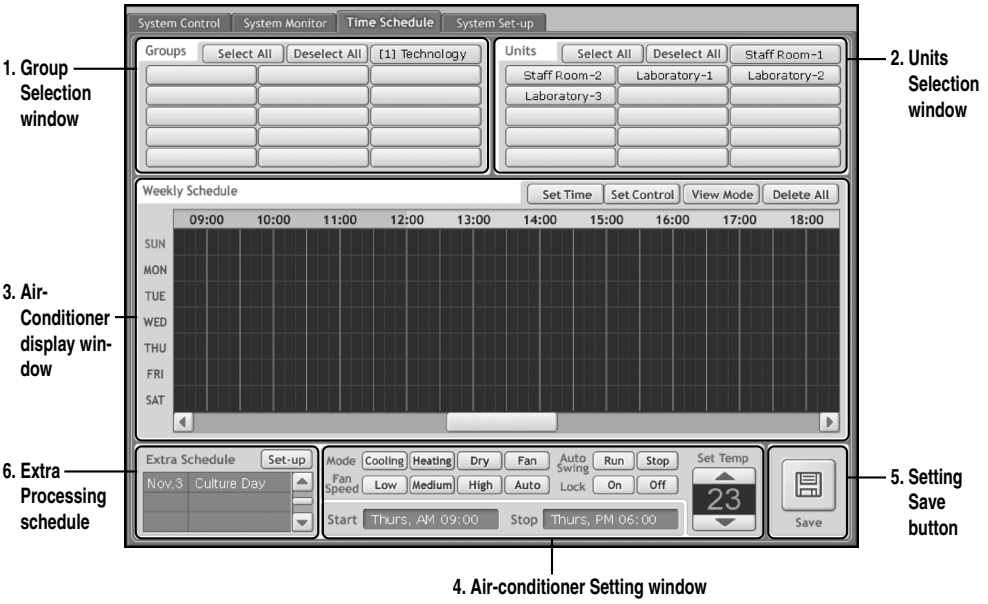


• In case of an error, please refer to the error code book or contact A/S center of LG Electronics located nearby.

2.2.6 Schedule Control

Schedule control function, the most advanced function of the Deluxe Central Controller enables to set all functions of the air-conditioner including group and air-conditioner selection, weekly operation schedule function, extra processing schedule function, air-conditioner control, setting save function. You must firstly set the group of air-conditioner in the system before starting schedule control.

• Configuration of Schedule Control Screen



• Explanation of "Schedule window" Functions

1. Group Selection Window

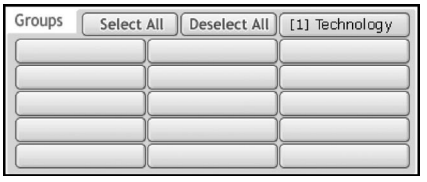


Fig. on the left shows all groups set in the central controller. “Select All” and “Deselect All” functions are available. Yellow color indicates the selected group.

2. Air-Conditioner Selection Window

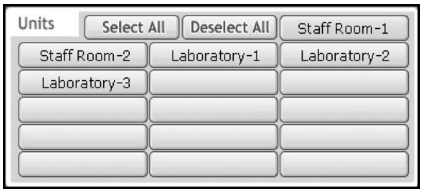
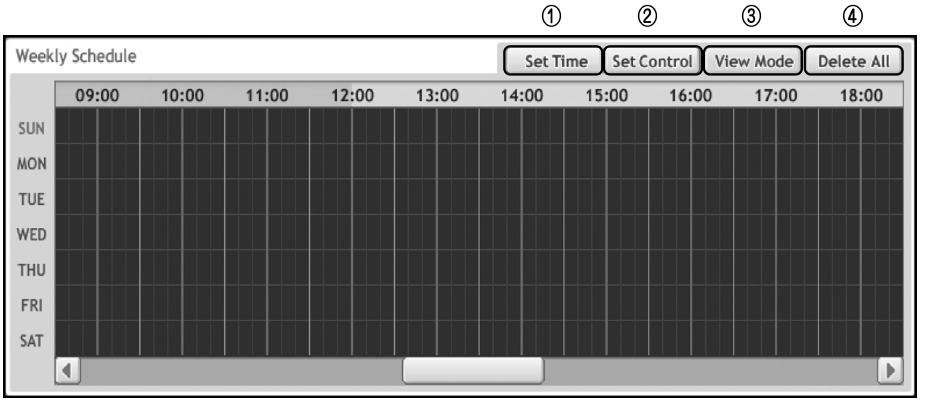


Fig. on the left shows air-conditioners within the selected group. “Select All” and “Deselect All” functions are available. Yellow color shows the selected air-conditioner.
Press the Indoor unit button to cancel the selection.

3. Weekly Schedule Display window



① Set time
This function sets the weekly operation schedule by hours for the selected air-conditioner.
Display the desired time zone by dragging the screen with a stylus pen. While setting a lot of time zone, draw the desired time zone horizontally. Setting per 10 minutes is possible. The Set Time mode is separated into morning (AM-gray) and afternoon (PM-amber). You can select easily with a scroll bar and set the time. If the setting is wrong, you can delete it again by selecting the time zone to be deleted. Always select the Set Save Button if schedule setting is completed.

② Set control
Operations mode, auto Swing, fan Speed, lock and set temp are controlled according to the selected air-conditioner schedule. Control setting by air-conditioner, time zone on the schedule is available.

③ View mode
Shows only the schedule of the selected air-conditioner.
• Control function can be set with the view mode.

④ Delete all
Deletes all schedules of the selected air-conditioner

4. Air-conditioner Setting Window



Operation mode, fan speed, auto swing, lock and desired temperature are controlled according the selected air-conditioner schedule. Control setting by air-conditioner, time zone on the schedule is available.

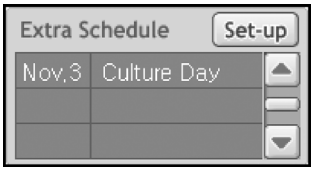
5. Save Setting Button



To save the operation mode, auto Swing, fan Speed, lock settings selected from the set control mode, select the "Save" button.

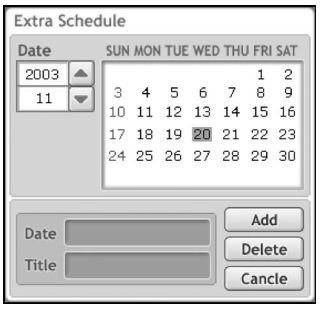
• During saving the settings, other setting may not be possible. After the saving is finished, the button returns to yellow color. Doing other setting is allowed after that.

6. Extra Schedule Window



This is a function to add or subtract a specific date from the weekly operation schedule.

To enter the exception processing schedule, select the Set-up button.



Select year and month with the button after clicking the 'Year' display window or the 'Month' display window.

On selecting the date from the calendar as shown in the fig, the exception processing date is automatically entered into the date display.

To enter the text into the title box, enter it by typing from the keyboard buttons. Then press the "Add" button.

To delete the entered date, select the "Delete" Button after selecting the date to be deleted.

To exit the extra schedule, select the "Cancel" button.

• Sequence of Schedule Setting

Keep follow below procedure or schedule function will not work.

1. Click View mode button and select indoor unit.
   and check the previous schedule information.
2. Click Set Time button and Drag schedule time.
3. Select mode, fan speed, set temperature, and lock setting.
4. Click Set control button.
5. Repeat sequence 2~4 until the completion of schedule for the indoor unit.
6. Click Save button.
7. Click View mode and click the indoor unit to check the scheduled information for the indoor unit.
8. Repeat sequence 1~7 for every indoor unit.

NOTE

1. Duration for each schedule in the indoor unit must be 10 minutes.
2. Keep follow the above procedure.
3. After you finish schedule setting, Check your scheduled information by sequence 7.

• Example of Schedule Setting(1)

We will set schedule data into ac0-2 indoor of Group1

① Monday AM 9:00 ~ 12:00 ‘ COOL, Fan Speed:LOW, 23°C

② Monday PM 1:00 ~ PM 6:00 ‘ COOL, Fan Speed : Medium, 20°C

1. Click view mode and ac0-2 indoor of Group1 to check previous schedule information.



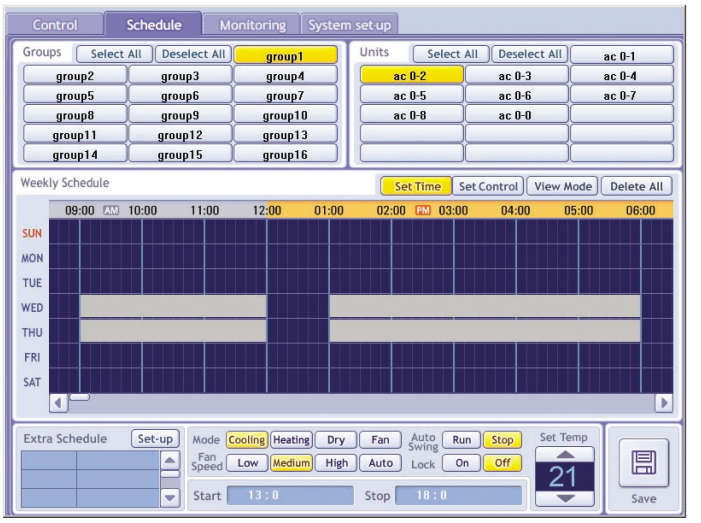
<Fig 1> Click view mode button



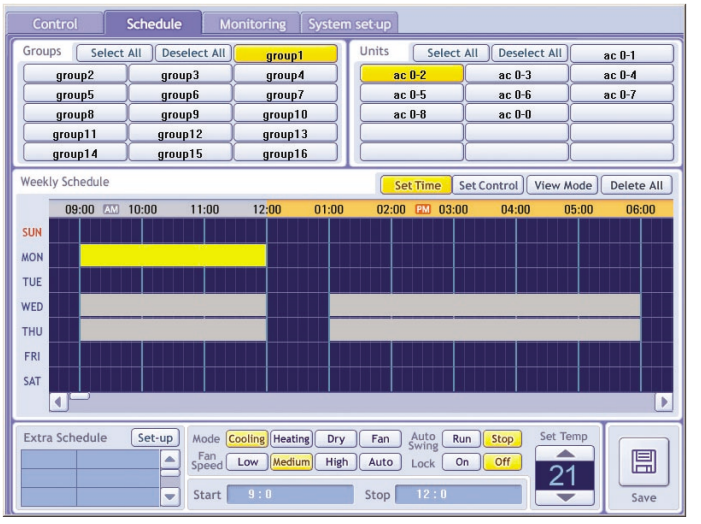
<Fig 2> click ac0-2 indoor to check previous schedule information.

• Example of Schedule Setting(2)

2. Click Set Time button and drag schedule time duration(ex, AM 9:00 ~ 12:00)



<Fig 3> Click Set Time button



<Fig 4> Drag the schedule time duration(ex, AM 9:00 ~ 12:00)
(The color of time duration will be yellow)

• Example of Schedule Setting(3)

3. Set Mode, Fan speed, Set Temperature, LOCK and so on.
(ex, COOL, FAN SPEED:LOW, 23°C for AM9:00~12:00)



<FIG 5> Set COOL, Fan speed : LOW, 23°C



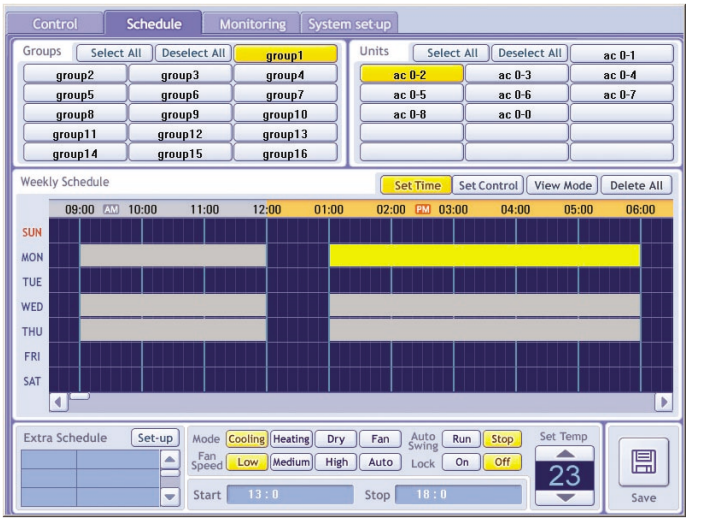
<Fig 6> Click Set Control button(Yellow color will be changed into gray)

• Example of Schedule Setting(4)

4. Click Set Time button and drag schedule time duration(ex, PM 1:00 ~ 6:00)



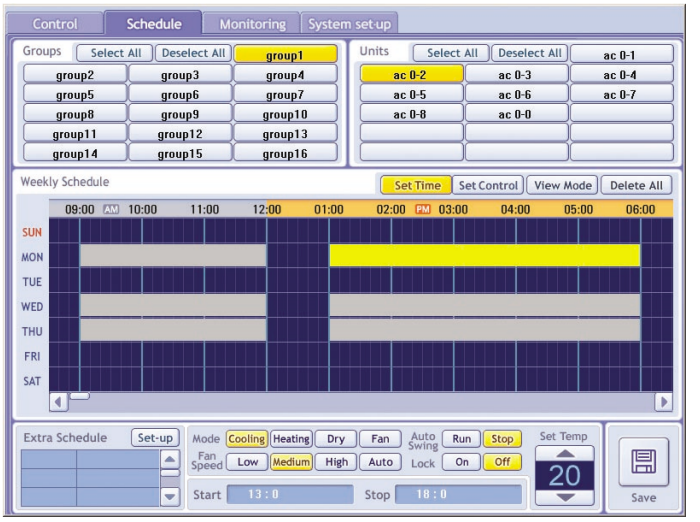
<Fig 7> Click Set Time button



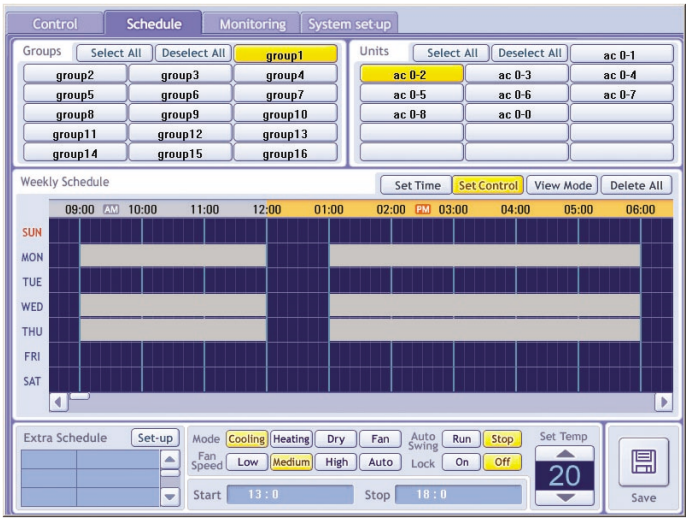
<Fig 8> Drag the schedule time duration(ex, PM 1:00 ~ 6:00)
(The color of time duration will be yellow)

• Example of Schedule Setting(5)

5. Set Mode, Fan speed, Set Temperature, LOCK and so on.
(ex, COOL, FAN SPEED:Medium, 20°C for PM 1:00~6:00)



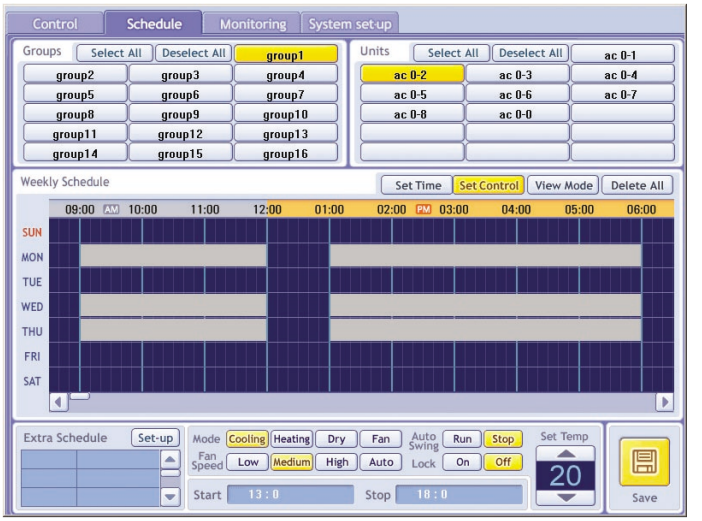
<Fig 9> COOL, Fan Speed : Medium, 20°C



<Fig 10> Click Set Control Button (Yellow color will be changed into gray)

• Example of Schedule Setting(6)

6. Click Save button to save schedule information
(The color of Save button will be yellow during saving schedule information)



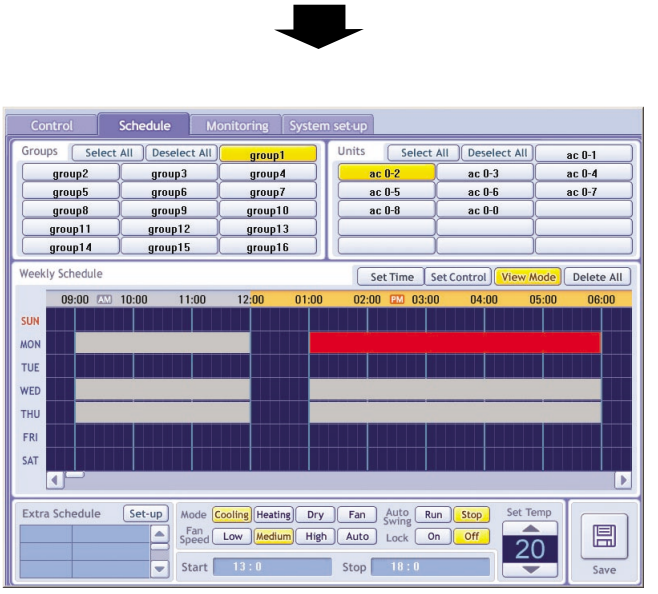
<Fig 11> Click Save button

• Example of Schedule Setting(7)

7. Click View mode button and select indoor unit(ac0-2) to check if your schedule setting is right or something wrong.



<Fig 12> Click View Mode button and select indoor(ac0-2).
Click schedule bar(ex, AM 9:00 ~ 12:00)
Check the schedule information is COOL, FanSpeed:LOW, 23°C or not.
(The color of Selected schedule bar will be “Red”)

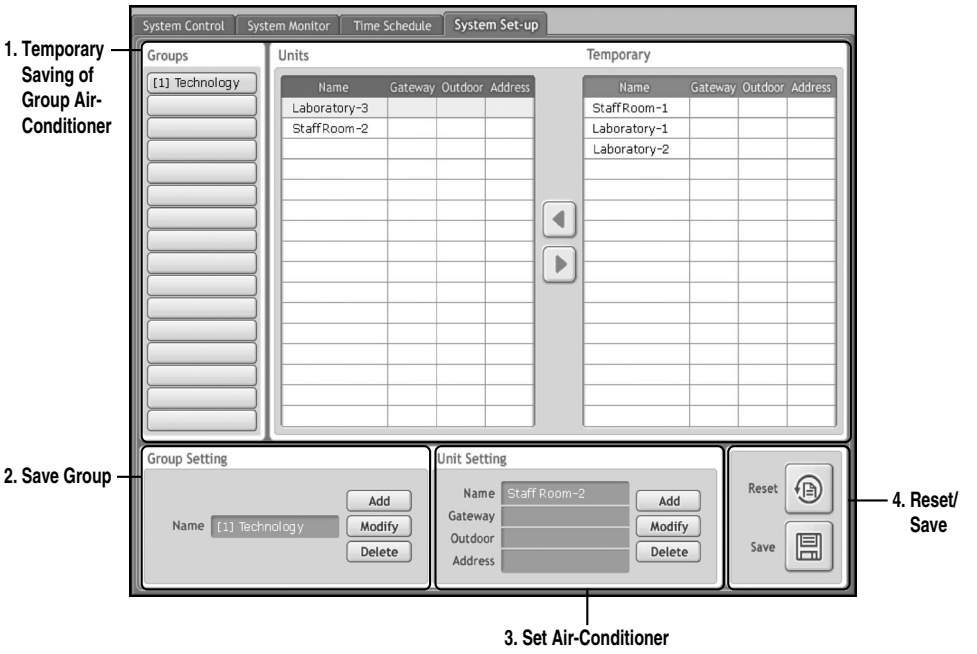


<Fig 13> Click schedule bar(ex, PM 1:00 ~ 6:00)
Check the schedule information is COOL, FanSpeed:Medium, 20°C or not.
(The color of Selected schedule bar will be “Red”)

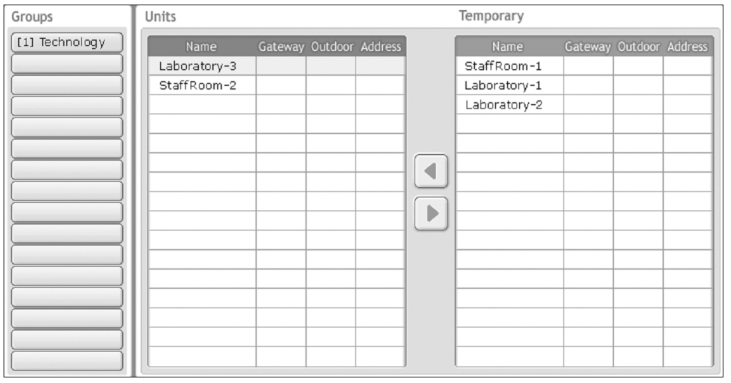
2.2.7 System Set-up

The fig. below shows each group information as well as the name of air-conditioner, G/W, Outdoor unit and address in the group.
In addition, it enlists air-conditioner information upon user's option. air-conditioner information can be searched by using the scroll bar.

• Configuration of System Setting Screen



1. Groups, Units and Temporary Save Window



Gateway, Outdoor, Address setting starts from 0.

You have to input each number by using 'Temporary' window or 'Unit Setting' window.

Ex) How to set a system that has 1 CNU, 2 Outdoor units(Gr.) connecting 2 Indoor units each

	Gateway	Outdoor	Address
1Gr-1IU	0	0	0
1Gr-2IU	0	0	1
2Gr-1IU	0	1	0
2Gr-2IU	0	1	1

2. Group Setting Window



Adds, Modifies and Deletes the group
Adding the group :
Enter the group name by pressing the keyboard button on the Central Controller.
The group is added on selecting the 'Add' button. Up to 16 no. of Groups can be designated.

Modifying the group :
Select the group to be modified. The name of the group appears in the 'Group Setting' window.
The group is modified on entering the group name and the selecting the 'Modified' button.
Deleting the group :
The selected group will be deleted. Select the group and press 'Delete' button.

3. Unit Setting Window



Indoor unit can be added and deleted from the 'Unit Setting' window.

- Name: Enter desired Indoor unit name.
- Gateway: Designates the setting no. of CNU which Indoor unit is connected. (Always '0')
- Outdoor unit: Designates the setting number of the Outdoor unit connected to Deluxe Central Controller.(it starts from '0')
- Address: Designates the setting number of the relevant Indoor unit connected to Deluxe Central Controller. (it starts from '0')

Adding Indoor unit :
Enter the Indoor unit's settings by using the keyboard on the Deluxe Central Controller.
The Indoor unit group is added on selecting the 'Add' button. Maximum of 16 Indoor units can be designated.

Modifying the Indoor unit :
Select the Indoor unit to be modified. The name of Indoor unit appears in the 'Unit Setting' window. After inputting Indoor unit's information, click 'Modify' button.

Deleting the Indoor unit :
The selected Indoor unit will be deleted. Select the Indoor unit and press 'Delete' button.

4. Reset/Save


Last saved settings are restored.


Save settings.
- Different setting is not possible for some time after saving the settings. If setting is completed, the button returns to yellow color. After that saving other setting is possible.

• Example of System Setting

Ex) Case of making a New Group & adding air-conditioners '1WAY' and '4WAY' to it.

Ex) Case of making a New Group & adding air-conditioners '1WAY' and '4WAY' to it.

Step1. Activate the keyboard. .....

Step2. Select the Group Name field from the Group Setting window. .....



Step3. Enter 'New Group'. .....

Step4.  Click

Step5. Select the New Group generated from the Group window. .....



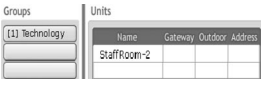
Step6. Select the Unit Name field from the Unit Setting window. .....
(Enter details in the same method).



Step7. Enter '4 WAY'. .....

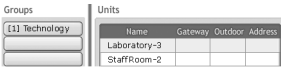


Step8. Click Add ('4WAY' generated) .....



Step9. Select the Units Name field from the Units Setting window. .....

Step10. Enter '1WAY'. .....



Step11. Click Add ('1WAY' generated) .....

• Message

Message window



* Display Message : Mode , Fan Speed , Auto Swing , Lock , Run , Stop , Error

2.2.8 Items confirmed before breakdown report

Confirm first lower part item before commit in the service center in case of singularity occurred to product.

Problem Contents	Check points	Solution
Power LED doesn't turn On.	Check if power is applied to Deluxe Central controller	• Apply power to Deluxe Central Controller.
Air conditioner selection button is in disable state.	Check if all connections are ok?	• If Deluxe center controller connections are not proper then control is possible only by the wired remote controller. Make connections properly for deluxe central control.
		• Confirm whether correct address of indoor unit is entered to the Deluxe Central controller.
		• Press reset to reset the Deluxe Central controller.
Air conditioner can't be controlled.	Check if all connections are ok?	• If Deluxe center controller connections are not proper then control is possible only by the wired remote controller. Make connections properly for deluxe central control.
		• Confirm whether correct address of indoor unit is entered to the Deluxe Central controller.
		• Press reset to reset the Deluxe Central controller.

2.2.9 System Structure

• System Configuration

- 1 Deluxe Central Controller ↔ 1 CNU
- 1 CNU ↔ 16 PI 485
- 1 PI485 ↔ 1 Outdoor
- 1 Outdoor ↔ 16 Indoors
- The number of maximum indoor units = 256

1. Deluxe Central Controller

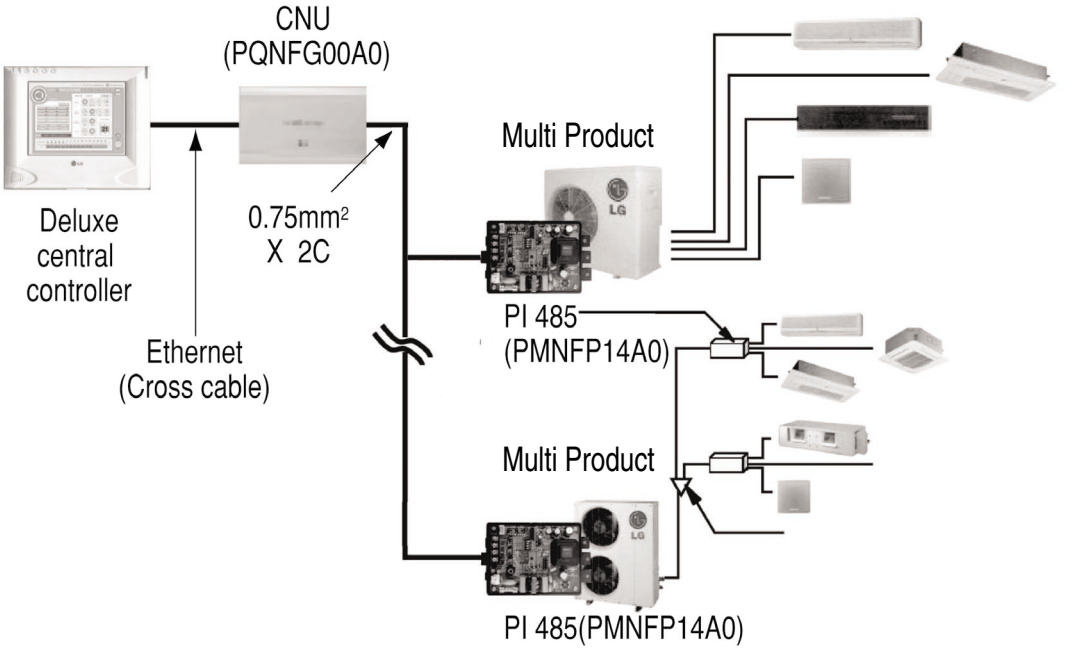
- Centralized control of maximum 256 (16 X 16) Indoor units
- Simple touch pad control
- GUI setting considering convenience of use
- Power failure compensation with independent built-in battery (Max. 2 hours)

2. CNU

- Combination of maximum 16 outdoor units
- 485 to ethernet converter built-in

3. PI 485

- 1 pc per outdoor/master unit

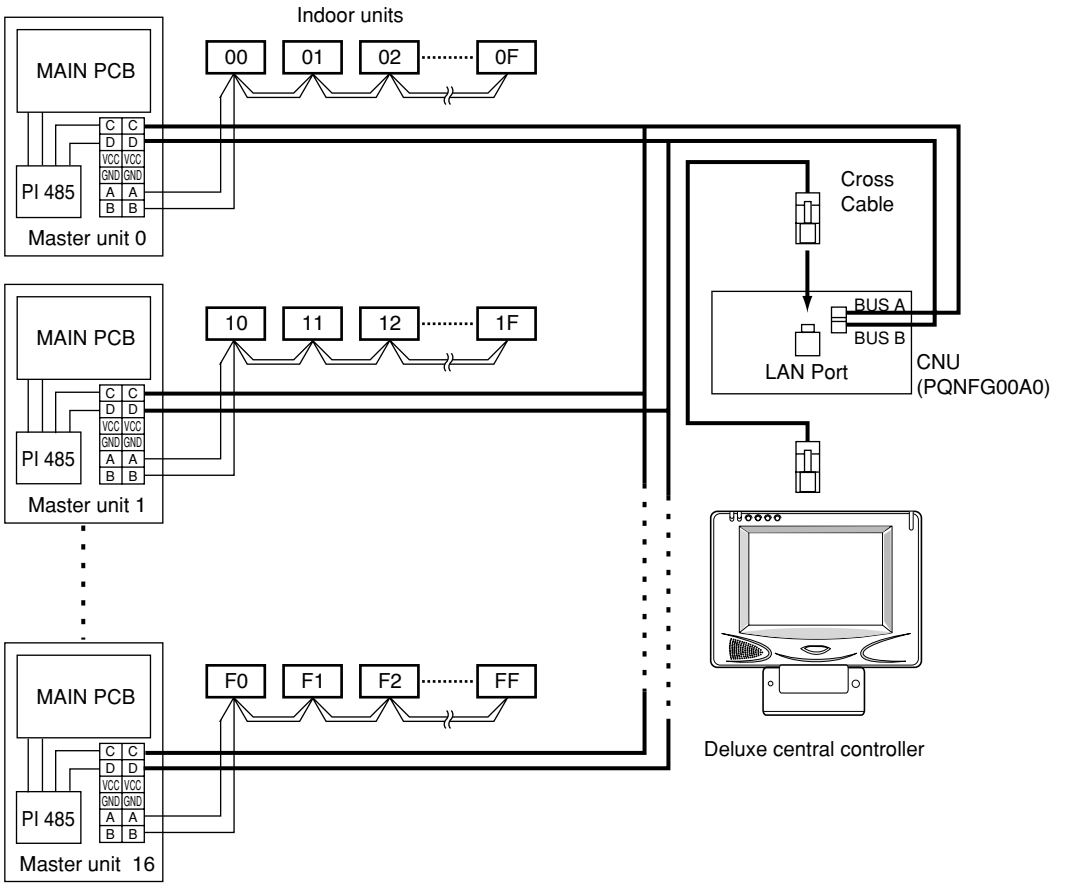


If your requirement does not match above mentioned specifications, then please contact LG Air-conditioner department for support

2.2.10 External Wiring Diagram

• Multi V CRU(N)N

- Refer the following wiring diagram and connect the communication line accordingly



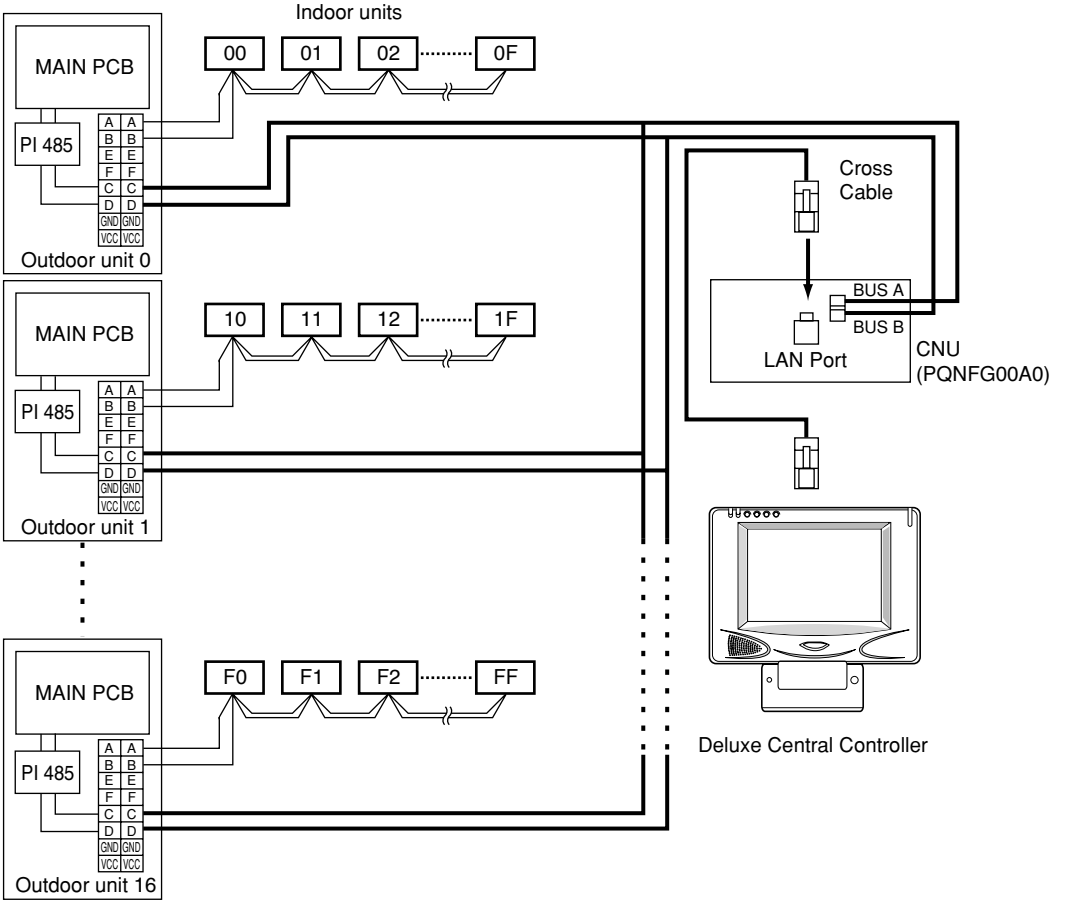
A, B terminals are connected to Indoor units and C, D terminals are connected to CNU.

NOTE

Indoor unit address setting can be done by rotary switch in the indoor unit pcb
The indoor unit connectivity with outdoor as shown above is only for Multi-V system.

• Multi V PLUS & Multi Product

- Refer the following wiring diagram and connect the communication line accordingly



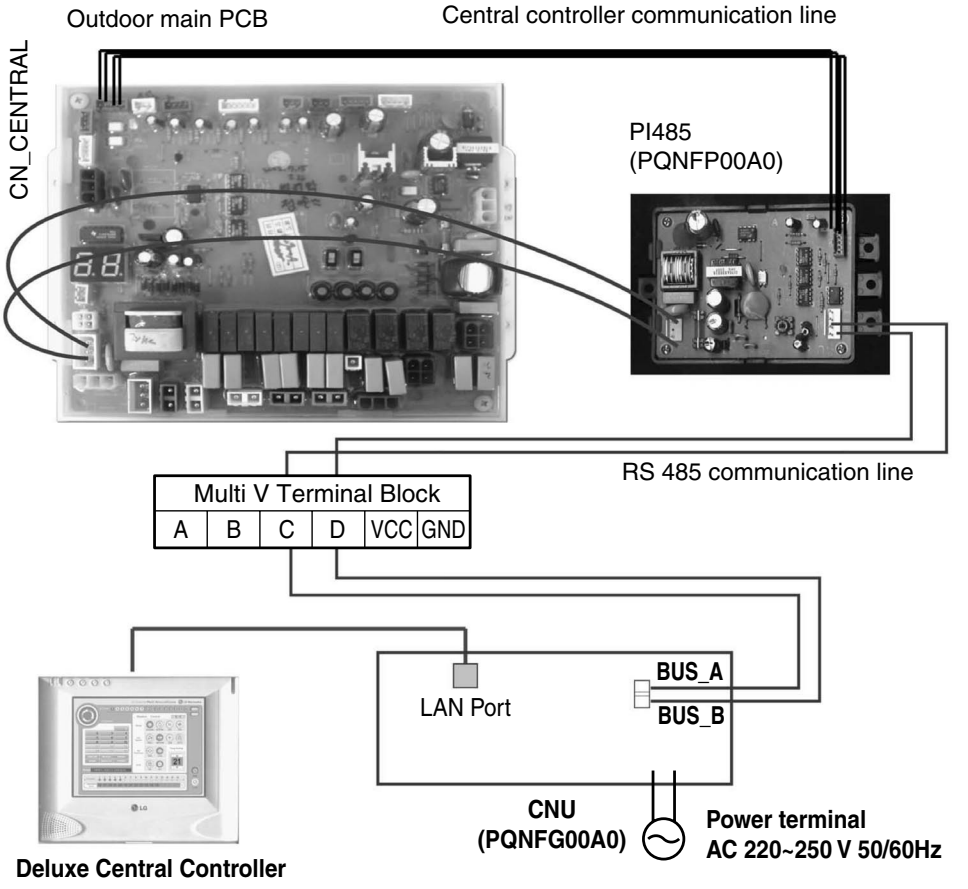
A, B terminals are connected to indoor units and C, D terminals are connected to CNU.

NOTE

Indoor unit address setting can be done by wired and wireless remote controller
Use of terminal block in case of Multi V, Multi and other models may or may not be needed. If it is not present, make direct connections.

2.2.11 Internal Wiring Diagram

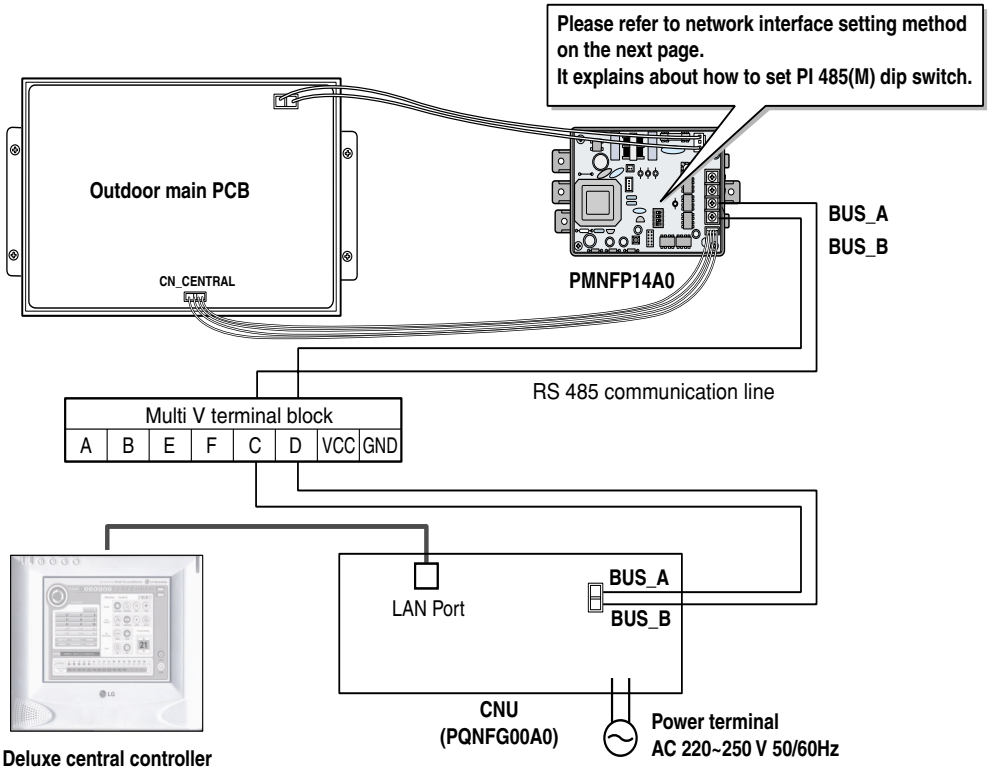
• Multi V CRU(N)N



NOTE

CNU and PI 485(PQNFG00A0, PQNFP00A0) should be purchased separately.

• Multi V PLUS & Multi Product

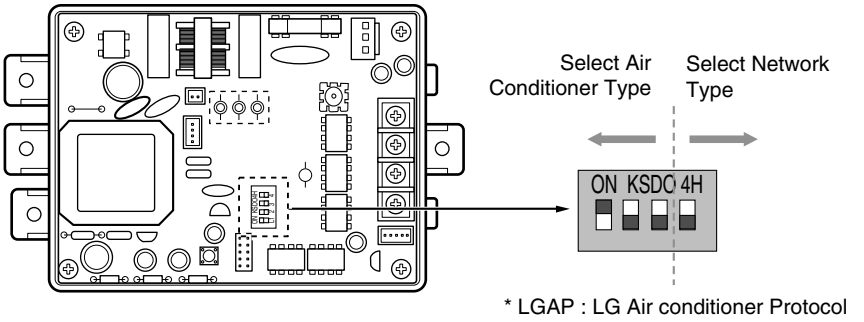


NOTE

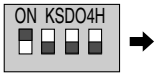
Use of terminal block in case of Multi V, Multi and other models may or may not be needed. If it is not present, make direct connections.

