The System of Model Numbers for Split Models

CS	–	M	E	7	E	B1	E	
1		2	3	4		5		6
CU	–	4	E	27	C	B	P	G
1		2	3	4		5		6

1 Model Type

CS : Split Type (Indoor unit)
CU : Split Type (Outdoor unit)
CZ : Accessories

2 Connection Configuration / Classification

<Indoor unit>
M : Multi Split Type
X : Single Split / Super Deluxe
T : Single Split / Super Deluxe Slim
P : Single Split / Standard
No Indications : Single Split / Deluxe

<Outdoor unit>
n: (n) rooms Multi

3 Function

V : Cooling only (HFC)
W : Heat Pump (HFC)
E : Inverter Heat Pump (HFC)

4 Capacity

Value = Capacity (Btu/h) x 1/1000
e.g. 18,000 Btu/h x 1/1000 = 18

5 Type

K : Wall-Mounted Type
T : Floor or Ceiling Dual Mountable Type
B1,B4 : Cassette Type
D3 : Hide-Away Type
B : Flexibly connectable to various type of indoor unit

6 Other

G : Outdoor power supply for Multi Split Type
<Indoor unit>
W : For either single or multi use
S : For single use

Optional Accessories

Filters

Replacement SUPER alleru-buster filter - Long-life type (10 years)

Applicable Models
CZ-SA15P
Wall-Mounted (Super Deluxe)
CS-XE9EKE, CS-XE12EKE

Replacement: every 10 years

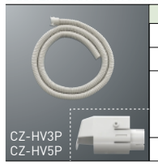
Replacement SUPER alleru-buster filter

Applicable Models	
CZ-SA13P	**CZ-SA14P**
Wall-Mounted (Deluxe,Deluxe-Wide),Cassette (4-way)	Wall-Mounted (Super Deluxe Slim, Standard),Floor or Ceiling
CS-E9DKEW, CS-E12DKEW, CS-E15DKEW, CS-E15EKEA, CS-E18DKEW, CS-E18EKEA, CS-E21DKES, CS-E21EKEA, CS-E24EKES, CS-E28EKE, CS-ME7DKEG, CS-W7DKE, CS-W9DKE, CS-W12DKE, CS-V7DKE, CS-V9DKE, CS-V12DKE, CS-W18DKE, CS-W24DKE, CS-V18DKE, CS-V24DKE, CS-V28EKE, CS-MV7EKE, CS-MV9EKE, CS-MV12EKE, CS-E15DB4EW, CS-E18DB4EW, CS-E21DB4ES	CS-TE9DKE, CS-TE12DKE, CS-PE9DKE, CS-PE12DKE, CS-PW9DKE, CS-PW12DKE, CS-PW18DKE, CS-E15DTEW, CS-E18DTEW, CS-E21DTES, CS-ME10DTEG

Replacement: every 3 years

Installation Parts

Dust Exhaust and Ventilation Hose (The indoor unit includes a 2-meter hose)

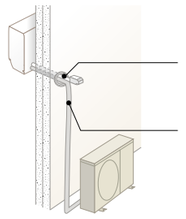


Applicable Models	
Extension Hose (3m)	**Replacement Hose (5m) with Tip Cover**
CZ-HV3P	**CZ-HV5P**
Can be added to the included 2-meter hose if necessary.	Use to replace the included 2-meter hose for concealed piping use. Use with the included 2-meter hose or the CZ-HV3P is not permitted. (Maximum hose length is 5 m.)
CS-XE9EKE, CS-XE12EKE	

Pipe Size Reducer

Applicable Models
CZ-MA1P
CS-E12DKEW,CS-E15DKEW, CS-E18DKEW,CS-E15DTEW, CS-E18DTEW,CS-E15DB4EW, CS-E18DB4EW,CS-E15DD3EW, CS-E18DD3EW

Hose Extension (Maximum Length)



Dust Exhaust and Ventilation Hose
Max. Length: 5m

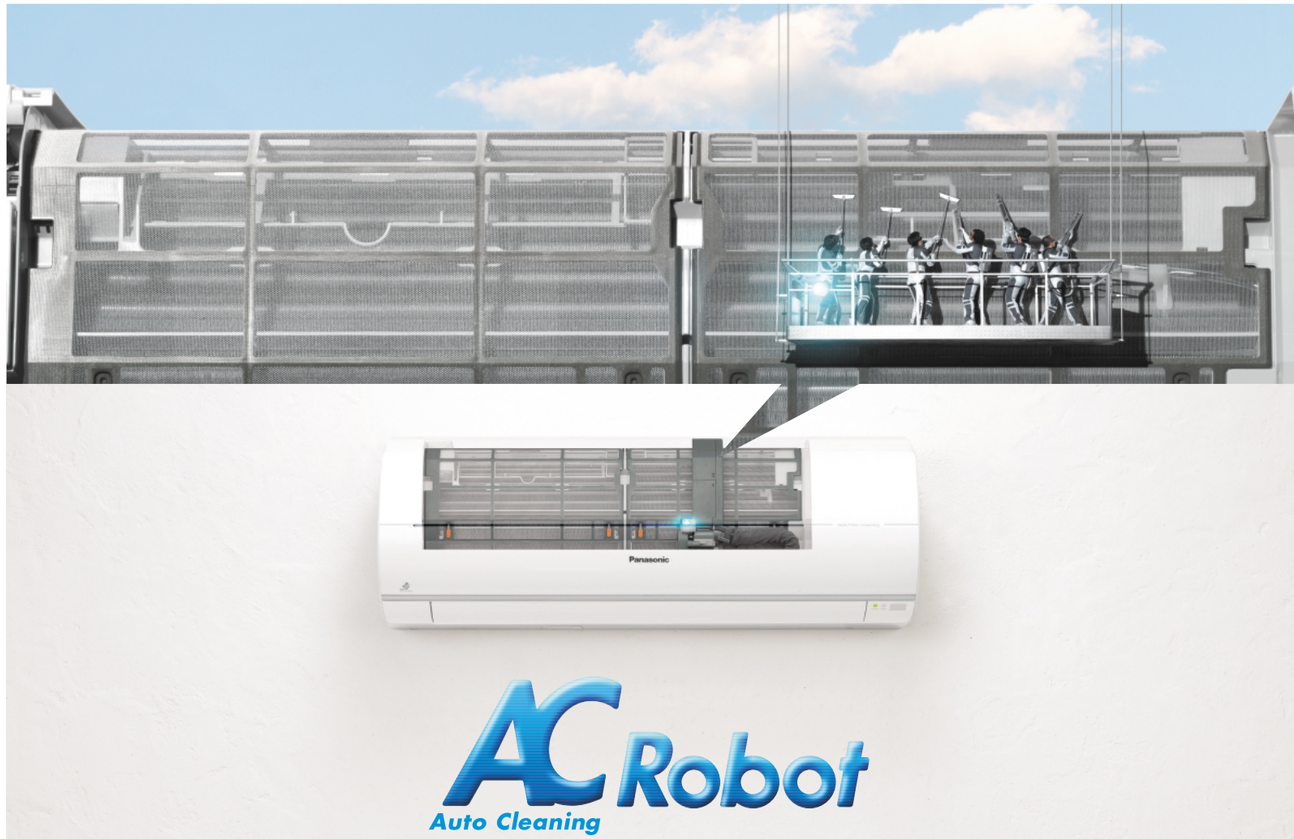
Refrigerant Pipe
Max. Length: 15m (CS-XE9EKE, CS-XE12EKE)

- Please read the Installation Manual carefully before installing the unit, and read the Operating Manual before using.
- Specifications are subject to change without notice for further improvement.
- The contents of this catalogue are effective as of November, 2005.
- Due to printing considerations, the actual colours may vary slightly from these shown.

Panasonic®

Panasonic
ideas for life

Air Conditioners



AC Robot
Auto Cleaning

AC Robot
Auto Cleaning

Meet the Auto Cleaning Robot.

It automatically cleans the filter to keep the performance just like new.

Introducing Panasonic's original filter-cleaning AC Robot (Auto Cleaning Robot).
This powerful, built-in cleaning mechanism automatically cleans
the filter to minimize filter clogging.
This maintains the air conditioner's original performance,
while eliminating the unpleasant job of cleaning the filter manually.

It automatically vacuums the dust from the filter
and exhausts it outdoors each time you use it.

Always **CLEAN**

Always **POWERFUL**

Always **EFFICIENT**

*For a filter cleaning and dust exhaust mechanism in a room air conditioner. (As of November, 2005)

Model Line-Up Choose the Best Inverter — Panasonic —

Energy-Efficiency Classification
Most efficient level : A
COOLING A 3.20 < EER

Refer to page 19 for information on Energy-Efficiency Classification.

Single Inverter Split INVERTER

Wall-Mounted

Indoor	Super Deluxe NEW	Super Deluxe Slim	Deluxe	Deluxe Wide	Standard
	 p.16	 p.16	 p.16	 p.17	 p.17
Capacity (kW) 2.5	CS-XE9EKE (CU-XE9EKE) A	CS-TE9DKE (CU-TE9DKE) A	CS-E9DKEW (CU-E9DKE) A		CS-PE9DKE (CU-PE9DKE) A
3.5	CS-XE12EKE (CU-XE12EKE) A	CS-TE12DKE (CU-TE12DKE) A	CS-E12DKEW (CU-E12DKE) A		CS-PE12DKE (CU-PE12DKE) A
4.5			CS-E15DKEW (CU-E15DKE) A		
			CS-E15EKEA (CU-E15EKEA) A NEW		
5.0				CS-E18DKEW (CU-E18DKE) A	
				CS-E18EKEA (CU-E18EKEA) A NEW	
6.0				CS-E21DKES (CU-E21DKE)	
				CS-E21EKEA (CU-E21EKEA) NEW	
6.5				CS-E24EKES (CU-E24EKE) NEW	
8.0				CS-E28EKE (CU-E28EKE) NEW	
Air Quality Features	AC Robot	ION	ION	ION	(option) AQ indic

Indoor	Floor or Ceiling	Cassette (4-way)	Hide-Away
	 p.18	 p.18	 p.18
Capacity (kW) 2.5			
3.5			
4.5	CS-E15DTEW (CU-E15DBE) A	CS-E15DB4EW (CU-E15DBE)	CS-E15DD3EW (CU-E15DBE) A
5.0	CS-E18DTEW (CU-E18DBE)	CS-E18DB4EW (CU-E18DBE)	CS-E18DD3EW (CU-E18DBE)
6.0	CS-E21DTES (CU-E21DBE)	CS-E21DB4ES (CU-E21DBE)	
6.5			
8.0			
Air Quality Features	(option)	(option)	

Multi Inverter Split INVERTER

Wall-Mounted

Indoor	Deluxe	Deluxe Wide
	 p.20~p.21	 p.20~p.21
Capacity (kW) 2.2	CS-ME7DKEG	
2.8	CS-E9DKEW	
3.2	CS-E12DKEW	
4.0	CS-E15DKEW	
5.0		CS-E18DKEW
Air Quality Features	ION	ION

Indoor	Floor or Ceiling	Cassette (1-way)	Cassette (4-way)	Hide-Away
	 p.20~p.21	 p.20~p.21	 p.20~p.21	 p.20~p.21
Capacity (kW) 2.2		CS-ME7EB1E		
2.8	CS-ME10DTEG	CS-ME10EB1E		CS-ME10DD3EG
3.2		CS-ME12EB1E		
4.0	CS-E15DTEW	CS-ME14EB1E	CS-E15DB4EW	CS-E15DD3EW
5.0	CS-E18DTEW		CS-E18DB4EW	CS-E18DD3EW
Air Quality Features	(option)		(option)	

Outdoor

2 rooms	3 rooms	4 rooms
 CU-2E15CBPG A (4.4-5.0kW)	 CU-3E18EBE A NEW CU-3E23CBPG A (5.0-10.0kW)	 CU-4E27CBPG A (5.0-13.6kW)
 CU-2E18CBPG A (4.4-6.4kW)		

See the table on page 21 for indoor unit and outdoor unit combinations.

Single Split

Wall-Mounted

Indoor	Deluxe	Deluxe Wide	NEW	Standard	Standard Wide	Floor or Ceiling
	 p.22	 p.22	 p.22	 p.23	 p.23	 p.23
Capacity (kW) 2.0	CS-W7DKE (CU-W7DKE) A					
	CS-V7DKE (CU-V7DKE) A					
2.5	CS-W9DKE (CU-W9DKE) A			CS-PW9DKE (CU-PW9DKE) A		
	CS-V9DKE (CU-V9DKE) A					
3.5	CS-W12DKE (CU-W12DKE) A			CS-PW12DKE (CU-PW12DKE) A		CS-W12CTP (CU-W12CTP5)
	CS-V12DKE (CU-V12DKE) A					CS-V12CTP (CU-V12CTP5)
5.0		CS-W18DKE (CU-W18DKE) A			CS-PW18DKE (CU-PW18DKE)	CS-W18CTP (CU-W18CTP5)
		CS-V18DKE (CU-V18DKE) A				CS-V18CTP (CU-V18CTP5)
6.5		CS-W24DKE (CU-W24DKE)				CS-W24CTP (CU-W24CTP5)
		CS-V24DKE (CU-V24DKE)				CS-V24CTP (CU-V24CTP5)
8.0			CS-V28EKE (CU-V28EKE) A			
Air Quality Features	ION	ION	ION	(option) AQ indic	(option)	

Heat Pump Models
Cooling Models

AC Robot Auto Cleaning Robot | Supersonic Air Purifying System | Super alleru-buster filter (Super alleru-buster + Catechin + Bio) | ION Ion Freshener | AQ indic Air Quality Indicator

Multi Split

Wall-Mounted

Indoor	Dual Split NEW	NEW	Triple Split NEW
	 p.24	 p.24	 p.24
Capacity (kW) 2.0		CS-MV7EKE/CS-MV12EKE (CU-2V19EKE)	
3.0	CS-MV9EKEx2 (CU-2V14EKE)		CS-MV9EKEx3 (CU-3V20EKE)
	CS-MV9EKEx2 (CU-2V18EKE)		
Outdoor	2 rooms	2 rooms	3 rooms
	 CU-2V14EKE (2.9-3.6kW) CU-2V18EKE (2.6-5.3kW)	 CU-2V19EKE (2.0-5.5kW)	 CU-3V20EKE A (2.6-6.4kW)
Air Quality Features	ION	ION	ION

Mark indicating product meets German safety standards.

Panasonic is participating in the EUROVENT Certification Programme. Products are as listed in the EUROVENT Directory of Certified Products.

The 3 rooms and 4 rooms Multi-Split Type are not in the scope of the EUROVENT certification.

AC Robot
Auto Cleaning

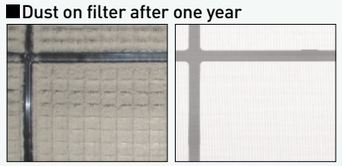
Cleans its own filter — all by itself!

The air conditioner stays in the same clean condition, with the same high-performance, as when it was first purchased.

Always CLEAN

It prevents dust from accumulating and keeps the filter like new. It prevents the breeding of mould and bacteria that cause unpleasant odours. Fresh and comfortable!

■Dust on filter after one year

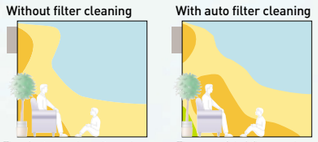


Without filter cleaning　　With auto filter cleaning

*Actual dust accumulation will vary depending on usage and environmental conditions.

Always POWERFUL

Because it maintains the same performance as when it was new, the level of power remains constant even after long periods of use. You enjoy comfortable air conditioning that reaches every corner of the room.



The air stream doesn't reach the corners of the room.

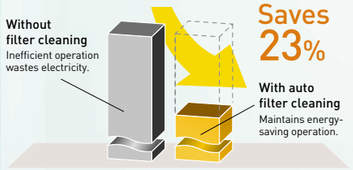
The powerful airflow reaches throughout the room.

<Test conditions> •Starting temperature and humidity: 7°C, 6°C •Set temperature: 23°C •Fan speed/airflow direction: set to auto mode •After air conditioning stabilizes •Area of simulated-house testing facility: 16.5m²

Always EFFICIENT

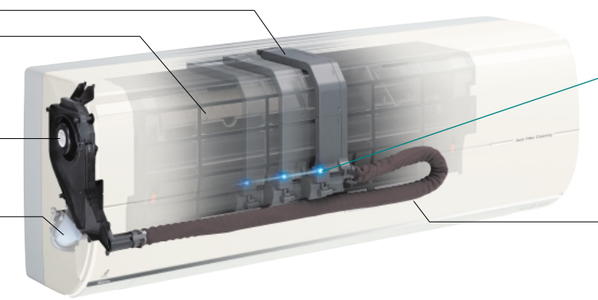
It prevents the reduced efficiency that is caused by filter clogging, so its top-class energy-saving performance is maintained longer. It also saves on the electric bill by suppressing the wasteful use of electricity.

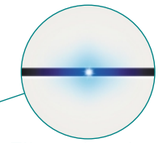
■Energy-saving comparison (After 3 years' use)



For heating

Automatically Traps, Vacuums and Exhausts Dust — For Clean Operation without the Cleaning Hassle





Filter cleaning indication light

The blue LED lights to show the operating status.

Applied for more than 90 patents

Panasonic has applied for more than 90 patents relate to auto filter cleaning technology. (As of November, 2005)

Cleaning Mechanism

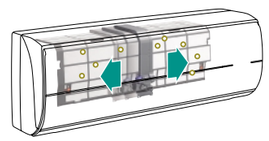
1 Traps

The vacuum nozzle moves to trap the dust

The nozzle automatically starts cleaning the filter after each use. The cumulative operating time is used to determine how much of the filter needs to be cleaned. The entire filter is cleaned when the operating time reaches 36 hours.

*The timer can also be set to start cleaning at a certain time.

The filter surface is divided into 12 blocks to ensure thorough cleaning.

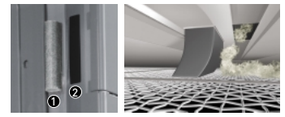


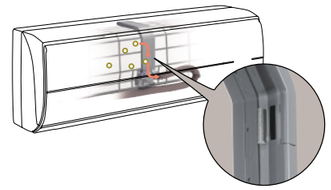
2 Vacuums

The vacuum duct vacuums the dust

The pad on the nozzle rubs the dust from the filter mesh, and the trapped dust is then vacuumed and exhausted through the vacuum duct.

❶**Pad:** The brush rubs dust from the filter. A durable, wear-resistant silicon foam material is used.
❷**Suction port:** The rubbed off dust is vacuumed.

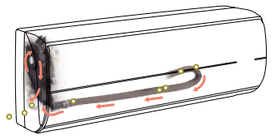




3 Exhausts

The exhaust duct discards the dust outdoors automatically

The dust goes through the vacuum duct to be exhausted. This is done automatically, so you don't have to do a thing. And only a small amount of dust is exhausted each time.

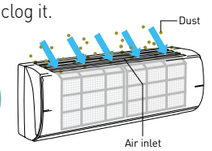


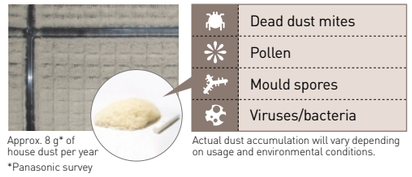
Why does the filter have to be cleaned?

The filter works to trap airborne dust. When the filter is not cleaned regularly, dust can accumulate and clog it.

■Problems Caused by Filter Clogging

Lower Air Volume　Lower Efficiency　More Noise　Unpleasant Odours





Approx. 8 g* of house dust per year

*Panasonic survey

Actual dust accumulation will vary depending on usage and environmental conditions.

A Clean Filter Greatly Boosts Performance, Giving You Greater Comfort and Saving Energy.

AC Robot
Auto Cleaning

Comparison of Mould Growth

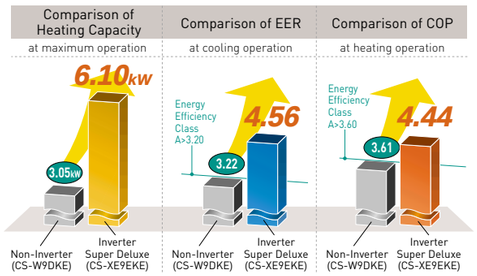
A dirty filter is a natural breeding ground for mould and house mites. Their growth can be greatly reduced by keeping the filter clean.

Without filter cleaning | With auto filter cleaning

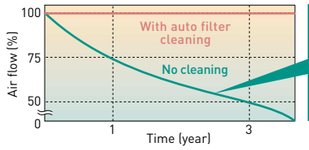
Observation of mould on filters (used for 3 months) after cultivation on agar media for 3 days.
Testing organization: Japan Food Research Laboratories Test No.: 204090946-001

Class A energy saving achieved by inverter technology

Panasonic's high-efficiency technologies clear stringent energy-saving standards, and the AC Robot maintains this high level of performance.



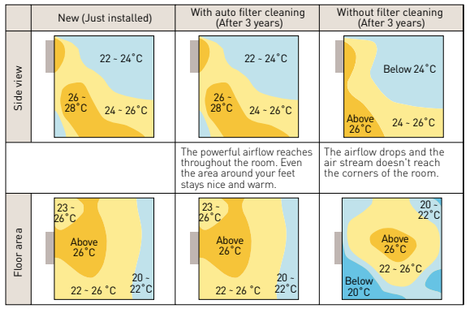
Airflow Comparison



No filter maintenance will cause air volume to drop
25% in 1 year
50% in 3 years

Temperature Distribution Comparison

With the AC Robot, heating performance is maintained even after long use. On the other hand, the power is reduced without filter cleaning.

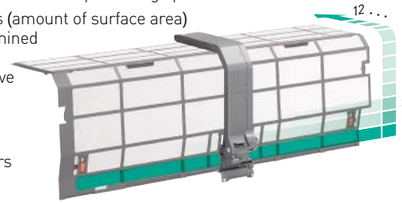


<Test conditions>
•Starting temperature and humidity: 7°C, 6°C •Set temperature: 23°C •Fan speed/airflow direction: set to auto mode •After air conditioning stabilizes •Area of simulated-house testing facility: 16.5m²

How It Works

A detailed cleaning programme built into the AC Robot ensures that the entire filter surface stays clean with a highly efficient cleaning process.

- The filter surface is divided into 12 blocks, and the vacuum nozzle cleans each block with a round-trip cleaning operation.
- The number of blocks (amount of surface area) to be cleaned is determined according to the air conditioner's cumulative operating time.
- Cleaning of the entire surface is completed after 36 operating hours are accumulated.



In the High fan speed in the normal setting mode

Cumulative operation hours (hour)	No. of cleaning operations
Less than 2	No cleaning
2 - <6	2 round-trip
6 - <9	3 round-trip
9 - <12	4 round-trip
>12	5 round-trip
Remarks	Max. of 8 round-trip, then 1 round-trip every 3 hours

The cumulative operating time is stored in an E2-ROM microcomputer memory. In the case of a power interruption, the data is retained. (However, the timer setting is cancelled.)

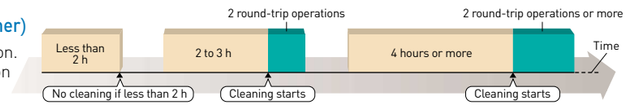
Auto Filter Cleaning Operation Patterns

Two operations are available. In addition to the normal setting, the timer setting can also be used.

Air Conditioner Operating
Auto Filter Cleaning
Stop

In the normal setting mode (non-timer)

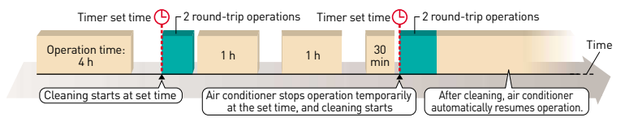
Cleaning automatically starts after each operation. The number of round-trip is determined based on the cumulative operating time.