2.2.12 Network Interface Connection

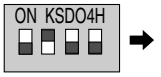
• P1485(M) Dip Switch Configuration



MULTI V PLUS & MPS multi products.



1 On, All others Off: **MULTI V PLUS** & Multi Inverter product



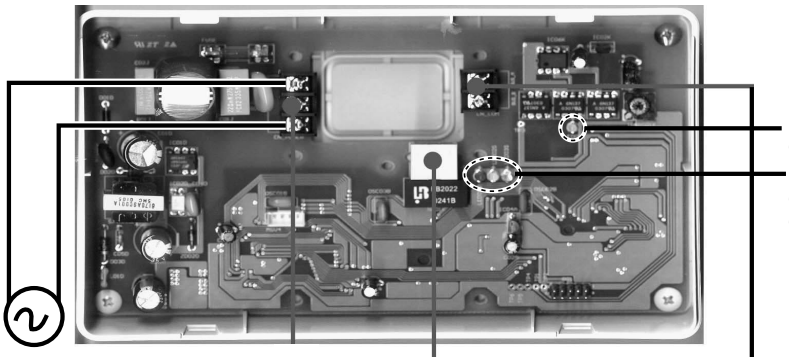
2 On, All others Off: Multi variable product

⚠CAUTION

The wrong setting of air-conditioner switch causes malfunctioning of the system.
Switch setting must be done carefully.

• CNU Connection

CNU : **Central Network Unit** (PQNFG00A0)



RS 485 Communication check LED

Ethernet communication check LED
LED01G:Rx
LED02G:Tx
LED03G:Collision

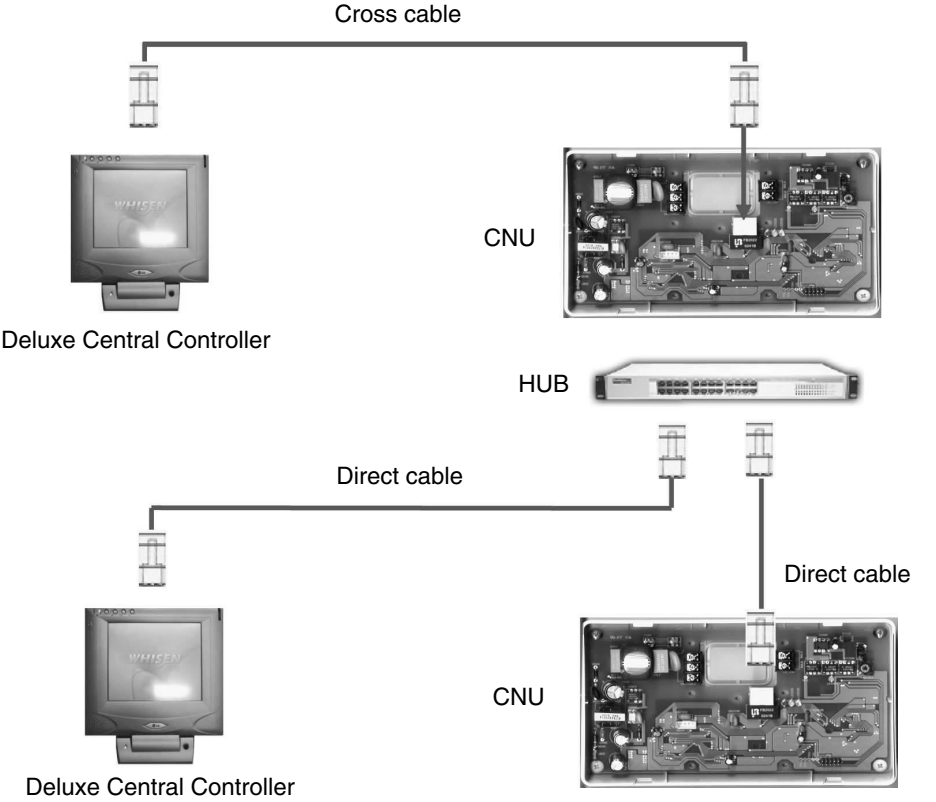
Power terminal
AC 220~250 V 50/60Hz

RJ45 connector : Connect with HUB or Deluxe central controller

RS485 G/W Communication Terminal
: Connect with PQNFP00A0 'C,D' or connect with PMNFP14A0 'A,B'

• NOTICE
PQNFG00A0 ---- PQNFP00A0 (PMNFP14A0)
BUS_A ---- BUS_C (BUS_A)
BUS_B ---- BUS_D (BUS_B)
Use two shield lines for RS 485 connecting line.
(Earth the shield line)

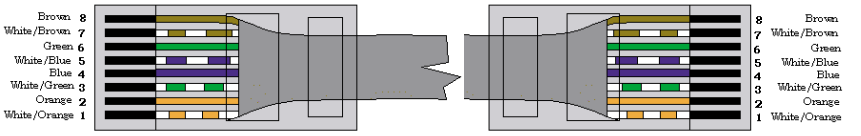
• Wiring Diagram



* How to differentiate between Direct cable & Cross cable

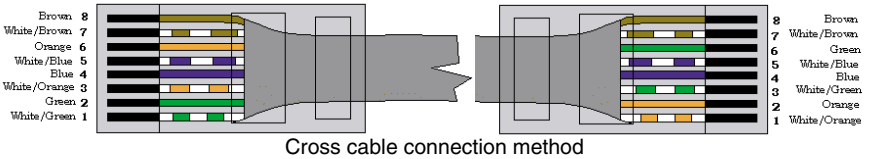
The UTP cable consists of 8 stripes of wire and the wire actually used for data transmission in the LAN environment is the reception (Rx) No.1 and 2 wire and the transmission (Tx) No.3 and 6, consisting of 4 strands. They are classified into two types depending on method to connect wire for reception and transmission.

Direct Cable - Also called as 1:1 straight cable and used for connecting other equipment from the network.



Direct cable connection method

Cross Cable – Used for 1:1 connection between same equipment in the network.



Cross cable connection method

2.2.13 The Indoor Unit Address Setting Method

• Multi V CRU(N)N

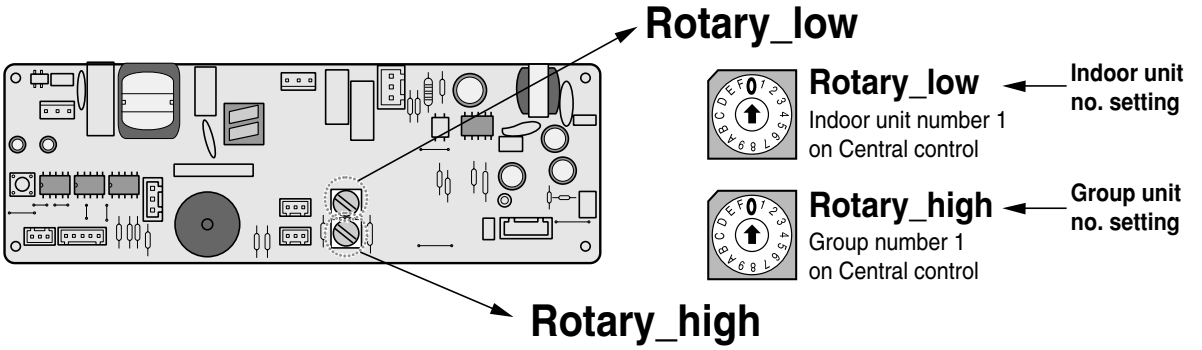
The indoor unit PCB has 2 rotary switches.

Rotary high is for group number setting and Rotary low is for room number setting.

The group number of the rotary switch of the Central controller and the indoor unit PCB rotary switch must match.

Example : Group number setting method(Central controller group rotary switch number 0 = The indoor unit PCB rotary switch Group number 0)

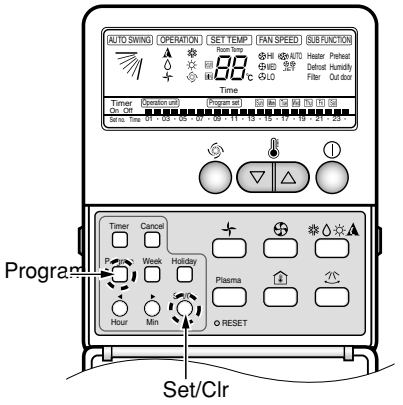
Example : The indoor unit number setting method (the indoor unit PCB rotary switch number 1 = Central controller LED number 1 turns ON)



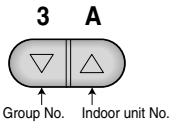
2.2.14 Addressing of Indoor Unit

• Addressing of Indoor Unit

Using wired remote controller

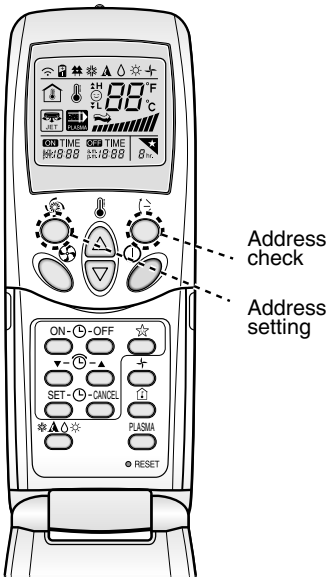


1. Press the Program & Set/Clr keys at the same time to activate the settings.
2. Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



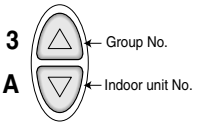
3. To complete the address setting, press the Program & Set/Clr keys at the same time for 3 seconds.

Using wireless remote controller



A. Address setting mode

1) Keep pressing upper left side key continuously and press RESET button once. Now the system is ready for address setting.(The left key should be pressed over 3 seconds)
2) Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



3) After setting address, press ON/OFF key once towards indoor unit.
4) The indoor unit shows the set address and it means completion of address setting process. (The address displaying time and its way can depend upon the type of indoor unit)

B. Address check mode

1) Keep pressing upper right side key continuously and press RESET button once. Now the system is ready for address checking.(The right key should be pressed over 3 seconds)
2) Press ON/OFF key once towards the indoor unit which shows set address on the display(The address displaying time and its way can depend upon the type of indoor unit)
3) Reset the remote controller to use it in the normal operation mode.

❉ Some remote controllers may not be supported by above functions according to the production date of wired/wireless remote controllers. As it has no concern with customers' use, use the remote controller available for the address setting during installation.

❉ It would be added how to set address of the simple central-control indoor unit.

2.2.15 Installation of Deluxe Central Controller Program

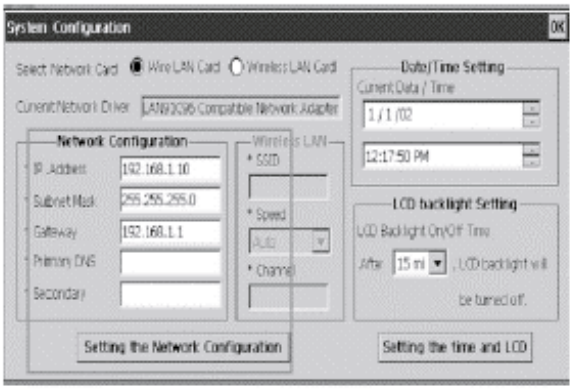
• Program Execution & System Set up

■ Deluxe Central Controller IP/Date/Time setting



System configuration button

1. Push system configuration button



2. System configuration window appears on screen.

3. Select network card : Select wire LAN card (Check white circle with stylus pen)

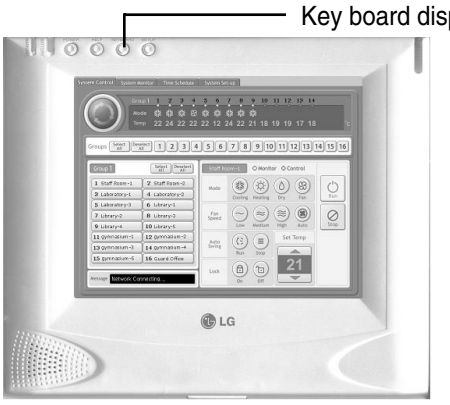
4. Set 'Network Configuration'
   Enter the 'IP address' in edit box. (Fill into the edit box with virtual key board - key board appears if you push the key board button)
   - IP Address : 192.168.1.XXX(Recommend '250')
   - Subnet Mask : 255.255.255.0 (Automatically filled)
   - Gateway : 192.168.1.1
   - DNS : 192.168.1.1

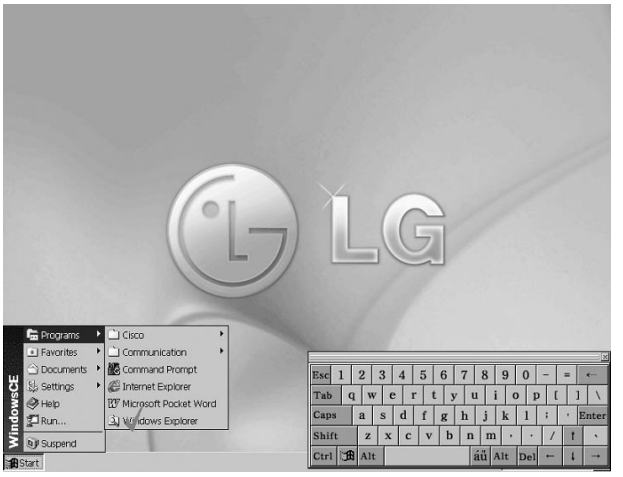
NOTE

IP Address 'XXX' : Any configuration is ok except 192.168.1.101
& 192.168.1.1 (192.168.1.101 : CNU address, 192.168.1.1 : External connection)

5. Click on “Setting the Network Configuration”
6. Setting the System message window appears.
7. Click 'OK', then System restarts.
8. After system restarts, push system configuration button again.
9. System configuration window pops up, set current date/time over there.
10. Set LCD backlight All date/time conditions settings are ok ?
11. Click 'Setting the time and LCD' ;
12. Setting the system message window appears
13. Click 'ok'
    It sets time and LCD backlight Finally system configuration message window disappears.

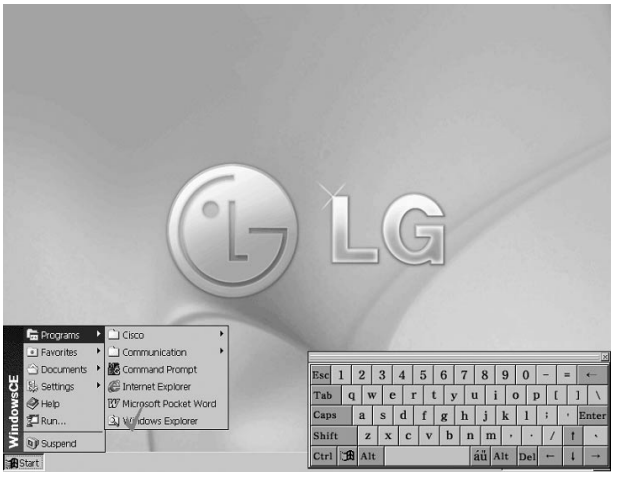
• Program Execution Procedure



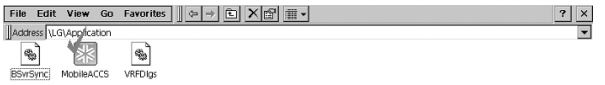


Press the third button on the top of Deluxe Central Controller to display the virtual keyboard

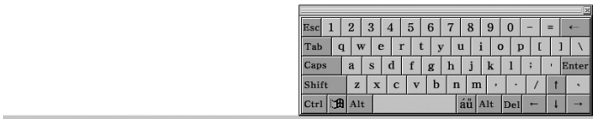
Use the stylus pen to press the windows icon on the key-board.

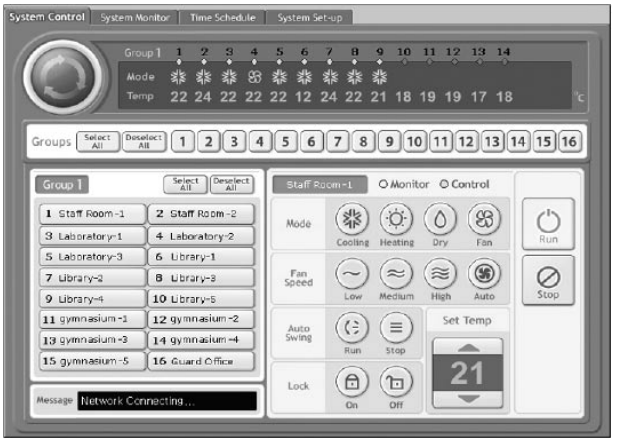


Press the windows explorer from the "Programs" menu.



Press the Mobile Accs from the path :
"MYCOMPUTER/LG/APPLICATION/MOBILEACCS"

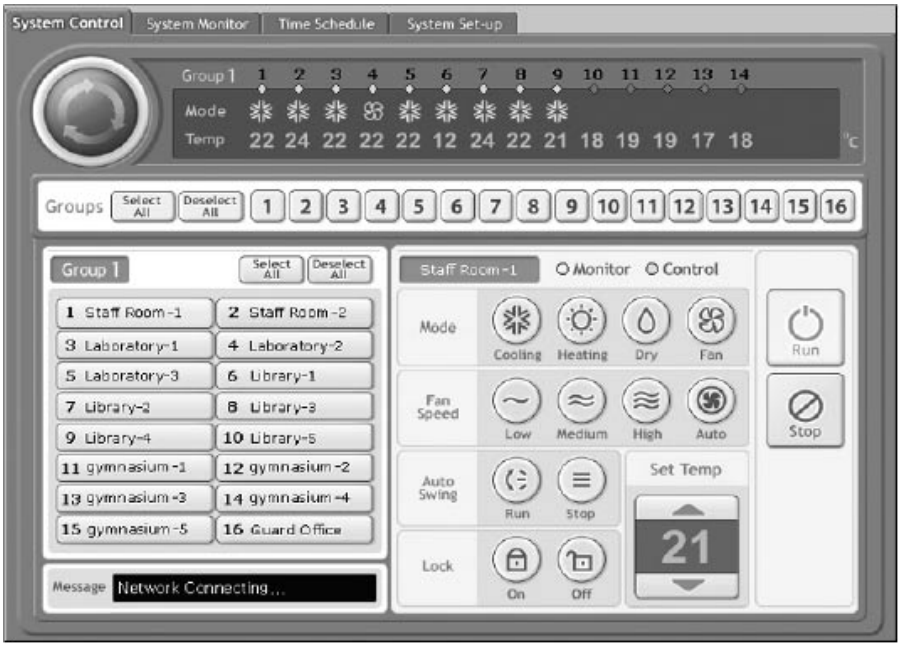




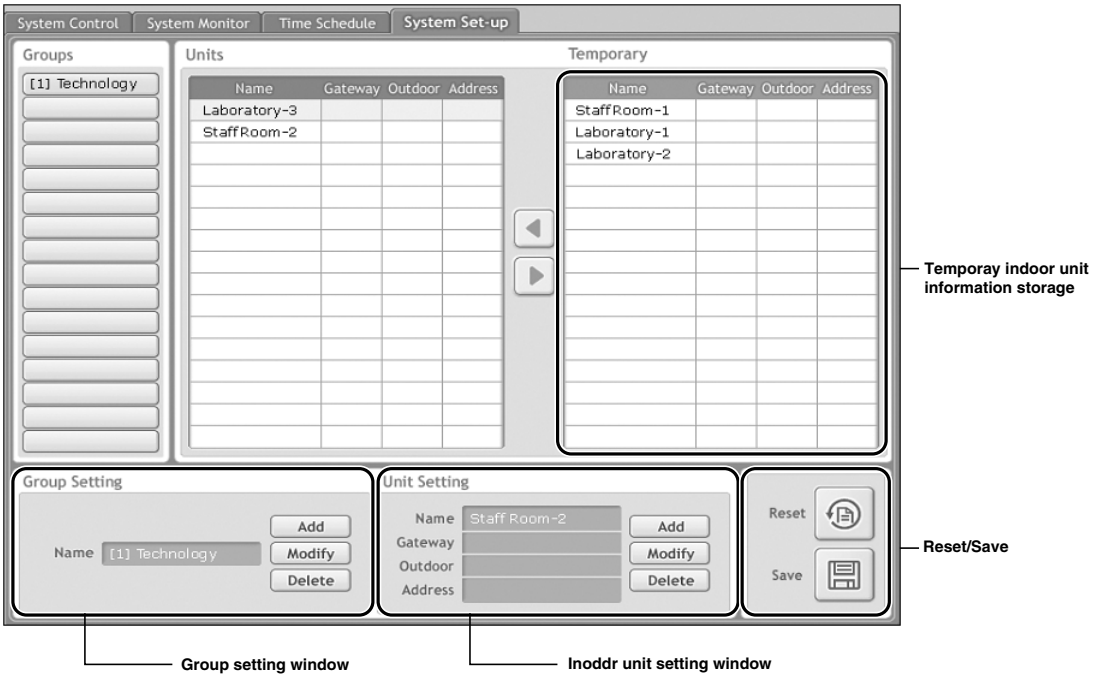
Deluxe Central Controller program starts.

2.2.16 System Set-up

• Configuration of System Setting Screen

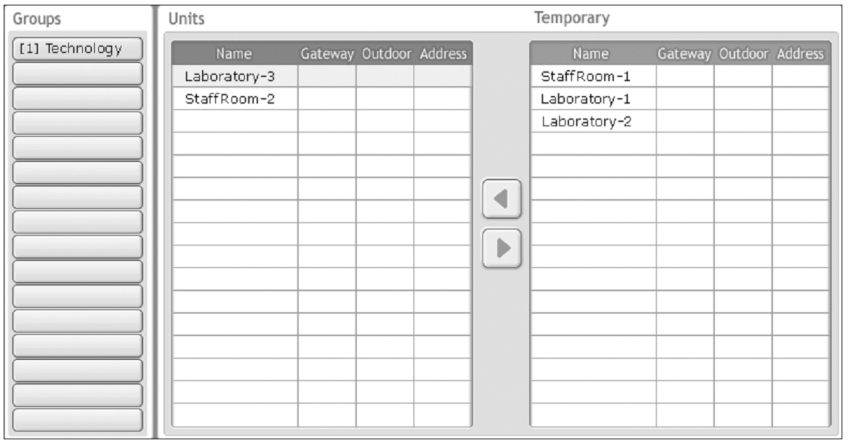


Press the "System set-up" from the program menu.



Configuration of system setting screen

(1) Groups, Units and Temporary Save Window



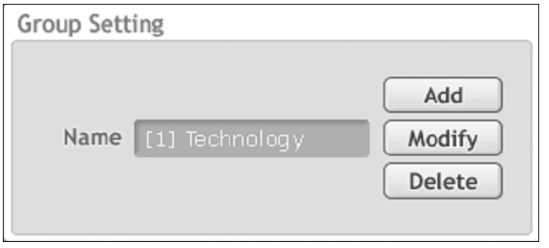
Gateway, Outdoor, Address setting starts from 0.

You have to input each number by using 'Temporary' window or 'Unit Setting' window.

Ex) How to set a system that has 1 CNU, 2 Outdoor units(Gr.) connecting 2 Indoor units each

	Gateway	Outdoor	Address
1Gr-1IU	0	0	0
1Gr-2IU	0	0	1
2Gr-1IU	0	1	0
2Gr-2IU	0	1	1

(2) Group Setting Window



Adds, Modifies and Deletes the group

Adding the group :
Enter the group name by pressing the keyboard button on the Central controller.
The group is added on selecting the 'Add' button. Up to 16 no. of groups can be designated.

Modifying the group :
Select the group to be modified. The name of the group appears in the 'Group Setting' window.
The group is modified on entering the group name and the selecting the 'Modified' button.

Deleting the group :
The selected group will be deleted. Select the group and press 'Delete' button.

(3) Unit Setting Window



Indoor unit can be added and deleted from the 'Unit Setting' window.

- Name: Enter desired Indoor unit name.
- Gateway: Designates the setting no. of CNU to which indoor unit is connected. (Always '0')
- Outdoor unit: Designates the setting number of the Outdoor unit connected to Deluxe Central Controller.(it starts from '0')
- Address: Designates the setting number of the relevant Indoor unit connected to Deluxe Central Controller.(it starts from '0')

Adding indoor unit :
Enter the Indoor unit's settings by using the keyboard on the Deluxe Central Controller.
The Indoor unit group is added on selecting the 'Add' button. Maximum of 16 Indoor units can be added.

Modifying the indoor unit :
Select the Indoor unit to be modified. The name of Indoor unit appears in the 'Unit Setting' window. After inputing Indoor unit's information, click 'Modify' button.

Deleting the indoor unit :
The selected indoor unit will be deleted. Select the Indoor unit and press 'delete' button.

(4) Reset/Save



Last saved settings are restored.



Save settings.
- Different setting is not possible for some time after saving the settings.
  If setting is completed, the button returns to yellow color. After that saving other settings is possible.

• Example of System Setting

Ex) Group name is 'Technology', and the Indoor names are 'Staff Room-2' & 'Laboratory-3'

Step1. Activate the keyboard..... 

Step2. Select the group name from the group setting window.....

Step3. Enter 'Technology'.....

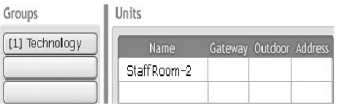
Step4. 

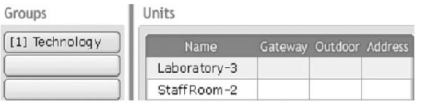
Click

Step5. Select the Technology generated in Group window..... 

Step6. Select the unit name from the Unit Setting window..... 

Step7. Enter 'Staff Room-2'..... 

Step8. Click Add ('Staff Room-2' generated)..... 

Step9. Select the unit name from the Units Setting window..... 

Step10. Enter 'Laboratory-3'.....

Step11. Click Add ('Laboratory-3' generated)

2.2.17 Items confirmed before breakdown report

Confirm first lower part item before commit in the service center in case of singularity occurred to product.

Problem Contents	Check points	Solution
Power LED doesn't turn On.	Check if power is applied to Deluxe Central controller	• Apply power to Deluxe Central Controller.
Air conditioner selection button is in disable state.	Check if all connections are ok?	• If Deluxe center controller connections are not proper then control is possible only by the wired remote controller. Make connections properly for deluxe central control.
		• Confirm whether correct address of indoor unit is entered to the Deluxe Central controller.
		• Press reset to reset the Deluxe Central controller.
Air conditioner can't be controlled.	Check if all connections are ok?	• If Deluxe center controller connections are not proper then control is possible only by the wired remote controller. Make connections properly for deluxe central control.
		• Confirm whether correct address of indoor unit is entered to the Deluxe Central controller.
		• Press reset to reset the Deluxe Central controller.

2.3 PC Central Controller

2.3.1 Overview

• PC Central Controller abstract

This controller for LG Air conditioner system is a product that has individual and integral monitoring and control of a maximum of 2048 Air Conditioners.

Especially , the state of each air conditioner can be individually controlled and displayed .The functions like operation mode, fan speed, temperature setting etc. can be set and displayed for each individual air conditioner.

Especially, this system enables centralized control with simple operation because equipment is simple and the users environment is superior.

The use of this controller can prevent indoor control of individual air conditioner because the control of each air conditioner can be established in the administration department. It can control unnecessary use of air conditioners and control of individual air conditioner is available using existing remote control if the unit is not locked.

Setting the weekly schedule is available.Detailed setting of schedule of individual air conditioner is possible easily with the touch screen. The schedule contents are set graphically. Such function is mostly effective in places like shhool and offices.

It can set the group : according to working conditions, according to installed environment and according to the position.

It can operate more efficiently at the control room through this establishment, because this set is available without any other equipment ,using function setting from touch screen the consumer can easily amend the system even after configuration.

According to consumer's request it can conveniently shorten the development time to compose a special system, and uses touch screen.

New customer need : In case a new air conditioner needs to be added to the already installed PC Central Controller, it can be done easily.

• Major Characteristics of PC Central Controller

1. Individual/Integrated Operation/Monitoring

• You can identify operation status of the air conditioner, operation mode, fan speed, locking, temperature setting and error, etc by selecting the installed air conditioner through individual selection, group selection or all selection. Individual setup and explanation of the detailed functions are available. Therefore, the manager can use a central control with the PC Central controller only installed at the control room at a building where a number of air conditioners are installed.

2. Group Management

• Grouping management of the installed air conditioners is available.
Thanks to group setup: separation by nature, location and size of each air conditioner enables convenient use. In addition, allotment of respective name to the setup group allows further intuitive management.

3. Self-diagnosis Function

• The air conditioner installed can self-diagnose its error status and then transmits the result to the Central controller. Therefore, a rapid countermeasure against failure of air conditioner allows easy management and increases the life of air-conditioner.

4. Semi-permanent Life / Convenient Maintenance

• Since the PC Central controller is designed for the semi-permanent use, this system can be used semi-permanently after installation differently from the existing PC or a large central control system which require a continuous management.

5. Management Cost Down

• In absence of the Central Control System, the manager had to control a number of air conditioners individually.Even if Central Control System is used, it has only the on/off management function , thus 2 or 3 building managers were actually required. However, manipulation of all functions can be now done at a control room for the PC Central Controller and so a manager can easily control all air conditioners. Automatic operation is also allowed without a manager if schedule function is used.

6. Convenient GUI

• No special education is required for using the PC Central Controller, it can be conveniently used just by pressing the buttons on the screen, and its function can be understood with an intuitive pictogram. Especially, schedule setting is done by simply dragging the screen as patented technology differs from the existing system which requires to press the button by more than an average 30 times to enter a schedule.

7. Schedule Automatic Operation Management / Energy Saving

• For the schedule automatic operation, weekly setting is available. Enlisting of the schedule exception processing schedule (national holiday) is done for a year prevents the Air-Con from an unnecessary operation, allowing the system to be controlled at the center so that it can be used only for a necessary case and thus enabling to obtain an excellent energy saving effect. This function can be applied if there is a fixed schedule for elementary school, middle school, high school and college or university to get excellent effect.

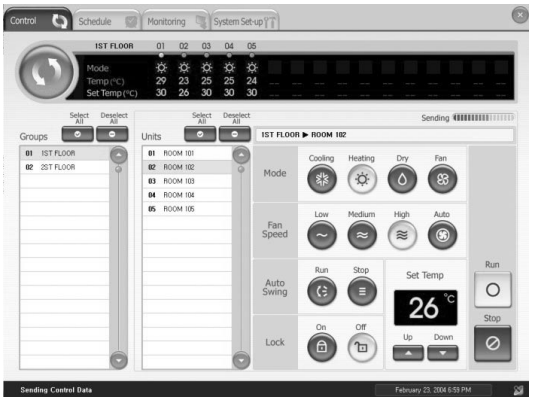
8. Stable Date Storage/Backup

• Setup information is saved as it is even if no power is supplied since all data is saved in the built-in flash memory.

9. Upgrade

• Additional installation of a new program is available via the and the existing program can be upgraded to a new program. Using such upgrade function always enables to construct a modern type of Central control system.

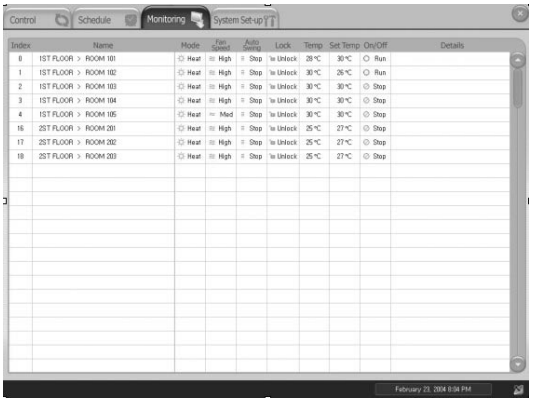
• Main Functions of PC Central Controller



[System Control]

To check general monitoring functions of the air conditioner central control system such as group selection and air-conditioner selection, air-conditioner control monitor function etc.

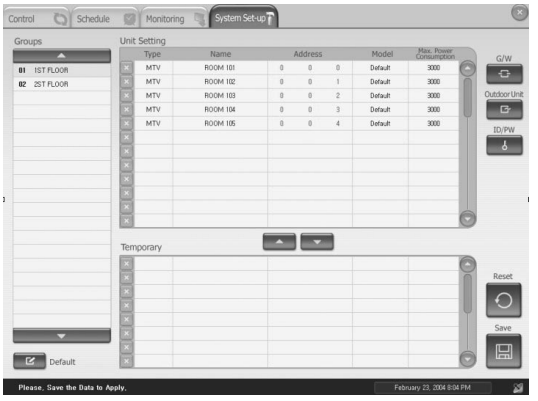
PQCSS501A0, PQCSS502A0



[System Monitor]

To check the actual status of air-conditioner currently.

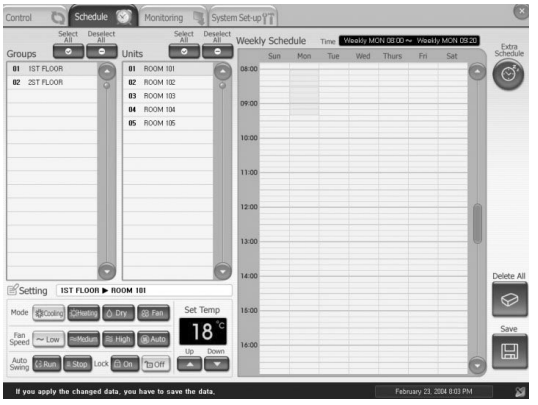
PQCSS501A0, PQCSS502A0



[System Set-up]

To manage the air-conditioner through grouping and record the setup of group and installation position, etc.

PQCSS501A0, PQCSS502A0



[Time Schedule]

Setup of a weekly schedule for all, group and individual air-conditioner enables operation of the system. Processing through enlist of extra schedule for a year is available.

PQCSS502A0

2.3.2 Configuration and Function of Screen

• Execution of the Program

1) Click the Program LG ACCS in the START menu in the program menu of windows (Click the LG ACCS icon on the desktop)

2) When the program is started, loading image is displayed and initial display appears as shown below.

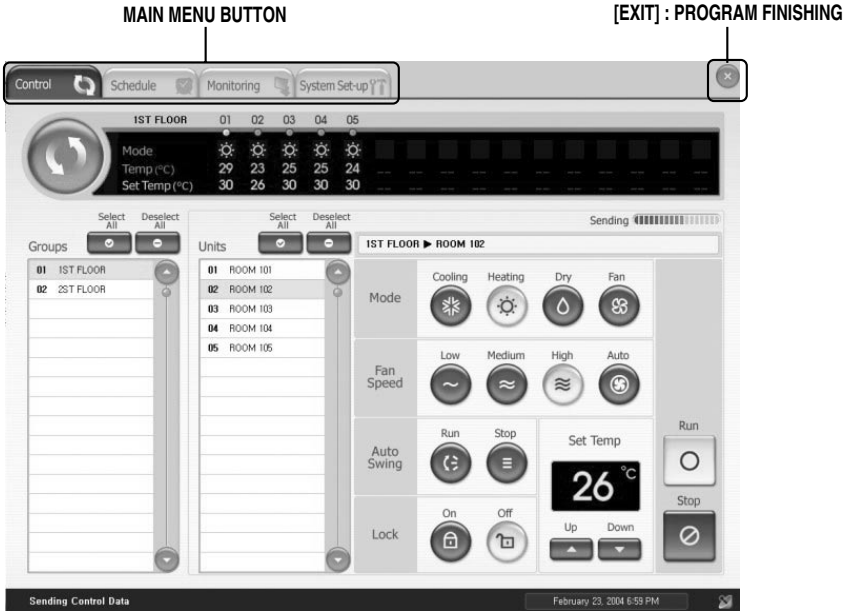


3) In the login window, insert ID and password, click the login button.
[At first time ID is admin and password is digital21]
If you click on cancel, this program is closed.

• PC Central program can be executed only when the approval hard_lock is connected to computer. When the hard_lock is pulled out, PC central program cannot be executed. Some error will be displayed.

• Main Screen Configuration of PC Central Controller

Let us understand basic functions of each part and learn how to use them easily through examples.

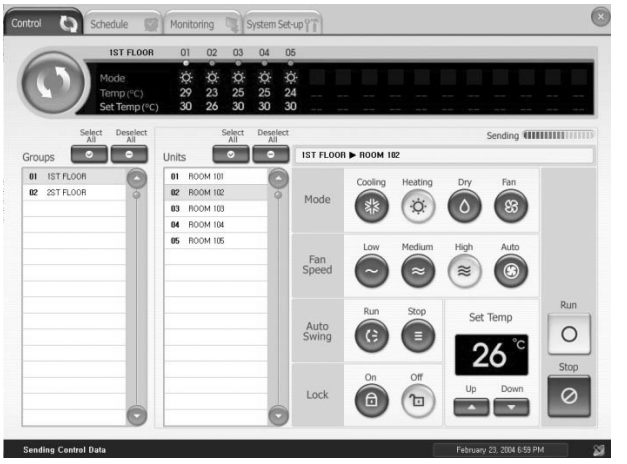


Main menu currently provided from the program is as follows:

1) System Control2) Schedule Control 3) System Monitor 4) System Set-up

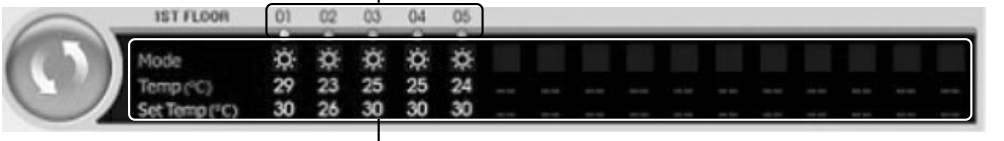
2.3.3 System control & Monitoring

PC Central program has normal function as control & monitor like on/off, main function and some message display

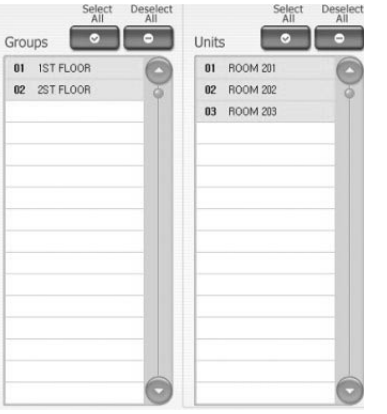


• Explanation of Each Function

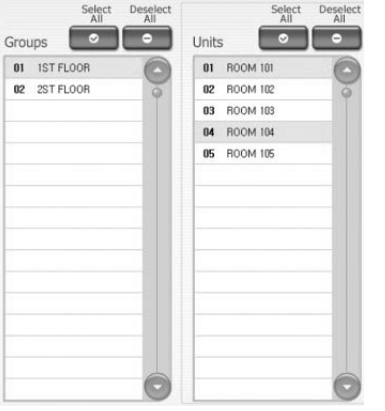
Shows each air conditioner. Mild green color signifies that the system is operating.



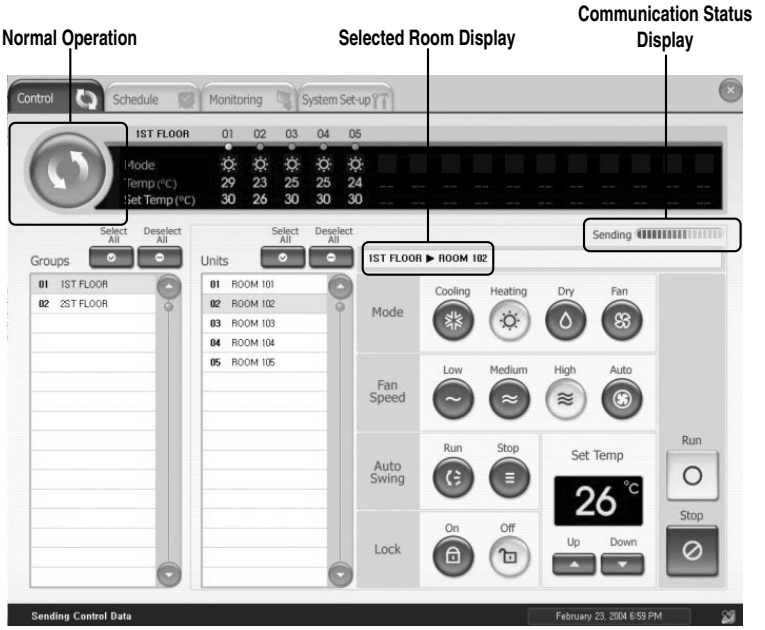
Each air conditioner's operating status



Group setting, Select each, Select all, Deselect all are available Group setting no is unlimited and group information is displayed from outdoor's information
All Group select means all air conditioner installed are selected, Each group select mean all air conditioner in that group are selected



The figure shows 3 air conditioner are selected in one group.
Selected air conditioner can be controlled in group as will as individually.



• Shows information of finally selected air conditioner in the View Mode.



Cooling : You can select desired temperature 18 ~ 30˚C. Difference between indoor temperature and outdoor temperature is preferable at 5˚C.

• Since excessive cooling is harmful to human health, please set and use appropriate desired temperature.

• Cooling operation is not done if the desired temperature is more than indoor temperature in the cooling mode -> the unit operates in the blowing mode. The desired temperature must be adjusted lower than indoor temperature.



Heating : You can select desired temperature 18 ~ 30˚C . Difference between indoor temperature and outdoor temperature is preferably at 5˚C.

• Since excessive heating is harmful to human health, please set and use appropriate desired temperature.

• Heating operation is not done if the desired temperature is more than indoor temperature in the heating mode -> the unit operates in the blowing mode. The desired temperature must be adjusted higher than indoor temperature.



Dry(Removal of moisture) : You can efficiently remove moisture if you use system in summer or during the high moisture. On selecting moisture removal, you cannot set or change the temperature.



Fan(Blowing) : This is an air cleaning operation mode and pleasant wind comes out. You may use air cleaning only in spring or autumn. On selecting the wind mode, you cannot set or change the temperature.



Fan Speed(Wind speed) : This is a function to adjust wind speed. You can set wind speed by pressing this button.



Auto Swing(Air flow) : Displays air flow of the current air conditioner.



Lock : Function to set the lock. If the lock mode is set, the control by a wire or wireless remote control is not available.