In the timer setting mode

Cleaning starts at the set time everyday.

* If the air conditioner has not been used for more than 30 minutes since it was cleaned, the cleaning operation will not be done at the preset time.



Air cleaning features

SUPER alleru-buster filter — Long-life type (10 years)

The SUPER alleru-buster filter combines three effects in one: anti-allergen, anti-virus, and anti-bacteria protection, to keep the room air clean and healthful. Plus, the effect is maintained for 10 years.

SUPER alleru-buster

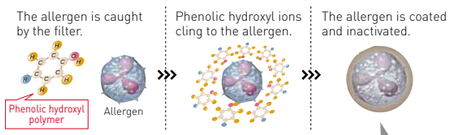
Anti-allergen protection

SUPER alleru-buster

Inactivates more than 99% of all filter-captured allergens!

Target substances
Allergens:
Pollen, dead dust mites and their waste products, cat dander, mould

How allergens are inactivated

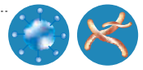


Anti-bacteria/Anti-mould protection

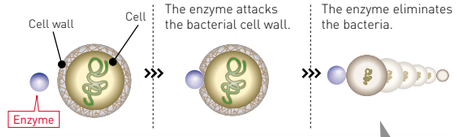
Bio (Bio-Elimination)

Enzymatic action eliminates more than 99% of all filter-captured bacteria!

Target substances
Bacteria: Staphylococcus aureus
Mould: Black mould (aspergillus), green fungus



How bacteria are bio-eliminated



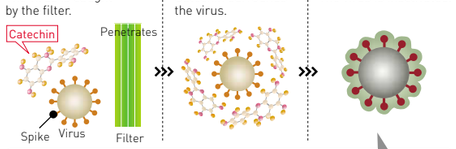
Anti-virus protection

Catechin

Inactivates more than 99% of all filter-captured viruses!

Target substances
Viruses: Influenza, Coxsackie virus, etc.

How viruses are inactivated



What's "Allergen"?

When allergens enter the body, they cause allergy symptoms due to an antigen-antibody reaction that occurs as the body tries to combat them.

Versatile Features for Super Deluxe Models

Quiet Mode	Simply press a button to reduce the indoor unit operating sound by about 3 dB. This function is especially convenient for operation near a sleeping baby.
Powerful Mode	Pressing the Powerful button cools or heats the room quickly. It provides fast comfort, with full power and a strong airflow. This is perfect for use immediately after coming home, or when unexpected guests arrive.
Ventilation Control	You can ventilate the room by simply pressing the remote control button. Dirty air is carried outside to keep the room fresh and clean.

Operation Indicator

The indicators become visible when the grille is opened.

super slim

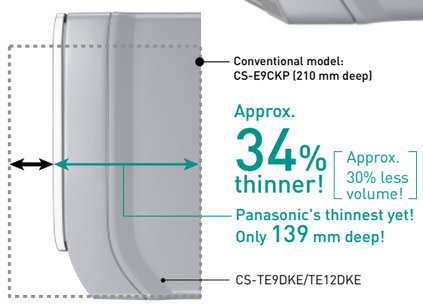
The super-slim design complements modern interiors

The compact, super-slim body is accented by the silver-grey lustre of its chrome plated flat panel. This modern, yet simple design adds to the beauty of any room.

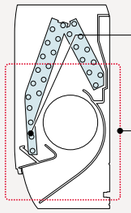
Energy-saving efficiency in a compact design

Slim & compact size

We used a number of unique technologies to downsize each and every component. Only 139 mm deep, these high-efficiency models are about 30% slimmer than previous models, to save space and enhance room interiors.



■ Slimming, Energy-Saving Technologies



Indoor unit

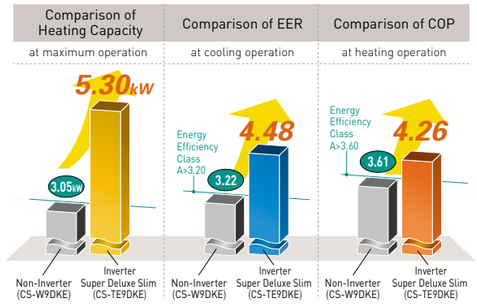
- **New-shape heat exchanger**
  The optimized copper tube arrangement and the new triple-bend design combine to slim down body dimensions and raise energy efficiency.
- **High-performance wind circuit**
  The new casing provides a smoother air flow.

Outdoor unit

- **DC Inverter (Hyper Wave Inverter)**
- **e-scroll compressor**

Powerful heating and top-class energy efficiency

Despite their compact size, our Super Deluxe Slim models offer both high capacity and a class-leading energy-saving performance that far exceeds requirements for Class A, the highest Energy-Efficiency Classification. These models prove that it's possible to achieve both compact size and energy-saving performance.



air cleaning

SUPER alleru-buster filter

The SUPER alleru-buster filter combines three effects in one—anti-allergen, anti-virus, anti-bacteria protection —to keep room air clean and healthful.

Anti-allergen protection	Inactivates more than **99%** of all filter-captured allergens
Anti-virus protection	Inactivates more than **99%** of all filter-captured viruses
Anti-bacteria/Anti-mould protection	Enzymatic action eliminates more than **99%** of all filter-captured bacteria

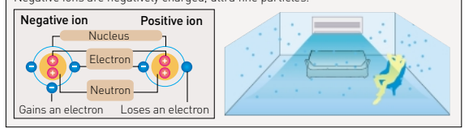
Here, inactivate means to suppress normal activity. This inactivation of mite allergens has been verified by the University of Edinburgh in the UK.

air-creating

Ion Freshener

Negative ions are generated to freshen the room. It's like being next to a waterfall or in a forest.

■ **What are negative ions?**
Negative ions are negatively charged, ultra fine particles.



supersonic

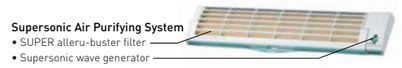
Powerfully collects allergens from the room's air

A Supersonic Air Purifying System accelerates the air cleaning effect of the SUPER alleru-buster filter. It keeps room air cleaner, to protect the family's health.

Cleaner air with supersonic waves and SUPER alleru-buster

air cleaning

Supersonic Air Purifying System with SUPER alleru-buster



SUPER SONIC Faster dust collection
Supersonic Air Purifying System

\+

SUPER alleru-buster Inactivates harmful elements
SUPER alleru-buster filter

The Supersonic Air Purifying System incorporated in the indoor unit generates supersonic waves.
The system works in combination with the filter to collects dust and dirt in the air for faster, more efficient air purification.

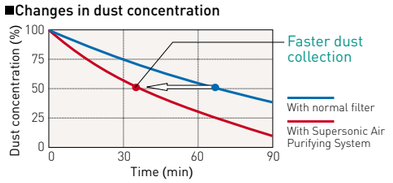
The SUPER alleru-buster filter combines three effects in one—anti-allergen, anti-virus, anti-bacteria protection —to keep room air clean and healthful.

Anti-allergen protection	Inactivates more than **99%** of all filter-captured allergens

Here, inactivate means to suppress normal activity. This inactivation of mite allergens has been verified by the University of Edinburgh in the UK.

Anti-virus protection	Inactivates more than **99%** of all filter-captured viruses
Anti-bacteria/Anti-mould protection	Enzymatic action eliminates more than **99%** of all filter-captured bacteria

■**Changes in dust concentration**



ION air-creating

Ion Freshener

Around 20,000 negative ions/cc are generated to freshen the room. It's like being next to a waterfall or in a forest.

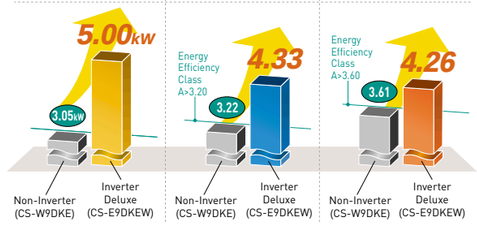
Super quiet

The indoor unit operates at a whisper-quiet 26 dB. You can also press the Quiet Mode button to lower the operating noise 3 dB. We've reduced the noise of the outdoor unit, too. You can run the air conditioner at night and enjoy a deeper, more comfortable sleep, and without bothering your neighbours.

*1 CS-E9DKEW: In cooling mode with low fan speed
*2 CU-E9DKE: In cooling mode

Powerful heating & top-class energy efficiency

Comparison of Heating Capacity	Comparison of EER	Comparison of COP
at maximum operation	at cooling operation	at heating operation



Round form

The white body and sleek design have a pleasant, hygienic appearance.

Advanced Inverter Performance – The Difference in Power and Comfort

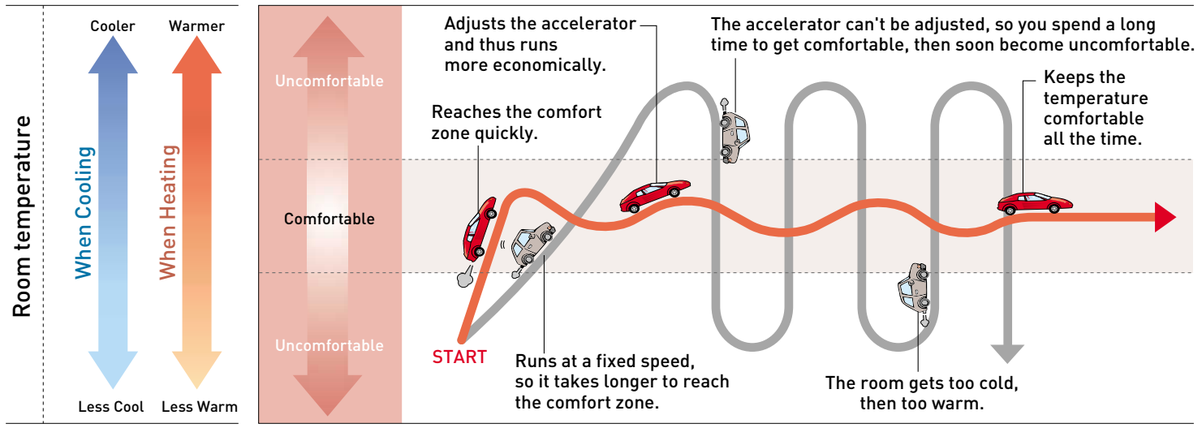
Panasonic is harnessing its industry-leading technologies to make life more comfortable.
With the slogan "Technologies that deliver new levels of comfort,"
the company is working to develop new, high-performance inverter air conditioners.
Models with PFC (power-factor corrector) circuitry reduce electrical loss from the power source,
thus increasing maximum power input.
This naturally increases the maximum air conditioner output,
so you enjoy more comfort.

WHAT'S AN INVERTER?

An inverter is a type of power conversion circuit that electronically regulates the voltage, current, and frequency of a device. In an inverter air conditioner, this circuit controls the revolutions of the compressor — and hence the air conditioner's output. Raising the frequency increases the output, lowering the frequency reduces it. In this way, inverter air conditioners provide much finer temperature control than non-inverter models.

The advantages of an inverter air conditioner

■Comparing inverter and non-inverter air conditioners to cars...

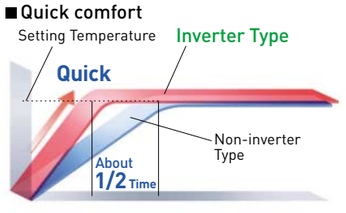


Non-inverter air conditioner Inverter air conditioner

Quick comfort

As soon as the an inverter air conditioner is switched on, it provides the exact amount of power needed to rapidly cool or heat of the room. This enables it to reach the set temperature in about half the time required by non-inverter models. So you're comfortable soon after you arrive home on a hot summer day, or on a cold winter morning.

■Quick comfort

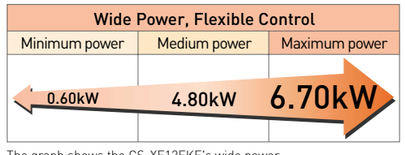


* The graph is a representation of temperature changes during heating.

Energy-saving

For optimum use of limited energy resources, an inverter air conditioner features an inverter circuit providing extremely efficient operation. Improved heat exchanger and compressor performance, precise microcomputer control and other innovations further assure dramatically boosted efficiency. So even though you get speedy, flexible operation, you use less electricity. What's more, low energy consumption means operation that's more environment-friendly than ever.

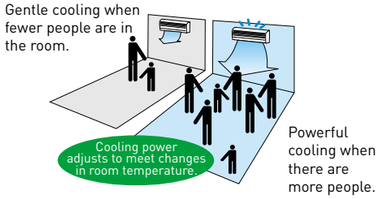
Flexible power control & Energy saving



The graph shows the CS-XE12EKE's wide power output range during heating.

Flexible power control

You're always comfortable with an inverter air conditioner. After quickly reaching the set temperature, it finely adjusts output power to maintain a constant temperature. So there are no uncomfortable temperature swings, while electricity is used more efficiently. Broad output power capability also assures continued comfort even if the number of people in a room changes. And at maximum output, an inverter air conditioner can deliver warm comfort even in the coldest winters.



Wall-Mounted

Super Deluxe

Model No	CS-XE9EKE	CS-XE12EKE
Capacity(kW)	2.60(0.60~3.00)/3.60(0.60~6.10)	3.50 (0.60~4.00)/4.80(0.60~6.70)
EER/COP(W/W)	4.56 A /4.44 A	3.98 A /3.93 A

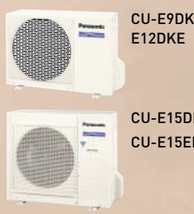
AC Robot Auto Cleaning | Super allergi-buster | 26dB (CS-XE9EKE) | R410A

Super Deluxe Slim

Model No	CS-TE9DKE	CS-TE12DKE
Capacity(kW)	2.60(0.60~3.00)/3.60(0.60~5.30)	3.50(0.60~4.00)/4.80(0.60~6.50)
EER/COP(W/W)	4.48 A /4.26 A	3.89 A /3.64 A

Super allergi-buster | Ion | 26dB (CS-TE9DKE) | R410A

Deluxe



-15°C Low Ambient Cooling

Model No	CS-E9DKEW	CS-E12DKEW	CS-E15DKEW	CS-E15EKEA NEW -15°C
Capacity(kW)	2.60(0.80~3.00)/3.60(0.80~5.00)	3.50(0.80~4.00)/4.80(0.80~6.50)	4.40(0.90~5.00)/5.50(0.90~7.10)	4.40(0.90~5.00)/5.50(0.90~7.10)
EER/COP(W/W)	4.33 A /4.26 A	3.63 A /3.81 A	3.21 A /3.50	3.21 A /3.50

Super Sonic | Super allergi-buster | Ion | 26dB (CS-E9DKEW) | R410A

Feature Comparison >> p.38~p.39 Specifications >> p.25

26dB 26dB Super Quiet in cooling mode with low fan speed

Deluxe Wide

Model No	CS-E18DKEW	CS-E21DKES
Capacity(kW)	5.30(0.90~6.00)/6.60(0.90~8.00)	6.30(0.90~7.10)/7.20(0.90~8.50)
EER/COP(W/W)	3.21 A /3.69 A	2.85/3.43

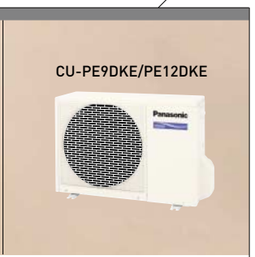
Model No	CS-E24EKES NEW	CS-E28EKE NEW
Capacity(kW)	6.80(0.90~8.10)/8.60(0.90~9.90)	7.65(0.90~8.60)/9.60(0.90~11.00)
EER/COP(W/W)	3.21 A /3.23	3.01/2.91

-15°C Low Ambient Cooling

Model No	CS-E18EKEA NEW -15°C	CS-E21EKEA NEW -15°C
Capacity(kW)	5.30(0.90~6.00)/6.60(0.90~8.00)	6.30(0.90~7.10)/7.20(0.90~8.50)
EER/COP(W/W)	3.21 A /3.69 A	2.85/3.43

Super Sonic | Super allergi-buster | Ion | R410A

Standard



Model No	CS-PE9DKE	CS-PE12DKE
Capacity(kW)	2.50(0.90~3.00)/3.30(0.90~4.00)	3.15(0.90~3.80)/4.10(0.90~5.00)
EER/COP(W/W)	3.42 A /4.02 A	3.46 A/3.69 A

Super allergi-buster (option) | Air Quality Indicator | R410A

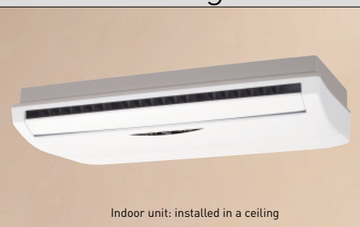
-15°C **Low Ambient Cooling**

Room cooling is possible even when the outside temperature drops as low as –15°C. This unit is designed to withstand conditions where cooling is required even during cold winter months, such as in computer rooms where the equipment heat must be controlled.

Feature Comparison >> p.38~p.39 Specifications >> p.25~p.26

26dB 26dB Super Quiet in cooling mode with low fan speed

Floor or Ceiling



Indoor unit: installed in a ceiling

Indoor unit: installed on a floor

With Bilingual Sticker

CU-E15DBE/E18DBE/ E21DBE

Model No	CS-E15DTEW	CS-E18DTEW	CS-E21DTES
Capacity(kW)	4.15(0.90~4.55)/5.17(0.90~6.30)	5.00(0.90~5.40)/6.10(0.90~7.60)	5.80(0.90~6.60)/6.80(0.90~8.10)
EER/COP(W/W)	3.22 A /3.34	3.01/3.35	3.01/3.42

(option)

Cassette (4-way)

Panel CZ-BT20E

With Bilingual Sticker

CU-E15DBE/E18DBE/ E21DBE

Model No	CS-E15DB4EW	CS-E18DB4EW	CS-E21DB4ES
Capacity(kW)	4.10(0.90~4.80)/5.10(0.90~6.20)	4.80(0.90~5.70)/5.60(0.90~7.10)	5.90(0.90~6.30)/7.00(0.90~8.00)
EER/COP(W/W)	3.15/2.88	3.14/2.95	2.88/2.86

(option) CS-E15DB4EW

Hide-Away

With Bilingual Sticker

CU-E15DBE/E18DBE

Model No	CS-E15DD3EW	CS-E18DD3EW
Capacity(kW)	4.10(0.90~4.70)/4.80(0.90~5.50)	5.10(0.90~5.70)/6.10(0.90~7.10)
EER/COP(W/W)	3.31 A /2.64	3.15/3.30

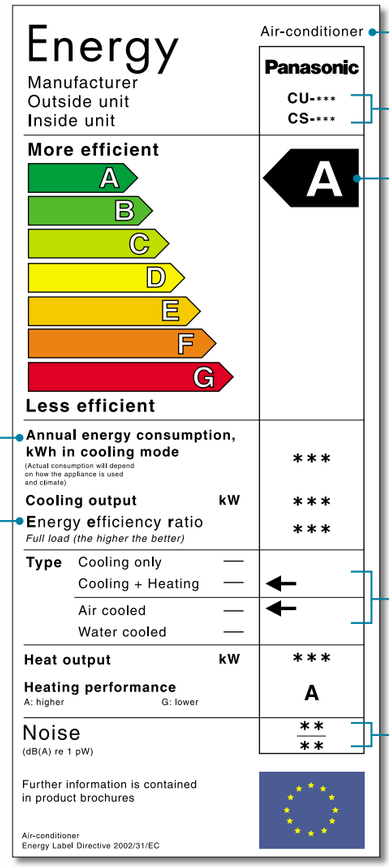
Feature Comparison >> p.38~p.39 Specifications >> p.26

26dB 26dB Super Quiet in cooling mode with low fan speed

Energy-Efficiency Classifications

According to a new EC Directive, the indication of the Energy Efficiency classification on household air conditioners became compulsory. This aims to provide consumers with clear and objective information regarding energy-saving, and to encourage them to select products that are environmentally friendly.
An Energy Label, like that shown in the sample below, will be provided in shop displays. In the label, the equipment is rated, with "A" being the most efficient. You may notice these labels and ratings appearing soon in shops that sell air conditioners. For easy understanding, the following information will be indicated for each model.

Energy Label ▶



The product — Air-conditioner

The model number — CU-**** / CS-****

The class — The class of energy efficiency in seven steps, from A to G.

Annual energy consumption — The annual energy consumption is calculated by multiplying the total power input by an average of 500 hours per year in cooling mode at full load.

The Energy Efficiency Ratio — The higher the EER, the greater the energy efficiency.

The type of air conditioner — Cooling only / Cooling + Heating / Air cooled / Water cooled

The noise — Outdoor / Indoor

Classifications

There are seven classifications of energy efficiency, from A to G.
The most efficient level is "A" and the least efficient level is "G."

Energy efficiency class of the unit in COOLING mode

A	3.20 < EER
B	3.20 ≥ EER > 3.00
C	3.00 ≥ EER > 2.80
D	2.80 ≥ EER > 2.60
E	2.60 ≥ EER > 2.40
F	2.40 ≥ EER > 2.20
G	2.20 ≥ EER

Energy efficiency class of the unit in HEATING mode

A	3.60 < COP
B	3.60 ≥ COP > 3.40
C	3.40 ≥ COP > 3.20
D	3.20 ≥ COP > 2.80
E	2.80 ≥ COP > 2.60
F	2.60 ≥ COP > 2.40
G	2.40 ≥ COP

These classifications are for split and multi-split air-cooled air conditioners.

Indoor Unit

Wall-Mounted

Deluxe

With Bilingual Sticker

Model No	CS-ME7DKEG	CS-E9DKEW	CS-E12DKEW★	CS-E15DKEW★
Capacity	2.2kW class	2.8kW class	3.2kW class	4.0kW class

SUPER-SONIC · SUPER alleru-buster · ION · R410A

Deluxe-Wide

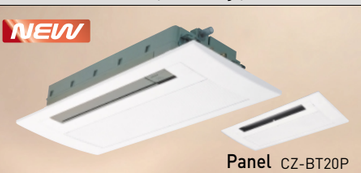
With Bilingual Sticker

Model No	CS-E18DKEW★
Capacity	5.0kW class

SUPER-SONIC · SUPER alleru-buster · ION · R410A

Cassette (1-way)

NEW



Panel CZ-BT20P

With Bilingual Sticker

Model No	CS-ME7EB1E	CS-ME10EB1E	CS-ME12EB1E	CS-ME14EB1E
Capacity	2.2kW class	2.8kW class	3.2kW class	4.0kW class

R410A

Cassette (4-way)

Panel CZ-BT20E

With Bilingual Sticker

Model No	CS-E15DB4EW★	CS-E18DB4EW★
Capacity	4.0kW class	5.0kW class

SUPER alleru-buster (option) · 26dB CS-E15DB4EW · R410A

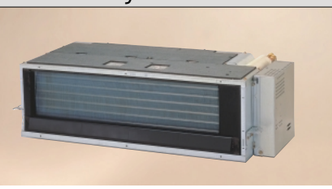
Floor or Ceiling

With Bilingual Sticker

Model No	CS-ME10DTEG	CS-E15DTEW★	CS-E18DTEW★
Capacity	2.8kW class	4.0kW class	5.0kW class

SUPER alleru-buster (option) · R410A

Hide-Away



With Bilingual Sticker

Model No	CS-ME10DD3EG	CS-E15DD3EW★	CS-E18DD3EW★
Capacity	2.8kW class	4.0kW class	5.0kW class

R410A

Outdoor Unit

2 rooms

CU-2E15CBPG

CU-2E18CBPG

3 rooms

CU-3E18EBE NEW
CU-3E23CBPG

4 rooms

CU-4E27CBPG

Additional Parts

Pipe Size Reducer

CZ-MA1P

For the indoor units marked with a star (★), the pipe size reducer must be used.