Desired temperature : Set the desire temperature with the  button.
The desired temperature is adjustable 18 ~ 30˚C for cooling and 16 ~ 30˚C for heating.

• During cooling or heating mode, temperature setting is available.



In case of DRY & FAN Operation this window does not display the set temperature



Run: Operates the selected air conditioner.
Press the operation button when operating more than 2 air conditioners at the same time or while operating in the same operation mode.
Try the reset operation, fan speed, lock, desired temperature mode, operating the air Conditioners whose set status is different to each other.



Stop: Stops the selected air-conditioner.

Message Display Window: It displays messages depending on air conditioner status.



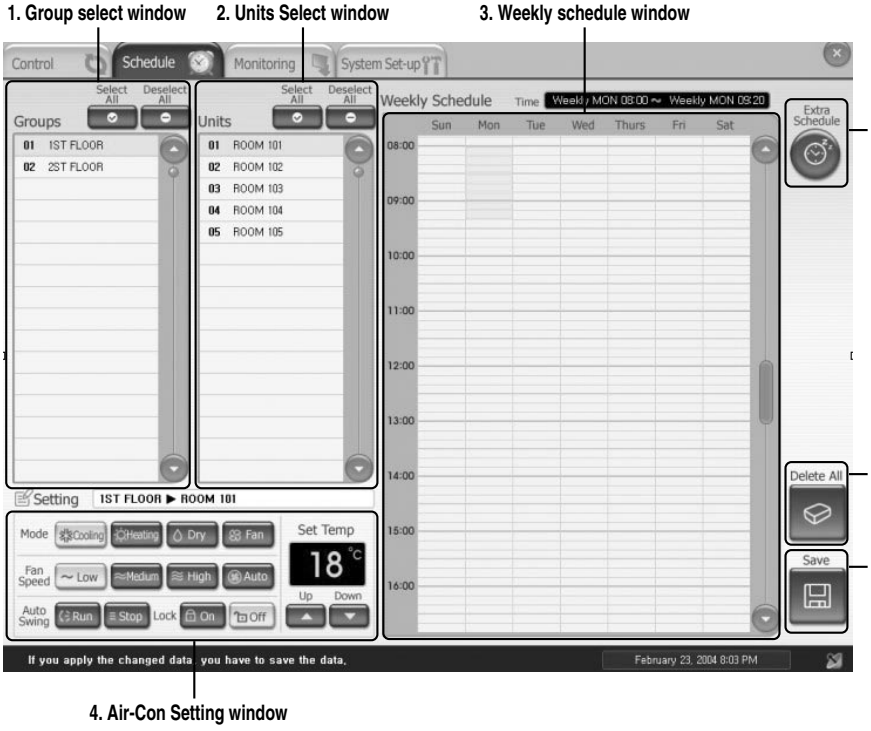
Points to observe

When several air conditioners that have several control modes and functions setting are all selected and changed to one control mode, other functions setting except control mode will be remained . Therefore, when operating whole air conditioner, it is convenient to choose all control set that oneself always wants.

• Air conditioner that is not registered in system setting is impossible control/monitoring.

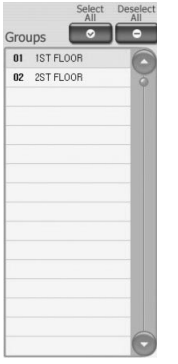
2.3.4 Schedule Control

Schedule control function, the most advanced function of the PC Central Controller enables to set all functions of the air-conditioner including group and air-conditioner selection, weekly operation schedule function, extra processing schedule function, air-conditioner control, setting save function. You must firstly set the group and the air-conditioner in the System setup before starting schedule control.



(1) Group selection window

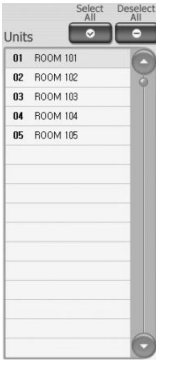
Fig.1 shows groups set in the Central controller. “Select All” and “Deselect All” functions are available. Yellow color shows the selected group



(Fig. 1)

(2) Air conditioner selection window

Fig.2 shows air-conditioners within the selected group.
"Select All" and "Deselect All" functions are available Yellow color shows the selected air conditioner. Press this button once again to cancel the selection.



(Fig. 2)

(3) Weekly schedule display window



This function sets a weekly operation schedule by hour in the selected air conditioner.
Display the desired time zone by dragging the screen with a mouse.
While setting a lot of time zone, draw the desired time zone horizontally.
Setting per 10 minutes is possible.

If the setting is wrong, you can delete it again by selecting the time zone to be deleted.
Always select the set save button if schedule setting is completed.

Deletes all schedules of the selected air conditioner

(4) Air conditioner setting window



Operation mode, fan speed, lock and desired temperature are controlled according the selected
air-conditioner schedule. Control setting by
air-conditioner, time zone on the schedule is available.

(5) Save setting button



To save the operation mode, Auto Swing, Fan apeed, Lock settings, select the "Save" button.

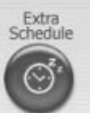
- On saving the settings, other setting may not be possible for same time . If the saving is completed, the button returns to yellow color. Other setting is allowed after that.

(6) Delete button



To delete saved operation Mode, Auto Swing, Fan Speed, Lock settings, select the “Delete” button.

(7) Extra schedule window



If you push the extra schedule button, it enters extra schedule mode



Select year and month with the button after clicking the "Year" display window or the "Month" display window.

On selecting the date from the calendar as shown in the fig. The exception processing date is automatically entered into the date display.

To enter text into the title box, enter it by typing from the keyboard buttons. Then press the "Add" Button.

To delete the entered date, select the "Delete" Button after selecting the date to delete.

To exit from the extra schedule, select the "Cancel" Button.

2.3.5 Items confirmed before breakdown report

Confirm first lower part item before commit in the service center in case of singularity occurred to product.

Problem Contents	Check points	Solution
HASP Not found error.	Check the USB Hare- lock key	• Insert the provided Hard-lock key to the USB port in your PC.
Air conditioner select button is in disable state.	Check if all the system connections are ok?	• If PC Central Controller connections are not proper then control is possible only by the wired remote controller. Connect properly for PC central control.
		• Confirm whether correct Address of air conditioner indoor Unit is entered to the PC Central Controller.
		• Press reset to reset the PC Central controller.
Air conditioner is not controlled.	Check if all the system connections are ok?	• If PC Central Controller connections are not proper then control is possible only by the wired remote controller.Connect properly for PC Central Control.
		• Confirm whether correct address of air conditioner indoor Unit is entered to the PC Central Controller.
		• Press reset for resetting the PC Central Controller.

2.3.6 System Installation

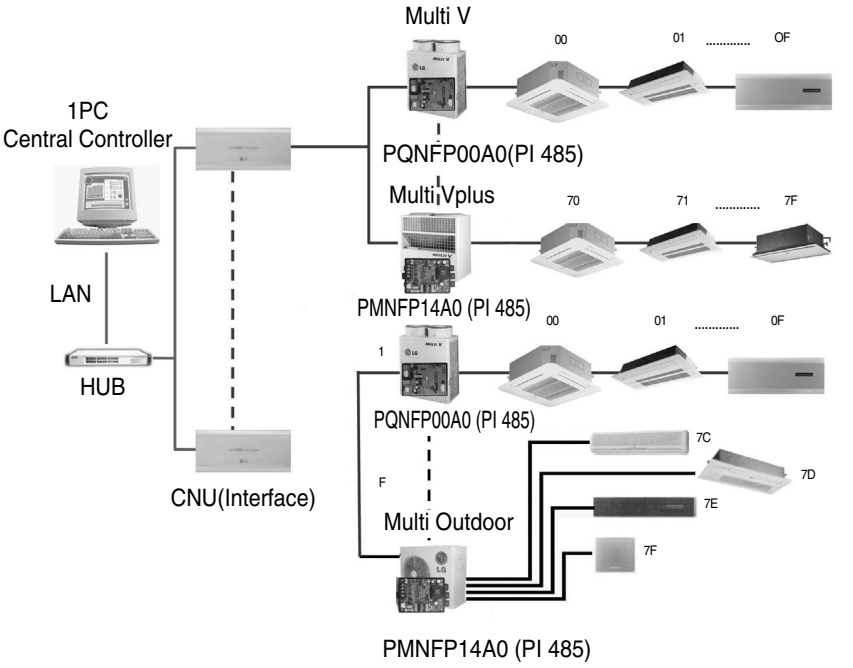
• System configuration

System Configuration

- 16 CNU / 1 PC Central controller
- 8 PI 485 / 1 CNU
- 1 master / PI 485

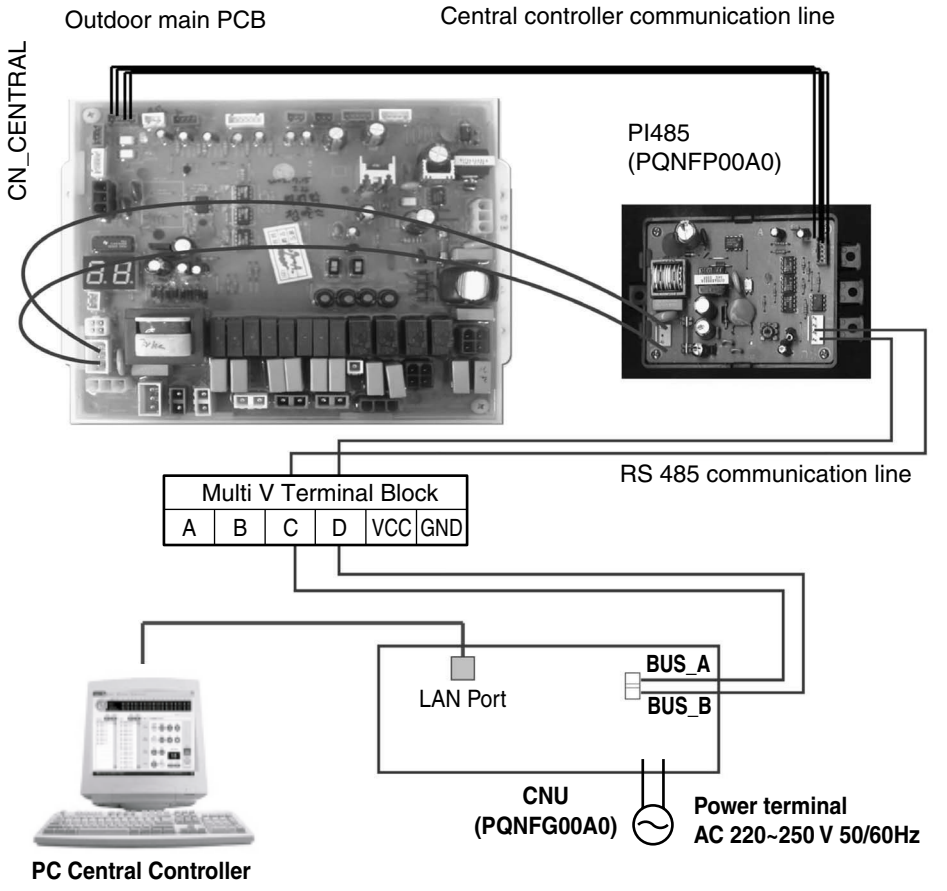
NOTE

If your requirement does not match above mentioned spec then please contact air-conditioner department for support.



2.3.7 Internal wiring diagram

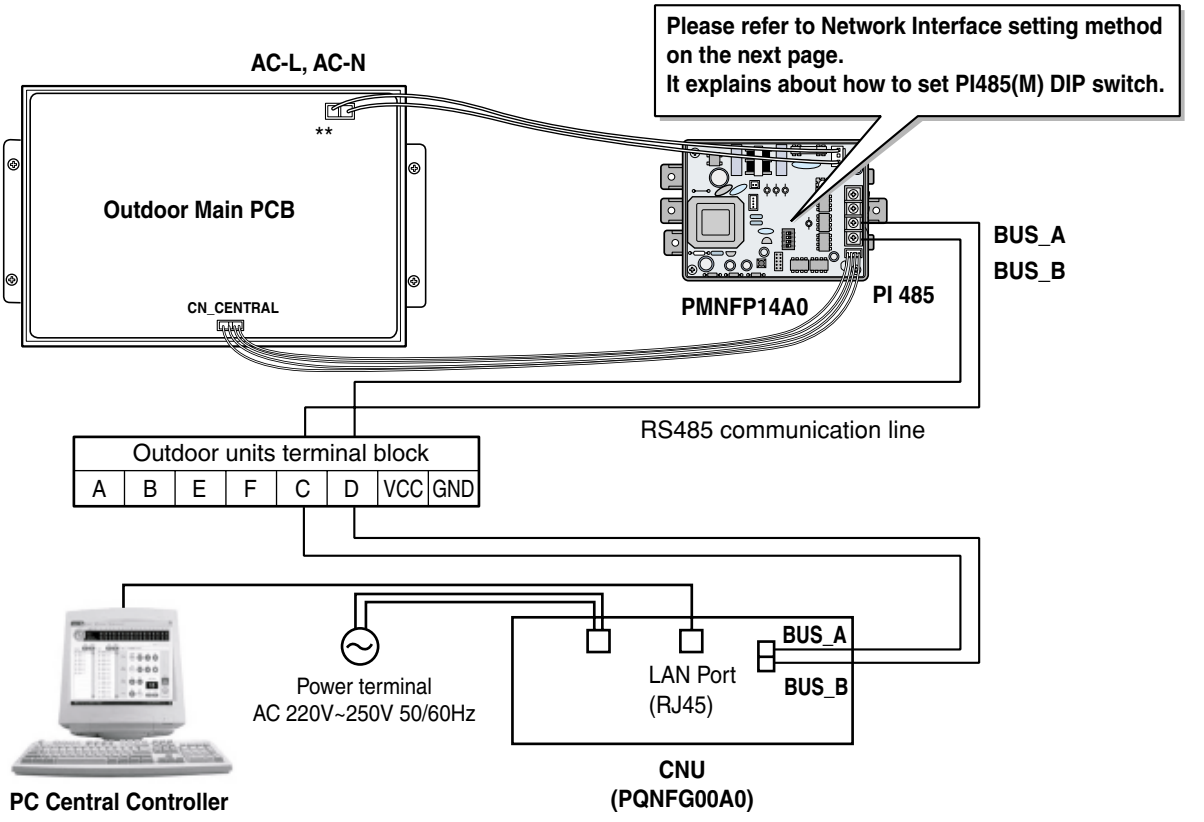
• Multi V CRU(N)N



NOTE

CNU and PI 485(PQNFG00A0, PQNFP00A0) should be purchased separately.

• Multi Product



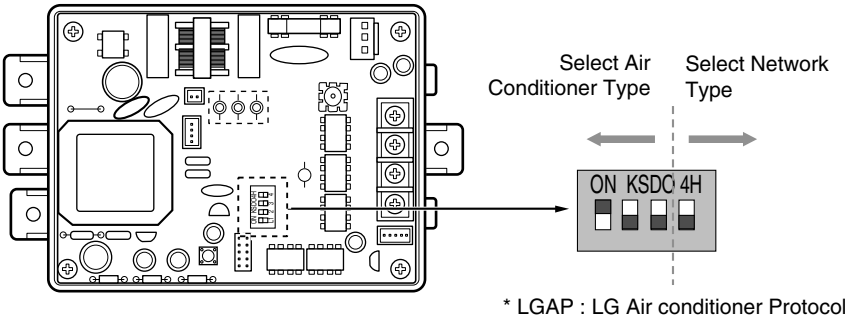
NOTE

Terminal block use in case of Multi V, Multi and other models may or may not be present.
If it is not present, make direct connections.

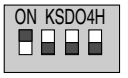
* : Depending on the outdoor model PCB AC-L, AC-N terminal may be at seperate positions from each other on PCB.

** : In case of PC Central controller, keep the Vcc, GND terminal open.

2.3.8 Network Interface Connection



MULTI V PLUS & Multi products.



1 On, All others Off: MULTI V PLUS & Multi Inverter product



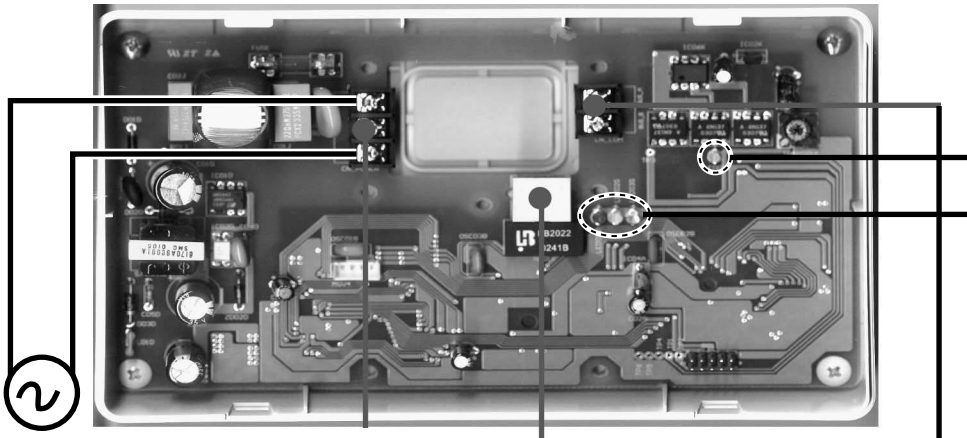
2 On, All others Off: Multi variable product

CAUTION

The wrong setting of air-conditioner switch causes malfunctioning of the whole system.
Switch setting must be done carefully.

• CNU Connection

CNU : **Central Network Unit** (PQNFG00A0)



RS 485 Communication check LED

Ethernet communication check LED
LED01G:Rx
LED02G:Tx
LED03G:Collision

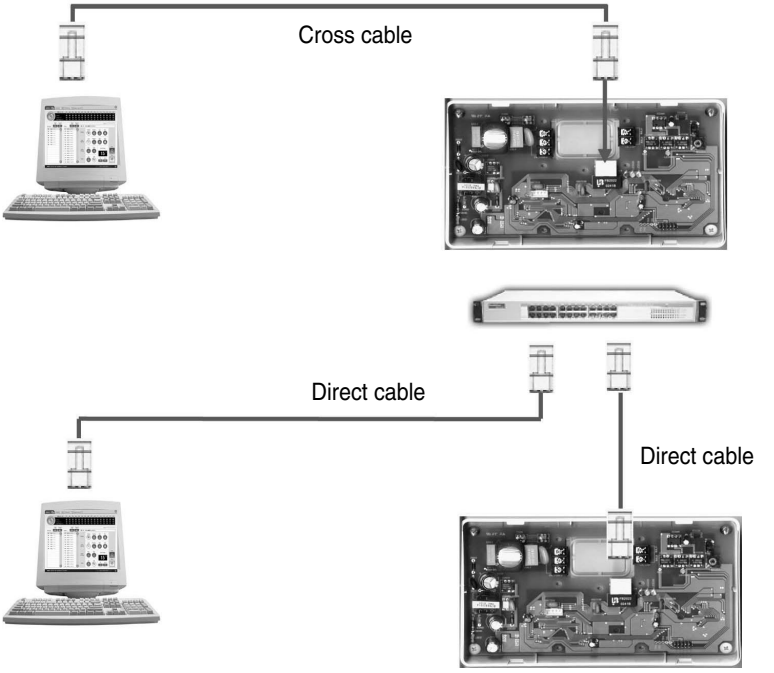
Power terminal
AC 220~250 V 50/60Hz

RJ45 connector : Connect with HUB or Deluxe central controller

RS485 G/W Communication Terminal
: Connect with PQNFP00A0 'C,D' or connect with PMNFP14A0 'A,B'

BUS A, BUS B connections should be correct in PI 485 PCB and CNU
(BUS A and BUS B connections should not be interchanged)

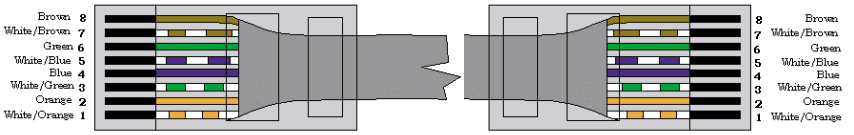
• Wiring Diagram



* How to differentiate between Direct cable & Cross cable

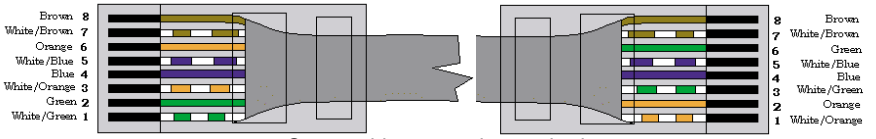
The UTP cable consists of 8 stripes of wire and the wire actually used for data transmission in the LAN environment is the reception (Rx) No.1 and 2 wire and the transmission (Tx) No.3 and 6, consisting of 4 strands. They are classified into two types depending on method to connect wire for reception and transmission.

Direct Cable - Also called as 1:1 straight cable and used for connecting other equipment from the network.



Direct cable connection method

Cross Cable – Used for 1:1 connection between same equipment in the network.

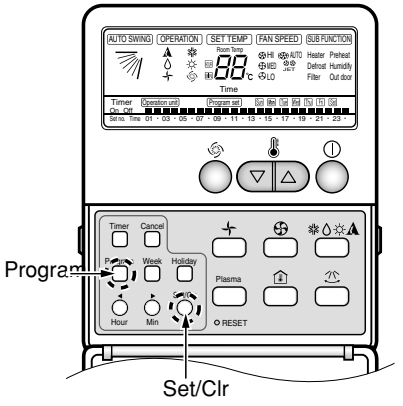


Cross cable connection method

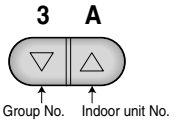
2.3.9 Addressing of Indoor Unit

• Addressing of Indoor Unit

Using wired remote controller

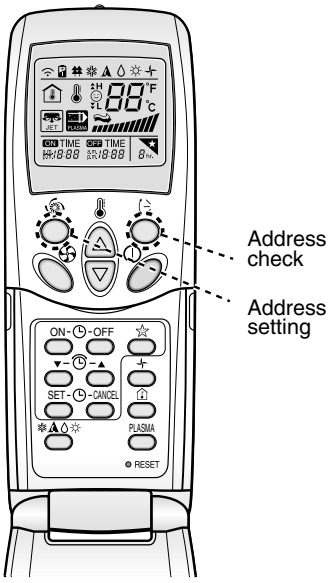


1. Press the Program & Set/Clr keys at the same time to activate the settings.
2. Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



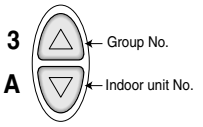
3. To complete the address setting, press the Program & Set/Clr keys at the same time for 3 seconds.

Using wireless remote controller



A. Address setting mode

1) Keep pressing upper left side key continuously and press RESET button once. Now the system is ready for address setting.(The left key should be pressed over 3 seconds)
2) Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



3) After setting address, press ON/OFF key once towards indoor unit.
4) The indoor unit shows the set address and it means completion of address setting process. (The address displaying time and its way can depend upon the type of indoor unit)

B. Address check mode

1) Keep pressing upper right side key continuously and press RESET button once. Now the system is ready for address checking.(The right key should be pressed over 3 seconds)
2) Press ON/OFF key once towards the indoor unit which shows set address on the display(The address displaying time and its way can depend upon the type of indoor unit)
3) Reset the remote controller to use it in the normal operation mode.

❉ Some remote controllers may not be supported by above functions according to the production date of wired/wireless remote controllers. As it has no concern with customers' use, use the remote controller available for the address setting during installation.

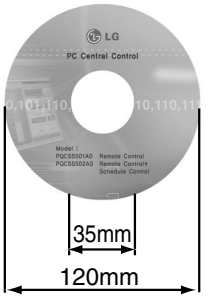
❉ It would be added how to set address of the simple central-control indoor unit.

2.3.10 Installation of PC Central Controller Hardware

• Parts of PC Central Controller



Personal Computer for PC Central Controller
(Not Provided)





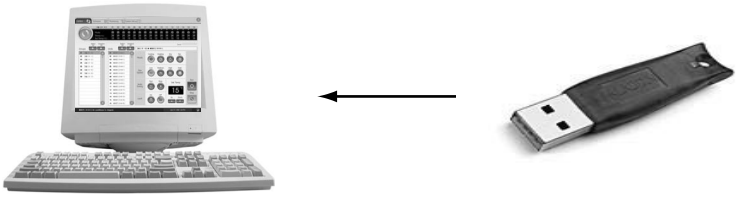
USB Hard_Lock key
(52mm*15mm*7mm)

• Connection USB Hard_Lock key

Connect USB Hard_Lock key in Computer for PC Central Controller

NOTE

USB Hard_Lock key determines all functions of PC Central Controller



2.3.11 Installation of PC Central Controller Software

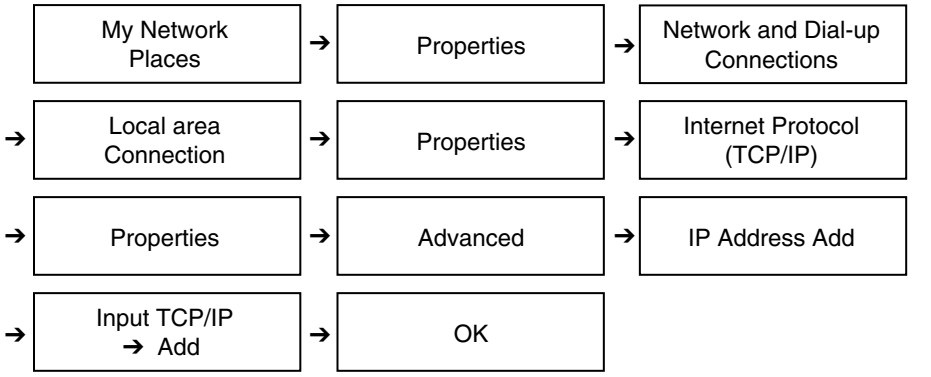
• Recommended System Configuration

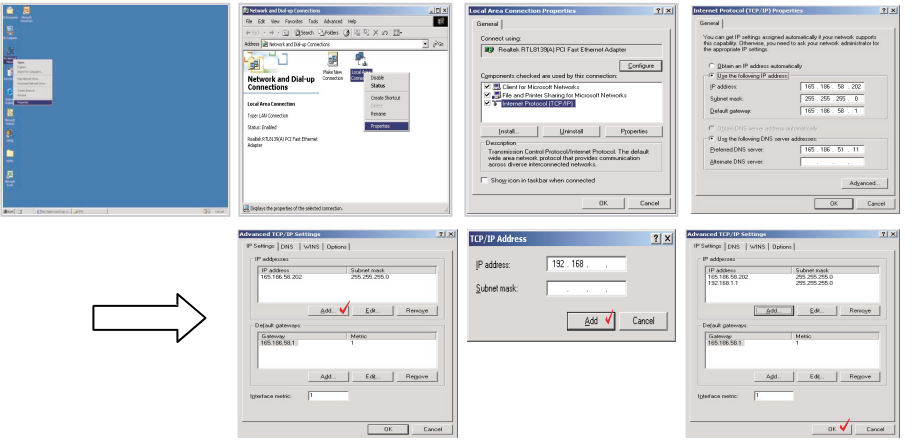
• LG PC Central Controller program can be executed in Window NT, 2000, 2003, XP and while installing the program, at least 50 Mbytes memory is necessary.

- CPU : Over Pentium IV 2.2GHz
- Main Memory : Over 256MB
- Operation System : Windows NT/ 2000/ XP/ 2003 (include Microsoft Java VM)
- Hard Disk : Minimum space: 600MB (Request more 600M when operating)
- Web browser : Over Internet Explore 5.0

• In case of using Hub, IP should be set in the PC

- The way to set IP address(You have to get IP from IT manager)

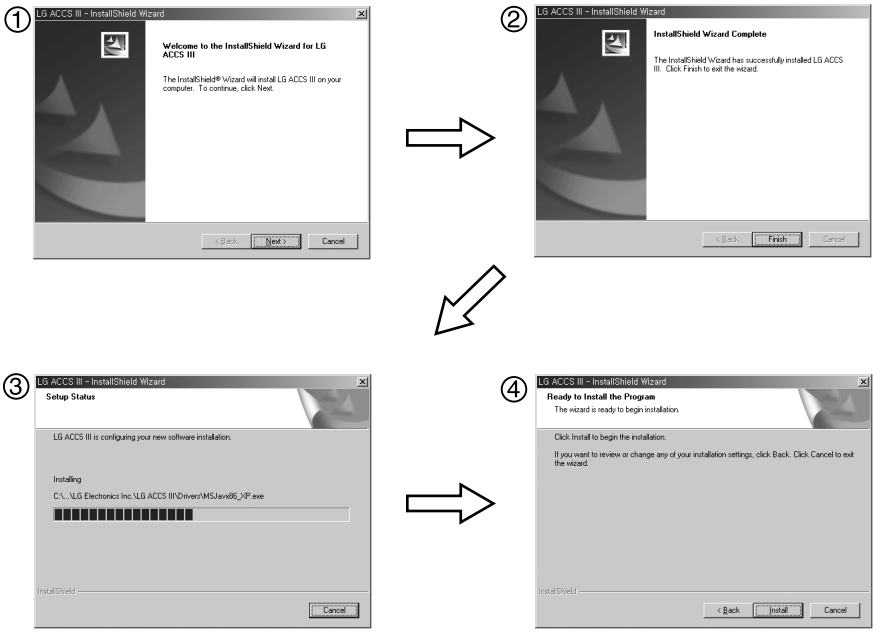


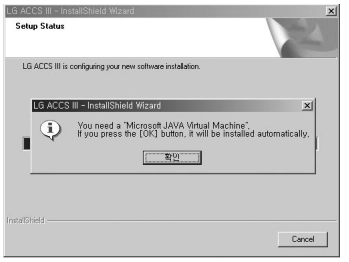


❉ As far as possible, use PC exclusively for central control only.

• How to install program

Insert supplied CD in CD-ROM driver, double click the Set-up icon and install the software.





NOTE

In case there is no Microsoft Java VM(MS JVM)program installed in the computer, a message appears as shown in left side picture. Click on 'OK' to install it.

• Engine S/W Registration in service program

Installed ACCS III Program in computer is classified GUI program and Engine Program “LG ACCS III Ver[name of version]” is GUI Program, “LG ACCS III Service Manager” is program to handle the Engine.

Actual air conditioner control,monitoring and other function operate in Engine.

So Engine S/W must operate in control Inside PC at all time.

It is possible to control air conditioner.

Click [Start] → [Program] → [LG Electronics Inc] ’ [LG ACCS III] → [LG ACCS III Service Manager]

After install, engine program is registered in Service program, then the program is executed automatically.

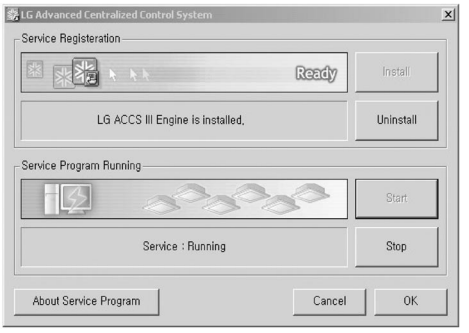
If service program is not executed, click on “Install” then click on “Start”

After becomes the execution, though window is closed by click on “OK”

S/W is executing continuously.

❉ Once you have set register at the first operation, you do not need to set again.

Engine S/W which registered at the service program will operate automatically when PC is rebooting after



• Execution of the Program

Click the Program LG ACCS in the start menu in the program menu of windows (Click the LG ACCS icon on the desktop)
When the program is started, loading image is displayed.
Afterwards, Initial display appears on the screen.



In the login window, insert ID and password, click the login button.
[At first time ID is admin and password is digital21]
If you click on cancel, the program is closed

- PC Central program can be executed only when the approval hard_lock is connected to computer. When the Hard_Lock is pulled out, PC Central Program can not be executed, Some error will be displayed.

Failed the Log-in

Loading screen is not appeared but appear fail message

"Status : Please, Input ID and password..."
- The case where ID and password are not input by the use

"Status : Authentication Failed. Wait a Moment..."
- In case input ID or password is wrong.

"Status : There is No Response, Login Failed. Wait a Moment..."
- The case where engine S/W does not operate.

"Status : Connection Error, Login Failed. Wait a Moment..."
- The case where data transmission of the receipt of a message goes wrong

"Status : Client License Access Over..."
- **Access people are over than limit**

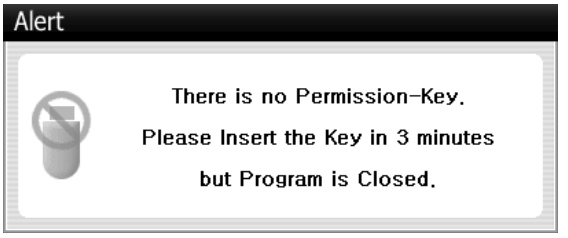
"Status : Permission Error. Retry Again..."
- Although succeed Log-in,it cannot receive permission information or receives wrong permission

• How to use approval hard_lock



PC Central program can be executed only when the hard_lock is connected to computer. When the Hard_Lock is pulled out, PC central Program can not be executed. In such a case some error will be displayed as shown in left picture. Click OK button and insert the approval hard_lock and then execute again.

▲ Hard_lock warning window appears in case key is not inserted.(When program starting)



A when approval hard_lock is pulled out or removed during operating program, warning message will be displayed As show in left picture.

If approval hard_lock is inserted within 3 minutes, warning message disappear and the program operates normally.

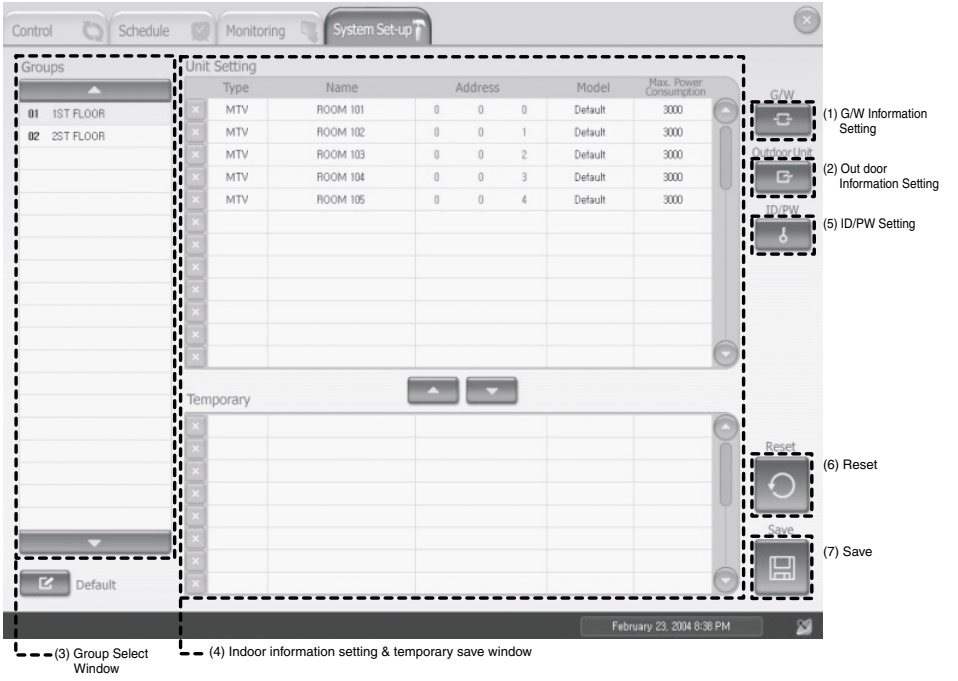
▲ Approval Hard_lock warning window
(While program is operating)



USB Hard_Lock key
(52mm*15mm*7mm)

• System set-up

The system information about outdoor unit, G/W, ID/PW etc. can be seen in the system set-up.



• Configuration of System Setting Screen

1) Click on "G/W"

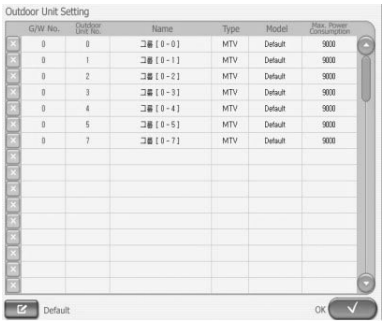


When you click on "default", default data is set. Enter the name, G/W setting in the G/W Setting field.
In the G/W Info., IP address will be set automatically.

The unnecessary data is deleted automatically.

When all the input data is set, click OK

2) Click the Outdoor Unit Setting.



When you click the "default" , default data is set. enter the G/W No., Outdoor unit No., Name, Type, Model, Max. power consumption in the Outdoor Unit Setting.

The unnecessary data is deleted automatically.

When all the input data is set, click OK

Click the "Group" and enter the group's name.
When you click the default, default data is set. All indoor unit's data made by presetting G/W and outdoor unit data is set automatically.
Group name(physical group data) is inherited by the outdoor name.

Click the Group name for which you want to input the indoor unit's data and the unit setting area.

Click on "Indoor Unit" .



Enter the indoor unit's information.

The physical addressing format is (X1. X2. X3) where X1 is Gateway information, X2 is the outdoor information, and X3 is the Indoor unit information for the Multi_V Unit .

To set id and password, click the ID/PW button and the enter your id and password in the ID/PW Window.

Click the 'Save' after setting all the data to save the information.

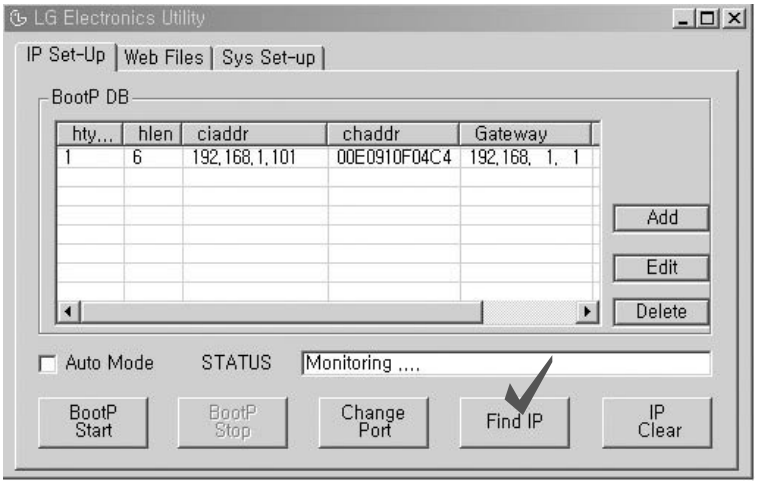
⚠CAUTION

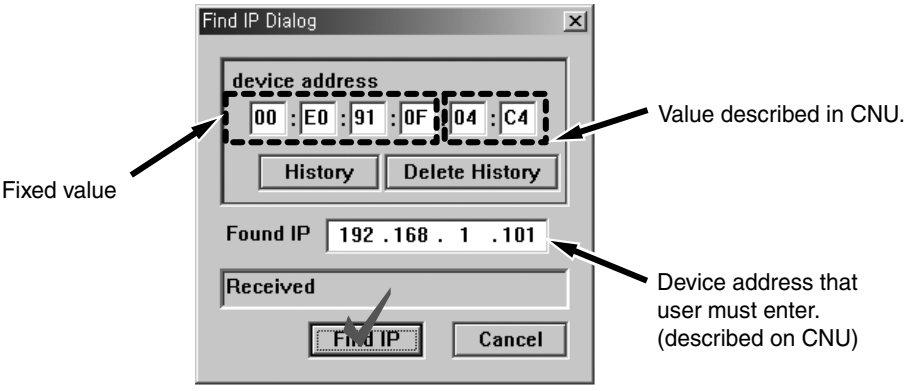
When you click "Reset", the last saved data is restored.

• How to search for IP which is set at the CNU

1. How to search for IP which is already set for the CNU

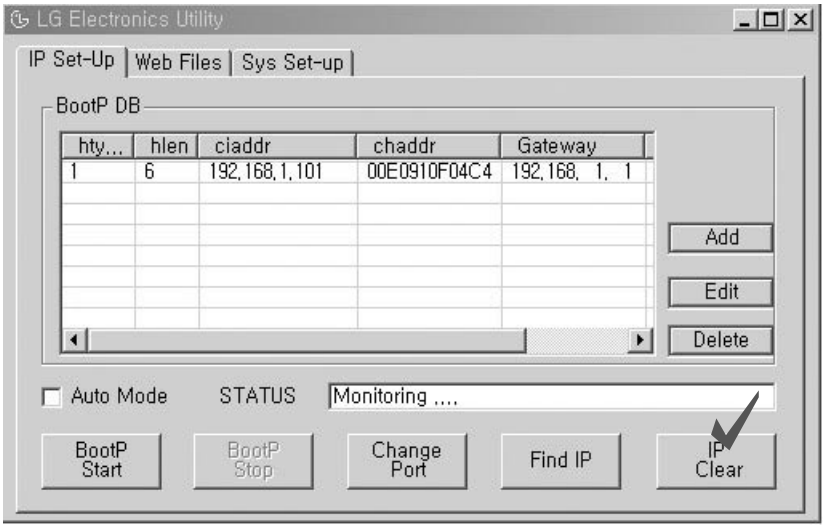
- Execute “LG Utility” program.
- Click the “Find IP” button.
- Click the “Find” button after entering “device address (mac address)” values to display the address which is already set for the CNU on the found IP window after communication with CNU.

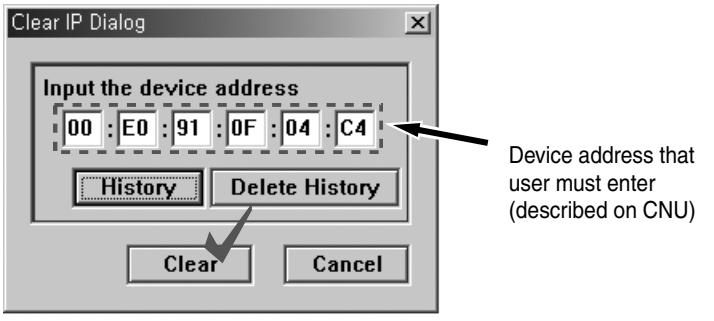




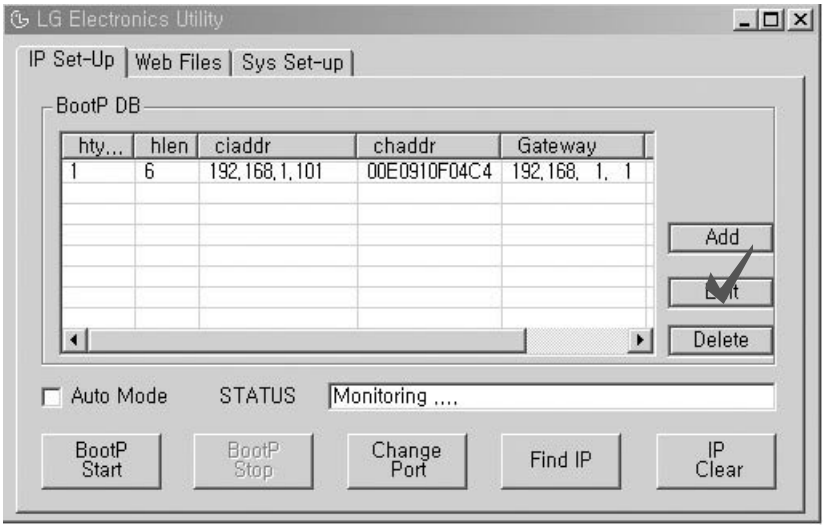
2. How to set a new IP in the CNU

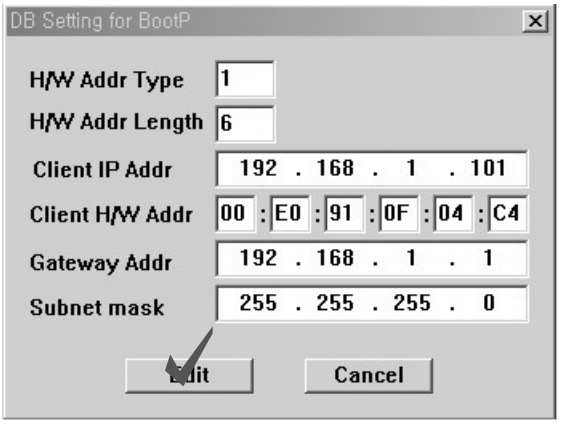
1. Execute “LG Utility” program
2. Click the “IP Clear” button to clear IP already setup.
   (Press the “clear” button after entering the relevant MAC address on the “Input the device address” window.)



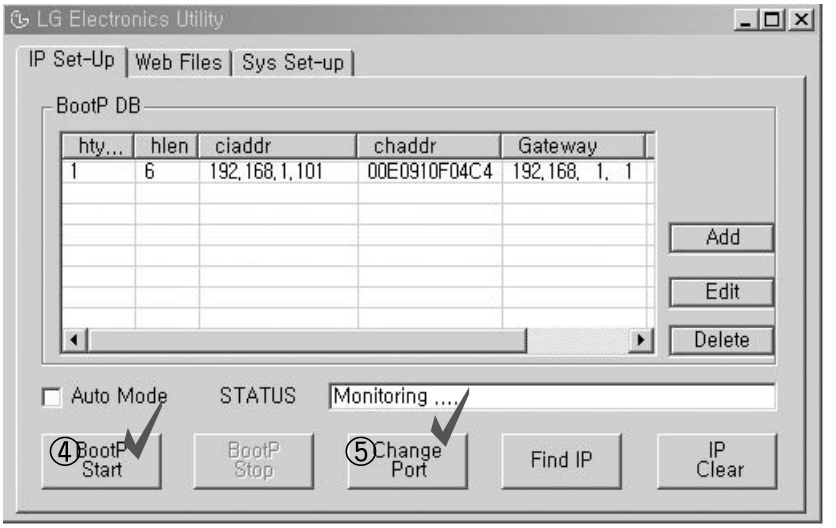


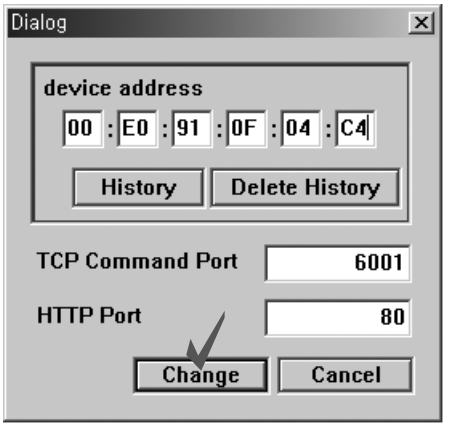
3. Click the "Edit" button after entering information related with IP to setup on the "DB Setting for BootP" window that is created if pressing the "Edit" button.





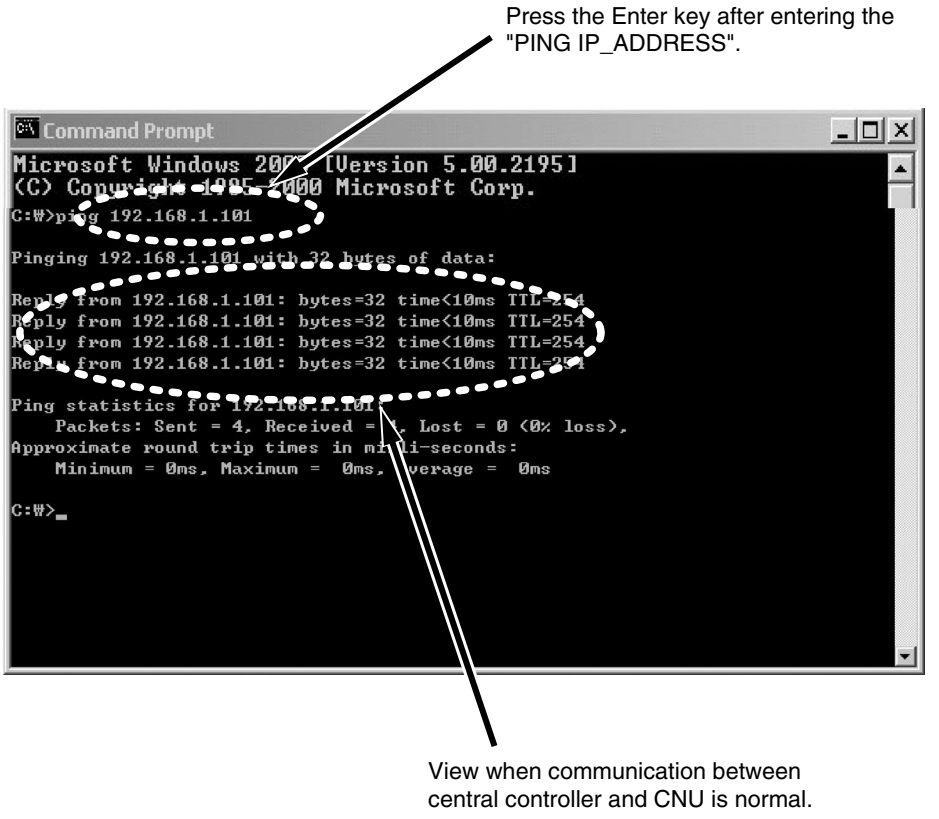
4. IP which is entered by pressing the “BootP start” button is set in the CNU.
5. Enter the mac address in the “device address” of the dialog window appearing when clicking the “Change Port” button and then click the “Change” button after entering “6001” for the TCP Command, and “80” for the HTTP Port.





• IP Test Method (PING Test)

This is to know about how to search for IP that is set in the CNU, and check that communication between central controller and CNU is possible by executing as below with IP of the relevant CNU noted.



• INSTALLATION OF WEB SERVER

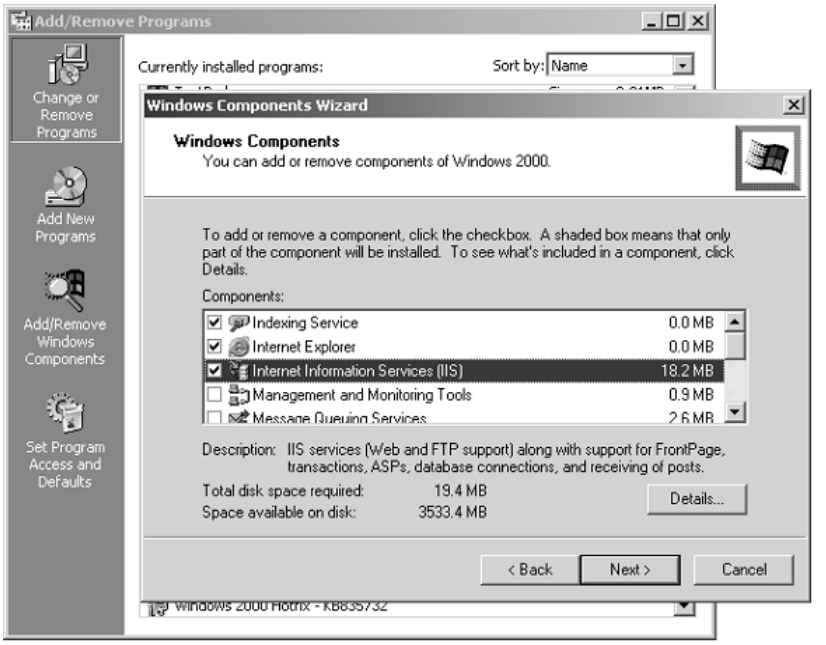
Installation of Web Server

Web server (IIS, Apache etc) must be installed in the inner PC where LG ACCS III is installed in order to remotely control I LG ACCS III air conditioner via Internet outside.

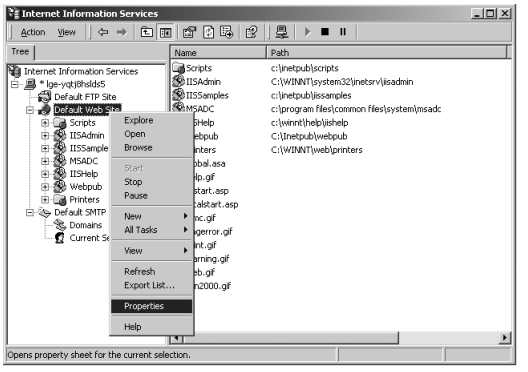
(1) Installation of IIS Web Server (Windows 2000)

Internet Information Service (IIS) is featured that construction of web server service for web service is easy and productivity is excellent.

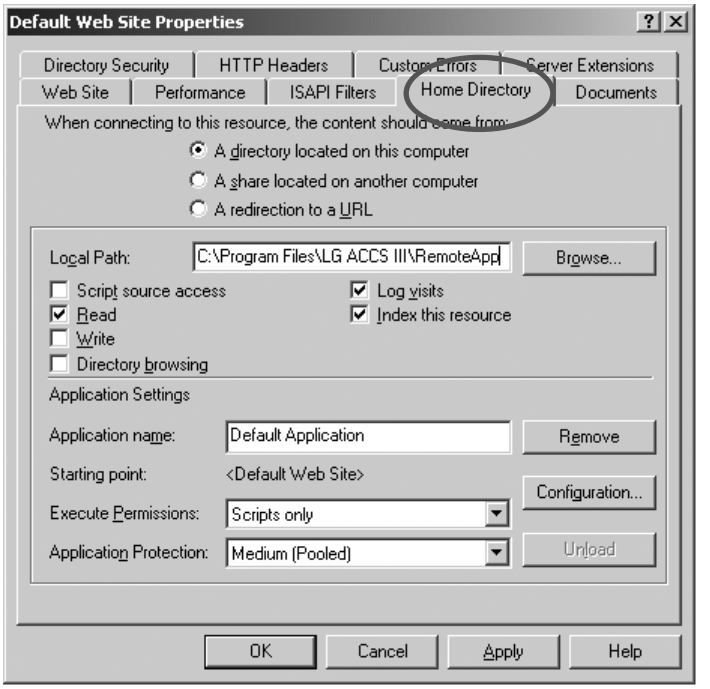
1. IIS must be installed on Windows2000 to install a Windows2000 computer with the web server. Select the left Add/Remove of Windows Configuration Factors from Setup >>Control Panel >>Program Add/Remove menu. Check and display Internet Information Service (IIS) from the [Windows Configuration Factors] window, and then select <Details>. You must select appropriate configuration factor for installation if a window to select detailed configuration factors for IIS appears.



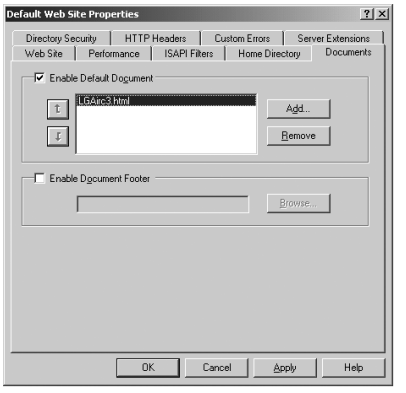
2. Environment Setup : Select Default Web Site after executing [Management Tool] >> [Internet Service Manager] in order to change setup of IIS if installation is completed.
   Select Registration Information after clicking the right mouse.



3. Home Directory Setup: Designates local path from the [Home Directory]. You must designated path as "C: \ Program Files \ LG Electronics Inc \ LG ACCS III \ RemoteApp" from the Search menu.



4. Document Setup : Check Using Basic Document from [Document] and setup it as "LGAirc3.html ".



(2) Installation of Apache Web Server (for Windows)

Installation is done if executing Installation File after downloading the Apache Web Server file for windows and designating a folder to be installed. Message [Server is executed] from the DOS window appears on the DOS window if installation is completed, and HTTP access with the system where this Apache is installed from that time is available.

1. Environment Setup: For environment setup of this Apache web server, you must restart the Apache web server by clicking Control Apache Server >> Edit the Apache httpd.conf Configuration File restart after modifying Start >> Program >> Apache HTTP Server >> from the text editor.
2. Home Directory Setup : Search for followings and then modify contents of DocumentRoot.

```
#
# DocumentRoot: The directory out of which you will serve your
# documents. By default, all requests are taken from this directory, but
# symbolic links and aliases may be used to point to other locations.

#
DocumentRoot "C:\Program Files\LG Electronics Inc\LG ACCS III\RemoteApp"

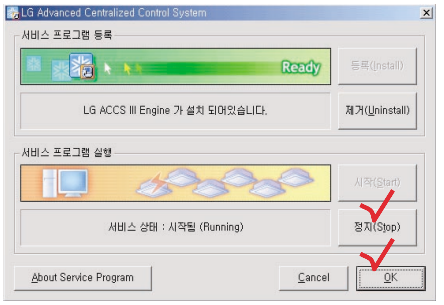
#
# This should be changed to whatever you set DocumentRoot to.
#
<Directory "C:\Program Files\LG Electronics Inc\LG ACCS III\RemoteApp">
```

3. Doc. Setup : Search for followings and then modify contents of DirectoryIndex.

```
#
# DirectoryIndex: Name of the file or files to use as a pre-written HTML
# directory index.  Separate multiple entries with spaces.
#\
<IfModule mod_dir.c>
  DirectoryIndex LGAirc3.html
</IfModule>
```

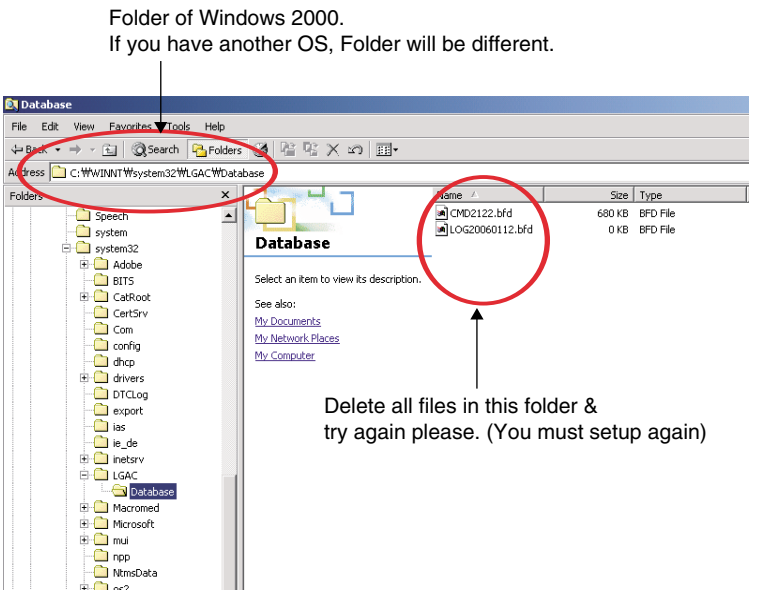
2.3.12 Troubleshooting

Defect phenomena and check method

<table>
<tr><th>Defect</th><th>Double click the ICON on the screen but the LOGIN screen does not appear</th><th>The specifications on the central controller screen is not communicated to the indoor appear</th></tr>
<tr><td>Check method</td><td>• Double click the Service manager on the screen to stop the program execution . Then again press the start button
 

Take out the Hard Lock key and insert again or after the program update save the Service manager and after that restart the program.</td><td> 
• Operating the indoor units confirm the communication between the outdoor units.
• If case there is non communication between indoor /outdoor then there is no communication with the central controller.</td></tr>
<tr><td>Defect</td><td>In case all indoor units at the same outdoor of the central control appears to be non activated</td><td>• ADDRESS setting confirmation
• In case the same address has been assigned to more than 2 indoor units then all indoor units will not appear on the central controller.
• When The registration of the central controller is different from the actual product, the central controller will not recognize the respective indoor units.

• LAN Line connection confirmation
confirm the LAN wire connection contact.</td></tr>
<tr><td>Check method</td><td> 
• Confirm PC IP of the PC control.
(CNU has to be in the same NETWORK)
• Confirm whether the power is supplied to CNU(I-G/W).
• Confirm if there is any abnormality in the LAN wire touching .
• Confirm whether the PI 485
• C(BUS_A)/D(BUS_B) terminal changed or not.</td><td></td></tr>
</table>

Defect	**Software is always sending** 
Check method	1. Delete all files at database folder 2. Try again(double click LGACCS Icon) 

2.3.13 Network error code

Error indication number	Error items	Meaning	Cause
240	Central controller Connector Error (I-G/W connection failure)	Communication connection failure between the centralcontroller and CNU	• Communication wire connection defect • CNU defect central controller and CNU IP • Setting is not correct • Communication defect

❑ Defect check method

1) Confirm whether the communication wire is connected properly.
2) If the central controller is connected to whole network then conform whether CNU, central controller etc IP is correct.
3) It seems CNU has been changed .

Error indication number	Error Items	Meaning	Cause
241	Central controller Send Error (Data sending error)	The failure of Central controller receiving signal from CNU in a specified time.	• CNU defect . • central controller Initialization failure

❑ Defect check method

1) Confirm whether the Air-conditioner addressing of the central controller and the actual system's addressing is same or not.
2) Restart the central controller service (engine) program.
3) Replace the CNU .

Error indication number	Error Items	Meaning	Cause
242	Central controller Receive Error (Data receiving error)	The failure of Central controller receiving signal from CNU in a specified time.	• CNU defect . • Central controller Initialization failure

❑ Defect check method

1) Confirm whether the Air-conditioner addressing of the central controller and the actual system's addressing is same or not.
2) Restart the central controller service (engine) program.
3) Replace the CNU .

Error indication number	Error Items	Meaning	Cause
243	Central controller receive buffer overflow(Excessive data receiving)	Central controller receive buffer overflow(Excessive data receiving)	• Not supporting outdoor /indoor union • CNU defect • Noise in the communication network.

❑ Defect check method

1) Confirm whether the Air-conditioner addressing of the central controller and the actual system's addressing is same or not.
2) Restart the central controller service (engine) program.
3) Check the CNU.

Error indication number	Error Items	Meaning	Cause
244	Central controller receiving time is more then 3 seconds	Communication failure between the Central controller and the CNU	• CNU defect • Failure in Central controller initialization

❑ Defect check method

1) Confirm whether the communication wire is connected properly.
2) If the central controller is connected to whole network then conform whether CNU, Central controller etc IP is correct.
3) Check the CNU.

Error indication number	Error Items	Meaning	Cause
245	Central controller data sending time more than specified	Failure in timely forward of the data from the CNU within the specified time	• CNU defect • Failure in Central controller initialization

❑ Defect check method

1) Confirm whether the aircon addressing of the central controller and the actual system's addressing is same or not .
2) Restart the central controller service (engine) program.
3) Check the CNU.

Error indication number	Error Items	Meaning	Cause
246	Central controller receive timeout	Failure in timely forward of the data from the CNU within the specified time	• CNU defect • Failure in Central controller initialization

❑ Defect check method

1)Confirm whether the Air-conditioner addressing of the central controller and the actual system's addressing is same or not.
2) Restart the central controller service (engine) program .
3) Replace the CNU .

Error indication number	Error Items	Meaning	Cause
250	Central controller Check sum error	Central controller Check sum error	• NOISE occurrence • CNU defect • Timing non-synchronizing • Air-conditioner defect

❑ Defect check method

1) Confirm whether the air-conditioner address at the Central controller and the actual system's address is same or not.
2) Restart the Central controller service (engine) program.
3) Replace the CNU.

Error indication number	Error Items	Meaning	Cause
251	Central controller receive zero error	Receiving data distance is 0	• NOISE occurrence • CNU defect • Timing non-synchronizing • Air-conditioner defect

❑ Defect check method

1) Confirm whether the air-conditioner address at the Central controller and the actual system's address is same or not.
2) Restart the Central controller service (engine) program.
3) Replace the CNU.

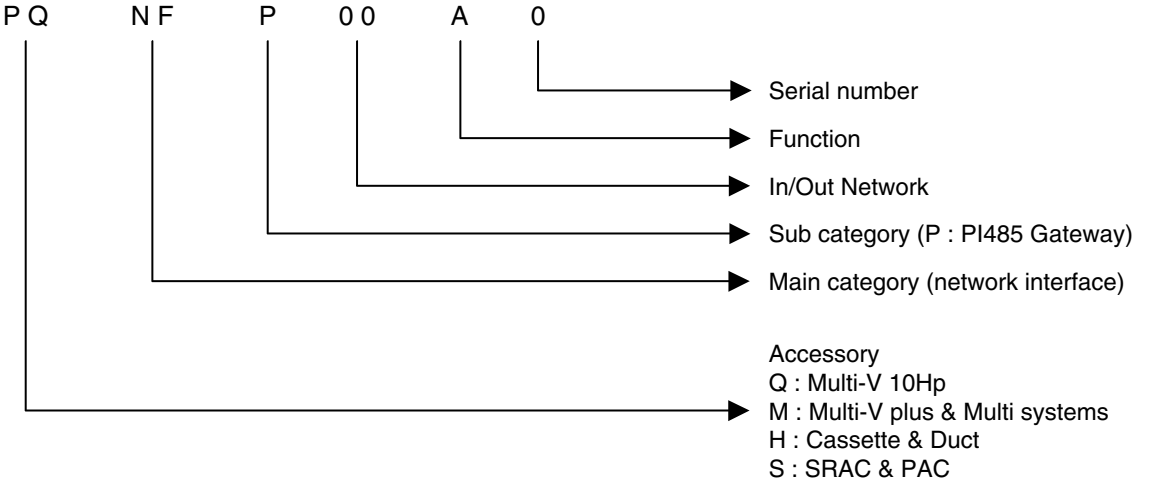
Error indication number	Error Items	Meaning	Cause
252	Central controller wrong address error	Central controller wrong address error	• NOISE occurrence • CNU defect • Timing non-synchronizing • Air-conditioner defect

❑ Defect check method

1) Confirm whether the air-conditioner address at the Central controller and the actual system's address is same or not.
2) Restart the Central controller service (engine) program.
3) Replace the CNU.

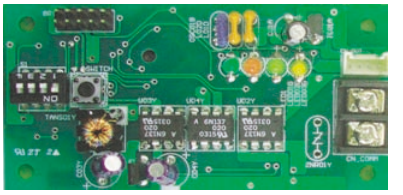
3. Others
3.1 Interface device
3.1.1 PI485 PCB

Interface device converts air-conditioners protocol to 485 protocol for Central Controller

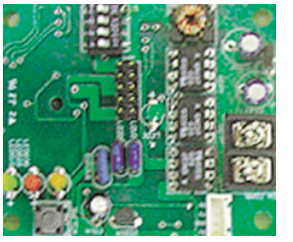




PMNFP14A0

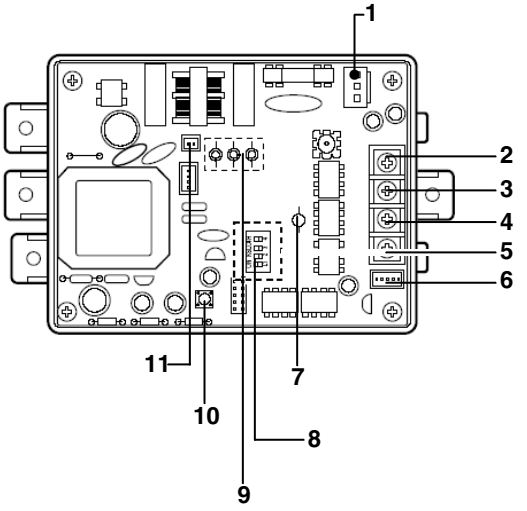


PHNFP14A0



PSNFP14A0

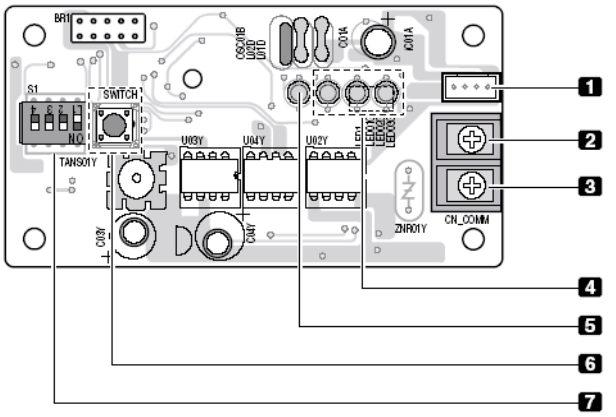
PMNFP14A0



1. CN_PWR : AC 220V connector
2. +10 : DC 10V terminal
3. GND : Ground
4. BUS_A : RS485 (+) terminal
5. BUS_B : RS485 (-) terminal
6. CN_out : Outdoor unit connector
7. LED1 : RS485 status LED
8. Dip Switch : Product selection
9. LED01G, 02G, 03G : Communication status LED
10. Reset switch : PI485(c) Reset
11. CN_DRY : Dry contact

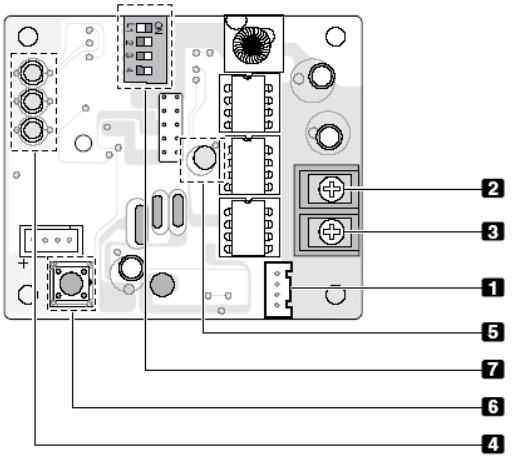
Slide switch selection criteria

PHNFP14A0



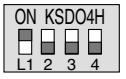
1. CN_out : Indoor unit connector
2. BUS_B : RS485 (-) terminal
3. BUS_A : RS485 (+) terminal
4. LED01G, 02G, 03G : Communication status LED
5. LED1 : RS485 Communication status LED
6. Reset switch : PI485(c) Reset
7. Dip Switch : Product selection

PSNFP14A0

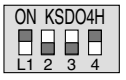


1. CN_out : Indoor unit connector
2. BUS_A : RS485 (+) terminal
3. BUS_B : RS485 (-) terminal
4. LED01G, 02G, 03G : Communication status LED
5. LED1 : RS485 Communication status LED
6. Reset switch : PI485(c) Reset
7. Dip switch : Product selection

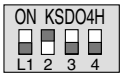
Dip switch setting



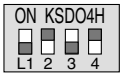
➡ 1 ON + 2, 3, 4 OFF : MULTI V & Multi Inverter multi.



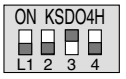
➡ 1, 4 ON + 2, 3 OFF : MULTI V & Multi Inverter multi + with LGAP.



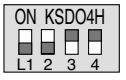
➡ 2 ON + ALL OFF : Multi Variable.



➡ 2,4 ON + ALL OFF : Multi Variable + with LGAP .

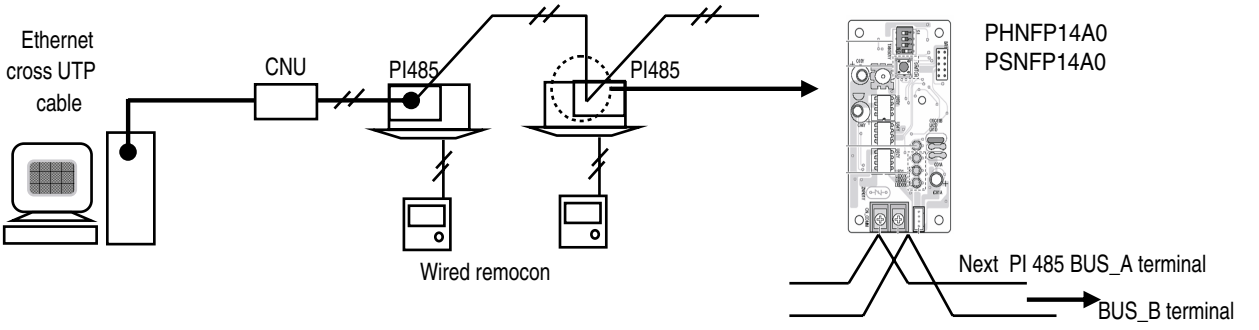


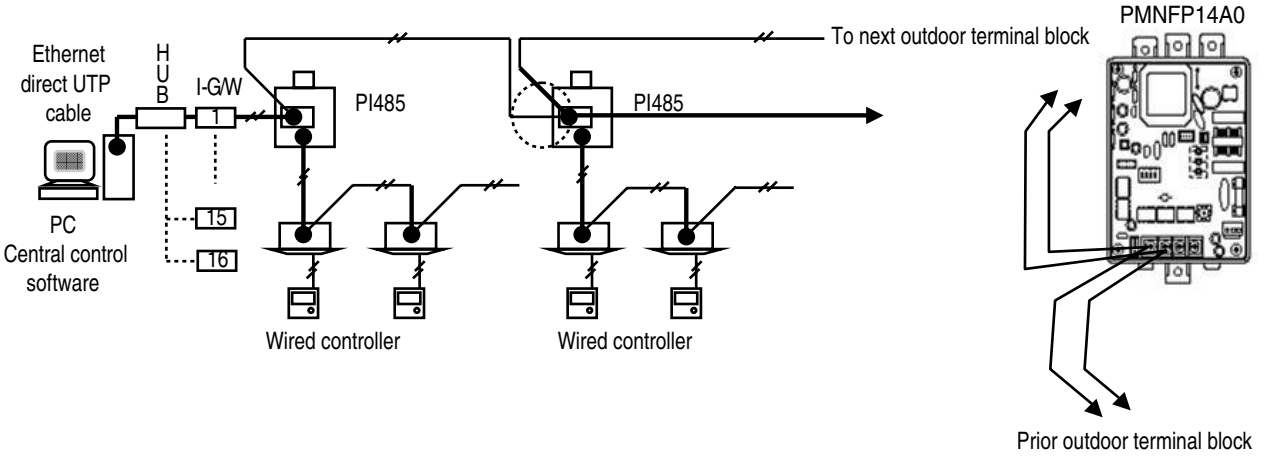
➡ 3 ON + ALL OFF : Ventilation, Single CAC.

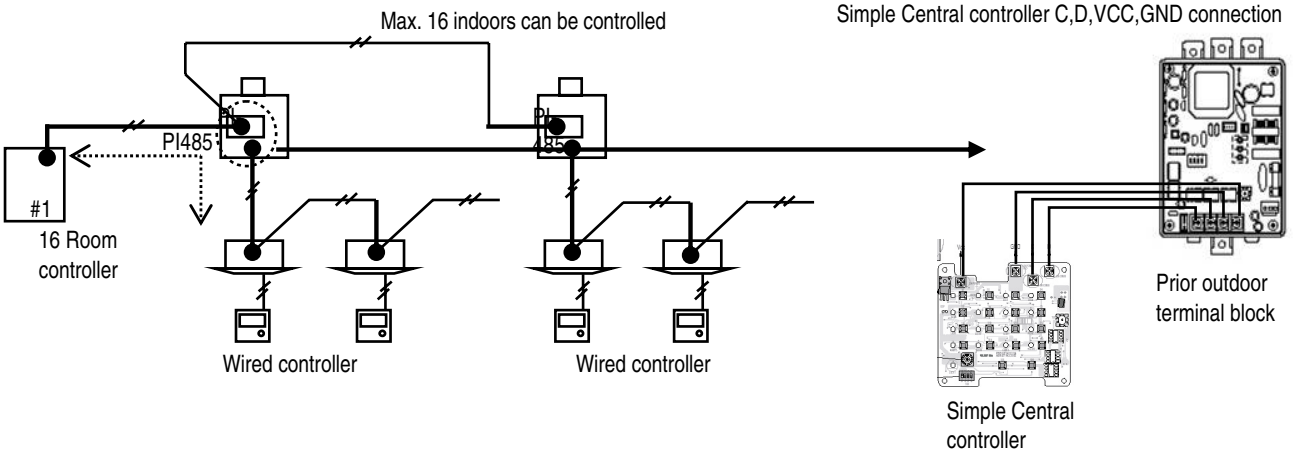


➡ 3, 4 ON + ALL OFF : Ventilation, Single CAC + with LGAP.

Wiring







NOTE

Outdoor to indoor unit connectivity depends upon model type.

Defect phenomena and check method (PMNFP14A0)

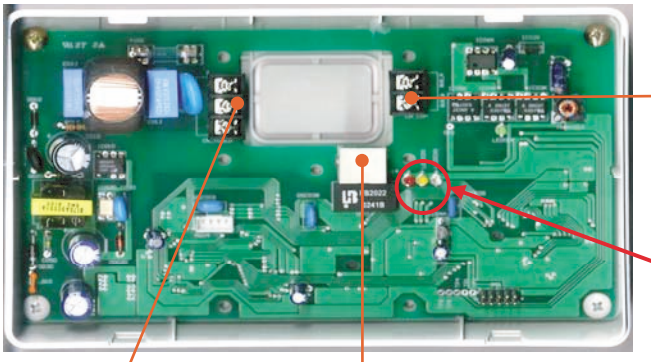
Defect	LED not glowing 	LED does not blink irregularly within a interval of 10 sec. 
Check method	Check whether the cable between the outdoor unit and PI 485 is connected or not .	Check whether the PI 485 module and CNU are connected or not . Especially, check if CNU's BUS_A with PI 485 A terminal and CNU's BUS_B with PI 485 B terminal are connected properly or not.

Defect phenomena and check method [PMNFP14A0, PMNHP14A0]

LED	Function	Normal operating condition	Abnormal working condition
LED01G(Red)	Indoor address conformation	After the initial power supply or after resetting, the LED blinks equals to the number of indoor unit and then 5 times every 3 minutes.	LED01G if not blinking then reconfirm the indoor address setting
LED02G(yellow) LED03G(orange)	LED for Outdoor communication and monitoring (sending / Receiving)	LED 02G, 03G continuous blinking (Directly after power supply, after reset only LED03G blinking can occur – depending on the indoor – outdoor communication speed)	- Observe the LED within 1 minute of the power supply - If after 1 min also only LED03G is blinking then recheck the DIP Switch setting.
LED1(green)	Confirmation of 485 communication	- Simple Central controller conenction : → Continuous blinking - Deluxe Central/Central controller connection : → Blink every 10~30 seconds in 0N state	- In case of Simple/Deluxe/PC Central controller, check all 485 communication line (A/B connections)

3.1.2 Communication Networking Unit (CNU)

It converts "RS 485 protocol" to the "Ethernet protocol" for central controllers.



PI 485 communication terminal

: Connected to PI 485 A/B

LED02G/LED03G blinking means LAN RX/TX communication is OK.

Power terminal

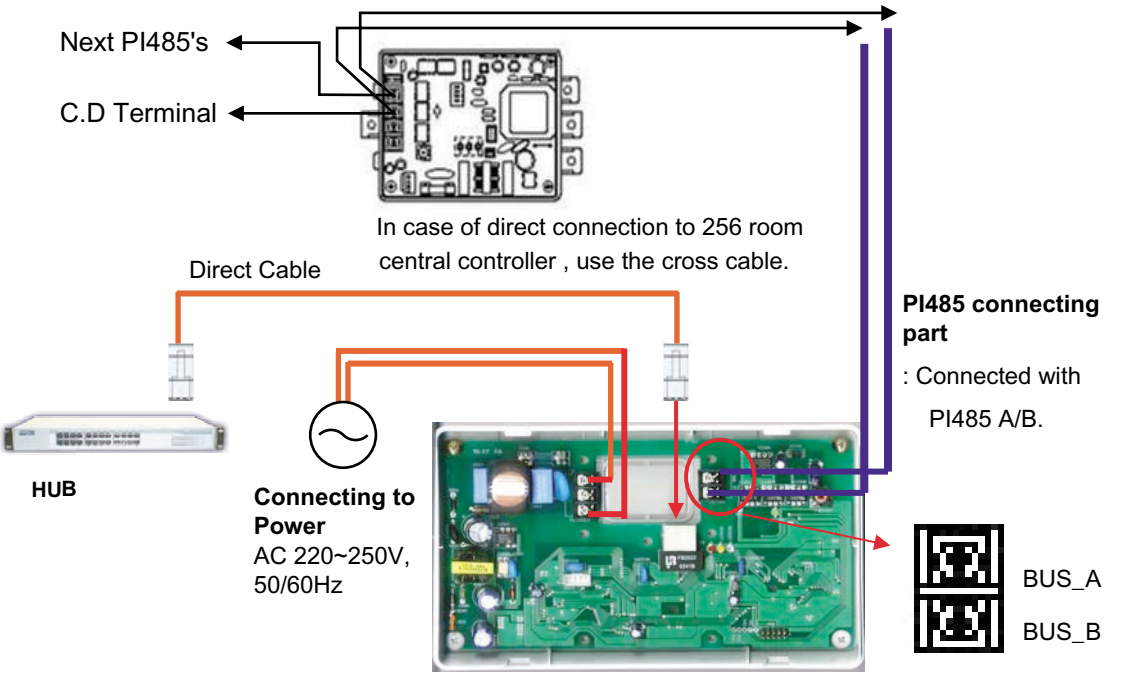
AC 220~230 V, 50/60Hz

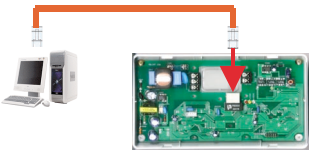
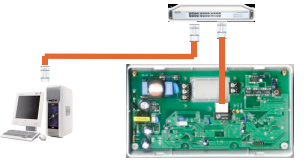
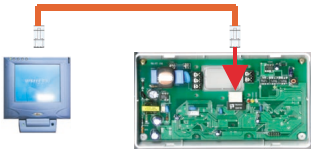
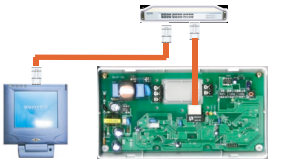
RJ45 Connector

: Connect with HUB or PC Central Controller

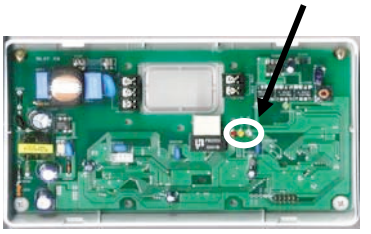
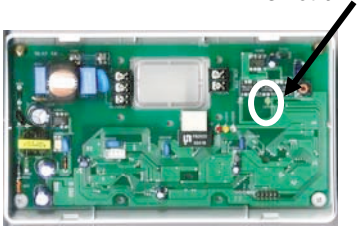
❊ **Separate power must be provided for CNU**

Wiring diagram



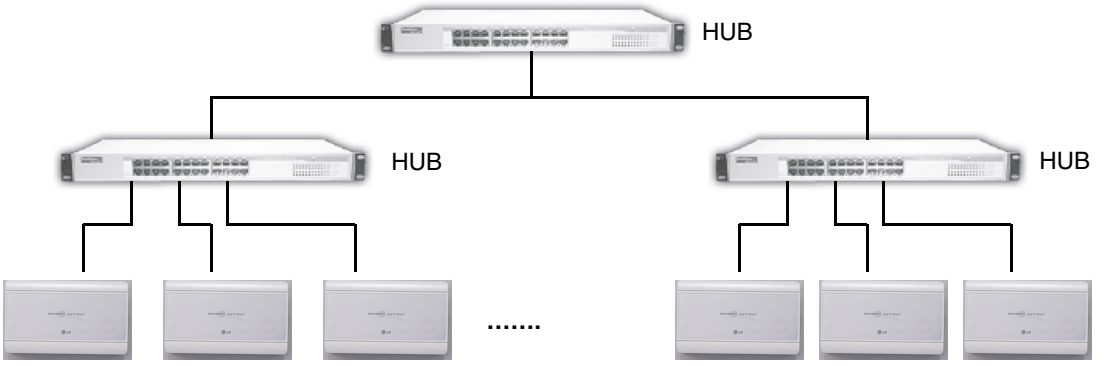
Connection method	CROSS CABLE LAN connection	DIRECT CABLE LAN connection	Comment
PC Central controller			❊ When HUB is not being used, then use the cross cable and when using the HUB then use the direct cable.
Deulxe Central controller			

Wiring diagram

Defect Phenomena	Within 5 sec time space 2 out of 3 LED are not blinking. 	Communication LED is not blinking. 
Check Method	- Conform whether the Deluxe Central controller's IP setting is right or not. - Confirm whether Deluxe Central controller with CNU is connected by the cross cable.	- Confirm whether the PI 485 and CNU are connected properly. Especially, confirm if, CNU BUS_A and PI-485 A terminal and CNU BUS_B with PI 485 B terminal are connected properly or not

3.1.3 HUB

HUB mean, equipment connecting network equipment in or near an office by using UTP cables when configuring the LAN. It plays a role such as network connection with computers or printers, connection with other networks (different HUB) nearby, connection with network equipment like router, check of network status and signal amplifying function.