Feature Comparison ›› p.38~p.39 Specifications ›› p.29~p.33

26dB 26dB Super Quiet in cooling mode with low fan speed

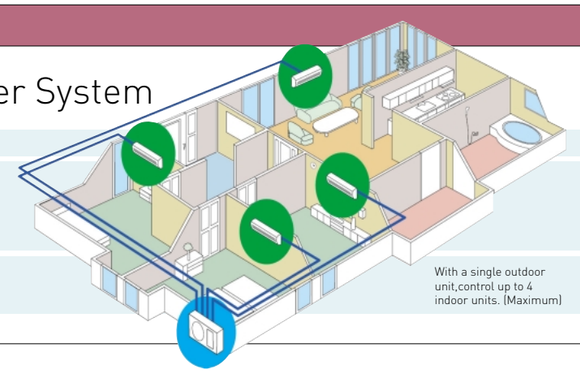
Advantages of the Multi Inverter System

Indoor unit

A variety of indoor units

Air-quality features (Wall-mounted type only)
- Supersonic Air Purifying System
- SUPER alleru-buster filter
- Ion Freshener

Adjust the operation settings for each indoor unit independently



With a single outdoor unit,control up to 4 indoor units. (Maximum)

Combination Patterns

Models		Indoor Units: Possible Combination Patterns (Must be within capacity range.)	Capacity Range	Refrigerant Pipe Diameter: Indoor Unit	Liquid Side	Gas Side	Pipe Extension: Maximum Pipe Length (1 room)	Maximum Pipe Length (Total)	Maximum Chargeless Length	Additional Gas	Maximum Height	Indoor Unit Combinations: Type (Capacity [kW class])	Wall-Mounted	Cassette (1-way)	Cassette (4-way)	Floor or Ceiling	Hide-Away
2 rooms	CU-2E15CBPG	PORT A 2.2 2.8 * Either unit PORT B 2.2 2.8 * Either unit	4.4 – 5.0 kW	Room A	ø 6.35	ø 9.52	20 m	30 m	20 m	20 g/m	10 m	2.2	●				
				Room B	ø 6.35	ø 9.52						2.8	●			●	●
	CU-2E18CBPG	PORT A 2.2 2.8 3.2 * Either unit PORT B 2.2 2.8 3.2 * Either unit	4.4 – 6.4 kW	Room A	ø 6.35	ø 9.52	20 m	30 m	20 m	20 g/m	10 m	2.2	●				
				Room B	ø 6.35	ø 9.52						2.8	●			●	●
												3.2	●				
3 rooms	CU-3E18EBE	PORT A 2.2 2.8 3.2 4.0 5.0 * Either unit PORT B 2.2 2.8 3.2 4.0 5.0 * Either unit PORT C 2.2 2.8 3.2 4.0 5.0 * Either unit	5.0 – 8.4 kW	Room A	ø 6.35	ø 9.52	25 m	50 m	30 m	20 g/m	15 m	2.2	●	●			
				Room B	ø 6.35	ø 9.52						2.8	●	●		●	●
				Room C	ø 6.35	ø 9.52						3.2	●	●			
												4.0	●	●	●	●	●
												5.0	●		●	●	●
	CU-3E23CBPG	PORT A 2.2 2.8 3.2 4.0 5.0 * Either unit PORT B 2.2 2.8 3.2 4.0 5.0 * Either unit PORT C 2.2 2.8 3.2 4.0 5.0 * Either unit	5.0 – 10.0 kW	Room A	ø 6.35	ø 9.52	25 m	50 m	30 m	20 g/m	15 m	2.2	●	●			
				Room B	ø 6.35	ø 9.52						2.8	●	●		●	●
				Room C	ø 6.35	ø 9.52						3.2	●	●			
												4.0	●	●	●	●	●
												5.0	●		●	●	●
4 rooms	CU-4E27CBPG	PORT A 2.2 2.8 3.2 4.0 5.0 * Either unit PORT B 2.2 2.8 3.2 4.0 5.0 * Either unit PORT C 2.2 2.8 3.2 4.0 5.0 * Either unit PORT D 2.2 2.8 3.2 4.0 5.0 * Either unit	5.0 – 13.6 kW	Room A	ø 6.35	ø 9.52	25 m	70 m	40 m	20 g/m	15 m	2.2	●	●			
				Room B	ø 6.35	ø 9.52						2.8	●	●		●	●
				Room C	ø 6.35	ø 9.52						3.2	●	●			
												4.0	●	●	●	●	●
				Room D	ø 6.35	ø 9.52						5.0	●		●	●	●

Dimensions (HxWxD): 540 x 780(+70) x 289 mm
Weight: 38 kg
* At least two indoor units must be connected.
Make sure to keep combi-nations within this range.

Dimensions (HxWxD): 735 x 826(+73) x 300 mm
Weight: 49 kg

Dimensions (HxWxD): 735 x 826(+110) x 300 mm
Weight: 57 kg

Dimensions (HxWxD): 908 x 900 x 320 mm
Weight: 73 kg

Wall-Mounted

Deluxe

With Bilingual Sticker

CU-W7DKE/ W9DKE/V7DKE

CU-W12DKE/ V9DKE/V12DKE

Heat Pump | Cooling

Model No	CS-W7DKE	CS-W9DKE	CS-W12DKE	CS-V7DKE	CS-V9DKE	CS-V12DKE
Capacity(kW)	2.30/2.45	2.75/3.05	3.60/3.90	2.40	3.00	3.68
EER/COP(W/W)	3.24 A /3.63 A	3.22 A /3.61 A	3.21 A /3.61 A	3.24 A	3.21 A	3.23 A

SUPER SONIC | SUPER allergy-buster | ION | 26dB (CS-W7DKE/W9DKE/V7DKE/V9DKE) | R410A

Deluxe Wide

With Bilingual Sticker

CU-W18DKE/W24DKE/ V18DKE/V24DKE/

Heat Pump | Cooling

Model No	CS-W18DKE	CS-W24DKE	CS-V18DKE	CS-V24DKE
Capacity(kW)	5.30/5.42	7.03/7.50	5.30	7.03
EER/COP(W/W)	3.21 A /3.27	2.53/2.87	3.25 A	2.70

SUPER SONIC | SUPER allergy-buster | ION | R410A

Deluxe Wide

With Bilingual Sticker

CU-V28EKE

Cooling

Model No	CS-V28EKE NEW
Capacity(kW)	7.91
EER(W/W)	3.22 A

SUPER SONIC | SUPER allergy-buster | ION | R410A

Feature Comparison >> p.38~p.39 Specifications >> p.27~p.28

26dB 26dB Super Quiet in cooling mode with low fan speed

Standard

Air Quality Indicator

With Bilingual Sticker

CU-PW9DKE/PW12DKE/

Heat Pump

Model No	CS-PW9DKE	CS-PW12DKE
Capacity(kW)	2.65/2.85	3.40/3.80
EER/COP(W/W)	3.21 A /3.80 A	3.21 A /3.80 A

SUPER SONIC (option) | Air Quality Indicator | R410A

Standard Wide

With Bilingual Sticker

CU-PW18DKE

Heat Pump

Model No	CS-PW18DKE
Capacity(kW)	5.10/5.30
EER/COP(W/W)	2.91/3.35

SUPER SONIC (option) | R410A

Floor or Ceiling

Indoor unit: installed in a ceiling

Indoor unit: installed on a floor

With Bilingual Sticker

CU-W12CTP5/ V12CTP5

CU-W18CTP5/ W24CTP5/ V18CTP5/ V24CTP5

Heat Pump | Cooling

Model No	CS-W12CTP	CS-W18CTP	CS-W24CTP	CS-V12CTP	CS-V18CTP	CS-V24CTP
Capacity(kW)	3.60/3.95	5.20/5.80	6.90/7.65	3.52	5.30	7.03
EER/COP(W/W)	3.13/3.35	3.07/3.33	2.51/2.65	3.20	3.17	2.58

R410A

Feature Comparison >> p.38~p.39 Specifications >> p.27~p.28

Multi Split

Wall-Mounted

Dual Split

2 rooms

NEW

With Bilingual Sticker

CU-2V14EKE

CU-2V18EKE

Cooling

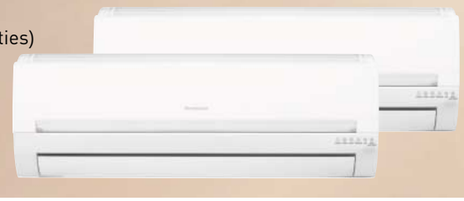
Model No	CS-MV9EKEx2 (CU-2V14EKE) 1-Compressor Dual Split Type		CS-MV9EKEx2 (CU-2V18EKE) 2-Compressor Dual Split Type	
Capacity(kW)	2.94 One-Unit Operation	3.63 Two-Unit Operation	2.65 One-Unit Operation	5.30 Two-Unit Operation
EER(W/W)	2.49 One-Unit Operation	2.93 Two-Unit Operation	3.05 One-Unit Operation	3.05 Two-Unit Operation

SUPER SONIC | SUPER allergi-buster | ION | 26dB | R410A

Dual Split

2 rooms
(Different Capacities)

NEW



With Bilingual Sticker

CU-2V19EKE

Cooling

Model No	CS-MV7EKE / CS-MV12EKE (CU-2V19EKE) 2-Compressor Dual Split Type					
Capacity(kW)	2.06	One-Unit Operation (CS-MV7EKE)	3.48	One-Unit Operation (CS-MV12EKE)	5.54	Two-Unit Operation (CS-MV7EKE+CS-MV12EKE)
EER(W/W)	2.86	One-Unit Operation (CS-MV7EKE)	2.83	One-Unit Operation (CS-MV12EKE)	3.01	Two-Unit Operation (CS-MV7EKE+CS-MV12EKE)

SUPER SONIC | SUPER allergi-buster | ION | 26dB | R410A

CS-MV7EKE

Triple Split

3 rooms

NEW

With Bilingual Sticker

CU-3V20EKE

Cooling

Model No	CS-MV9EKEx3 (CU-3V20EKE) 2-Compressor Triple Split Type							
Capacity(kW)	2.68	One-Unit Operation (B)	2.89	One-Unit Operation (A1 or A2)	5.57	Two-Unit Operation (B + A1 or A2)	3.74	Two-Unit Operation (A1 + A2)	6.42	Three-Unit Operation (B + A1 + A2)
EER(W/W)	2.95	One-Unit Operation (B)	2.58	One-Unit Operation (A1 or A2)	2.87	Two-Unit Operation (B + A1 or A2)	3.12	Two-Unit Operation (A1 + A2)	3.23	Three-Unit Operation (B + A1 + A2) A