Network consisting 3 HUB in the cascade pattern

There are various types of HUB depending on port numbers, support speed but HUB may be largely classified into dummy hub and switch hub depending on its function.

Dummy hub – Method to use by dividing the whole of band range by each node number, and general Hub is a dummy hub.

Switch hub – Method that each mode uses the whole of band range, also called as switch.
❉ Switch hub is strongly recommended

• Controllers connection limitation

① PC Central Controller

	CNU	Outdoor unit PI485	Indoor unit	Connectable Indoor units
Multi V	16	8	16	2048
Multi	16	8	8	1024
Single AC	16	-	32	512

② Deluxe Central Controller

	CNU	Outdoor unit PI485	Indoor unit	Connectable Indoor units
Multi V	1	16	16	256
Multi	1	16	8	128
Single AC	1	-	32	32

❉ 485 Mux(Expanding unit for single AC) is on developing

③ Simple central controller

	CNU	Outdoor unit PI485	Indoor unit	Connectable Indoor units
Multi V	-	-	16	16
Multi	-	-	16	16
Single AC	-	-	16	16

3.1.4 LAN

Specification change

A. Main and essential points

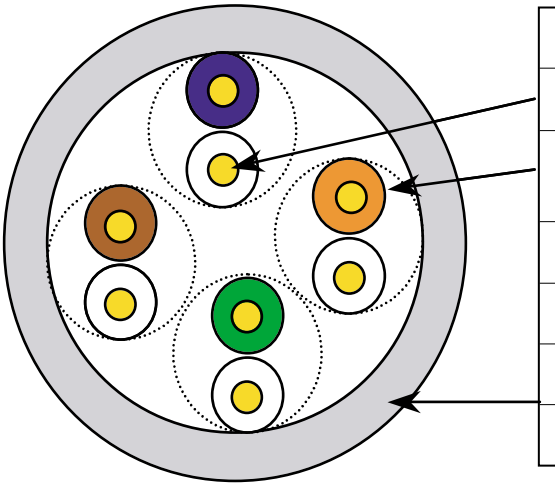
1) All LAN material should be as per the KS standards, it must support above category 5.
(Outlet, UTP, Patch pannel)

B. LAN Cable construction work

1) Cable is installed as per the IEEE802.3 standards .
2) The patch cord from the IDF (Outlet) to the PC should use the specified impedence.
UTP(4P) Cable and cable construction working should be done by concealing the cable with the walls, pipes, Access floors .
3) All wiring cables should comply with the wiring standards and and for a better distinguishing between them, identification numbers should be given to them.
4) For the protection of the cables, they should be installed at a height above 100mm from the floor surface at an appropriate place.
5) In external exposed area fire restive conduit should be used for all cables. Pipe should be supported after every 2 m with hangers or other supports.
6) All LAN cable are of category 5 and above, for all exposure parts mold should be made to cover it.
7) While cabling, do not damage the insulation or twist the cable.
8) For UTP cable length of each node shall not be exceeded more than pre decided length.
9) Patch panel touching UTP cable cut part should have more than 3m in reserves.

UTP 100MHz cat.5 cable

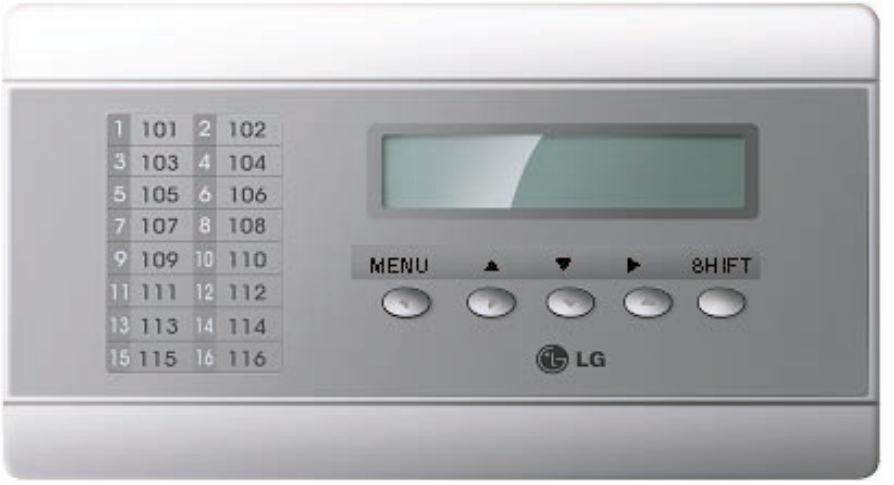
Cross-sectional diagram



Wire size	0.511 mm
Material	Annealed copper
Insulation	Solid HDPE 0.195 mm
Twin lays	Max. 22 mm
Cable lay	Max. 180 mm
Jacket	FR-PVC 0.6 mm
Cable diameter	5.2 mm

3.2 Power Distributor Indicator (PDI)

3.2.1 Overview



■ Functions

- Accumulated Total Power Consumption
- Accumulated / Current Power Consumption of each indoor unit
- Monthly Accumulated Power Consumption
- Data back-up even if power turns off

■ Specification

- Power supply: 220~240V AC 50/60HZ 1Ø
- Dimension: W(200mm) x (120mm) x (55mm)
- Connectable Units: 1 Outdoor Unit per Power Distribution Indicator.

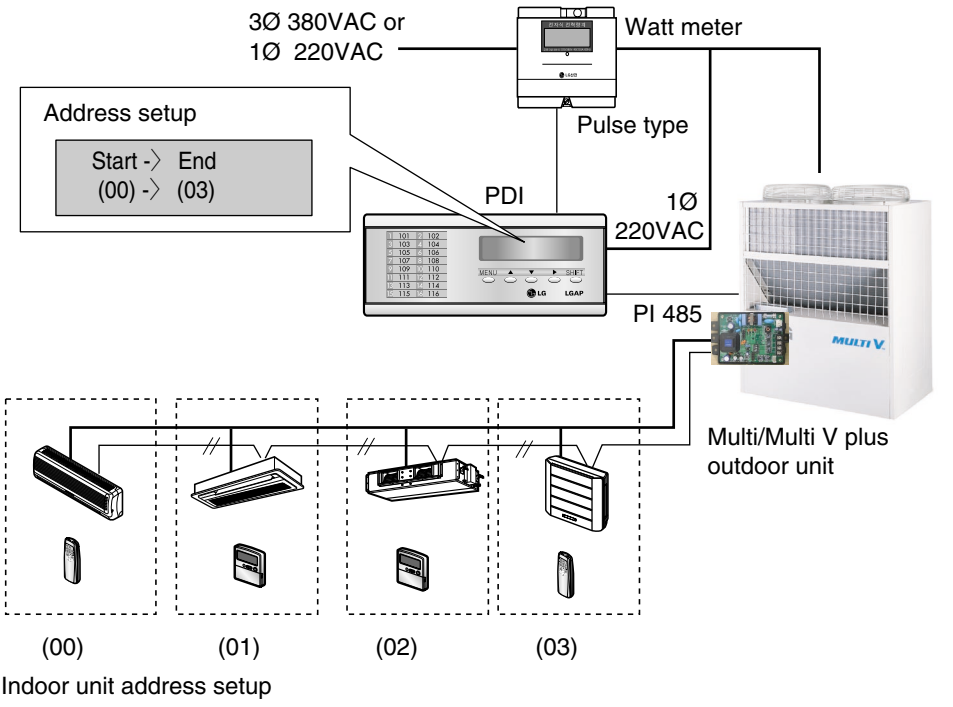
■ Count Method for Electric Power Distribution

- Power Consumption of each Indoor Unit = Power consumption of outdoor unit x [Weighting power of each Indoor unit / Weighting power of total indoor units]
- Weighting Power of each indoor unit = Operation (On/Off) x [Capacity of Indoor Unit X EEV open rate X Fan step of indoor unit]

3.2.2 Wiring Diagram

• Independent operation of PDI

- Connect the product as shown in the below connection diagram

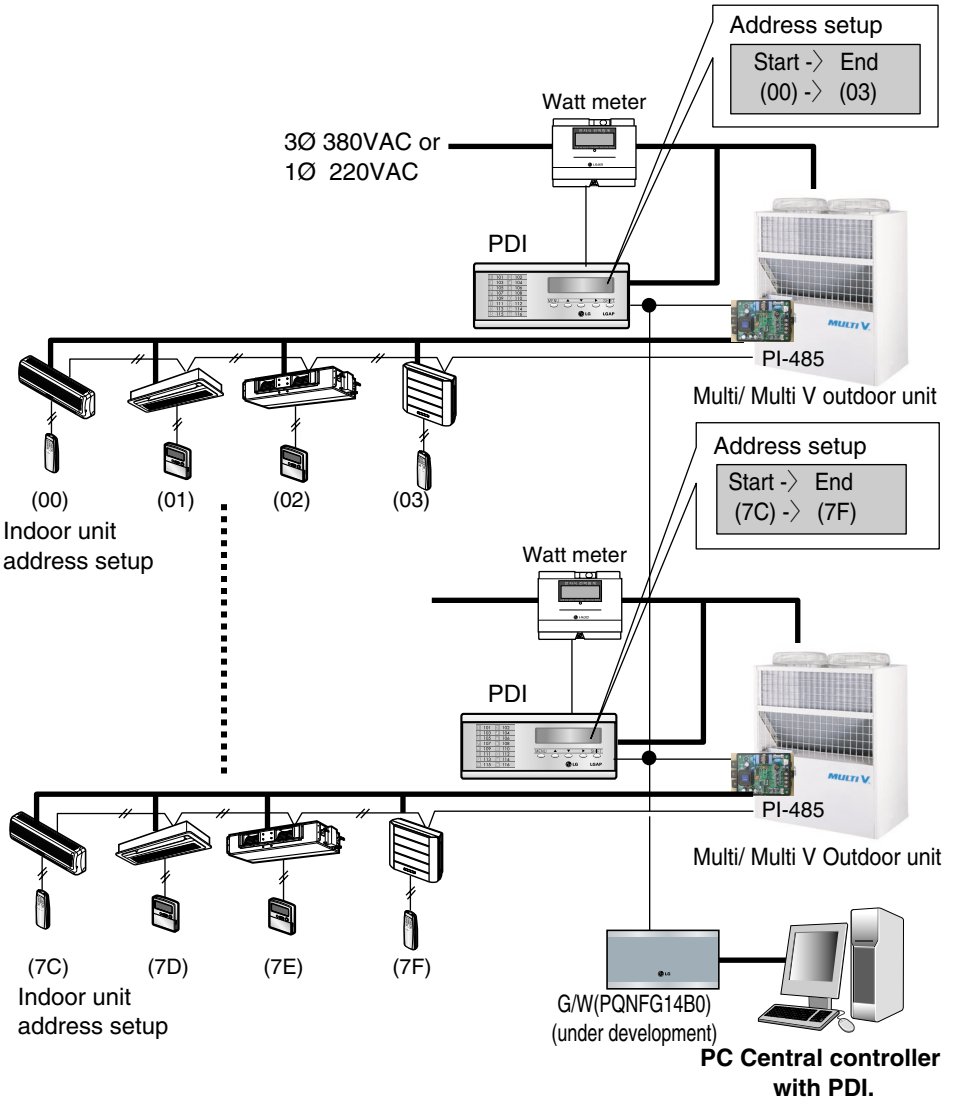


NOTE

PI-485 must be connected for PDI.
(PI-485 must be purchased separately.)

• Operation with PC Central controller

- Connect the product as shown below.

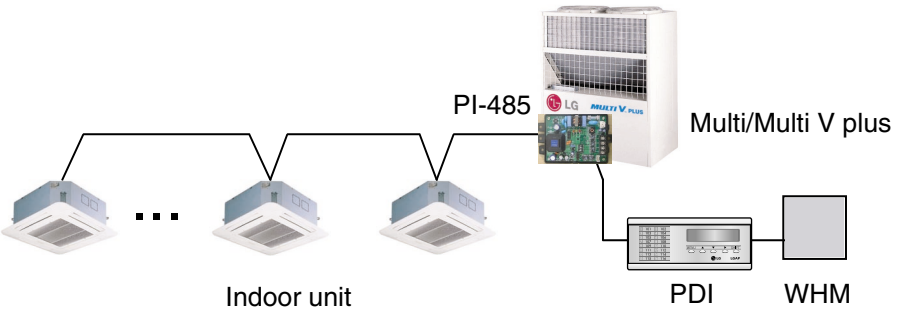


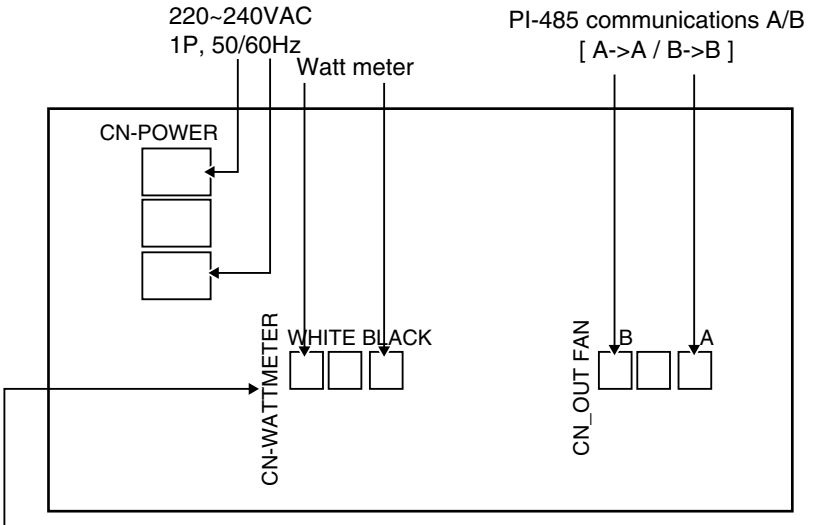
CAUTION

When CNU power is off or it is out of order with PC Central controller, the PDI can not distribute the power consumption.

3.2.3 Internal Wiring Diagram

• Install the product as shown below.





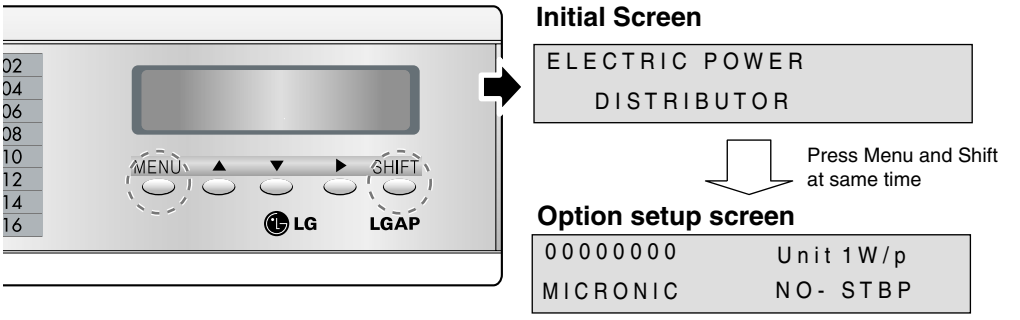
The color and polarity of the communications line can differ from what's indicated on the PCB depending on the manufacturer of watt meter. [Black -> (+), white -> (-)]

• Turn On the power after connecting the product.

3.2.4 Installation

• How to set Option

1. You must start the key operation within 10 minutes after turning on the power for setting options.
2. When you press the Menu and Shift key at the same time, the following option screen will be shown.



• Product selection

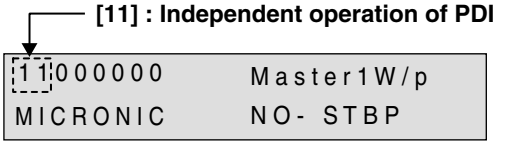
When the first two digits flash, you can use the ▲ or ▼ key to set the product.

[00] -> Unit (function not used)

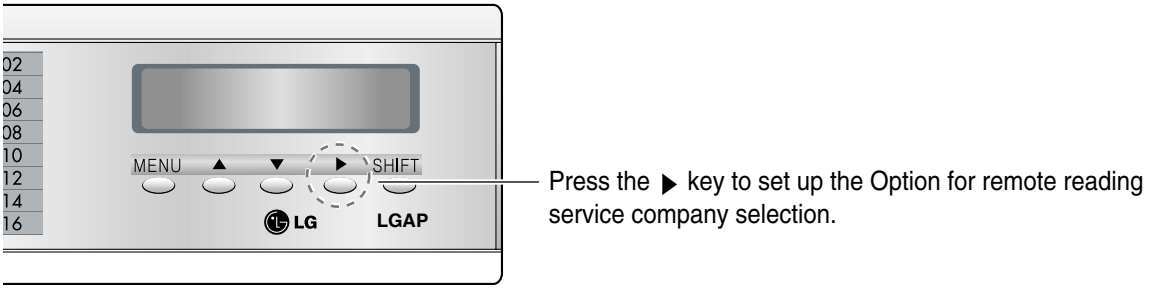
[10] -> Slave (when using in connection with PC Central Controller)

[11] -> Master (when not using in connection with PC Central Controller)

Ex) Product selection: Master, Watt meter: 1W/1 pulse



- After setting the product, press ▶ to select the next option.

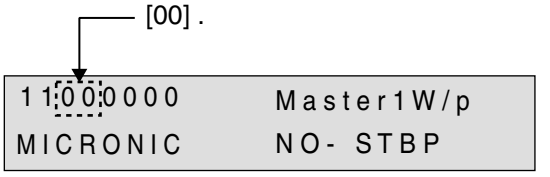


• Remote reading service company selection

(Don't care selecting remote reading service ID.)

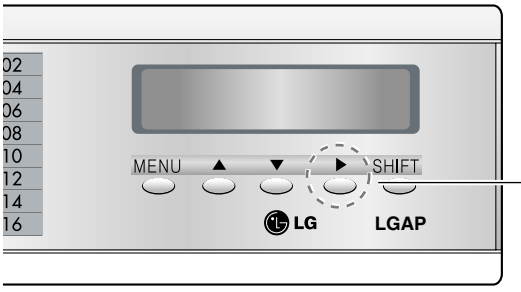
- When two digits flash, use the ▲ or ▼ key to select the remote reading service company.

[00] -> MICRONICS / [01] -> LSIS-COM
[10] -> CI-TOPIA / [11] -> OMNI-SYS



✱ This setting does not care to use PDI
- After setting the product, press ▶ to select the next option.

- After setting the product, press ▶ to select the next option.



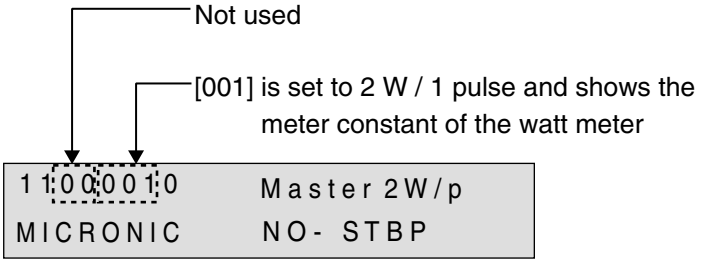
Press ▶ key to set up the option for watt meter selection.

• Watt meter selection

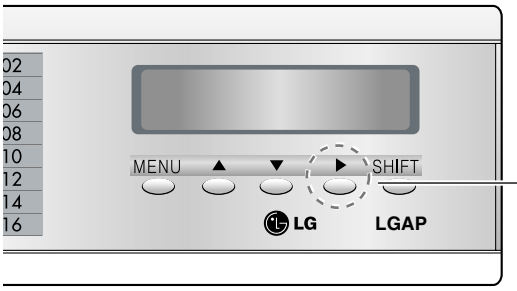
- When the third 3 digits flash, use ▲ or ▼ key to select the meter constant of the watt meter.

[000] -> 1 W/ P / [001] -> 2 W/ P
[010] -> 4 W/ P / [011] -> 6 W/ P
[100] -> 8 W/ P / [101] -> 10 W/ P

Ex) Product selection: Master, watt meter: 2W/ pulse



- After setting the product, press ▶ to select the next option.



Press the ▶ key to select the option for standby power.

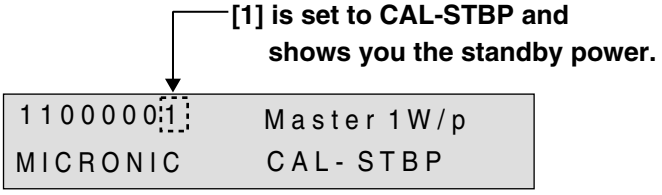
• Standby power indication selection

- When the forth digit flashes, use ▲ or ▼ key to select the standby power.
  [0] NO-STBP -> Does not show the standby power
  [1] CAL-STEP -> Shows the standby power

NOTE

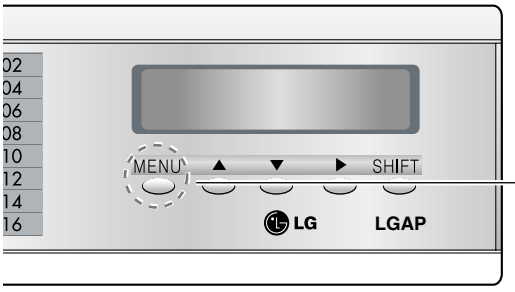
If the PDI has been set slave in previous option selection then certainly set NO-STBP

Ex) Product selection: Master, standby power indication selection



✱ What is standby power selection function?

: Standby power refers to the electric power consumed by the product after the operation of the product is turned Off. It is the function of separately saving the power consumed when all heating and air conditioning indoor units are turned Off.



Press the “Menu” key to save the option and return to the initial screen.

3. After setting the option, press the Shift key to enter the remote reading service ID setup mode. (In case of selecting reading service ID in)

- When the first two digits flash, use the s or t key to select the remote reading service ID by company.

CI-TOPIA ID setup

OUT DR ID(CITOPIA)
XX

MICRONICS ID setup

OUT DR ID(MICRONIC)
XX

OMNI SYS ID setup

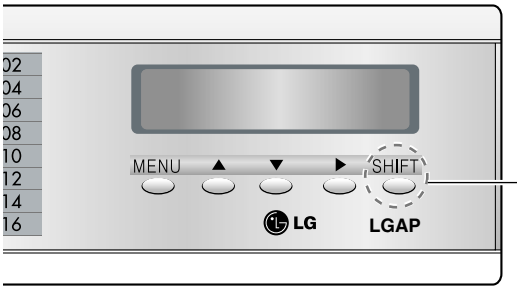
OUT DR ID(OMNI-SYS)
XXXX

LS IS ID setup

OUT DR ID(LSIS)
XXXX

✱ When setting the remote reading service ID, enter the remote reading service ID assigned by the remote reading service company.

4. After entering the remote reading service ID, press the shift key to enter the indoor address selection mode. (In case of the selecting "master/slave")



Press the Shift key to enter the indoor selection mode

Initial Screen

(Start) -> (End)
(00) -> (00)

- You can select the option for indoor address selection mode only when master/slave is selected.
- You can see power distribution to maximum 48 indoor units. (Stand by power can be shown for maximum 47 indoor units)

Ex 1) Distribution of using power to 64 indoor units
(central control address 00-2F)

(Start) -> (End)
(00) -> (2F)

NOTE

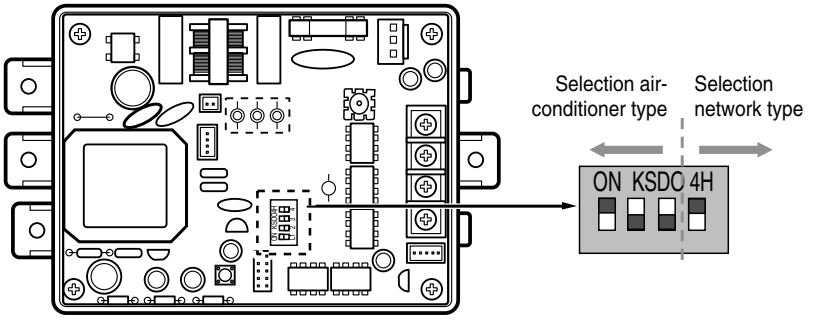
When operating in connection to the PC Central Controller, the range of the indoor address setup (Start – End) on the power indicator is from 00 to 7F.
The Start and End address of the power indicator refers to the first and last address of the indoor unit group.

Ex) Indoor address "72", "73", "74", "75" ‡
Start address: 72 End address: 75.

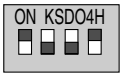
- Press the Menu key to save the remote reading service ID and return to the initial screen

3.2.5 How to set Interface unit

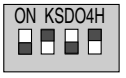
PI-485



MULTI V PLUS & MULTI Products Configuration Methods



➡ 1 and 4 On + all other Off: MULTI V PLUS & Multi inverter product



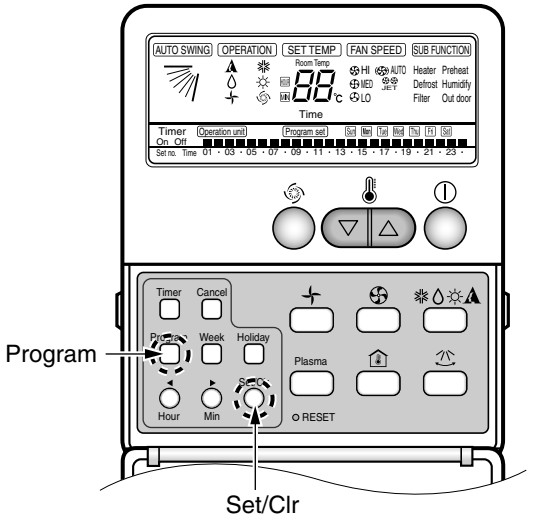
➡ 2 and 4 On + all other Off: Multi variable product.

⚠CAUTION

Wrong products configuration can lead to malfunctioning

3.2.6 How to set each indoor unit

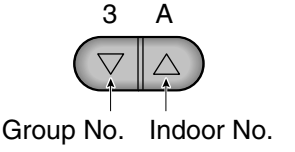
• Using wired remote controller



1. Press the "Program" & "Set/Clr" keys at the same time.

2. Set up the indoor address using the temperature adjustment key

* Setup range: 00-7F

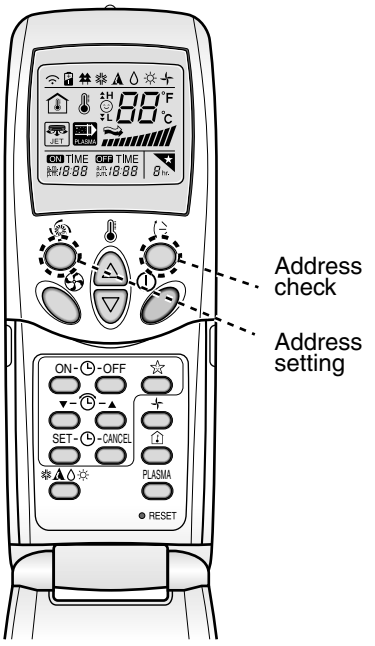


3. Press the "Program" & "Setup/Clr" keys at the same time for 3 seconds to set up the indoor address.

- The room address on the PDI is listed in the ascending order of indoor number.
  Ex) If the indoor addresses are "7C", "7D", "7E" and "7F", the order of the indoor unit on the PDI are "1", "2", "3" and "4".

- The indoor numbers must be entered in sequence to be accurately recognized in the PDI.
  Ex) Correct indoor unit address setup: "01", "02", "03" (setup in order)
  Incorrect indoor unit address setup: "01", "02", "06"

• Using wireless remote controller



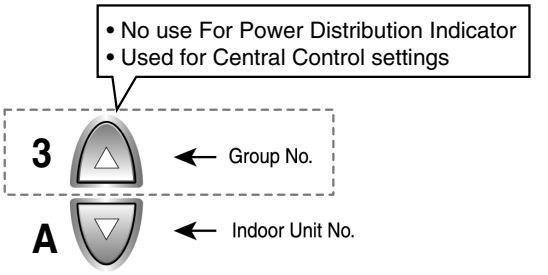
1. Address setting mode

1) With the top left key pressed, press the Reset button.
(Press the left key for more than 3 second)

2) Using the temperature adjustment key, set up the indoor unit address

❇ Setup range: 00-7F

ex)



3) After setting the address, press the On/Off key once directing the remote controller to the indoor unit.

4) When indoor unit shows the setting address, the address setup is complete.
(The time and method of the address display can differ depending on the indoor unit type.)

5) Reset the remote controller and use it.

2. Address check mode

1) With the top right key pressed, press the Reset button.
(Press the left key for more than 3 seconds.)

2) Press the On/Off key once directing the remote controller to the indoor unit.
The indoor unit shows the setting address and the address setup is completed.
(The time and method of the address display can differ depending on the indoor unit type.)

3) Reset the remote controller and use it

i Depending on the manufactured date of the wired/ wireless remote controller, the above function might not work.
Since this is a function not relevant for consumer in using the product, setup the remote controller to enable address setup during installation.

i When setting the address, refer to the details on the previous page.

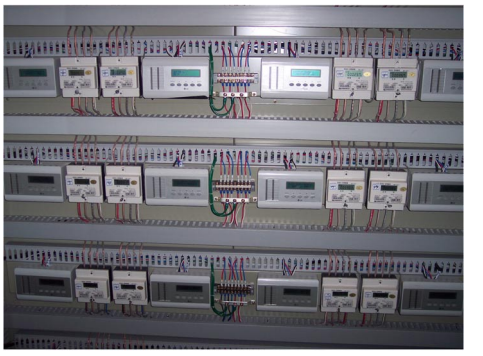
3.2.7 Installation Guide

Power Distribution Indicator and WHM should be installed in the specified cabinet which can protect the Power Distribution Indicator from water and humidity.

EX1)



EX2)



EX3)



EX4)



NOTE

WHM (Watt-hour meter)

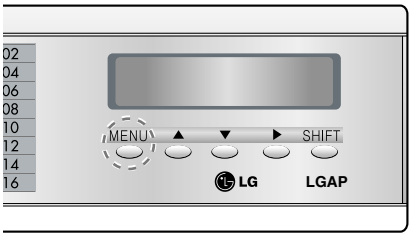
- Suppl power after completing the Wiring
- Set the Power Distribution Indicator so as to fit the usage condition.

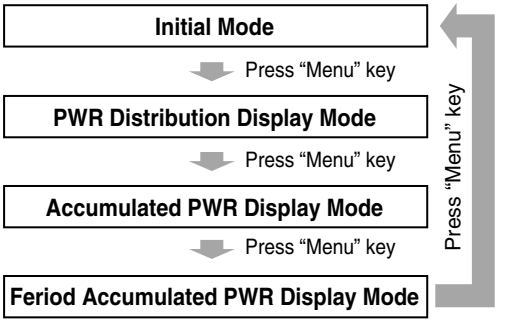
3.2.8 Usage

(The distributed power consumption is based on current operating condition)

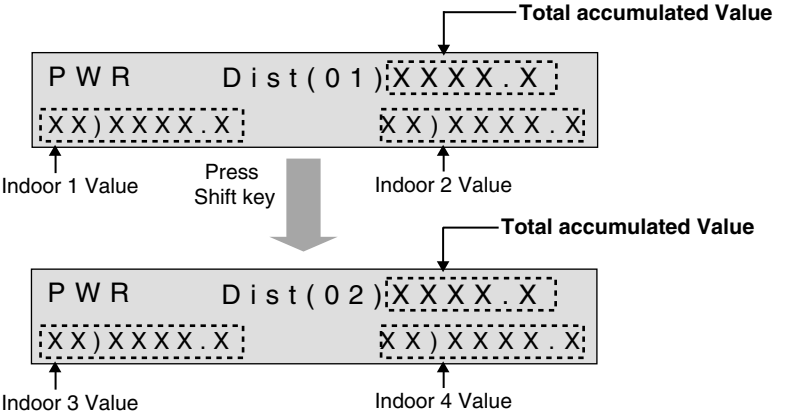
- Press the Menu key once to display the current power consumption.
- Consecutively press the Menu key to switch the screen.
- The PDI will operate normally after 3 minutes, when all options are set .

1. PWR distribution mode



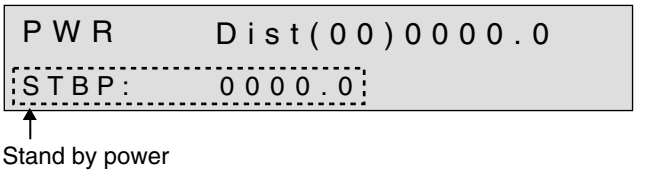


- It displays the current power consumption of each indoor unit(Watt/hour)
- When 1-2 indoor units are connected, only 1 page is displayed.
- When 4 or more indoor units are connected, press the "Shift" key to check the next page.



- When selecting the option for classifying the stand by power, the stand by power is displayed in the last page.

The stand by power page

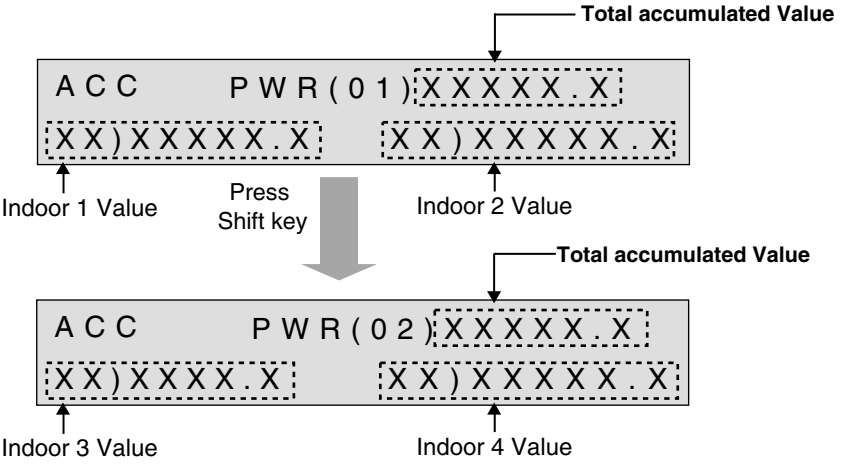


2. ACCUMPWR distribution mode

• It displays the accumulated power consumption of each indoor unit (Kwh)

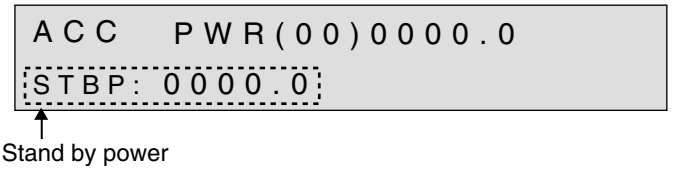
• When 1-2 indoor units are connected, only 1 page is displayed.

• When 4 or more indoor units are connected, press the Shift key to check the next page.



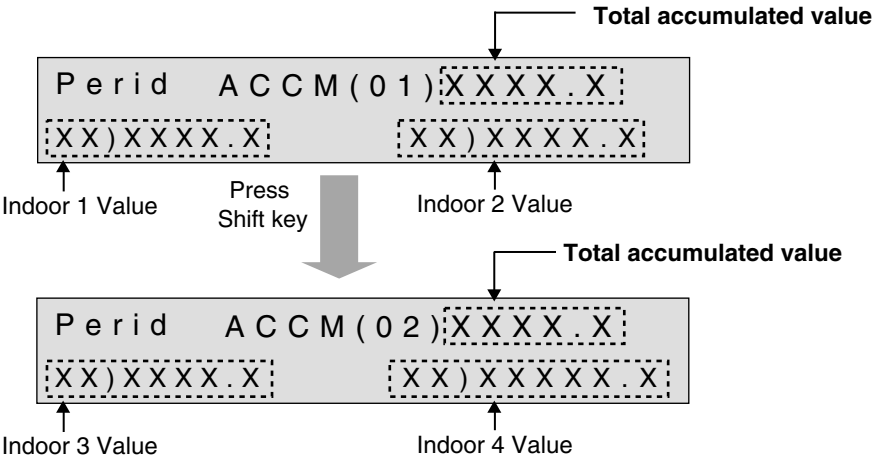
• When selecting the option for classifying the stand by power, the stand by power is displayed in the last page.

The stand by power page



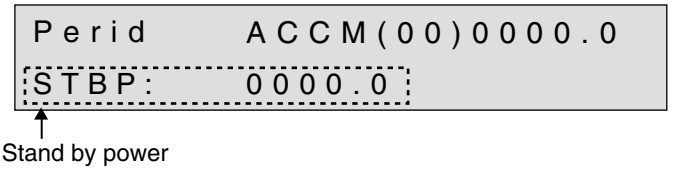
3. Period accumulated power distribution mode

- It displays the power consumption of each indoor unit (Kwh)
- When 1-2 indoor units are connected, only 1 page is displayed.
- When 4 or more indoor units are connected, press the Shift key to check the next page.



- Press the ▲ and ▼ key at the same time for 3 seconds to clear the data.
- As the function for manual check, when cleared after the check, it displays the cumulated power from the clearing point.
- When classifying the stand by power, it is shown after the last page.

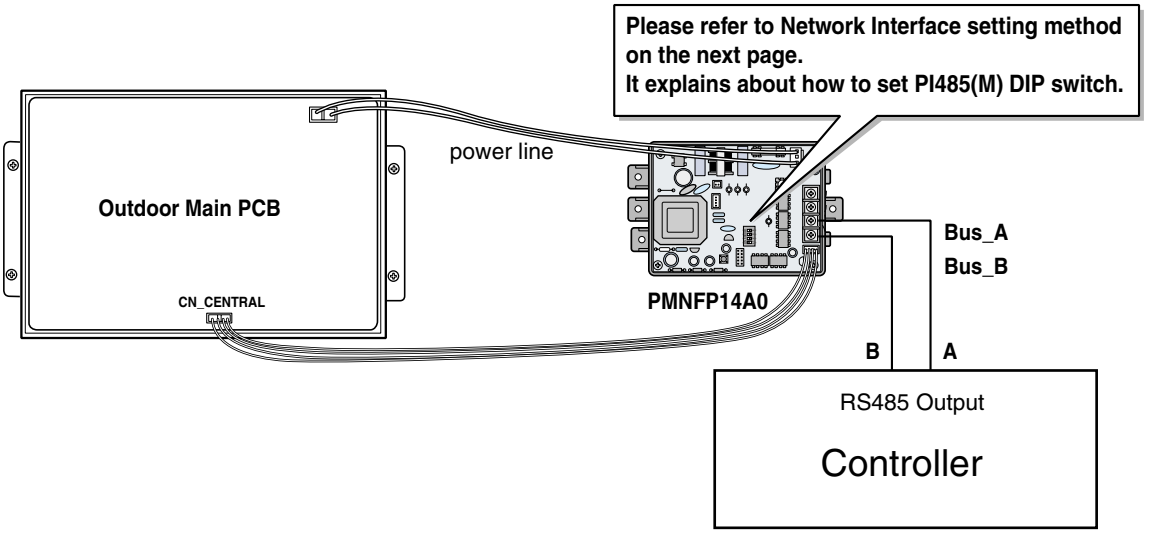
The stand by power indication page



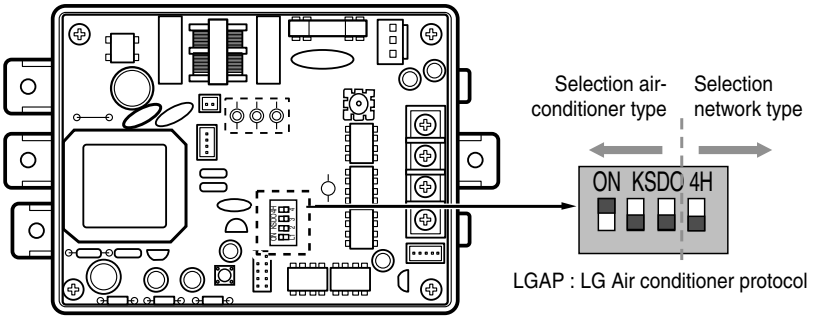
3.3 Home Automation

3.3.1 H/W Installation

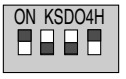
- Purchase interface unit PI485 for air_conditioner from LG, then Install PI485
  (PI485 model name is different according to air_conditioner model name(refer to the Solution catalogue)
- Install PI485 in the outdoor or indoor unit.
  (indoor for single constant product, outdoor for the others product_Multi, Multi V, Invert)
- Set the dip switch on the PI485 according to the following.
- Set the indoor address to you want(that id Group no, Indoor unit No)



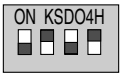
3.3.2 Dip switch setting



MULTI V PLUS & MULTI Products



➡ 1 and 4 On + all other Off: MULTI V PLUS & Multi inverter



➡ 2 and 4 On + all other Off: Multi standard product.

Please refer the corresponding central controller installation manual if you want to know whether you central controller is compatible with LGAP or not.

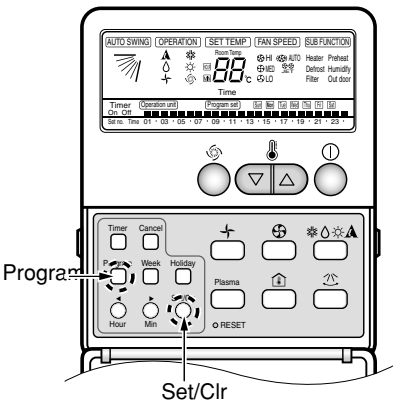
⚠CAUTION

The wrong setting of air-conditioner switch causes malfunctioning of the whole system.
Switch setting must be done carefully.