SUPER SONIC | SUPER allergi-buster | ION | 26dB | R410A

Feature Comparison >> p.38~p.39 Specifications >> p.34~p.35

26dB 26dB Super Quiet in cooling mode with low fan speed

Specifications

Single Inverter Split R410A

Cooling
Heating

Model (50Hz)		CS-XE9EKE (CU-XE9EKE)	CS-XE12EKE (CU-XE12EKE)	CS-TE9DKE (CU-TE9DKE)	CS-TE12DKE (CU-TE12DKE)	CS-E9DKEW (CU-E9DKE)	CS-E12DKEW (CU-E12DKE)	CS-E15DKEW (CU-E15DKE)	CS-E18DKEW (CU-E18DKE)	CS-E21DKES (CU-E21DKE)	CS-E24EKES (CU-E24EKE)	CS-E28EKE (CU-E28EKE)
Cooling Capacity	kW	2.60 (0.60 - 3.00)	3.50 (0.60 - 4.00)	2.60 (0.60 - 3.00)	3.50 (0.60 - 4.00)	2.60 (0.80 - 3.00)	3.50 (0.80 - 4.00)	4.40 (0.90 - 5.00)	5.30 (0.90 - 6.00)	6.30 (0.90 - 7.10)	6.80 (0.90- 8.10)	7.65 (0.90 - 8.60)
	kcal/h	2,240 (520 - 2,580)	3,010 (520 - 3,440)	2,240 (520 - 2,580)	3,010 (520 - 3,440)	2,240 (690 - 2,580)	3,010 (690 - 3,440)	3,780 (770 - 4,300)	4,560 (770 - 5,160)	5,420 (770 - 6,110)	5,850 (770 - 6,970)	6,580 (770 - 7,400)
EER	W/W	4.56	3.98	4.48	3.89	4.33	3.63	3.21	3.21	2.85	3.21	3.01
Heating Capacity	kW	3.60 (0.60 - 6.10)	4.80 (0.60 - 6.70)	3.60 (0.60 - 5.30)	4.80 (0.60 - 6.50)	3.60 (0.80 - 5.00)	4.80 (0.80 - 6.50)	5.50 (0.90 - 7.10)	6.60 (0.90 - 8.00)	7.20 (0.90 - 8.50)	8.60 (0.90 - 9.90)	9.60 (0.90 - 11.00)
	kcal/h	3,100 (520 - 5,250)	4,130 (520 - 5,760)	3,100 (520 - 4,560)	4,130 (520 - 5,590)	3,100 (690 - 4,300)	4,130 (690 - 5,590)	4,730 (770 - 6,110)	5,680 (770 - 6,880)	6,190 (770 - 7,310)	7,400 (770 - 8,510)	8,260 (770 - 9,460)
COP	W/W	4.44	3.93	4.26	3.64	4.26	3.81	3.50	3.69	3.43	3.23	2.91
Electrical Data Voltage	V	230	230	230	230	230	230	230	230	230	230	230
Running Current	A	2.8 3.8	4,1 5.6	2.7 3.9	4.2 6.2	2.9 4.0	4.5 5.8	6.3 7.1	7.5 8.1	9.9 9.3	9.7 12.1	11.8 15.3
Power Input	W	570 (120 - 700) 810 (115 - 1,640)	880 (120 - 1,100) 1,220 (115 - 1,840)	580 (120 - 720) 845 (115 - 1,360)	900 (120 - 1,160) 1,320 (115 - 1,880)	600 (175 - 780) 845 (165 - 1,360)	965 (185 - 1,200) 1,260 (175 - 1,890)	1,370 (215 - 1,600) 1,570 (245 - 2,250)	1,650 (215 - 2,050) 1,790 (245 - 2,650)	2,210 (215 - 2,540) 2,100 (245 - 2,750)	2,120 (350 - 2,700) 2,660 (360 - 3,200)	2,540 (350 - 2,950) 3,300 (360 - 3,790)
Noise: Sound Pressure Level Indoor (Hi/Lo)	dB(A)	39/26 40/27	42/29 42/33	39/26 40/27	42/29 42/33	39/26 40/27	42/29 42/33	43/32 43/35	44/37 44/37	45/37 45/37	47/38 47/38	49/38 48/38
Outdoor (Hi)	dB(A)	46 47	48 50	46 47	48 50	46 47	48 50	46 46	47 47	48 49	52 52	53 53
Sound Power Level* Indoor (Hi)	dB	50 51	53 53	50 51	53 53	50 51	53 53	54 54	57 57	58 58	60 60	62 61
Outdoor (Hi)	dB	59 60	61 63	59 60	61 63	59 60	61 63	59 59	60 60	61 62	66 66	67 67
Moisture Removal	L/h	1.6	2.0	1.5	2.0	1.6	2.0	2.4	2.9	3.5	3.9	4.5
Air Circulation (Indoor/Hi)	m^3/min	10.6 11.7	11.9 12.7	9.2 10.5	9.9 10.9	9.6 10.5	10.7 11.2	11.0 11.8	15.2 16.7	16.2 17.3	16.9 18.3	17.7 18.7
Dimensions Indoor (Outdoor) Height	mm	305 (540)	305 (540)	298 (540)	298 (540)	280 (540)	280 (540)	280 (750)	275 (750)	275 (750)	275 (795)	275 (795)
Width	mm	870 (780)	870 (780)	799 (780)	799 (780)	799 (780)	799 (780)	799 (875)	998 (875)	998 (875)	998 (900)	998 (900)
Depth	mm	229 (289)	229 (289)	139 (289)	139 (289)	183 (289)	183 (289)	183 (345)	230 (345)	230 (345)	230 (320)	230 (320)
Net Weight Indoor (Outdoor)	kg	13 (37)	13 (37)	8 (33)	8 (34)	9 (37)	9 (37)	9 (48)	11 (49.0)	11.0 (51.0)	12.0 (72.0)	12.0 (72.0)
Refrigerant Pipe Diameter Liquid Side	mm inch	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"
Gas Side	mm inch	9.52 3/8"	12.70 1/2"	9.52 3/8"	12.70 1/2"	9.52 3/8"	12.70 1/2"	12.70 1/2"	12.70 1/2"	12.70 1/2"	15.88 5/8"	15.88 5/8"
Pipe Extension Minimum Pipe Length	m	3	3	3	3	3	3	3	3	3	3	3
Maximum Pipe Length**	m	15	15	15	15	15	15	15	20	20	30	30
Power Supply		Indoor	Indoor	Indoor	Indoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Energy Saving Classification: Cooling Class		A	A	A	A	A	A	A	A	C	A	B
Annual Energy Consumption	kW	285	440	290	450	300	485	685	825	1,105	1,060	1,270
Heating Class		A	A	A	A	A	A	B	A	B	C	D

Rating Conditions

	Cooling	Heating
Inside air temperature	27°C DB/19°C WB	20°C DB
Outside air temperature	35°C DB/24°C WB	7°C DB/6°C WB

* The cooling sound power level specification is based on EUROVENT Document 6/C/006-97.
** Additional Gas might be required for some models.
# For models with the Air Purifying Filter, the specifications indicate values with the filter removed.

Caution (Important) Please do not use copper pipes which the thickness is less than 0.8mm.

Keep the dust exhaust and ventilation hose on the CU-XE9EKE and CU-XE12EKE within 5 m maximum.

Specifications

Single Inverter Split R410A

Cooling
Heating

Model		(50Hz)	CS-E15EKEA (CU-E15EKEA)	CS-E18EKEA (CU-E18EKEA)	CS-E21EKEA (CU-E21EKEA)	CS-PE9DKE (CU-PE9DKE)	CS-PE12DKE (CU-PE12DKE)	CS-E15DTEW (CU-E15DBE)	CS-E18DTEW (CU-E18DBE)	CS-E21DTES (CU-E21DBE)	CS-E15DB4EW (CU-E15DBE)	CS-E18DB4EW (CU-E18DBE)	CS-E21DB4ES (CU-E21DBE)	CS-E15DD3EW (CU-E15DBE)	CS-E18DD3EW (CU-E18DBE)
Cooling Capacity		kW	4.40 (0.90 - 5.00)	5.30 (0.90 - 6.00)	6.30 (0.90 - 7.10)	2.50 (0.90 - 3.00)	3.15 (0.90 - 3.80)	4.15 (0.90 - 4.55)	5.00 (0.90 - 5.40)	5.80 (0.90 - 6.60)	4.10 (0.90 - 4.80)	4.80 (0.90 - 5.70)	5.90 (0.90 - 6.30)	4.10 (0.90 - 4.70)	5.10 (0.90 - 5.70)
		kcal/h	3,780 (770 - 4,300)	4,560 (770 - 5,160)	5,420 (770 - 6,110)	2,150 (770 - 2,580)	2,710 (770 - 3,270)	3,570 (770 - 3,910)	4,300 (770 - 4,640)	4,990 (770 - 5,680)	3,530 (770 - 4,130)	4,130 (770 - 4,900)	5,070 (770 - 5,420)	3,530 (770 - 4,040)	4,390 (770 - 4,900)
EER		W/W	3.21	3.21	2.85	3.42	3.46	3.22	3.01	3.01	3.15	3.14	2.88	3.31	3.15
Heating Capacity		kW	5.50 (0.90 - 7.10)	6.60 (0.90 - 8.00)	7.20 (0.90 - 8.50)	3.30 (0.90 - 4.00)	4.10 (0.90 - 5.00)	5.17 (0.90 - 6.30)	6.10 (0.90 - 7.60)	6.80 (0.90 - 8.10)	5.10 (0.90 - 6.20)	5.60 (0.90 - 7.10)	7.00 (0.90 - 8.00)	4.80 (0.90 - 5.50)	6.10 (0.90 - 7.10)
		kcal/h	4,730 (770 - 6,110)	5,680 (770 - 6,880)	6,190 (770 - 7,310)	2,840 (770 - 3,440)	3,530 (770 - 4,300)	4,450 (770 - 5,420)	5,250 (770 - 6,540)	5,850 (770 - 6,970)	4,390 (770 - 5,330)	4,820 (770 - 6,110)	6,020 (770 - 6,880)	4,130 (770 - 4,730)	5,250 (770 - 6,110)
COP		W/W	3.50	3.69	3.43	4.02	3.69	3.34	3.35	3.42	2.88	2.95	2.86	2.64	3.30
Electrical Data	Voltage	V	230	230	230	230	230	230	230	230	230	230	230	230	230
	Running Current	A	6.3 7.1	7.5 8.1	9.9 9.3	3.4 3.7	4.2 4.9	6.0 7.1	7.5 8.2	8.7 9.0	6.0 8.0	7.0 8.5	9.2 10.9	5.7 8.2	7.3 8.3
	Power Input	W	1,370 (215 - 1,600) 1,570 (245 - 2,250)	1,650 (215 - 2,050) 1,790 (245 - 2,650)	2,210 (215 - 2,540) 2,100 (245 - 2,750)	730 (190 - 1,000) 820 (170 - 1,110)	910 (190 - 1,270) 1,110 (170 - 1,400)	1,290 (255 - 1,550) 1,550 (260 - 2,050)	1,660 (255 - 1,890) 1,820 (260 - 2,380)	1,930 (255 - 2,240) 1,990 (260 - 2,650)	1,300 (255 - 1,710) 1,770 (260 - 2,180)	1,530 (255 - 1,930) 1,900 (260 - 2,450)	2,050 (255 - 2,200) 2,450 (260 - 2,820)	1,240 (255 - 1,500) 1,820 (260 - 2,090)	1,620 (255 - 1,840) 1,850 (260 - 2,200)
Noise	Sound Pressure Level Indoor (Hi/Lo)	dB(A)	43/32 43/35	44/37 44/37	45/37 45/37	42/27 42/27	42/30 42/33	45/37 45/33	46/39 47/35	47/41 47/37	34/26 35/28	36/28 37/29	41/33 42/34	33/27 35/28	41/30 41/32
	Outdoor (Hi)	dB(A)	46 46	47 47	48 49	46 47	48 50	46 47	47 48	48 49	45 47	47 48	49 49	46 47	47 48
	Sound Power Level* Indoor (Hi)	dB	54 54	57 57	58 58	53 53	53 53	58 58	59 60	60 60	47 48	49 50	54 55	49 51	57 57
	Outdoor (Hi)	dB	59 59	60 60	61 62	59 60	61 63	59 60	60 61	61 62	58 60	60 61	62 62	59 60	60 61
Moisture Removal		L/h	2.4	2.9	3.5	1.4	1.8	2.4	2.8	3.2	2.3	2.6	3.3	2.3	2.8
External Static Pressure		Pa (mmAq)	—	—	—	—	—	—	—	—	—	—	—	25 (2.55)	25 (2.55)
Air Circulation (Indoor/Hi)		m^3/min	11.0 11.8	15.2 16.7	16.2 17.3	9.8 10.3	9.9 10.4	12.0 12.2	12.5 12.7	13.1 13.2	10.5 10.8	11.0 11.5	12.8 14.0	7.9 8.9	10.4 13.0
Dimensions Indoor/Panel** (Outdoor)	Height	mm	280 (750)	275 (750)	275 (750)	280 (540)	280 (540)	540 (750)	540 (750)	540 (750)	260/51 (750)	260/51 (750)	260/51 (750)	235 (750)	285 (750)
	Width	mm	799 (875)	998 (875)	998 (875)	799 (780)	799 (780)	1,028 (875)	1,028 (875)	1,028 (875)	575/700 (875)	575/700 (875)	575/700 (875)	750 (875)	750 (875)
	Depth	mm	183 (345)	230 (345)	230 (345)	183 (289)	183 (289)	200 (345)	200 (345)	200 (345)	575/700 (345)	575/700 (345)	575/700 (345)	370 (345)	370 (345)
Net Weight Indoor/Panel** (Outdoor)		kg	9 (48)	11 (49)	11 (51)	8 (30)	8 (34)	17 (48)	18 (48)	20.0 (49.0)	18.0/2.5 (48.0)	18.0/2.5 (48.0)	18.0/2.5 (49.0)	17.0 (48.0)	18.0 (48.0)
Refrigerant Pipe Diameter	Liquid Side	mm inch	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"
	Gas Side	mm inch	12.70 1/2"	12.70 1/2"	12.70 1/2"	9.52 3/8"	9.52 3/8"	12.70 1/2"	12.70 1/2"	12.70 1/2"	12.70 1/2"	12.70 1/2"	12.70 1/2"	12.70 1/2"	12.70 1/2"
Pipe Extension	Minimum Pipe Length	m	3	3	3	3	3	3	3	3	3	3	3	3	3
	Maximum Pipe Length***	m	15	20	20	15	15	20	20	20	20	20	20	20	20
Power Supply			Indoor	Indoor	Indoor	Indoor	Indoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Energy Saving Classification	Cooling Class		A	A	C	A	A	A	B	B	B	B	C	A	B
	Annual Energy Consumption		685	825	1,105	365	455	645	830	965	650	765	1,025	620	810
	Heating Class		B	A	B	A	A	C	C	B	D	D	D	E	C

Rating Conditions

	Cooling	Heating
Inside air temperature	27°C DB/19°C WB	20°C DB
Outside air temperature	35°C DB/24°C WB	7°C DB/6°C WB

Caution (Important) Please do not use copper pipes which the thickness is less than 0.8mm.

Single Split R410A

Cooling
Heating

Model		(50Hz)	CS-W7DKE (CU-W7DKE)	CS-W9DKE (CU-W9DKE)	CS-W12DKE (CU-W12DKE)	CS-W18DKE (CU-W18DKE)	CS-W24DKE (CU-W24DKE)	CS-PW9DKE (CU-PW9DKE)	CS-PW12DKE (CU-PW12DKE)	CS-PW18DKE (CU-PW18DKE)	CS-W12CTP (CU-W12CTP5)	CS-W18CTP (CU-W18CTP5)	CS-W24CTP (CU-W24CTP5)
Cooling Capacity		kW	2.30	2.75	3.60	5.30	7.03	2.65	3.40	5.10	3.60	5.20	6.90
		kcal/h	1,980	2,370	3,100	4,560	6,050	2,280	2,920	4,390	3,100	4,470	5,930
EER		W/W	3.24	3.22	3.21	3.21	2.53	3.21	3.21	2.91	3.13	3.07	2.51
Heating Capacity		kW	2.45	3.05	3.90	5.42	7.50	2.85	3.80	5.30	3.95	5.80	7.65
		kcal/h	2,110	2,620	3,350	4,660	6,450	2,450	3,260	4,560	3,400	4,990	8,580
COP		W/W	3.63	3.61	3.61	3.27	2.87	3.80	3,80	3.35	3.35	3.33	2.65
Electrical Data	Voltage	V	230	230	230	230	230	230	230	230	230	230	230
	Running Current	A	3.2 3.0	3.8 3.8	5.1 4.9	7.4 7.4	13.1 12.5	3.90 3.70	5.30 4.70	7.7 6.9	5.1 5.3	7.6 7.9	13.0 13.7
	Power Input	W	710 675	855 845	1,120 1,080	1,650 1,660	2,780 2,610	825 750	1,060 1,000	1,750 1,580	1,150 1,180	1,690 1,740	2,750 2,890
Noise	Sound Pressure Level Indoor (Hi/Lo)	dB(A)	34/26 36/26	36/26 39/26	39/29 40/29	43/38 42/38	47/41 46/41	38/30 38/29	39/32 39/31	45/38 43/38	39/33 39/33	45/39 45/39	47/42 47/42
	Outdoor (Hi)	dB(A)	46 48	48 49	49 49	54 55	54 55	48 49	49 50	55 55	49 49	55 56	60 61
	Sound Power Level* Indoor (Hi)	dB	47 49	49 52	52 53	55 53	59 57	49 49	50 50	58 56	52 52	58 58	60 60
	Outdoor (Hi)	dB	61 63	63 64	64 65	68 69	69 70	61 62	62 63	70 70	64 65	68 69	74 75
Moisture Removal		L/h	1.5	1.6	2.1	2.9	4.0	1.6	1.9	2.9	2.1	2.9	3.9
Air Circulation (Indoor/Hi)		m^3/min	7.9 9.1	8.6 9.7	9.5 9.7	15.3 16.0	17.4 18.2	9.6 9.8	9.3 9.8	16.2 16.4	9.7 9.7	12.4 12.4	12.9 12.9
Dimensions Indoor (Outdoor)	Height	mm	280 (510)	280 (510)	280 (540)	275 (750)	275 (750)	280 (540)	280 (540)	275 (540)	540 (540)	540 (685)	540 (685)
	Width	mm	799 (650)	799 (650)	799 (780)	998 (875)	998 (875)	799 (780)	799 (780)	998 (780)	1,028 (780)	1,028 (800)	1,028 (800)
	Depth	mm	183 (230)	183 (230)	183 (289)	230 (345)	230 (345)	183 (289)	183 (289)	230 (289)	200 (289)	200 (300)	200 (300)
Net Weight Indoor (Outdoor)		kg	9 (26)	9 (29)	9 (35)	11.0 (56.0)	11.0 (63.0)	8.5 (29)	8.5 (32)	11.0 (45.0)	18 (35)	20 (55)	20 (61)
Refrigerant Pipe Diameter	Liquid Side	mm inch	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"
	Gas Side	mm inch	9.52 3/8"	9.52 3/8"	12.70 1/2"	12.70 1/2"	15.88 5/8"	9.52 3/8"	9.52 3/8"	12.70 1/2"	12.70 1/2"	12.70 1/2"	15.88 5/8"
Pipe Extension	Minimum Pipe Length	m	3	3	3	3	3	3	3	3	3	3	3
	Maximum Pipe Length***	m	10	10	15	25	25	10	15	25	15	25	25
Power Supply			Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Energy Saving Classification	Cooling Class		A	A	A	A	E	A	A	C	B	B	E
	Annual Energy Consumption	kW	355	430	560	825	1,390	415	530	875	575	845	1,375
	Heating Class		A	A	A	C	D	A	A	C	C	C	E

* The cooling sound power level specification is based on EUROVENT Document 6/C/006-97.
** Panel is applicable to cassette type only.
*** Additional Gas might be required for some models.
# For models with the Air Purifying Filter, the specifications indicate values with the filter removed.

Specifications

Single Split

Model (50Hz)		CS-V7DKE (CU-V7DKE)	CS-V9DKE (CU-V9DKE)	CS-V12DKE (CU-V12DKE)	CS-V18DKE (CU-V18DKE)	CS-V24DKE (CU-V24DKE)	CS-V28EKE (CU-V28EKE)	CS-V12CTP (CU-V12CTP5)	CS-V18CTP (CU-V18CTP5)	CS-V24CTP (CU-V24CTP5)
Cooling Capacity	kW	2.40	3.00	3.68	5.30	7.03	7.91	3.52	5.30	7.03
	kcal/h	2,060	2,580	3,160	4,560	6,050	6,800	3,030	4,530	6,050
EER	W/W	3.24	3.21	3.23	3.25	2.70	3.22	3.20	3.17	2.58
Electrical Data										
Voltage	V	230	230	230	230	230	230	230	230	230
Running Current	A	3.4	4.2	5.3	7.3	12.3	11.3	4.9	7.5	13.1
Power Input	W	740	935	1,140	1,630	2,600	2,460	1,100	1,670	2,730
Noise										
Sound Pressure Level										
Indoor (Hi/Lo)	dB(A)	33/26	35/26	39/29	42/37	46/40	49/44	39/33	45/39	47/42
Outdoor (Hi)	dB(A)	46	48	49	54	54	55	49	55	60
Sound Power Level*										
Indoor (Hi)	dB	46	48	52	54	59	62	52	56	60
Outdoor (Hi)	dB	61	63	64	69	69	70	63	68	73
Moisture Removal	L/h	1.5	1.7	2.1	2.9	4.0	4.6	2.0	2.9	3.5
Air Circulation (Indoor/Hi)	m^3/min	7.8	8.5	9.5	14.8	16.9	20.1	9.7	12.2	12.9
Dimensions Indoor (Outdoor)										
Height	mm	280 (510)	280 (540)	280 (540)	275 (750)	275 (750)	340 (750)	540 (540)	540 (685)	540 (685)
Width	mm	799 (650)	799 (780)	799 (780)	998 (875)	998 (875)	1,150 (875)	1,028 (780)	1,028 (800)	1,028 (800)
Depth	mm	183 (230)	183 (289)	183 (289)	230 (345)	230 (345)	260 (345)	200 (289)	200 (300)	200 (300)
Net Weight Indoor (Outdoor)	kg	9 (25)	9 (31)	9 (33)	11.0 (50.0)	11.0 (59.0)	18.0 (62.0)	18 (37)	20 (60)	20 (63)
Refrigerant Pipe Diameter										
Liquid Side	mm inch	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"	6.35 1/4"
Gas Side	mm inch	9.52 3/8"	9.52 3/8"	12.70 1/2"	12.70 1/2"	15.88 5/8"	15.88 5/8"	12.70 1/2"	12.70 1/2"	15.88 5/8"
Pipe Extension										
Minimum Pipe Length	m	3	3	3	3	3	3	3	3	3
Maximum Pipe Length**	m	10	10	15	25	25	30	15	25	25
Power Supply		Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Energy Saving Classification	Cooling Class	A	A	A	A	D	A	B	B	E
	Annual Energy Consumption kW	370	470	570	815	1,300	1,230	550	835	1,365

Rating Conditions

	Cooling	Heating
Inside air temperature	27°C DB/19°C WB	20°C DB
Outside air temperature	35°C DB/24°C WB	7°C DB/6°C WB

Caution (Important) Please do not use copper pipes which the thickness is less than 0.8mm.