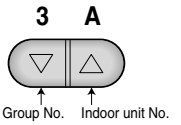
3.3.3 Addressing of Indoor Unit

• Addressing of Indoor Unit

Using wired remote controller

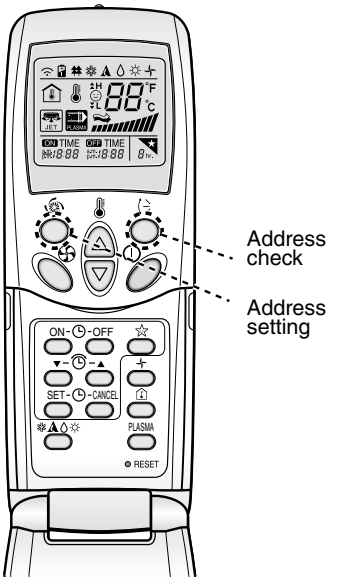


1. Press the Program & Set/Clr keys at the same time to activate the settings.
2. Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



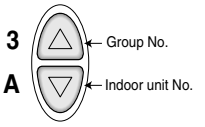
3. To complete the address setting, press the Program & Set/Clr keys at the same time for 3 seconds.

Using wireless remote controller



A. Address setting mode

1) Keep pressing upper left side key continuously and press RESET button once. Now the system is ready for address setting.(The left key should be pressed over 3 seconds)
2) Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



3) After setting address, press ON/OFF key once towards indoor unit.
4) The indoor unit shows the set address and it means completion of address setting process. (The address displaying time and its way can depend upon the type of indoor unit)

B. Address check mode

1) Keep pressing upper right side key continuously and press RESET button once. Now the system is ready for address checking.(The right key should be pressed over 3 seconds)
2) Press ON/OFF key once towards the indoor unit which shows set address on the display(The address displaying time and its way can depend upon the type of indoor unit)
3) Reset the remote controller to use it in the normal operation mode.

❉ Some remote controllers may not be supported by above functions according to the production date of wired/wireless remote controllers. As it has no concern with customers' use, use the remote controller available for the address setting during installation.

❉ It would be added how to set address of the simple central-control indoor unit.

3.3.4 Communication basic Spec

1. Format : Start(1bit_low), Data(from bit0 to bit7),Parity(none),Stop(1bit_high)
2. Speed : 4800bps
3. Method : At first master request, slave answer. Master is controller, slave is air_conditioner
   (control or monitoring data is transferred from Controller to air_conditioner with address No, then same address air_conditioner will response)

3.3.5 Basic data for control air_conditioner

Group No.	Indoor address for control, set by wired or wireless remote controller.
On	1 : air_con ON, 0 : air_con OFF
EXE	Means control execution, 1:control execution, 0: just response(Monitoring). When EXE bit is 1, according to the ON bit, air_conditioner will be controlled, EXE bit 1 & ON bit 1 : air_condition ON, according to the Mode,Fan Speed,Auto swing, Set temp,Lock data, air_conditioner will be operated. EXE bit 1 &ON bit 0 : air_condition OFF, according to the Mode,Fan Speed,Auto swing, Set temp,Lock data, air_conditioner will be operated. After EXE bit 1, EXE 0 data must be transferred to enable individual control
Lock	Lock Set : only control from communication is possible, individual control disable Lock CLR : control from communication & individual control disable. When EXE bit 1, according to Lock bit, Lock Set or Clr is executed 1: Set 0: Clr
Plasma	When EXE bit 1, according to Plasma bit, Function Set or Clr is executed 1: Set 0: Clr ❉ this Function is option function, some product doesn't have plasma function. so according to the Model Name. This function must be applied.(recommend not use)
Mode	When EXE bit 1, according to Mode bit, Mode setting is executed cooling(0), dehumidify(1), fan(2), heating(4), Auto(3) is only for monitoring. Heating is optional function according to the model name.
Auto Swing	When EXE bit 1, according to Auto swing bit, auto swing setting is executed 1: auto swing set 0: Clr, optional function according to the model name.
Fan Speed	When EXE bit 1, according to Fan Speed bit, Fan Speed setting is executed Low(1), Middle(2), High(3), Auto(4) Auto is optional according to the model name.
Set Temp	When EXE bit 1, according to Set Temp bit, Set Temp setting is executed Indoor Set Temp = Communication Set Temp bits Value + 15°C In cooling mode, set temp is 18~30°C is possible, in fan/dehumidify mode, set temp is no need., In heating mode, set temp is 16~30°C is possible
Room Temp	Room temperature is according to the following Room Temperature Table.
Error	Error Code of air_conditioner for SVC. Controller can display the error code in decimal, 0 means No Error.

3.3.6 Room temperature table

comm data(Decimal)	Room Temp(°C)	comm data(Decimal)	Room Temp(°C)
76,77	40	117,118,119	24
78,79	39	120,121,122	23
80,81,82	38	123,124,125	22
83,84	37	126,127,128	21
85,86	36	129,130,131	20
87,88,89	35	132,133,134	19
90,91,92	34	135,136,137	18
93,94	33	138,139,140,141	17
95,96,97	32	142,143,144	16
98,99	31	145,146,147	15
100,101,102	30	148,149,150	14
103,104,105	29	151,152,153	13
106,107,108	28	154,155,156	12
109,110,111	27	157,158,159	11
112,113	26	160,161,162	10
114,115,116	25		

3.3.7 TX & RX Data for control air_conditioner

TX data from Controller

Controller ➔ PI485

	7	6	5	4	3	2	1	0
TX0	1	0000				000		
TX1	00							
TX2	0xA0							
TX3	Group No				Indoor Unit No			
TX4	000			Plasma	0	Lock	EXE	ON
TX5	0	Fan Speed			Auto Swing	Mode		
TX6	000			Set Temp(1~15)				
TX7	CHECK SUM={TX0+TX1+…+TX6} XOR (0x55)							

RX data from air_conditioner

PI485 ➔ Controller

	7	6	5	4	3	2	1	0
TX0	0	Length(16_decimal))						
TX1	X	0000				Lock	X	ON
TX2	X							
TX3	X							
TX4	Group No				Indoor Unit No			
TX5	ERROR							
TX6	X	Fan speed			Auto swing	Mode		
TX7	X		plasma	X	Set Temp			
TX8	Room Temp(0~255)							
TX9	X							
TX10	X							
TX11	X							
TX12	X							
TX13	X							
TX14	X							
TX15	CHECK SUM={TX0+TX1+…+TX14} XOR (0x55)							

X: Don't Care

❊ Example

- Want to ON the air_conditioner address No is 02. to "cooling/set temp 20°C/Fan speed high/auto swing set/Lock Clr"
- Controller ⟶ air_conditioner

80H	00H	A0H	02H	03H	38H	05H	37H
TX0							TX7

For more reliability the communication.

After transferring that data 3 times, then transfer

monitoring data(EXE bit is 0, other data is same)

3.3.8 Basic data for control Ventilation product

Group No,Indoor Unit No	Indoor address for control, set by wired or wireless remote controller.
ON	1 : ventilation ON, 0 : ventilation OFF
EXE	Means control execution, 1:control execution, 0: just response(Monitoring). When EXE bit is 1, according to the ON bit, ventilation will be controlled, EXE bit 1 & ON bit 1 : ventilation ON, according to the Mode,Fan Speed,Lock data, ventilation will be operated. EXE bit 1 &ON bit 0 : ventilation OFF, according to the Mode,Fan Speed,Lock data, ventilation will be operated. After EXE bit 1, EXE 0 data must be transferred to enable individual control
LOCK	Lock Set : only control from communication is possible, individual control disable Lock CLR : control from communication & individual control disable. When EXE bit 1, according to Lock bit, Lock Set or Clr is executed 1: Set 0: Clr
Mode	When EXE bit 1, according to Mode bit, Mode setting is executed Heat_exchange(0),Auto(1),Normal(2)
Fan Speed	When EXE bit 1, according to Fan Speed bit, Fan Speed setting is executed Low(1), High(2), Super High(3), Auto(4)
Filter	1 : Filter sign On, 0 : Filter Sign OFF
ERROR	Error Code of ventilation for SVC. Controller can display the error code in decimal, 0 means No Error.

3.3.9 TX & RX Data for control ventilation

TX data from Controller

Controller ➔ PI485

	7	6	5	4	3	2	1	0
TX0	1	0000				000		
TX1	0x70							
TX2	0xA0							
TX3	Group No				Indoor Unit No			
TX4	000				0	EXE	ON	
TX5	0	Fan Speed			0	Mode		
TX6	0x00							
TX7	CHECK SUM={TX0+TX1+…+TX6} XOR (0x55)							

RX data from ventilation

PI485 ➔ Controller

	7	6	5	4	3	2	1	0
TX0	0	0x0A						
TX1	X							ON
TX2	0x0A							
TX3	0x0A							
TX4	Group No				Indoor Unit No			
TX5	ERROR							
TX6	Filter	Fan speed			X	Mode		
TX7	X							
TX8	X							
TX9	CHECK SUM={TX0+TX1+…+TX8} XOR (0x55)							

X: Don't Care

❊ **Example**

- Want to ON the air_conditioner address No is 02. to "cooling/set temp 20°C/Fan speed high/auto swing set/Lock Clr"
- Controller ⟶ air_conditioner

80H	70H	A0H	02H	03H	20H	00H	E0H
TX0							TX7

For more reliability the communication.

After transferring that data 3 times, then transfer

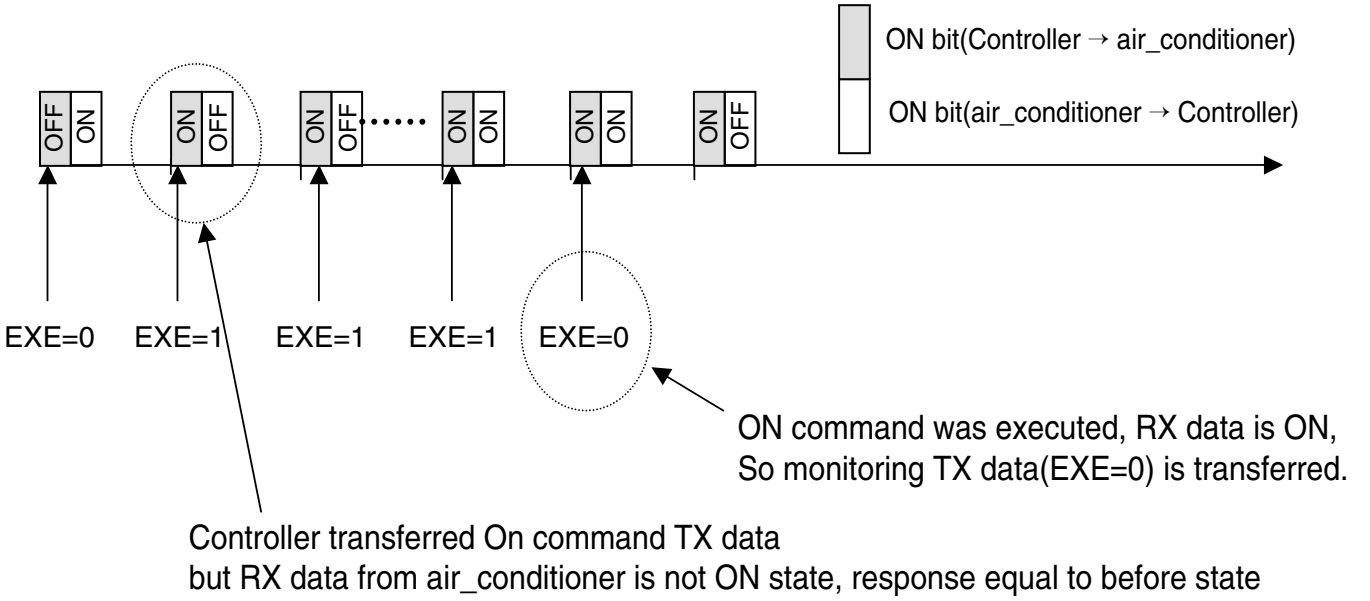
monitoring data(EXE bit is 0, other data is same)

3.3.10 Reference

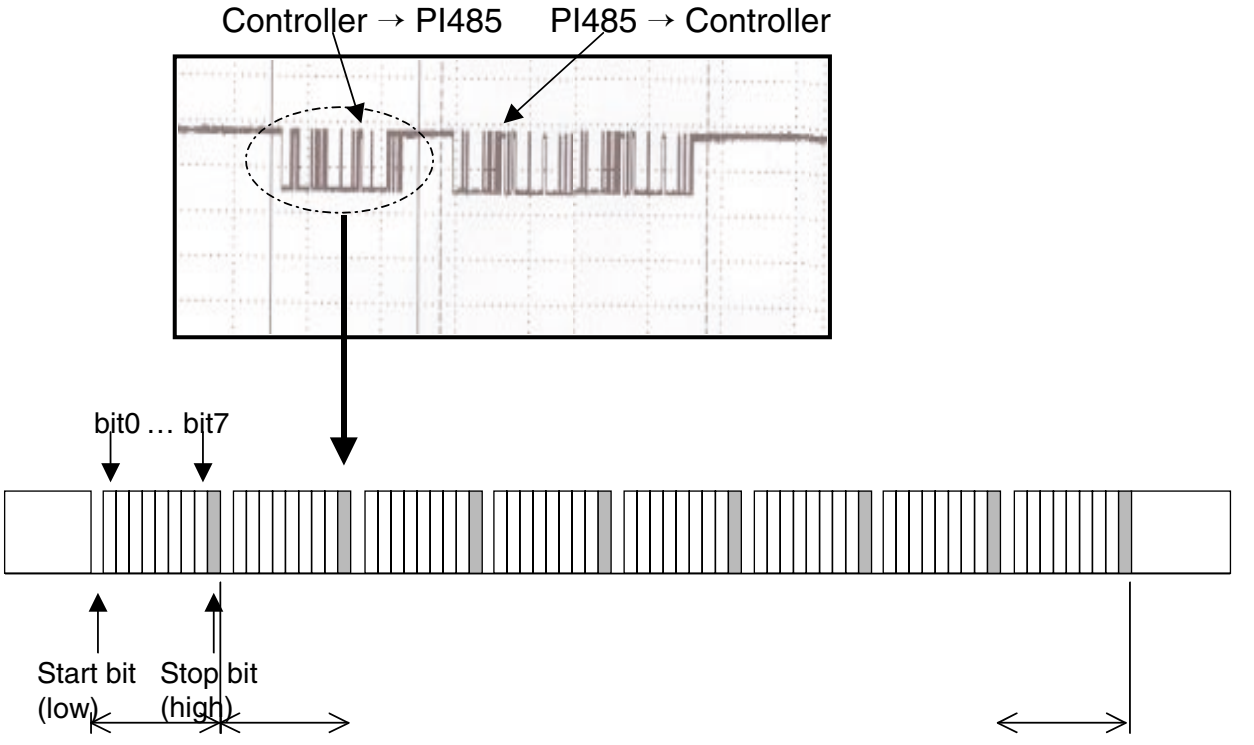
1. In case of control air_conditioner, transfer control TX data(EXE=1) more than 3 Times (protect to data loss)
2. Interval TX data Transfer (controller -> air_conditioner) : more than 100msec,
3. After transferring control data 3 times, then transfer monitoring data(EXE bit is 0, other data is same)

❊ Example(On the air_conditioner from Controller)

Air_conditioner is now “OFF”, In case of On command from the controller



❊ Communication Format(PI485 A Voltage based on B)



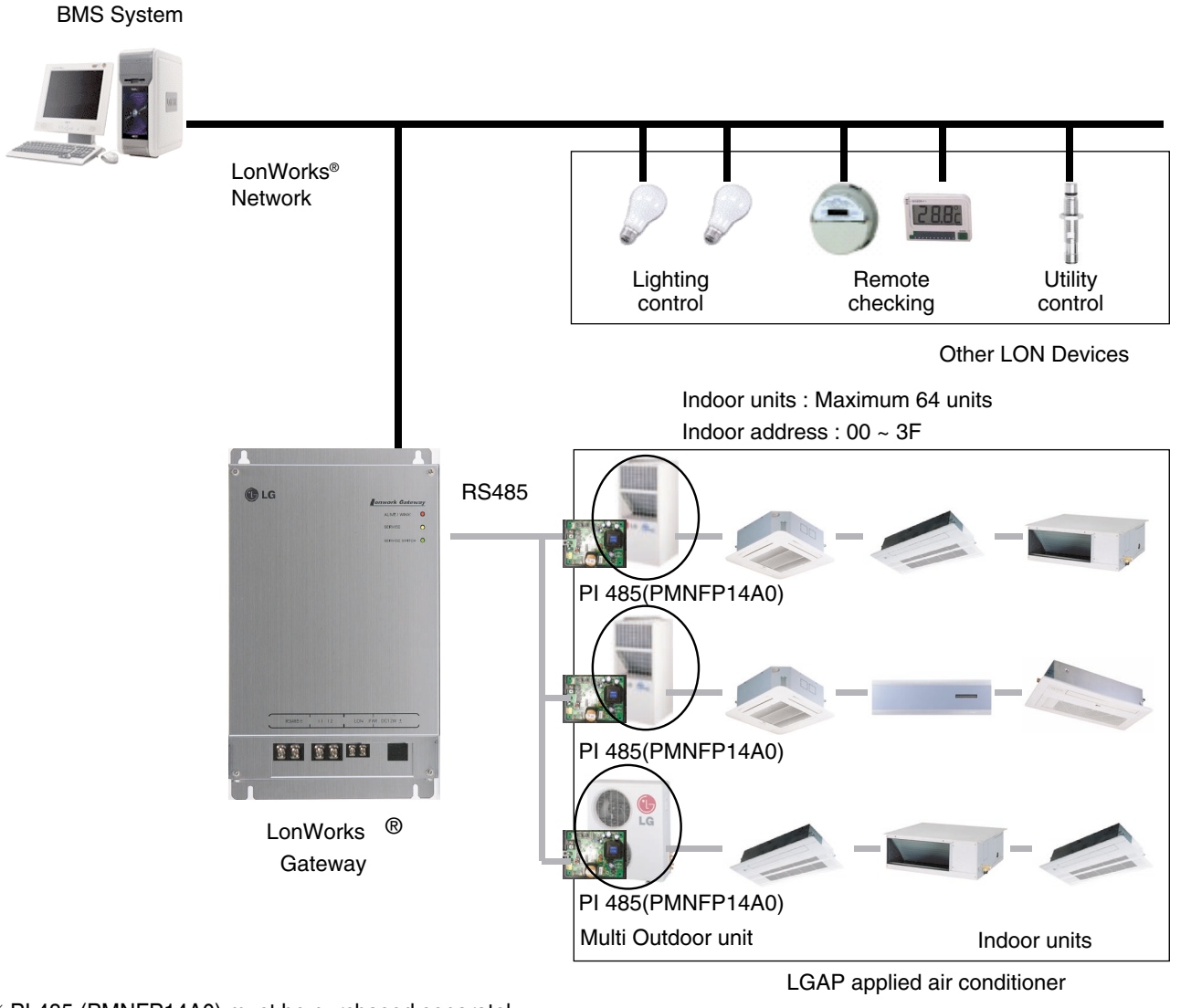
3.4 BMS [BNU-LW (PQNFB16A0)]

3.4.1 Features & functions

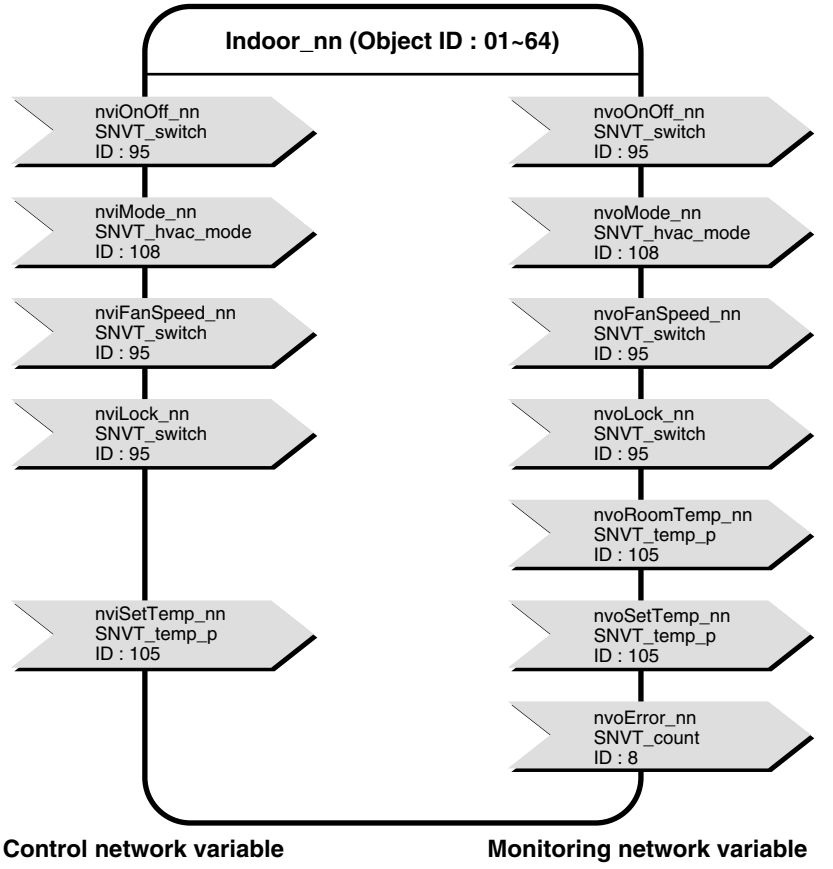
1. A conversion gateway between BMS System using LonWorks protocol and LG Air Conditioner using LGAP protocol.
2. Can process max 64 indoor units. (valid indoor address : 00 ~ 3F)
3. FT-10 line is used to connect communication lines between BMS System and Lonworks Gateway.
4. Control & monitoring of the units.

Controlling items	Monitoring items
On/Off command	on/off status report
Operation mode setting	Operation mode status report
Fan speed setting	Fan speed status report
Temperature setting	Temperature setting report
Lock setting	Lock setting report
	Room temperature report
	Error code report

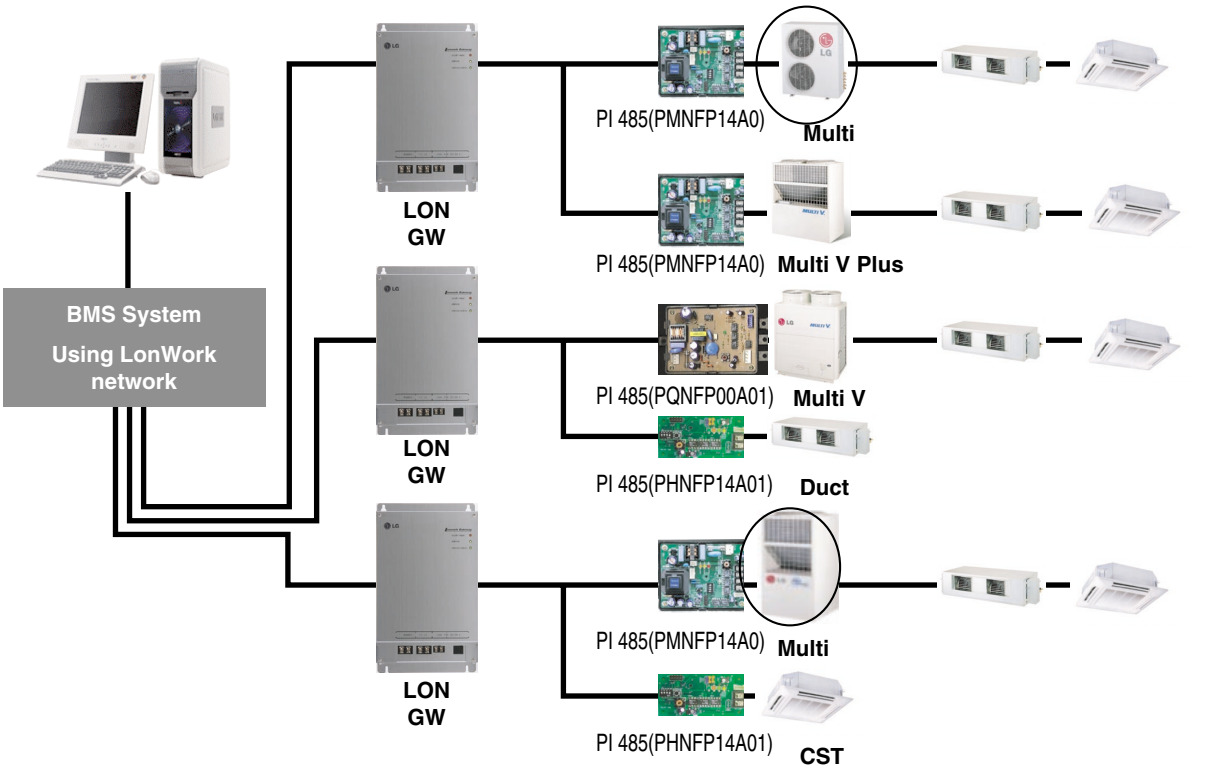
3.4.2 System connection



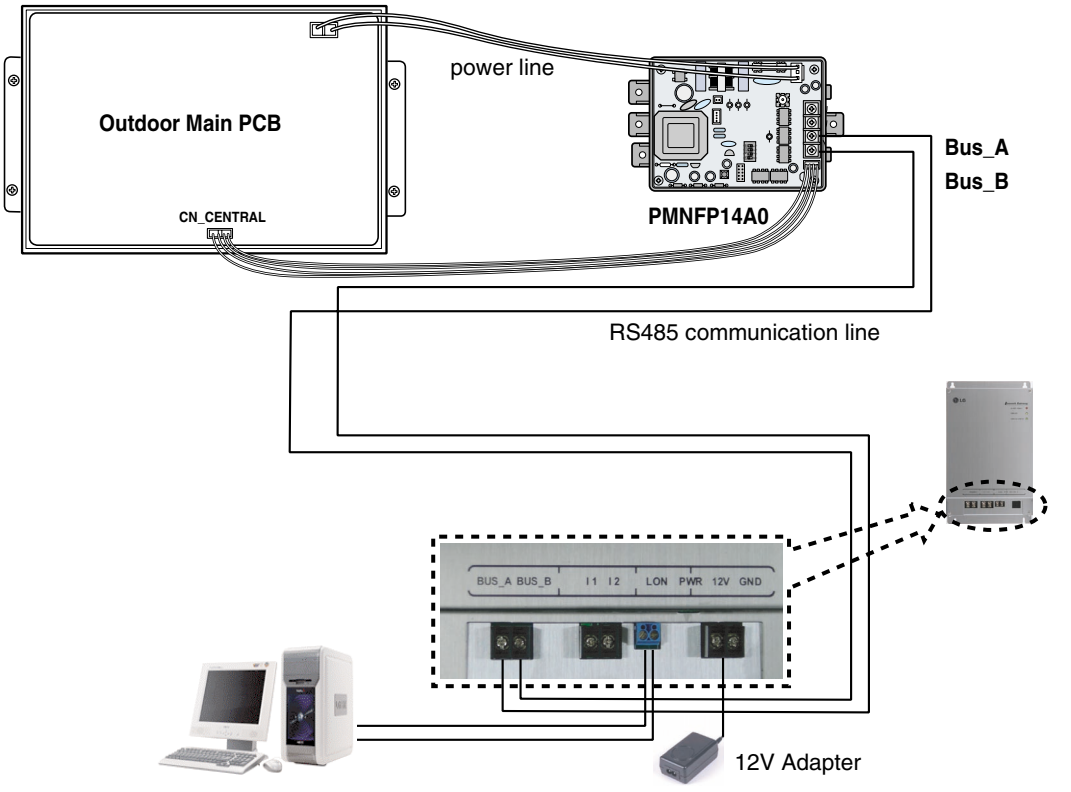
❊ PI 485 (PMNFP14A0) must be purchased separately



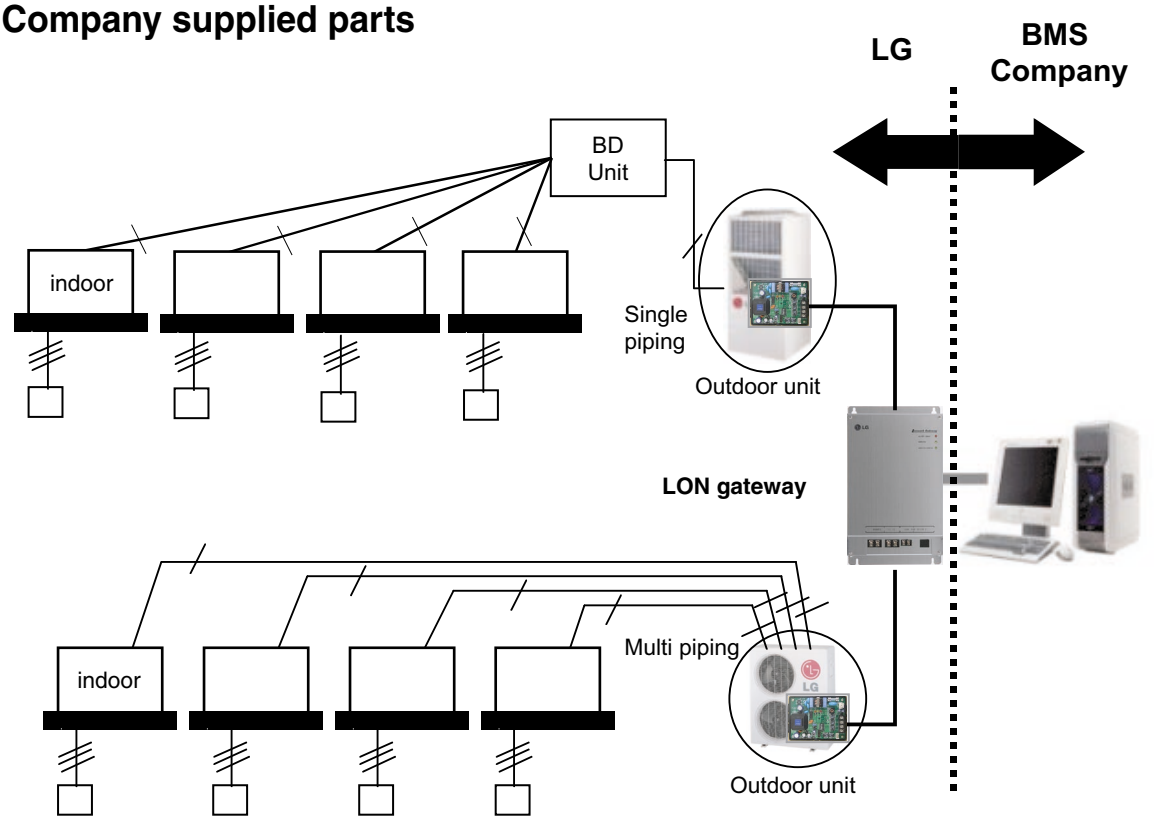
System connection for air conditioner only



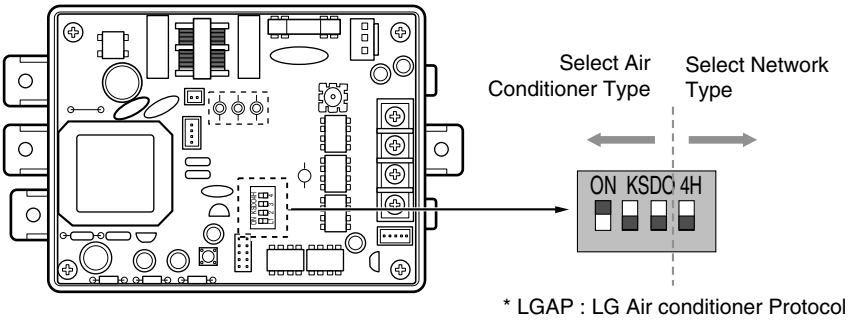
3.4.3 Detailed wiring diagram



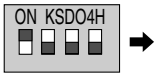
3.4.4 Company supplied parts



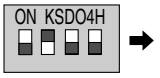
3.4.5 Network Interface Connection



MULTI V PLUS & Multi products.



1 On, All others Off: MULTI V PLUS & Multi Inverter product



2 On, All others Off: Multi variable product

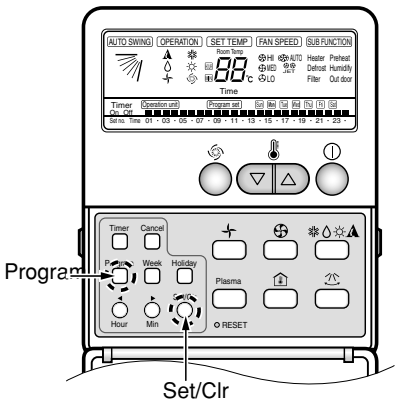
⚠CAUTION

The wrong setting of air-conditioner switch causes malfunctioning of the whole system.
Switch setting must be done carefully.

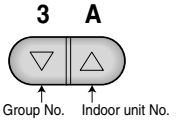
3.4.6 Addressing of Indoor Unit

• Addressing of Indoor Unit

Using wired remote controller

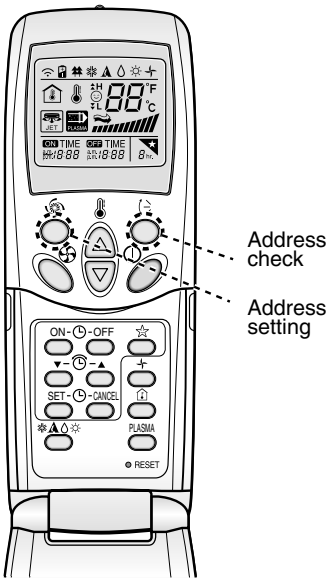


1. Press the Program & Set/Clr keys at the same time to activate the settings.
2. Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



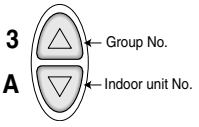
3. To complete the address setting, press the Program & Set/Clr keys at the same time for 3 seconds.

Using wireless remote controller



A. Address setting mode

1) Keep pressing upper left side key continuously and press RESET button once. Now the system is ready for address setting.(The left key should be pressed over 3 seconds)
2) Set the indoor unit address using the temperature controller buttons.
   Allowed Range : 00 - FF
   ex)



3) After setting address, press ON/OFF key once towards indoor unit.
4) The indoor unit shows the set address and it means completion of address setting process. (The address displaying time and its way can depend upon the type of indoor unit)

B. Address check mode

1) Keep pressing upper right side key continuously and press RESET button once. Now the system is ready for address checking.(The right key should be pressed over 3 seconds)
2) Press ON/OFF key once towards the indoor unit which shows set address on the display(The address displaying time and its way can depend upon the type of indoor unit)
3) Reset the remote controller to use it in the normal operation mode.

❉ Some remote controllers may not be supported by above functions according to the production date of wired/wireless remote controllers. As it has no concern with customers' use, use the remote controller available for the address setting during installation.

❉ It would be added how to set address of the simple central-control indoor unit.

Part 5 Accessories

List of applicable models

1. Controller accessories 733

1.1 Wireless remote controller 733
1.2 Simple remote controller 738
1.3 Deluxe remote controller 742
1.4 Hotel use remote controller 742
1.5 Zone controller 744
1.6 Dry contact module 747

2. Mechanical accessories.....749

2.1 Low ambient kit 749
2.2 Y-branch 752
2.3 Branch distributor 754
2.4 Drain pump.....757
2.5 Plasma air purifier 762
2.6 Air guide 764
2.7 Cassette cover 765

List of applicable models

Function		Model name				
		Wall mounted	Artcool	CST	Ceiling & Floor	Duct
Individual control	Wired Remote Controller(Deluxed)	x	x	PQRCUDS0	x	PQRCUDS0
	Wired Remote Controller(Simple)	x	x	PQRCUCA0	x	PQRCUCA0
	Wired Remote Controller(for hotel use)	x	x	PQRCFCS0	x	PQRCFCS0
	Wireless Remote Controller	x	x	"PQWRHSF0	x	"PQWRHSF0
		x	x	AHWRHD	x	AHWRHD
		x	x	AHWRHS	x	AHWRHS
CAC Network function	General Central Controller(Non LGAP)	x	x	x	x	x
	Network Function(LGAP)	O	O	O	O	O
	PI485	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0	PMNFP14A0
	Dry_Contact	PQDSB	PQDSB	PQDSB	PQDSB	PQDSB
	PDI(Power Distribution Indicator)	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00	PQNUD1S00
Special function kit	Low Ambient Kit	AQLA	AQLA	AQLA	AQLA	AQLA
	Zone Controller (for Duct)	x	x	x	x	ABZCA

1. Controller accessories
1.1 Wireless remote controller

Picture:


PQWRHSF0


AHWRHD


AHWRHS


AKB35149710(1)

Functions:

A Wireless remote controller allows the operation of air conditioner from any corner of the room

Functions	PQWRHSF0 AKB35149710(1)	AHWRHD	AHWRHS
Air circulation / Fan operation	●	●	●
Room temperature checking	●	●	●
Sleep mode operation	●	●	–
Temperature settings	●	●	●
Operation mode selection	●	●	●
Air-swing & Jet cool (Cassette Only)	●	●	–
On/Off Timer settings	●	●	–

Applicable Models:

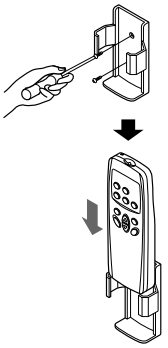
Ceiling cassete

Ceiling concealed duct

Accessory: Wireless remote control 1EA
Owner's manual 1EA

Installation procedure:

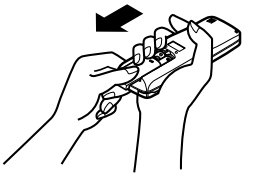
Mounting on the wall



1) Mount the remote control stand on the wall with the help of screw driver and screw purchased locally.
2) Insert the remote control in the stand.

How to insert batteries:

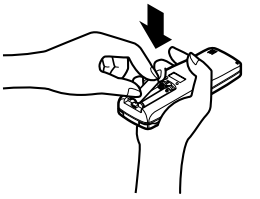
1) Remove the battery cover from the remote control. Slide the cover in the direction of arrow.
2) Insert two batteries. Take care about the polarity(+/-) and batteries should be new.
3) Re-place the cover by sliding it back into position.



How to use

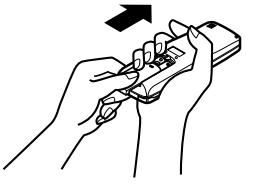
For ceiling cassette :

Point the signal transmitter towards the front panel of the cassette indoor unit (for C, D, E, F Chassis models) and press any function key. For B chassis point the signal transmitter towards the wired remote control and press any function key.



For ceiling concealed duct, ducted split & Single package :

Point the signal transmitter towards the wired remote control and press any function key.



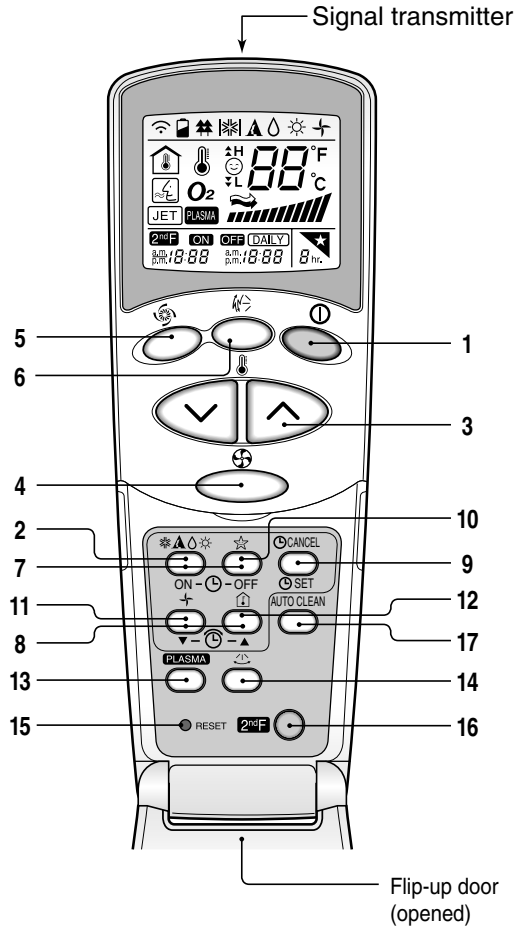
Remarks

1. Do not use rechargeable batteries for wireless remote control .
2. Remove the batteries from the remote control if the air conditioner is not going to be used for long time.

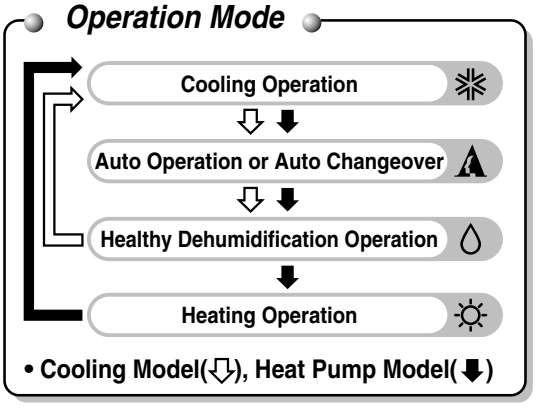
Function's detail

Models : PQWRHSF0

The remote control transmits the signals to the system.



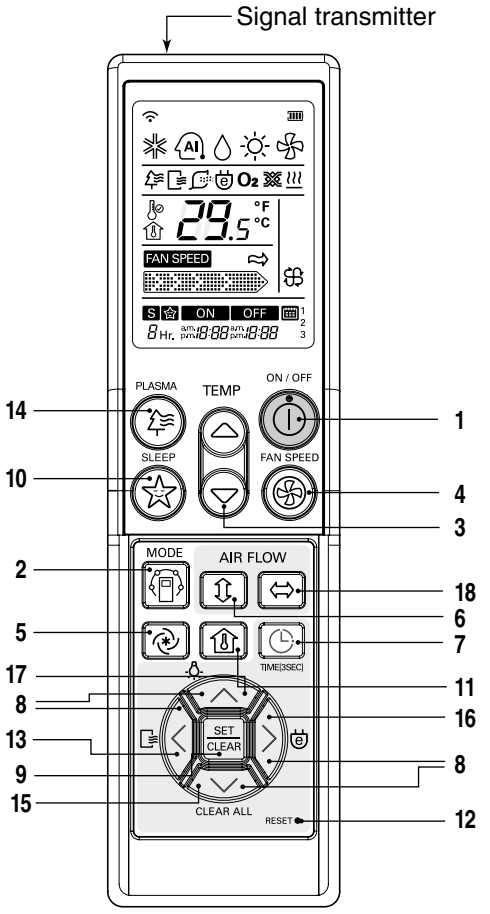
Operation Mode



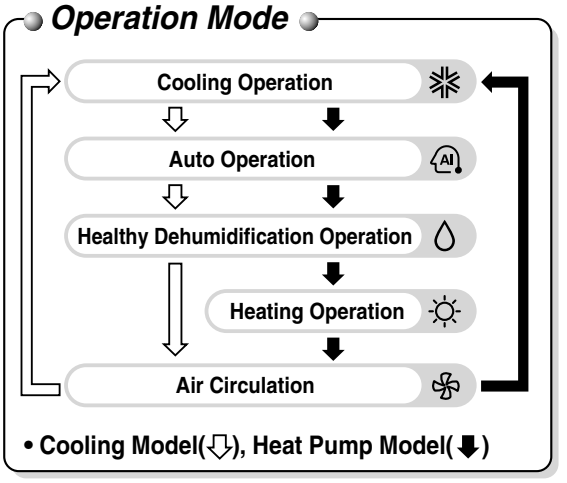
1. **START/STOP BUTTON**
   Operation starts when this button is pressed and stops when the button is pressed again.
2. **Operation mode selection button**
   Used to select the operation mode.
3. **ROOM TEMPERATURE SETTING BUTTONS**
   Used to select the room temperature.
4. **INDOOR FAN SPEED SELECTOR**
   Used to select fan speed in four steps low, medium, high and CHAOS.
5. **JET COOL**
   Used to start or stop the speed cooling. (Speed cooling operates super high fan speed in cooling mode.)
6. **CHAOS SWING BUTTON**
   Used to stop or start louver movement and set the desired up/down airflow direction.
7. **ON/OFF TIMER BUTTONS**
   Used to set the time of starting and stopping operation.
8. **TIME SETTING BUTTONS**
   Used to adjust the time.
9. **TIMER SET/CANCEL BUTTON**
   Used to set the timer when the desired time is obtained and to cancel the Timer operation.
10. **SLEEP MODE AUTO BUTTON**
    Used to set Sleep Mode Auto operation.
11. **AIR CIRCULATION BUTTON**
    Used to circulate the room air without cooling or heating.
12. **ROOM TEMPERATURE CHECKING BUTTON**
    Used to check the room temperature.
13. **PLASMA(OPTIONAL)**
    Used to start or stop the plasma-purification function.
14. **HORIZONTAL AIRFLOW DIRECTION CONTROL BUTTON (NOT ON ALL MODELS)**
    Used to set the desired horizontal airflow direction.
15. **RESET BUTTON**
    Used prior to resetting time or after replacing batteries.
16. **2nd F Button**
    Used prior to using modes printed in blue at the bottom of buttons.
17. **AUTO CLEAN(OPTIONAL)**
    Used to set Auto Clean mode.

Models : AKB35149710(1)

The controls will look like the following.



Operation Mode



1. ON/OFF BUTTON
Used to turn off/on the unit.

2. OPERATION MODE SELECTION BUTTON
Used to select the operation mode.

3. ROOM TEMPERATURE SETTING BUTTONS
Used to select the room temperature.

4. INDOOR FAN SPEED SELECTOR BUTTON
Used to select fan speed in four steps
low, medium, high and CHAOS.

5. JET COOL BUTTON
Used to start or stop the speed cooling.
(It operates fan in super high speed in cooling mode)

6. CHAOS SWING BUTTON
Used to stop or start louver movement and set the desired up/down airflow direction.

7. TIMER AND TIME SETTING BUTTON
Used to set the time of starting and stopping operation.

8. TIME SETTING BUTTONS
Used to adjust the time.

9. TIMER SET / CLEAR BUTTON
Used to set and to cancel the timer operation.

10. SLEEP MODE AUTO BUTTON
Used to set sleep mode auto operation.

11. ROOM TEMPERATURE CHECKING BUTTON
Used to check the room temperature.

12. RESET BUTTON
Used prior to resetting time.

13. AUTO CLEAN BUTTON
Used to set auto clean mode.

14. PLASMA BUTTON
Used to start or stop the plasma-purification function.

15. CLEAR ALL BUTTON
Used to cancel all timer setting.

16. ENERGY SAVING COOLING BUTTON(OPTIONAL)
Used to save Energy.

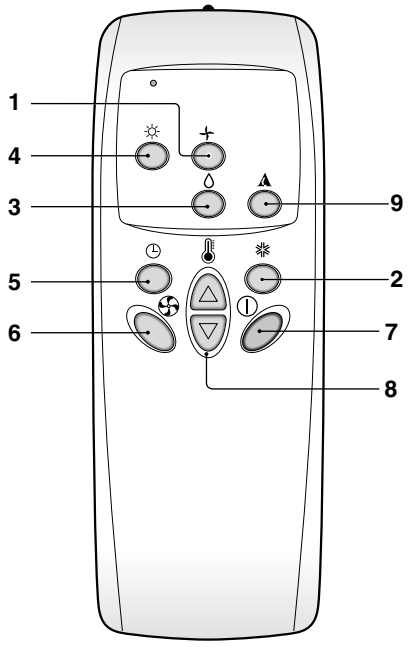
17. LCD LUMINOSITY BUTTON(OPTIONAL)
Used to adjust LCD luminosity.

18. HORIZONTAL AIRFLOW DIRECTION CONTROL BUTTON (OPTIONAL)
Used to set the desired horizontal airflow direction.

Models : AHWRHS

Signal transmitter

Transmits the signals to the signal receptor.



1. FAN operation button
Used to circulate room air without cooling or heating.

2. Cooling operation button

3. Soft dry operation button
Used to dehumidify without overcooling.

4. Heating operation button
(Heat pump model only)

5. Timer set button
Used to set the timer when the desired time is obtained. Then the wired remote controller is set up to 24 hours by an hour but the wireless remote controller is set up to 7 hours by an hour. Therefore, if you want to set over 7 hours, use the wired remote controller.

6. Fan speed button
Used to set the desired fan speed.

7. On/Off button
Operation starts when this button is pressed, and stops when the button is pressed again.

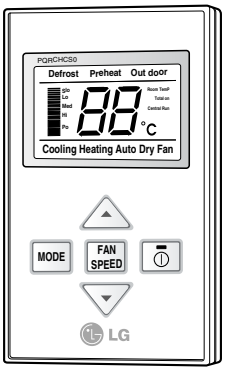
8. Set temperature button
Used to set the temperature when the desired temperature is obtained

9. Auto operation button

1.2 Simple wired remote controller

Models : PQRCUCA0

Picture:



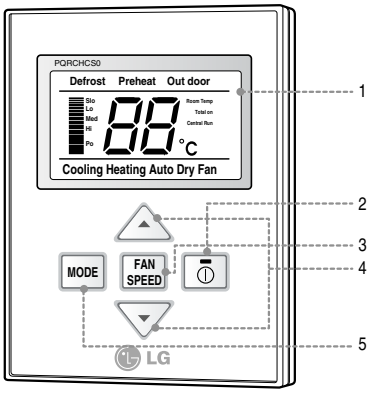
Functional description:

1. Simple design.
2. Simple & easy use.
3. Memorize data(operation data) in case of power failure.
4. ON/OFF , Temperature setting, room temperature display, Air flow control, lock setting, Fault diagnosis function, operation mode setting, basic functions.
5. Easy address setting with central control.
6. Operation LED is on during operation.

Applicable models

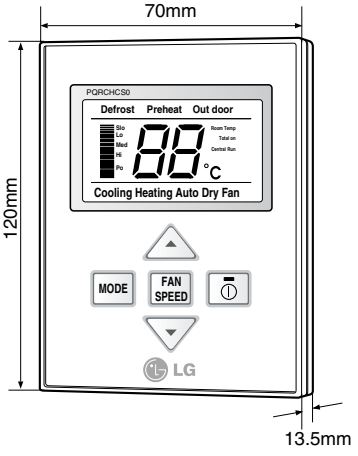
Cassette, duct and ceiling and floor

Functional control



1. Operation Display Panel
2. On/off Function
3. Fan Speed Button
4. Temperature Control Button
5. Mode Selection Check Button

Dimension

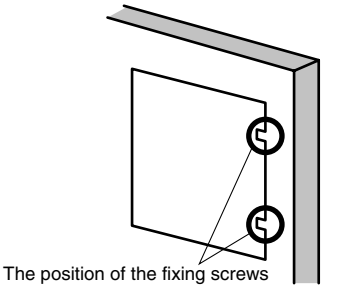


NOTE

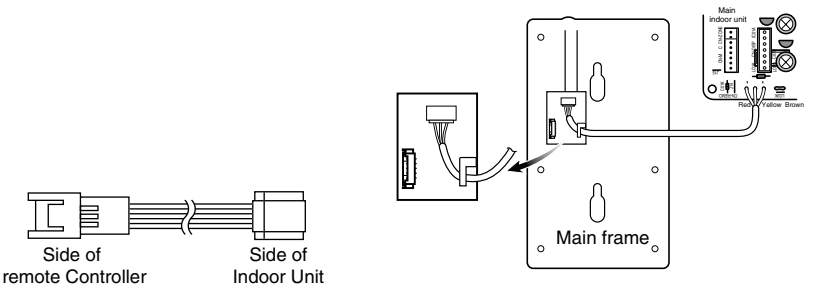
If the indoor unit is equipped with plasma filter, the filter automatically turns ON/OFF in accordance without operation, There is no individual control no display and no button for plasma filter operation on the remote controller.

Installation method:

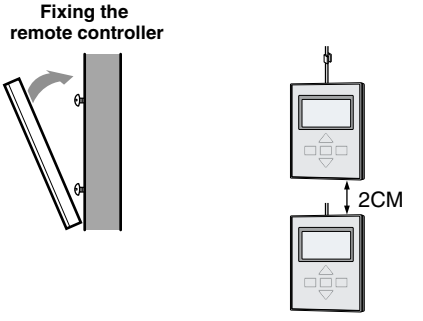
1 Put the installation paper on the place and determine the position and height of the fixing screws of the wired remote controller.
• Refer to the printed side of the installation paper.



2 Plug the connecting cable into the indoor unit.
• The product is being shipped with the cable connected only to the remote controller.
Fix the connecting cable with the cable rack.



3 Remove the installation paper before installing the remote controller so that it can fit at the right place.



* Do not embed the remote controller into the wall. (It may cause the breakdown of the temperature sensor.)

* If you want to install a number of remote controller at the same place in a vertical line, install them at regular intervals of 2cm. (It may cause the breakdown of the temperature sensor.)

* Do not install the cable with a distance of 30 m or longer. (This can cause communication error.)

* When installing the cable, check whether the connector between the remote controller and the product is installed properly. The connector will not be connected when installed in opposite sides.

o Supply the power after connecting wired remote controller.
When you need to change wired remote controller, switch off the main power and change it.
If the wired remote controller is changed before switching off the main power, the option function of the indoor unit can't be used. (option function like "slow" fan speed selection)

1.3 Deluxe wired remote controller

Models : PQRCUDS0

Picture:



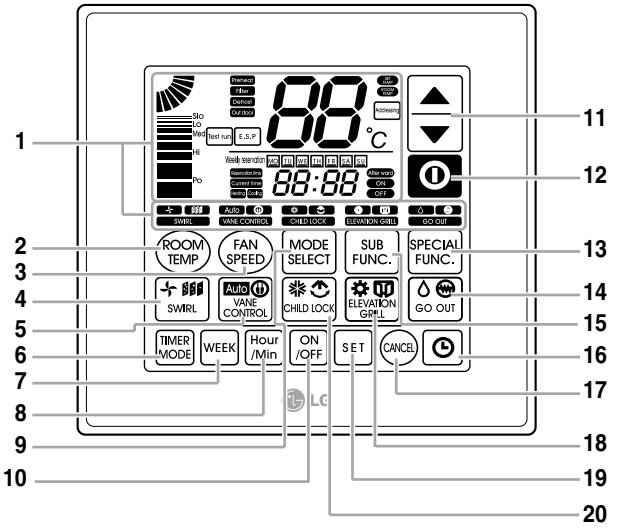
Functional Description:

1. Big LCD panel which can display various information.
2. Deluxe touch panel.
3. Memorize data(operation data) in case of power failure.
4. ON/OFF,Temperature setting, room temperature display,
5. Air flow control, lock setting,reservation function,
6. Fault diagnosis function, operation mode setting, basic functions.
7. Easy address setting with central control.
8. Deluxe with LCD back light applied
9. Vane control & child lock, optimum air control as deluxe function
10. Back light LED is on during operation.

Applicable models

Cassette, duct and ceiling and floor

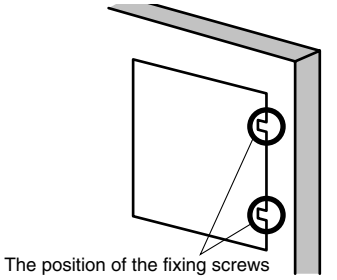
Functional control



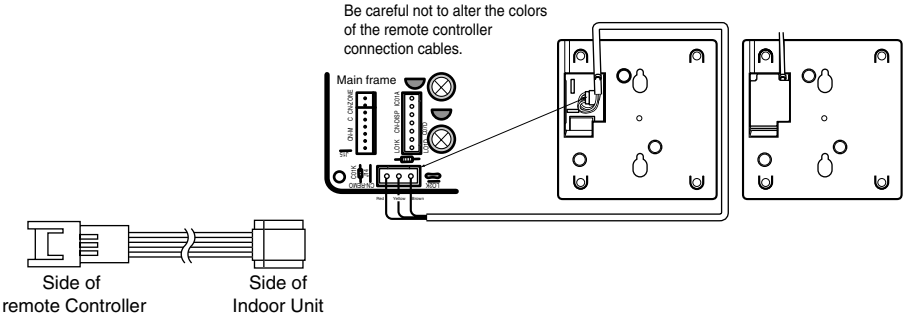
1. Operation Display Panel
2. Room Temperature Button
3. Fan Speed Button
4. Fan/Plasma/Swirl Swing Button
5. Automatic / Power Saving Vane Control Button
6. Timer Mode Button
7. Date Selection Button
8. Hour/Minute Button
9. Mode Selection Button
10. On/Off Button for reservation
11. Temperature Control Button
12. On/Off Button
13. Special Function Button
14. Dehumidification/ Heater/ Go-out Button
15. Sub Function Button
16. Easy Reservation Button
17. Cancel Button
18. Heating/Ventilation/Elevation Grill Button
19. Setting Button
20. Cooling / Auto Swing / Child Lock Button

Installation method:

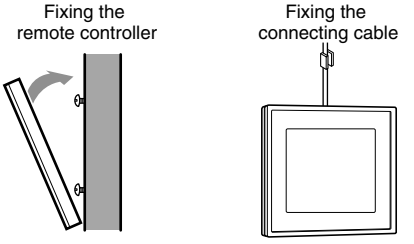
1 Put the installation paper on the place and determine the position and height of the fixing screws of the wired remote controller.
• Refer to the printed side of the installation paper.



2 Plug the connecting cable into the indoor unit.
• The product is being shipped with the cable connected only to the remote controller. Put each cable to the remote controller according to the color match



3 Remove the installation paper before installing the remote controller so that it can fit into the right place.



* When installing the wired remote controller, do not install it so that it is buried to the wall. (This can cause error in the temperature sensor)
* When installing multiple wired remote controllers horizontally in one location, leave a minimum distance apart (2cm). (This can cause error in the temperature sensor)
* Do not install the cable with a distance of 50 m or longer. (This can cause communication error.)
* When installing the cable, check whether the connector between the remote controller and the product is installed properly. The connector will not be connected when installed in opposite sides.

❑ Supply the power after connecting wired remote controller.
When you need to change wired remote controller, switch off the main power and change it Before switch off the main

1.4 Hotel use remote controller

Models : PQRCFCS0

Picture:



Functional description:

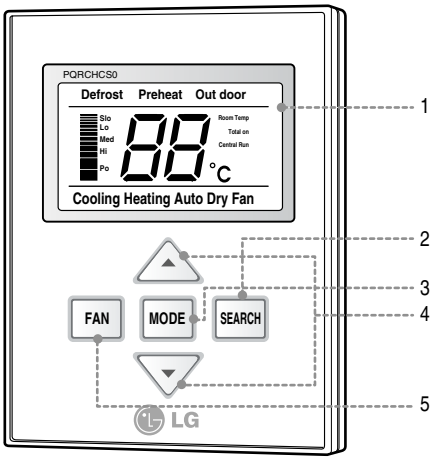
Can control one or multi indoor units which have been installed at remote areas with same function by same controller at same time

1. Simple design.
2. Simple & easy use.
3. Memorize data(operation data) in case of power failure.
4. ON/OFF , Temperature setting, room temperature display, Air flow control, lock setting, Fault diagnosis function, operation mode setting, basic functions.
5. Easy address setting with central control.
6. Operation LED is on during operation.
7. Operation mode setting can be done by central control

Applicable models

Cassette, duct and ceiling and floor

Functional control

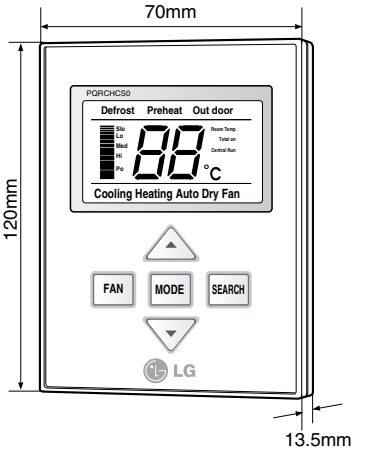


1. Operation display panel
2. Search button
3. Mode button
4. Temperature control button
5. Fan speed button

NOTE

If the indoor unit is equipped with plasma filter, the filter automatically turns ON/OFF in accordance without operation, There is no individual control no display and no button for plasma filter operation on the remote controller.

Dimension



Operation

1. LCD Panel to show various information.
2. Can check indoor operation status by Key.
3. Memorize data(operation data) in case of power failure.
4. ON/OFF , Temperature setting, room temperature display, Air flow control, lock setting, Fault diagnosis function, operation mode setting, basic functions, reservation function, Clock function.
5. Easy address setting with central control.

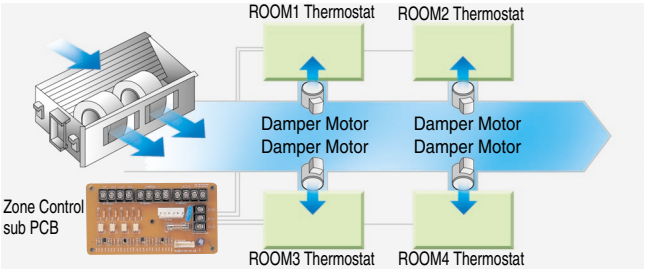
NOTE

1. Two types of controller CST/DUCT.
2. Can control one or multi indoor units which have been installed at remote areas with same function by same controller at same time.

1.5 Zone Control

Models : ABZCA

Picture



Functional Description:

1) Operation Summary

A device which senses temperature of each zone controls operation of each diffuser,so temperature of each zone can be controlled.

2) Specific Operation

- If every zone (diffuser) is closed, Comp and outer fan become turned off to protect compressor.

* Zone controller requires diffuser temperatures and controllers available locally.

3) Operating Scene

- The temperature of all zones are controlled individually (makes energy savings) controlled by the signal of every zones in duct system (By connecting the thermostat and VAV Diffuser to Main PCB,comp. & fan)
- Diffuser and Thermostat are locally sourced Connected to Another Apparatus, Control it Freely.

Applicable models

Ceiling concealed duct

Accessory

• Factory Supplied :

- Zone Control PCB.....1EA
- Trans.....1EA
- Case 1EA
- Cover 1EA
- Main lead wires.....1EA
- Screws 4EA
- Holder 4EA
- Installation Manual.....1

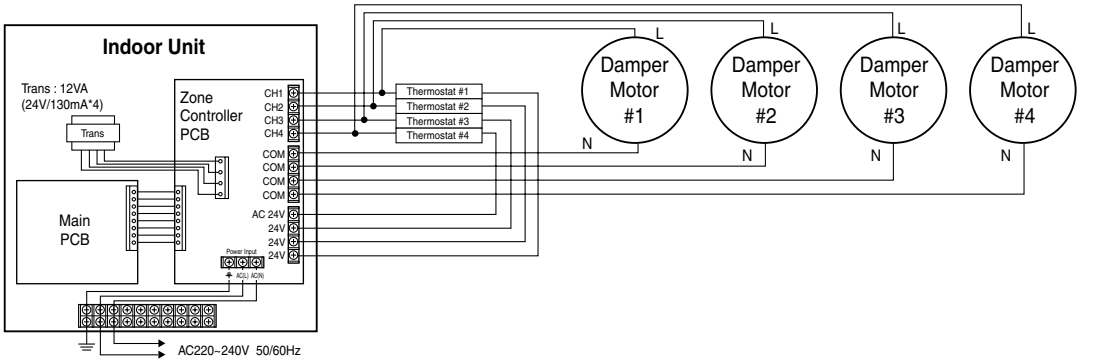
• Purchased Locally :

- Damper Motor
- Thermostat
- Damper

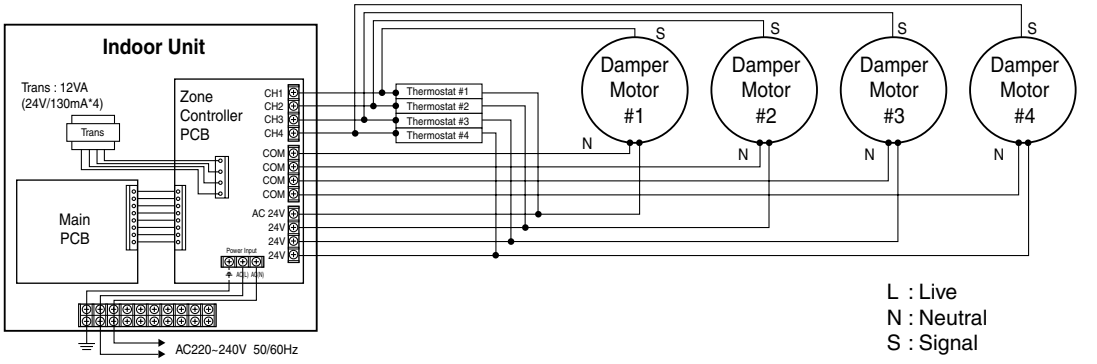
Installation method:

- Connect main lead wires between main PCB and Zone Control.
- Connect thermostat to Zone Control according to thermostat maker's manuals.
- Connect Damper Motor to Zone Control according to Damper Motor maker's manuals.
- Wiring also depends upon the type of the damper actuators.

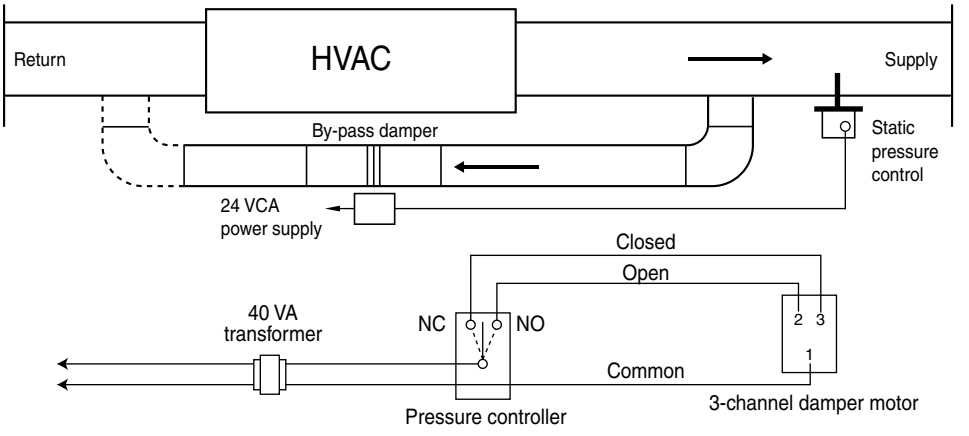
• Spring Return Damper Actuators



• Non Spring Return Damper Actuators



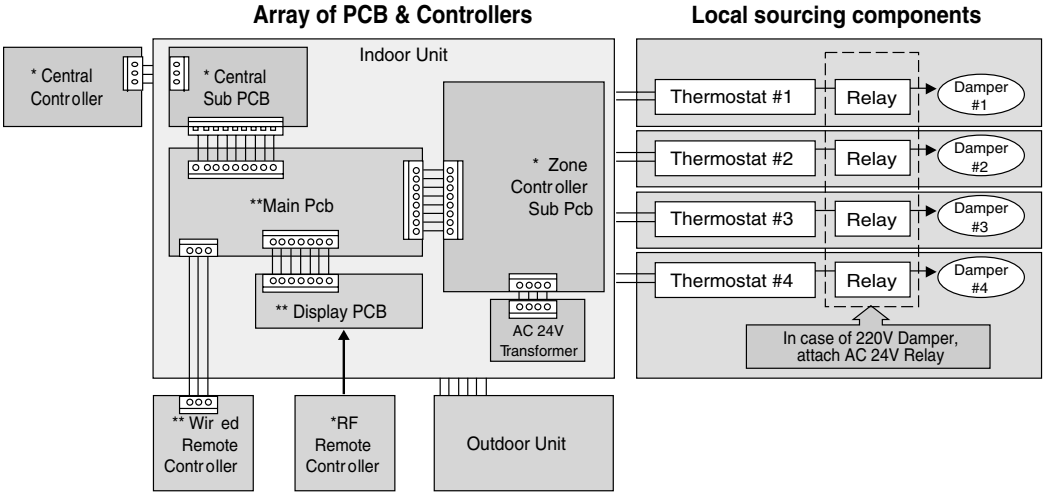
By Pass Damper System :-



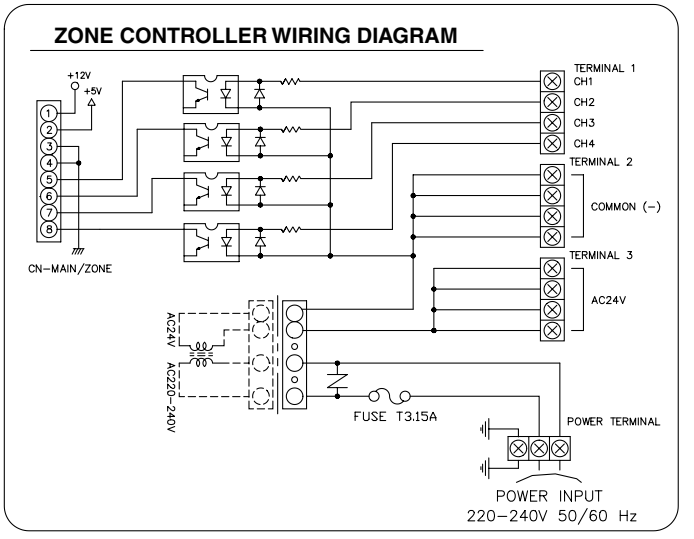
To maintain an adequate flow of air and static pressure through the HVAC system, a by-pass system can be used that is equipped with a motorized damper and a static pressure control.

Installation Procedure:

- The control should be mounted to control panel using 4 screws supplied.
- Fasten it to any holes on control panel as long as there is enough space to install. If necessary drill holes to install on proper position.
- When drilling, ensure that metal f does not foul any electronic components.



Wiring Diagram:



When the area dampers open or close, the static pressure control will open or close the by-pass damper so as to maintain the adequate static pressure. Dimensions of the by-pass damper depends on the cooling capacity of the unit.

Btu/h	Size of the by-pass (ø)
36K	250 mm
42K	250 mm
48K	300 mm
60K	300 mm
91K	350 mm
120K	350 mm

Remarks:

- Turn off the Power before installation or maintenance.

1.6 Dry contact module

Models : PQDSA [Without case], PQDSB [With case]

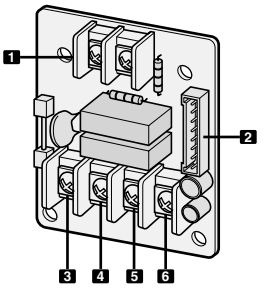
Picture:



PQDSA



PQDSB



1. CN-POWER : AC 220V Connector
2. CN-CC : MAIN PCB Connector
3. CN_DRY (L) : DRY CONTROLLER Connector
4. CN_DRY (SIG) : DRY CONTROLLER Connector
5. CN_DRY (ERROR CHECK) : ERROR Check Display Connector
6. CN_DRY(OPER STATE): Operation Display Connector

Accessory:

PQDSA

- Dry Contact PCB.....1EA
- Installation Manual 1EA
- Lead Wire Assembly 4EA

PQDSB

- Dry Contact PCB 1EA
- Case 1EA
- Installation Manual 1EA
- Lead Wire Assembly 4EA

Applicable Models

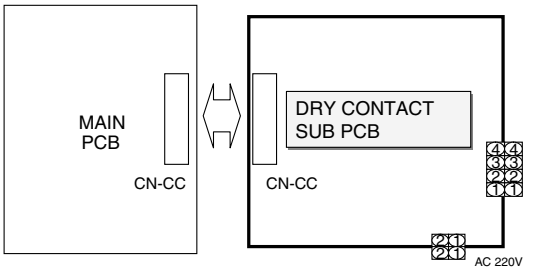
- LGAP application models

Installation Procedure:

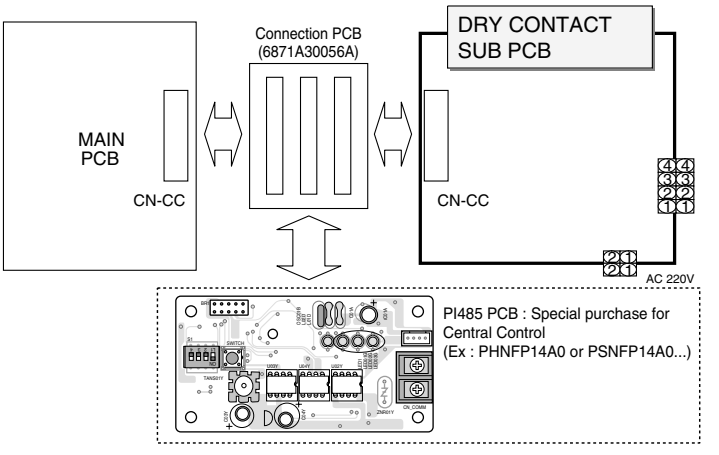
Installation steps for single product

1 . Connect CN-CC with Main PCB by the cable(provided)

- Connection of Dry contact only



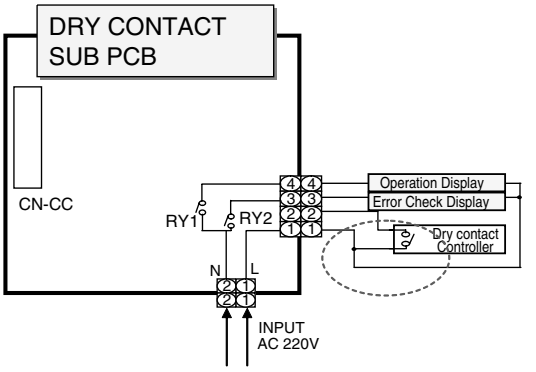
- Connection of Dry contact & LG Central Controller



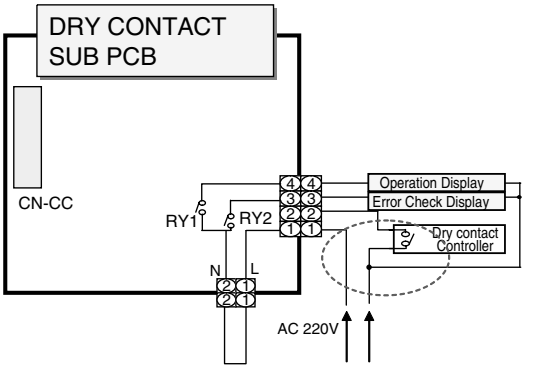
Installation steps for muiti product

1 . Connect CN_DRY with Control Unit .
(Fix SUB PCB into the proper location.)

- To apply power source through PCB



- To apply power source from the outside



User guide

Function

It gives a selection whether to turn ON the unit directly or not from the external source (such as key holder in hotel rooms). The selection can be made by pressing Cancel button of the wireless remote controller 3 times within 3 minutes of starting the unit facing it towards the unit (This function availability depends on indoor unit model type.)

1. Normal mode (Factory set)

- Not to turn ON the unit directly from the external source.
  On inserting the key inside the key holder, it activates the system.
  Later on , the unit can be turned ON by the remote controller.

2.Automatic mode

- To turn ON the unit directly from the external source
  On inserting the key inside the key holder, it automatically turns ON the air conditioner. So no need to use remote controller.

❉ However the unit can be turned off directly if the key is taken out of the key holder for both cases.

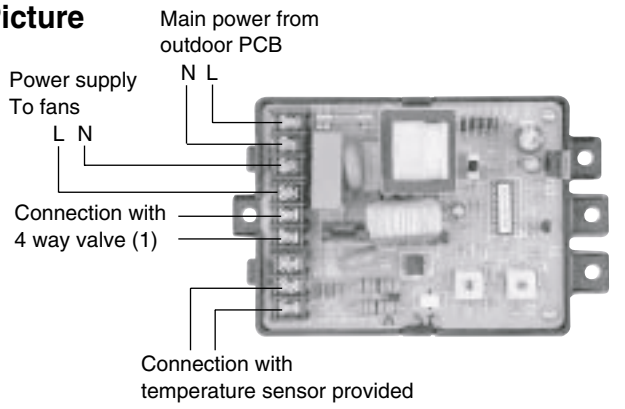
⚠CAUTION

- In case of power failure the air conditioner will resume its similar operation before the power failure.
- In case power comes again after a power failure. Auto restart the unit auto magically operates to the previous operation conditions.

2. Mechanical accessories
2.1. Low Ambient Kit

Models : AQLA

Picture



Low ambient kit wiringconnections

Functional Description:

- Even when the outdoor temperature reaches low ambient with low ambient kit you can get cooling operation.
- As the ambient air temperature rises and falls, the outdoor fan speed increases and slows down, to produce the variable cooling effect needed to give constant pressure.

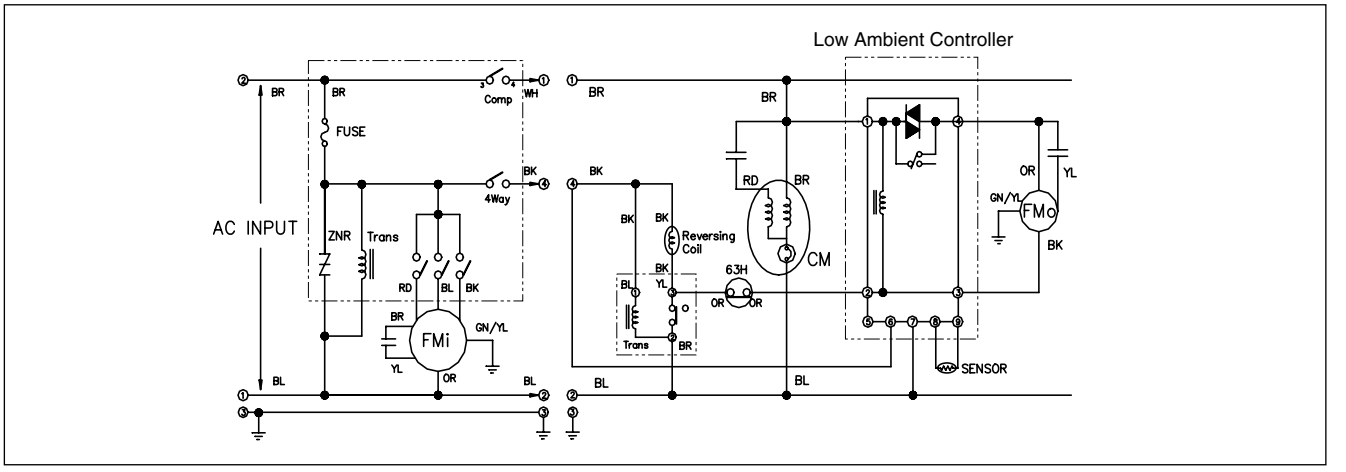
Accessory:

- AQLA Fan Speed Controller.....1EA
- Sensor Assembly 1EA
- Buckle-clip 3EA
- Adhesive Insulation, 20mm x 80mm 1EA
- Tie Wrap,100mm.....2EA
- Instruction Manual.....1EA
- Screw 3EA

Applicable Models

- Convertible
- Ceiling Concealed Duct
- Ceiling Cassette
- Single Split
- Multi Splits (specific models)

Wiring diagram

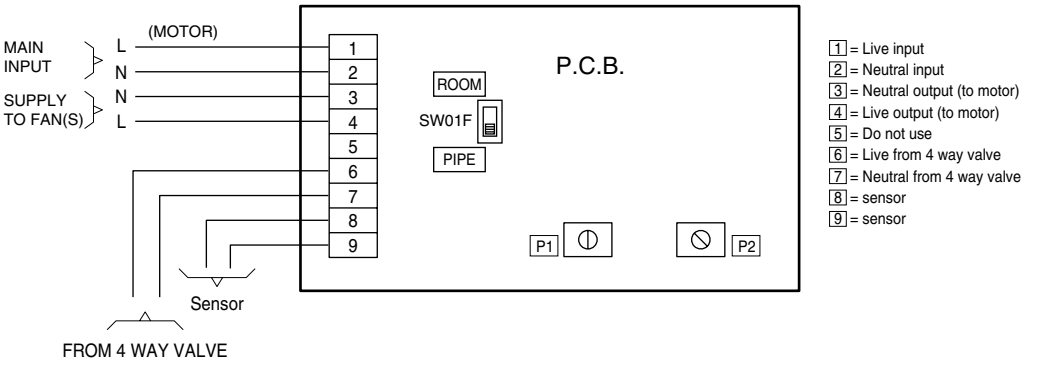


Installation procedure:

Fixing : The control should be mounted to control panel within the condensing unit using two screws supplied.Fasten it to any holes on control panel as long as there is enough space to install.If necessary, drill holes to install on proper position.

Some condensing units are equipped with two fans. In that case, connect the lead Wire of each motor to terminal numbers 3 and 4. But some condensing units also require a separate control for each fan.

Electrical connections:



Heat ump models : When the low ambient control is to be used with a heat pjmp the condenser fan needs to run at full speed during the heating mode and is only modulated during the cooling mode.

When fitted to a heatpump terminal numbers 6 and 7 should be wired directly to the reversing solenold valve in all cases both live and neutral side of solenold valve should be connected to the control.

Cooling Only Models : On cooling only units, where a reversing valve is not fitted, terminal numbers 6 and 7 Should be left unconnected.

Fitting the Sensor : Locate a return bend, two or three bends above a convenient liquid line exit from the Condenser. This should ideally be chosen with its temperature closest to that of discharge saturation temperature.

Setting the Control : First check whether switch SW01F is towards pipe or not. If not than slide it towards

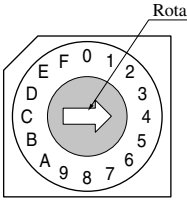


Fig. 1: Rotary S/W P1
(default:4)

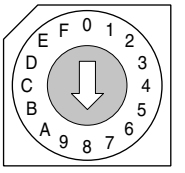


Fig. 2: Rotary S/W P2
(default:8)

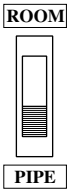


Fig. 3: S/W SW01F
(default: PIPE)

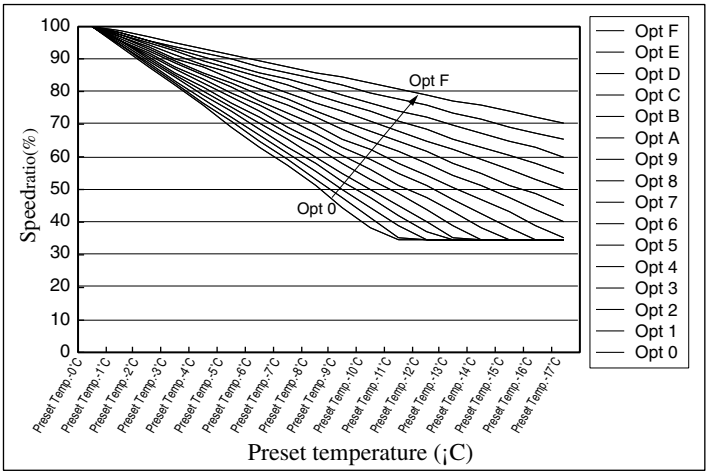
Opt A

Preset temperature at the condenser outlet can be set by switch S/W P1 and accordingly the fan on /off temperature will be as follows :

	Opt 0	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5	Opt 6	Opt 7	Opt 8	Opt 9	Opt 10	Opt 11	Opt 12	Opt 13	Opt 14	Opt 15
PRESET TEMP	19°C	20.5°C	22°C	23.5°C	25°C	26.5°C	28°C	29.5°C	31°C	32.5°C	34°C	35.5°C	37°C	38.5°C	40°C	41.5°C
FAN OFF TEMP	2°C	3.5°C	5°C	6.5°C	8°C	9.5°C	11°C	12.5°C	14°C	15.5°C	17°C	18.5°C	20°C	21.5°C	23°C	24.5°C
FAN ON TEMP	4°C	5.5°C	7°C	8.5°C	10°C	11.5°C	13°C	14.5°C	16°C	17.5°C	19°C	20.5°C	22°C	23.5°C	25°C	26.5°C

Table : Setting Temperatures ; Controlled by rotating P1

According to preset temp. - 0 or 1 or 2,.....17, you can read the % speed ratio from graph. The variation in % speed ratio is changed by position of switch S/W P2.



Graph : Speed ratio(%) ; Controlled by rotating P2

Remarks:

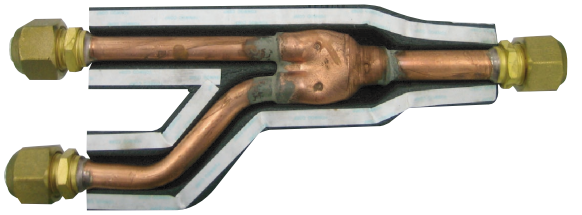
- Disconnect all power supplies before starting installation or maintenance work.
- The control & sensor are to be safely enclosed within the condensing unit.
- All electrical wiring must be carried out by a competent person, and must follow the local & National Electric code.

2.2 Y-branch

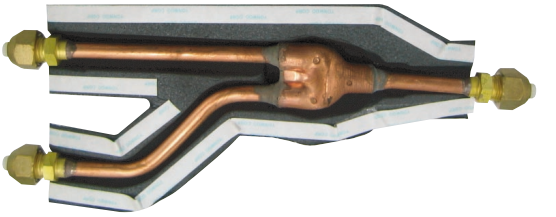
Models : PMBL3620, PMBL5620

Picture

Gas pipe

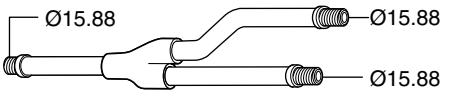
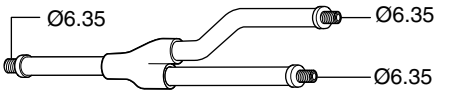
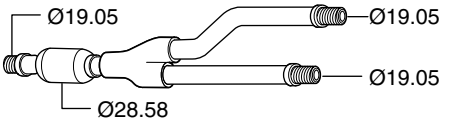
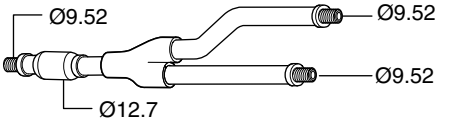


Liquid pipe

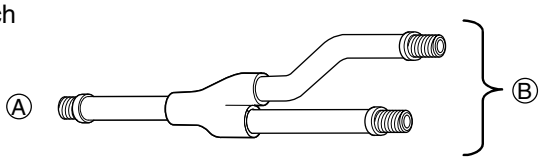


Features

[unit:mm]

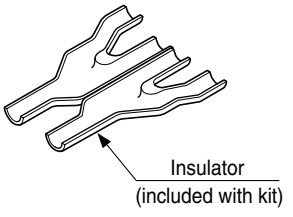
Model Name	Gas Pipe	Liquid Pipe
PMBL3620		
PMBL5620		

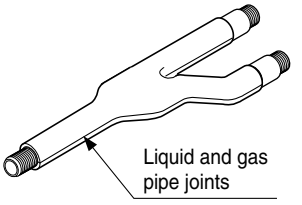
■ Y branch

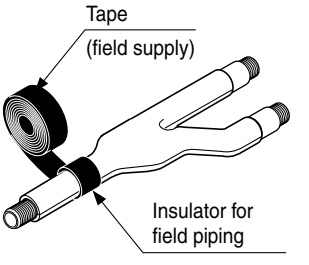


Ⓐ To Outdoor Unit
Ⓑ To BD Unit

• Branch pipe should be insulated with the insulator in each kit







Accessory:

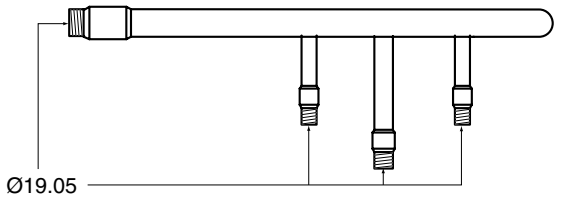
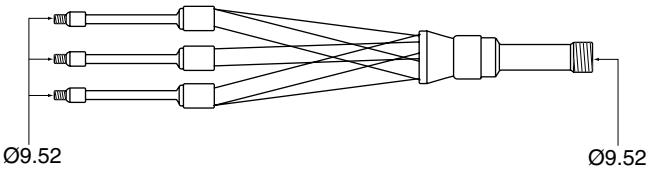
- Y Branch(Gas side, Liquid side).....1EA
- Installation manual 1EA

Applicable Models

• Multi F DX

Models : PMBL1203F0

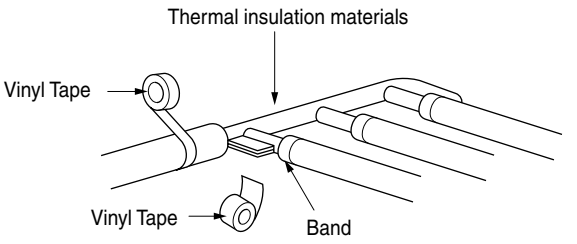
[unit:mm]

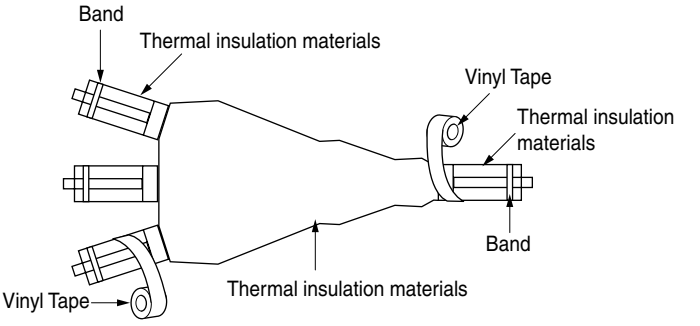
Gas Pipe	Liquid Pipe
	

- When installing the branch pipe, direction and angle of installation is not limited.
- Take care so that burrs and foreign material may not enter into the cutting surface when connecting.

Thermal insulation work

- Securely wrap the refrigerant and the branch pipe by using thermal insulation materials provided. When using thermal insulation materials released, use withstand heat insulation materials.(thickness of more than 10mm)
- Securely adhere thermal insulation materials wrapping the branch pipe so that they do not widen. After wrapping them with auxiliary materials , bound them with a band .
- Finish the work by wrapping with a vinyl tape after the insulation material work.

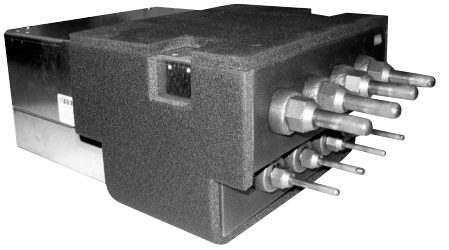




2.3 Branch distributor

Models : PMDB3620, PMBD3630, PMBD3640, PMBD7220, PMBD7230 - Multi Inverter

Picture:



Functional Description:

- Distribution of refrigerant to various indoor units.
- 3 types available (2, 3, 4 indoor units)
- Consists of EEV inside
- Controlling PCB inside the unit
- Internally insulated (prevent any chances of drainage)
- Flare joints for easy and clean installation
- Compact design (low height)

Applicable Models:

- Multi Variable systems
- Multi Inverter systems
- Multi F DX, Tropical Multi system.

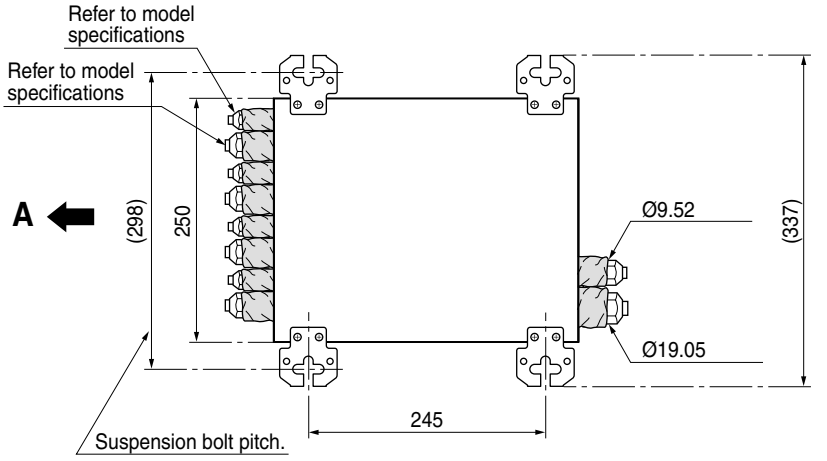
Specifications:

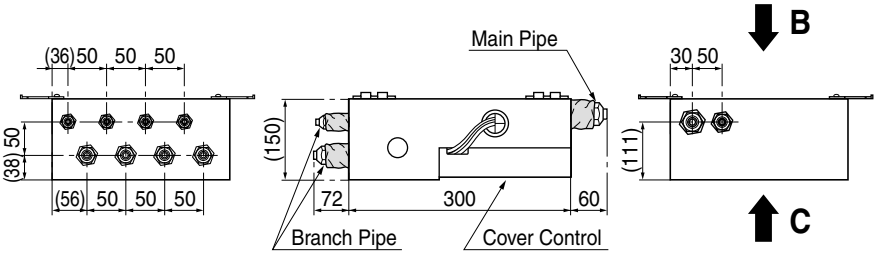
R410A

UNIT			PMBD3640	PMBD3630	PMBD3620	PMBD7220	PMBD7230
Connectable	Number of Indoor Unit		1~4	1~3	1~2	1~2	1~3
	Capacity	(Bhu/hr)	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k	7k/9k/12k/18k/24k	18k/24k/30k/36k	18k/24k/30k/36k
Casing color			Paintingless	Paintingless	Paintingless	Paintingless	Paintingless
Power Source(Ø, Hz)			1, 50/60	1, 50/60	1, 50/60	1, 50/60	1, 50/60
			220~240/220V	220~240/220V	220~240/220V	220~240/220V	220~240/220V
Power Consumption		(W)	10	10	10	10	10
Running Current		(A)	0.05	0.05	0.05	0.05	0.05
Dimensions (W x H x D)		(mm)	302 x 143 x 252	302 x 143 x 252	302 x 143 x 252	302 x 143 x 252	302 x 143 x 252
Packing Dimension (W x H x D)		(mm)	422 x 202 x 300	422 x 202 x 300	422 x 202 x 300	422 x 202 x 300	422 x 202 x 300
Net Weight			5.0	4.9	4.8	5.0	5.0
Connecting Cable	Indoor Unit	No. x mm²	4 x 0.75	4 x 0.75	4 x 0.75	4 x 0.75	4 x 0.75
	Outdoor Unit	No. x mm²	4 x 0.75	4 x 0.75	4 x 0.75	4 x 0.75	4 x 0.75
Piping Connection	Liquid	(mm)	9.52	9.52	9.52	9.52	9.52
(Outdoor Unit)	Gas	(mm)	19.05	19.05	19.05	19.05	19.05
Piping Connection	Liquid	(mm)	6.35 x 4EA	6.35 x 3EA	6.35 x 2EA	6.35 x 2EA	6.35 x 3EA
(Indoor Unit)	Gas	(mm)	9.52 x 4EA	9.52 x 3EA	9.52 x 2EA	12.7(1/2) x 2EA	12.7(1/2) x 3EA
Piping Length		(m)	-	-	-	-	-
Piping Elevation		(m)	-	-	-	-	-
Drain hose							
Heat Insulation							
Parts	Hanger	(EA)	4	4	4	4	4
	Screw	(EA)	8	8	8	8	8
	Manual	(EA)	1	1	1	1	1

1. BD unit ↔ BD unit, Indoor Unit ↔ Indoor Unit : Max. Height - 10m Set up the BD unit and Indoor Unit in 15m.
2. The piping connection must be suit the piping sizes of the indoor unit which will be connected.(If need, use the connector which is included in the indoor unit)
3. The BD unit should be installed inside the building.

Dimensions:

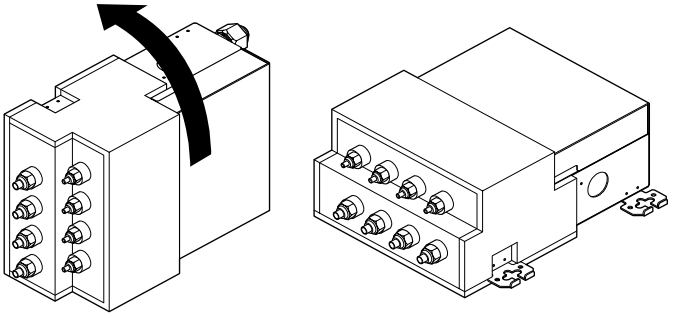


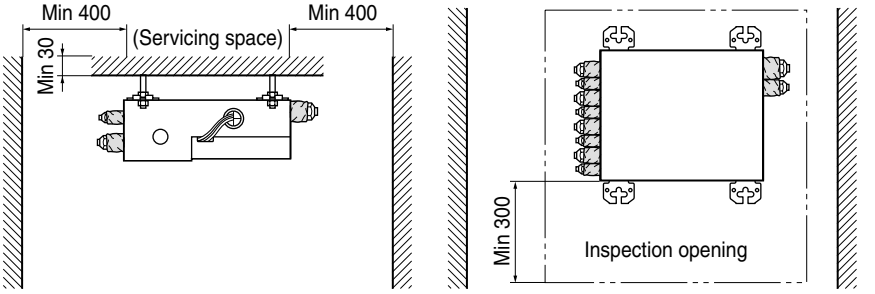


Installation procedure:

Installation of the unit

- This unit has two different installation types:
  (1) Ceiling-suspended type and (2) wall-mounted type.
- Choose the proper installation pattern according to the location of installation.
- The installation location for printed wiring board can be changed.
  Follow the procedure specified in the "CONNECTING THE WIRING" section to change the location.





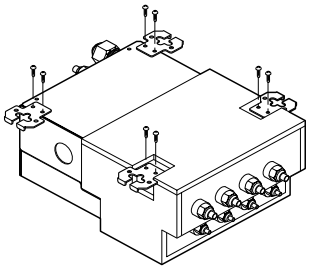
⚠CAUTION

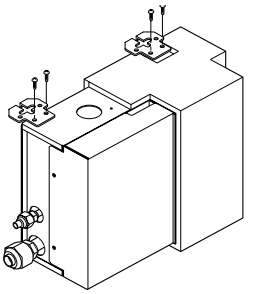
This unit should be nstalled horizontally, however, it may be freely mount with any side forward, back and to the sides.
This unit "does not require drain treatment" as it uses internal foam treatment as low-pressure piping insulation.

Ceiling Suspended Type :

(1) Fix the famished hanger metal with two screws.(4 locations in total).

(2) Using an insert-hole-in- anchor, hang the hanging bolt.

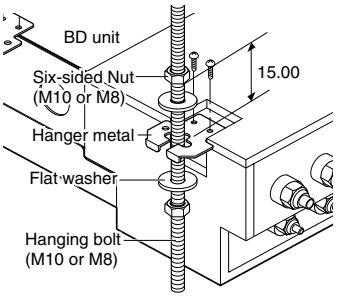




(3) Install a hexagon nut and a flat washer (locally-procured)tothe hanging bolt as shown in the figure in the left, and ift the main unit to hang on the hanger metal.

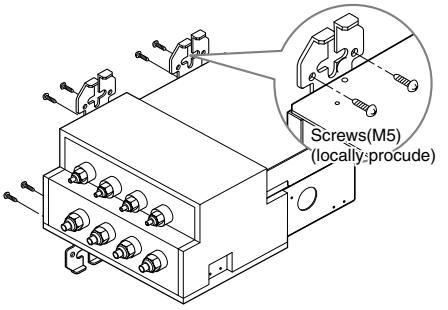
(4) After checking with a level that the unit is level, tighten thehexagon nut.

* The tilt of the unit should be within ±5° in front/back and left/right.



Wall mounted Type :

(1) Fix the famished hanger metal with two screws.(3 locations in total)



(2) After checking with a level that the unit is level, fix the unit with the furnished wood screws.

* The tilt of the unit should be within ±5° in front/back and left/right.

* Block up the parts of hanger holes (2 places) by usinginsulation PE after installing the hanger.

⚠CAUTION

- Once a screw-hole on the main unit has had a screw hammered in, make sure to either hammer it again or cover it with alumium tape.(This is to prevent condensation)
- Be sure to install the unit with the ceiling-sie up.
- Do not install near bedrooms. the sound of refrigerant flowing through the piping may sometimes be audible.

2.4 Drain pump

Accessory Model Name	Ceiling Concealed Duct		
	D, F Chassis	G, H Chassis	E Chassis
	ABDPD	ABDPG	ABDPE

Functional Description:

• To remove the condensed water from the indoor unit.

• In some of the places where natural drainage is not possible Drain Pump is very useful to remove condensed water.

Picture:



ABDPD/ABDPE



ABDPG

Accessory:

Factory Supplied Parts

For D,E&F Chassis Models

- Drain Pump Assembly (AC220~240,50/60Hz,400CMM).....1EA
- Elbow (ø32).....1EA
- Hose.....1EA
- Tie Wrap 2EA
- Screw 10EA
- Rubber 1EA
- Installation Manual 1EA

For G&H Chassis Models :

- Drain Pump Assembly (AC220~240,50/60Hz,400CMM).....1EA
- Screw 4EA
- Cap 1EA
- Installation Manual 1EA

Parts needed for servicing (Factory Supplied)

For D, E&F Chassis Models :

Part Name	Part No.
Water Pump	5858A10001L
Switch Assy, Float	6601A20001E

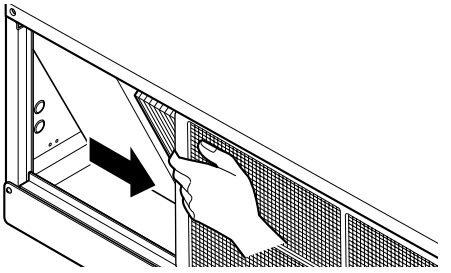
For G&H Chassis Models :

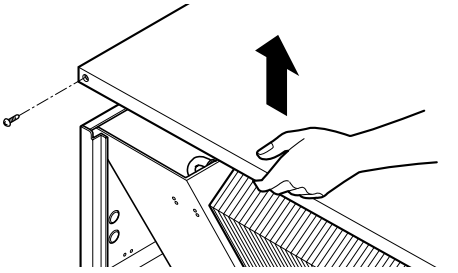
Part Name	Part No.
Water Pump	5858A10001L
Switch Assy, Float	6601A20001E

Installation procedure

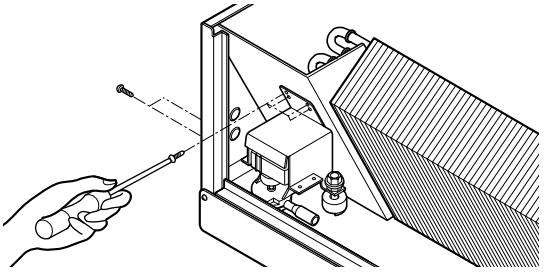
For D,E&F Chassis Models:

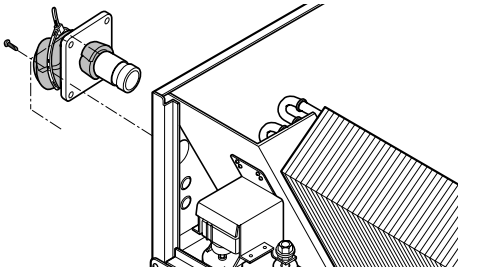
Step 1. Separate the filter and Open the top cover.





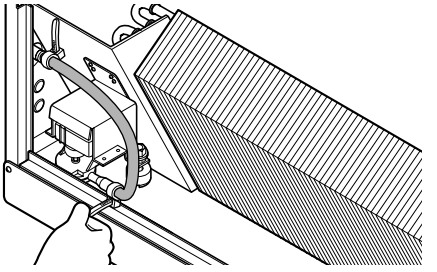
Step 2. Assemble the drain pump assembly and Attach the elbow to the side panel. Tighten 4 screws to the channel. Tighten 2 screws to the Side panel.

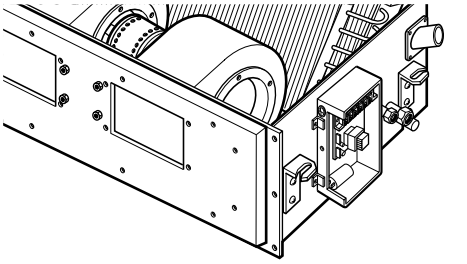




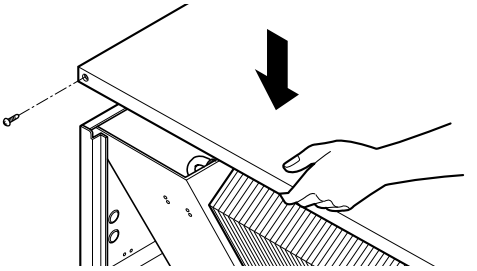
Step 3. Connect the hose and tie wrap and Connect two lead wires to control box. Connect two lead wires to control box, One wire is for float switch and other Wire is for power supply to drain pump.

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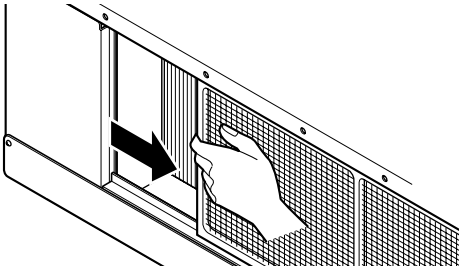
Step 4. Assemble the top cover.

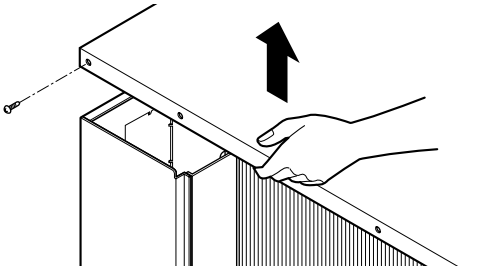


Installation procedure

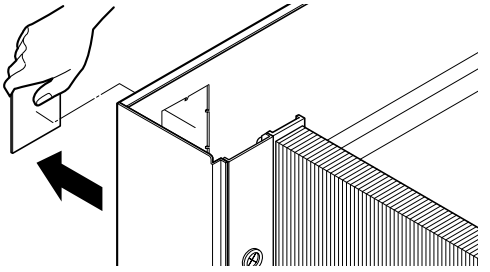
For G & H Chassis Models:

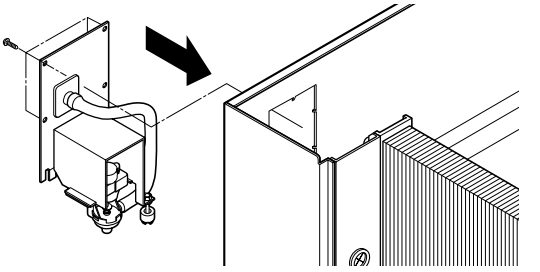
Step 1. Separate the filter and Open the top cover.



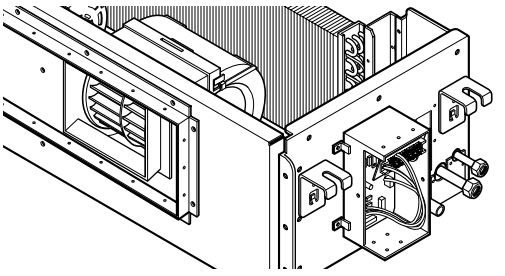


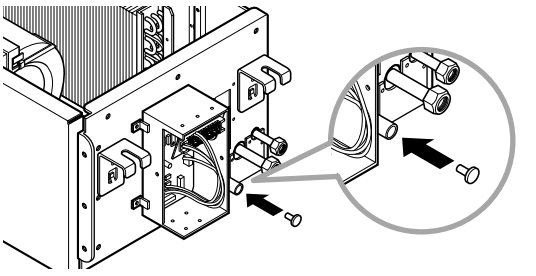
Step 2. Remove the knock-out from the side panel and Assemble the drain pump assembly. Tighten 4 screws to the Side Panel.



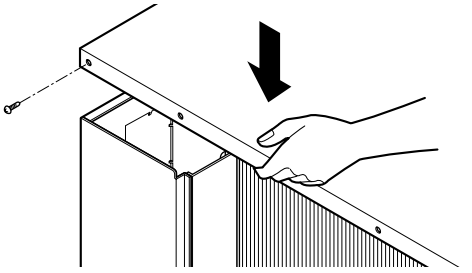


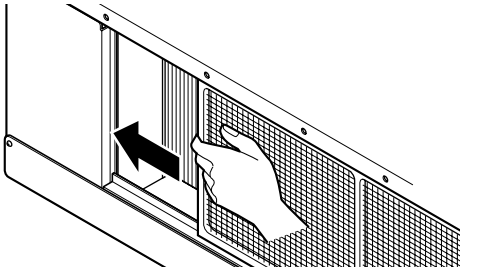
Step 3. Connect two lead wires to control box and Close the drainage hole with the provided cap. Connect two lead wires to control box (One wire is for float switch and other Wire is for power supply to drain pump.)





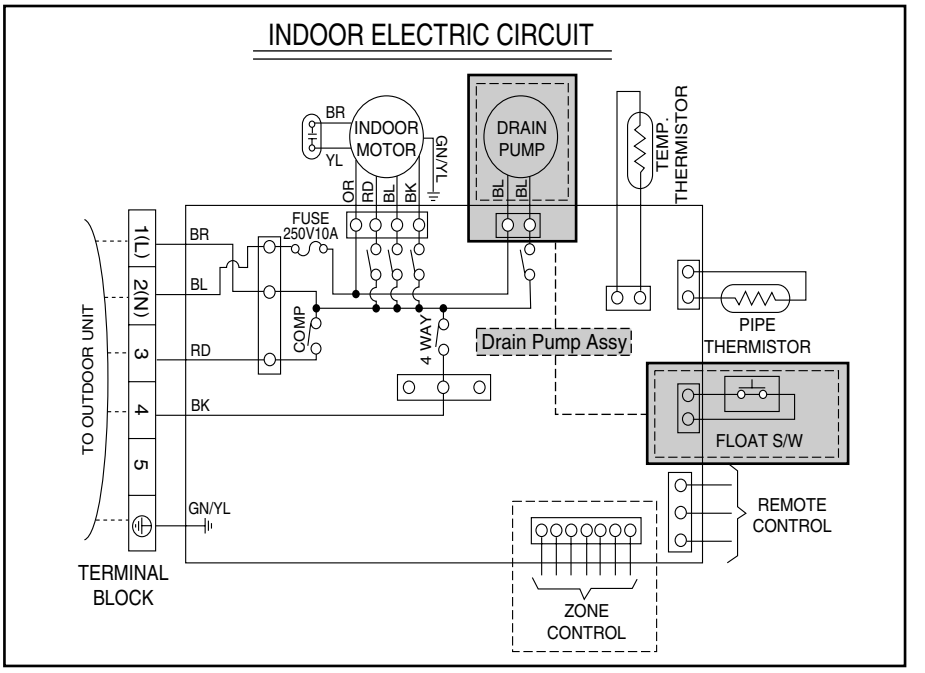
Step 4. Assemble the top cover and insert the filter.



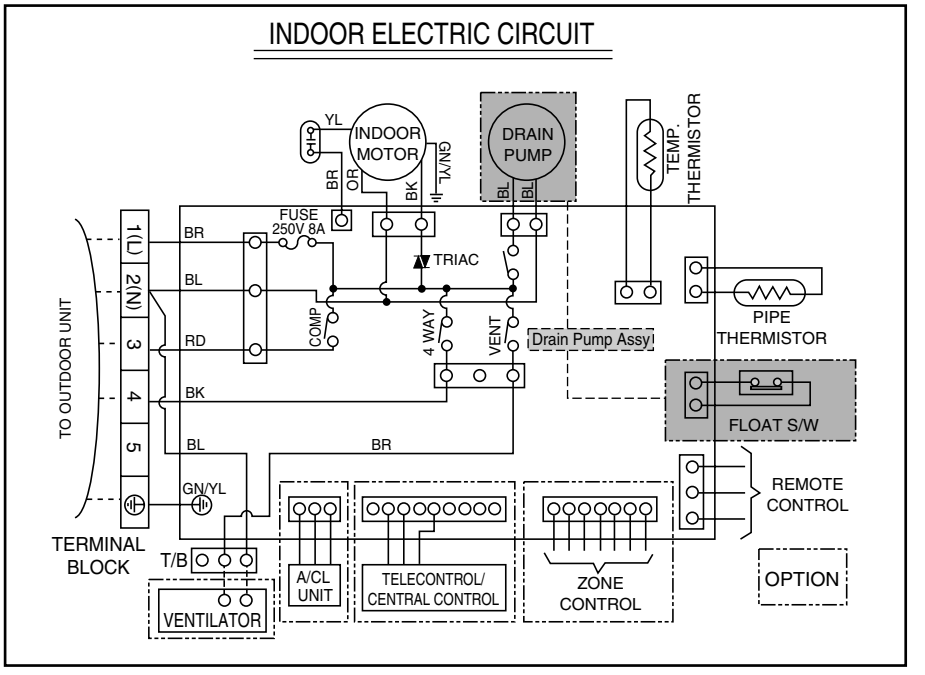


Wiring diagram:

For D, E & F chassis models



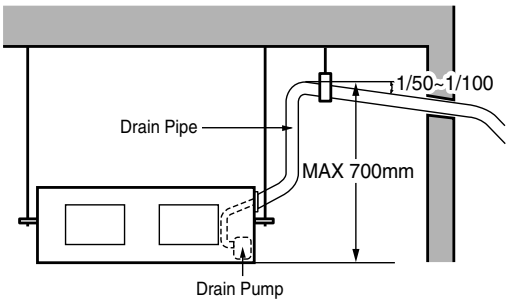
For G & H Chassis Models :



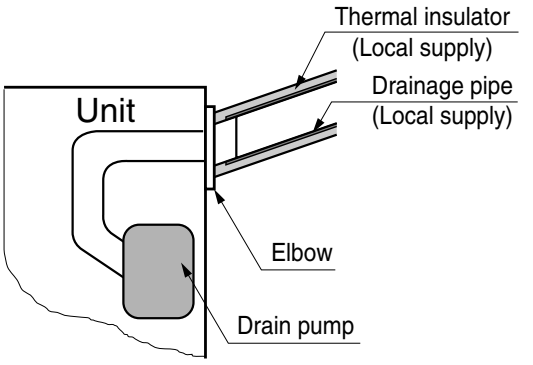
Remarks

For D,E,F,G&H Chassis Models

- Possible drain-head height is up to 700mm. so, installation must be below 700mm.
- Keep the drain hose inclined downward with a slope of 1/50~1/100.
- Prevent upward or reverse flow.

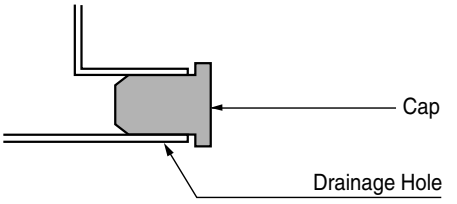


- To prevent condensate forming over the drain pipe minimum 5mm thick insulation should be applied.



- Upward rounding is not allowed.

- Be sure that there should not be any leakage
- after closing the drainage hole with the cap.

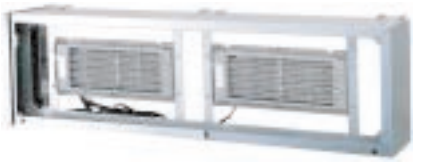


- Disconnect the power supply before installation & maintenance.
- Check the drain pump for normal operation and abnormal noise after electrical wiring.

2.5 Plasma air purifier

	Type	Capacity (Btu/h)						
		18K	24K	30K	36K	42K	48K	60K
ABPAHH	Heat Pump	●	●					
ABPAHC	Cooling Only	●	●					
ABPAGH	Heat Pump			●	●	●		
ABPAGC	Cooling Only			●	●	●		
ABPAEH	Heat Pump						●	●
ABPAEC	Cooling Only						●	●

Picture:



ABPAEH(C)



ABPAGH(C)



ABPAHH(C)

Functional Description:

• To provide odor free, dust free, allergy free, clean & healthy air.

• It not only removes microscopic contaminants & dust but it also removes house mites, pollen, and pet fur to help prevent allergic diseases like asthma.

Accessory:

Plasma Air Purifier Kit.....1EA

Installation Manual.....1EA

Screws M4.....12EA

Wired Remote Control.....1EA

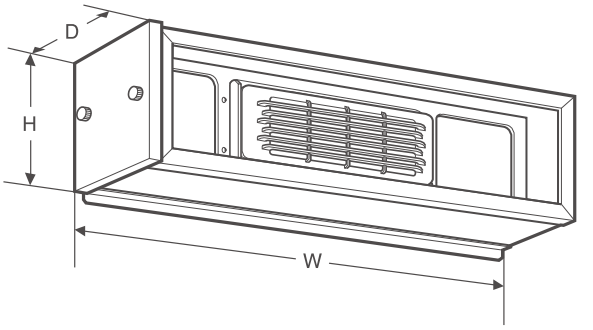
Applicable Models

Ceiling Concealed Duct type of air conditioner.

Installation procedure:

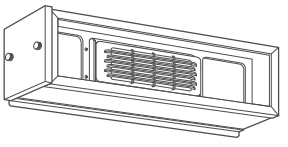
1. Disassemble the angle attached at the return of the indoor unit.
2. Fasten the Plasma Air purifier kit using supplied Screws (M4).
3. Do the wiring as per the wiring diagram provided with Plasma Air Purifier kit.
4. Confirm there is no gap between the indoor unit and Plasma Air Purifier Kit.
5. Reassemble detached angle to the back side of the plasma Air Purifier Kit box

Dimensional Drawing:



Model	Dimension (mm)		
	H	D	W
ABPAHH ABPAHC	230	180	785
ABPAGH ABPAGC	260	180	1,092
ABPAEH ABPAEC	350	180	1,235

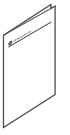
Components:



Plasma Air cleaner



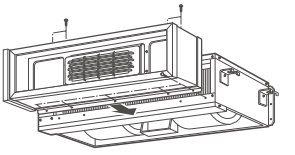
Remote Controller

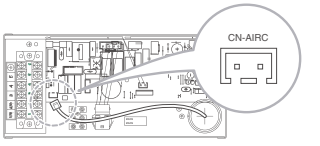


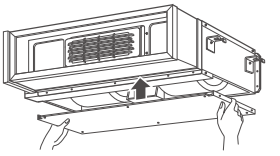
Manual

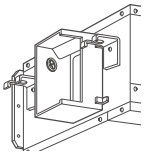


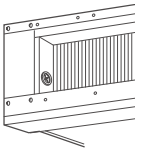
Screw











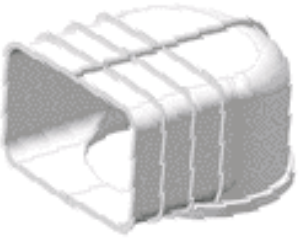
Remarks:

Turn off the Power before installation or maintenance.

2.6 Air guide

Models : PQAGA.

Picture:



Functional Description:

- It is an air guide that specially fits the Outdoor design.
- Air discharge can be changed by a simple installation.
- With one outdoor unit top discharge and front discharge are available simultaneously.

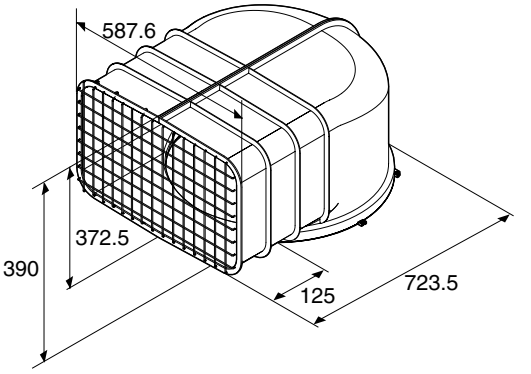
Accessory:

Air Guide.....1EA

Applicable Models

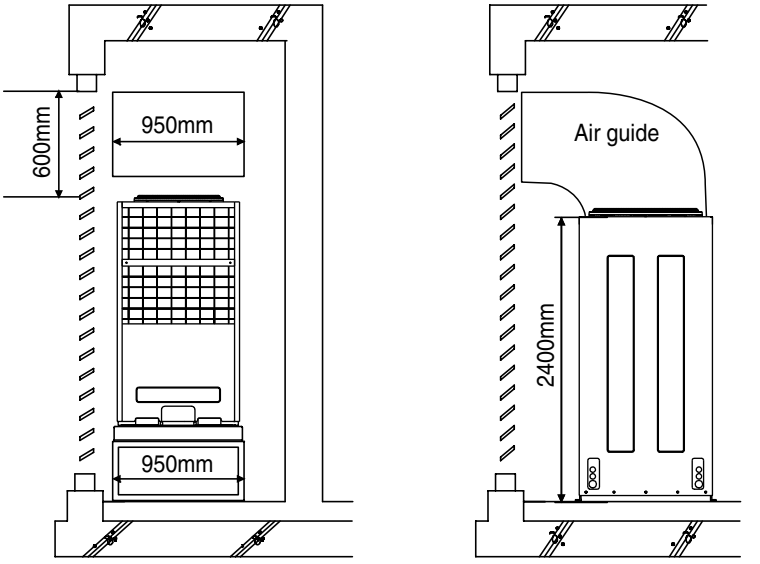
- Multi-V plus chassis; UQ, UY, UW
- Multi F DX chassis; UY, UW

Dimension



Installation Procedure:

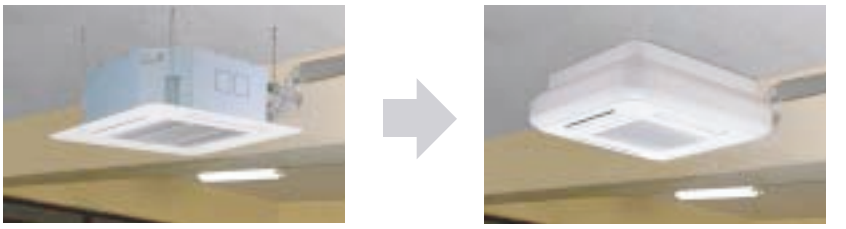
1. Fix the air guide unit on the top of the outdoor unit as shown in the figure.



2.7 Cassette cover

Models : PTDCD/PTDCD1

Picture:



Functional Description:

- Designed for indoor unit.
- Covers the side area of cassette.
- Gives elegant look.
- Light weight.
- Suitable when fall ceiling is unavailable.

Applicable Models:

- PTDCD - Ceiling cassette (TD chassis)
- PTDCD1 - Ceiling cassette (TD1, TH chassis)

Part 6 Special Part

Installation guide at the seaside.....768

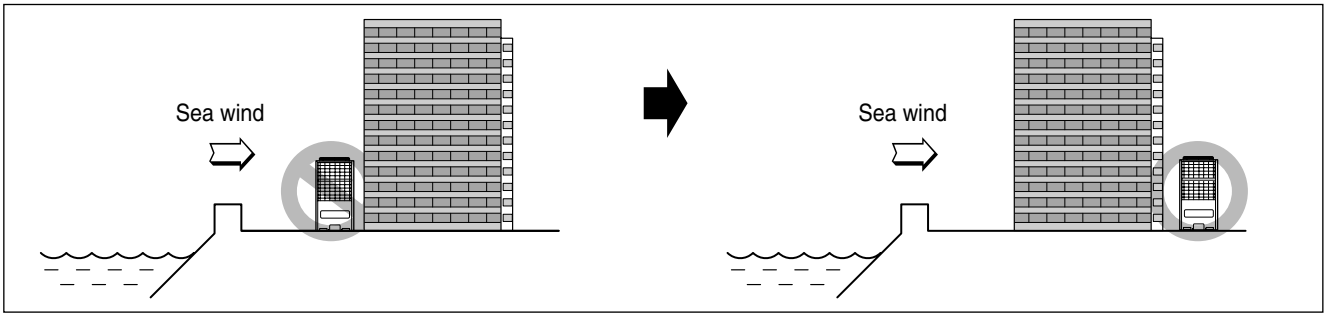
Installation guide at the seaside

CAUTION

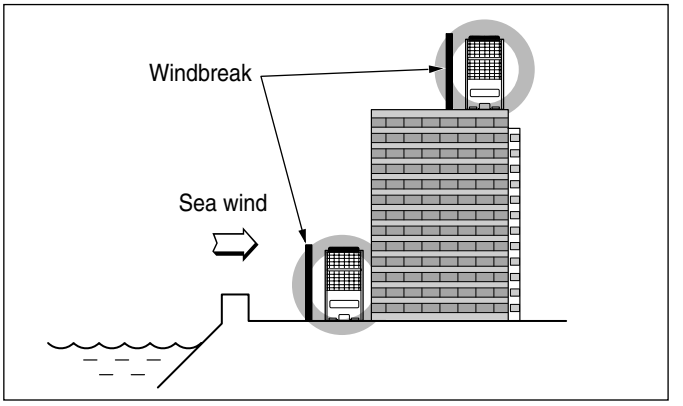
1. **Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.**
2. **Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient performance.**
3. **If outdoor unit is installed close to the seaside, it should avoid direct exposure to the sea wind. Otherwise it needs additional anticorrosion treatment on the heat exchanger.**

Selecting the location(Outdoor Unit)

1) If the outdoor unit is to be installed close to the seaside, direct exposure to the sea wind should be avoided. Install the outdoor unit on the opposite side of the sea wind direction.



2) In case, to install the outdoor unit on the seaside, set up a windbreak not to be exposed to the sea wind.



- It should be strong enough like concrete to prevent the sea wind from the sea.
- The height and width should be more than 150% of the outdoor unit.
- It should be keep more than 70 cm of space between outdoor unit and the windbreak for easy air flow.

3) Select a well-drained place.

1. If you can't meet above guide line in the seaside installation, please contact LG Electronics for the additional anticorrosion treatment.
2. Periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using water



P/No.: 3828A20576B

LG Electronics

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File No. : A8974
Volume:1

Certificate No. : E00626/1

The air conditioners manufactured by LG have received ISO9001 certificate for quality assurance and ISO14001 certificate for environmental management system.