Multi Inverter Split : Outdoor Units

Cooling
Heating

Model (50Hz)			CU-2E15CBPG	CU-2E18CBPG	CU-3E18EBE	CU-3E23CBPG	CU-4E27CBPG
Indoor-units Combination			2.2 kW + 2.2 kW	3.2 kW + 3.2 kW	2.2 kW + 2.8 kW + 4.0 kW	2.8 kW + 3.2 kW + 4.0 kW	3.2 kW + 3.2 kW+ 3.2 kW + 4.0 kW
Power Source			Single phase, 230 V, 50 Hz (Power supply from outdoor unit)				
Cooling Operation							
Capacity		kW	4.5 (1.5 - 5.0)	5.2 (1.5 - 5.4)	5.2 (1.8 - 7.3)	6.8 (2.8 - 8.4)	8.0 (3.0 - 9.2)
Electrical Data							
Running Current		A	5.75	7.10	5.40	8.50	8.70
Power Input		W	1,230 (250 - 1,350)	1,520 (250 - 1,580)	1,220 (360 - 2,180)	1,950 (490 - 2,800)	1,980 (530 - 2,870)
EER		W/W	3.66	3.42	4.26	3.49	4.04
Noise							
Sound Pressure Level		dB(A)	47	49	46	48	48
Sound Power Level		dB	62	64	59	61	61
Heating Operation							
Capacity		kW	5.4 (1.1 - 7.0)	5.6 (1.1 - 7.2)	6.8 (1.6 - 8.3)	8.6 (3.5 - 9.1)	9.4 (4.2 - 10.6)
Electrical Data							
Running Current		A	5.20	5.35	6.30	8.30	9.10
Power Input		W	1,170 (210 - 1,670)	1,210 (210 - 1,700)	1,420 (320 - 2,110)	1,880 (560 - 2,710)	2,080 (700 - 3,060)
COP		W/W	4.62	4.63	4.79	4.57	4.52
Noise							
Sound Pressure Level		dB(A)	49	51	47	49	49
Sound Power Level		dB	64	66	60	62	62
Maximum Current		A	12.0	12.0	17.5	18.5	19.0
Starting Current		A	5.75	7.10	6.30	8.50	9.10
Compressor Output		W	1,200	1,500	1,500	1,900	2,200
Fan Output		W	40	40	50	53	51
Circuit Breaker Ratio		A	15	15	20	20	20
Dimensions							
Height		mm	540	540	735	735	908
Width		mm	780 (+70)	780 (+70)	826 (+73)	826 (+110)	900
Depth		mm	289	289	300	300	320
Net Weight		kg	38	38	49	57	73
Connecting Cable			3 + 1 (earth), ø1.5 mm^2				
Pipe Length Range (1 room)		m	3 - 20	3 - 20	3 - 25	3 - 25	3 - 25
Maximum Pipe Length (Total room)***		m	30	30	50	50	70
Refrigerant Pipe Diameter							
Liquid Side		mm	6.35	6.35	6.35	6.35	6.35
Gas Side		mm	9.52	9.52	9.52	9.52	9.52
Energy Saving Classification	Cooling Class		A	A	A	A	A
	Annual Energy Consumption	kW	615	760	610	975	990
	Heating Class		A	A	A	A	A

* The cooling sound power level specification is based on EUROVENT Document 6/C/006-97.
** Additional Gas might be required for some models.
*** Refer to page 21 for information on Additional Gas.
# For models with the Air Purifying Filter, the specifications indicate values with the filter removed.

Specifications

Multi Inverter Split : Indoor Units

Wall-Mounted R410A

Cooling
Heating

Model (Capacity)	CS-ME7DKEG (2.2 kW class)	CS-E9DKEW (2.8 kW class)	CS-E12DKEW (3.2 kW class)	CS-E15DKEW (4.0 kW class)	CS-E18DKEW (5.0 kW class)
Power Source	Single phase, 230 V, 50 Hz				
Noise (Hi/Lo)					
Sound Pressure Level dB(A)	40/29 40/29	40/29 40/29	44/32 44/32	44/32 44/33	46/33 46/35
Sound Power Level dB	53/42 53/42	53/42 53/42	57/45 57/45	57/45 57/46	59/46 59/48
Fan Output W	30	30	30	30	30
Dimensions					
Height mm	280	280	280	280	275
Width mm	799	799	799	799	998
Depth mm	183	183	183	183	230
Net Weight kg	9.0	9.0	9.0	9.0	11.0
Connecting Cable	3 + 1 (earth), ø1.5 mm²				
Refrigerant Pipe Diameter					
Liquid Side mm	6.35	6.35	6.35	6.35	6.35
Gas Side mm	9.52	9.52	12.70*	12.70*	12.70*

*A pipe size reducer (CZ-MA1P) must be used to reduce the pipe diameter to 9.52 mm at the connection port of the indoor unit.
For models with the Air Purifying Filter, the specifications indicate values with the filter removed.

Floor or Ceiling R410A

Cooling
Heating

Model (Capacity)	CS-ME10DTEG (2.8 kW class)	CS-E15DTEW (4.0 kW class)	CS-E18DTEW (5.0 kW class)
Power Source	Single phase, 230 V, 50 Hz		
Noise (Hi/Lo)			
Sound Pressure Level dB(A)	39/31 40/31	45/37 45/33	46/39 47/35
Sound Power Level dB	52/44 53/44	58/50 58/46	59/52 60/48
Fan Output W	51	51	51
Dimensions			
Height mm	540	540	540
Width mm	1,028	1,028	1,028
Depth mm	200	200	200
Net Weight kg	17.0	17.0	18.0
Connecting Cable	3 + 1 (earth), ø1.5 mm²		
Refrigerant Pipe Diameter			
Liquid Side mm	6.35	6.35	6.35
Gas Side mm	9.52	12.70*	12.70*

*A pipe size reducer (CZ-MA1P) must be used to reduce the pipe diameter to 9.52 mm at the connection port of the indoor unit.

Cassette (1-way) R410A

Cooling
Heating

Model (Capacity)	CS-ME7EB1E (2.2 kW class)	CS-ME10EB1E (2.8 kW class)	CS-ME12EB1E (3.2 kW class)	CS-ME14EB1E (4.0 kW class)
Power Source	Single phase, 230 V, 50 Hz			
Noise (Hi/Lo)				
Sound Pressure Level dB(A)	40/32 42/32	40/32 42/32	41/32 43/32	43/32 44/34
Sound Power Level dB	53/45 55/45	53/45 55/45	54/45 56/45	56/45 57/47
Fan Output W	30	30	30	30
Dimensions				
Height mm	185	185	185	185
Width mm	770	770	770	770
Depth mm	360	360	360	360
Net Weight kg	9.8	9.8	9.8	10.5
Connecting Cable	3 + 1 (earth), ø1.5 mm²			
Refrigerant Pipe Diameter				
Liquid Side mm	6.35	6.35	6.35	6.35
Gas Side mm	9.52	9.52	9.52	9.52

Multi Inverter Split : Indoor Units

Cassette (4-way) R410A

Cooling
Heating

Model (Capacity)	CS-E15DB4EW (4.0 kW class)	CS-E18DB4EW (5.0 kW class)
Power Source	Single phase, 230 V, 50 Hz	
Noise (Hi/Lo)		
Sound Pressure Level dB(A)	34/26 35/28	36/28 37/29
Sound Power Level dB	47/39 48/41	49/41 50/42
Fan Output W	40	40
Dimensions		
Height mm	260	260
Width mm	575	575
Depth mm	575	575
Net Weight kg	18.0	18.0
Connecting Cable	3 + 1 (earth), ø1.5 mm²	
Refrigerant Pipe Diameter		
Liquid Side mm	6.35	6.35
Gas Side mm	12.70*	12.70*

*A pipe size reducer (CZ-MA1P) must be used to reduce the pipe diameter to 9.52 mm at the connection port of the indoor unit.

Hide-Away R410A

Cooling
Heating

Model (Capacity)	CS-ME10DD3EG (2.8 kW class)	CS-E15DD3EW (4.0 kW class)	CS-E18DD3EW (5.0 kW class)
Power Source	Single phase, 230 V, 50 Hz		
Noise (Hi/Lo)			
Sound Pressure Level dB(A)	31/27 35/27	33/27 35/28	41/30 41/32
Sound Power Level dB	47/43 51/43	49/43 51/44	57/46 57/48
Fan Output W	30	30	30
External Static Pressure Pa(mmAq)	25 (2.55)	25 (2.55)	25 (2.55)
Air Circulation m³/min	7.0	7.8	10.3
Dimensions			
Height mm	235	235	285
Width mm	750	750	750
Depth mm	370	370	370
Net Weight kg	17.0	17.0	18.0
Connecting Cable	3 + 1 (earth), ø1.5 mm²		
Refrigerant Pipe Diameter			
Liquid Side mm	6.35	6.35	6.35
Gas Side mm	9.52	12.70*	12.70*

*A pipe size reducer (CZ-MA1P) must be used to reduce the pipe diameter to 9.52 mm at the connection port of the indoor unit.

Specifications

CU-2E15CBPG

A.E.C. : Annual Energy Consumption

	Indoor Units Capacity	Cooling Operation: Cooling Capacity Room A (kW)	Cooling Capacity Room B (kW)	Cooling Capacity Total (kW)	Running Current (A)	Power Input (W)	Cooling Class	A.E.C.# (kW)	Heating Operation: Heating Capacity Room A (kW)	Heating Capacity Room B (kW)	Heating Capacity Total (kW)	Running Current (A)	Power Input (W)	Heating Class
1 room	2.2	2.20	–	2.20 (1.1 - 2.9)	2.45	520 (220 - 750)	A	260	3.20	–	3.20 (0.7 - 4.8)	3.75	850 (170 - 1,410)	A
	2.8	2.80	–	2.80 (1.1 - 3.5)	3.50	750 (220 - 1,000)	A	375	4.00	–	4.00 (0.7 - 5.5)	5.10	1,150 (170 - 1,700)	B
2 rooms	2.2 + 2.2	2.25	2.25	4.50 (1.5 - 5.0)	5.75	1,230 (250 - 1,350)	A	615	2.70	2.70	5.40 (1.1 - 7.0)	5.20	1,170 (210 - 1,670)	A
	2.2 + 2.8	2.00	2.50	4.50 (1.5 - 5.2)	5.75	1,230 (250 - 1,520)	A	615	2.40	3.00	5.40 (1.1 - 7.0)	5.20	1,170 (210 - 1,670)	A
	2.2 + 2.8*	2.00	2.50	4.50 (1.5 - 5.2)	6.50	1,390 (250 - 1,730)	A	695	2.40	3.00	5.40 (1.1 - 7.0)	6.05	1,360 (210 - 1,670)	A

*The specifications are different from other type of indoor units when 2.8kW duct type or floor/ceiling type is connected to CU-2E15CBPG.

CU-2E18CBPG

A.E.C. : Annual Energy Consumption

	Indoor Units Capacity	Cooling Operation: Cooling Capacity Room A (kW)	Cooling Capacity Room B (kW)	Cooling Capacity Total (kW)	Running Current (A)	Power Input (W)	Cooling Class	A.E.C.# (kW)	Heating Operation: Heating Capacity Room A (kW)	Heating Capacity Room B (kW)	Heating Capacity Total (kW)	Running Current (A)	Power Input (W)	Heating Class
1 room	2.2	2.20	–	2.20 (1.1 - 2.9)	2.45	520 (220 - 750)	A	260	3.20	–	3.20 (0.7 - 4.8)	3.75	850 (170 - 1,410)	A
	2.8	2.80	–	2.80 (1.1 - 3.5)	3.50	750 (220 - 1,000)	A	375	4.00	–	4.00 (0.7 - 5.5)	5.10	1,150 (170 - 1,700)	B
	3.2	3.20	–	3.20 (1.1 - 4.0)	4.30	920 (220 - 1,220)	A	460	4.50	–	4.50 (0.7 - 6.2)	5.55	1,250 (170 - 1,810)	B
2 rooms	2.2 + 2.2	2.25	2.25	4.50 (1.5 - 5.0)	5.75	1,230 (250 - 1,350)	A	615	2.70	2.70	5.40 (1.1 - 7.0)	5.20	1,170 (210 - 1,670)	A
	2.2 + 2.8	2.00	2.50	4.50 (1.5 - 5.2)	5.75	1,230 (250 - 1,520)	A	615	2.40	3.00	5.40 (1.1 - 7.0)	5.20	1,170 (210 - 1,670)	A
	2.2 + 2.8*	2.00	2.50	4.50 (1.5 - 5.2)	6.50	1,390 (250 - 1,730)	A	695	2.40	3.00	5.40 (1.1 - 7.0)	6.05	1,360 (210 - 1,670)	A
	2.2 + 3.2	1.95	2.85	4.80 (1.5 - 5.3)	6.10	1,310 (250 - 1,540)	A	655	2.30	3.30	5.60 (1.1 - 7.2)	5.45	1,230 (210 - 1,720)	A
	2.8 + 2.8	2.40	2.40	4.80 (1.5 - 5.2)	6.10	1,310 (250 - 1,520)	A	655	2.80	2.80	5.60 (1.1 - 7.2)	5.55	1,250 (210 - 1,740)	A
	2.8* + 2.8*	2.40	2.40	4.80 (1.5 - 5.2)	7.25	1,560 (250 - 1,730)	B	780	2.80	2.80	5.60 (1.1 - 7.2)	6.50	1,470 (210 - 1,740)	A
	2.8 + 3.2	2.30	2.70	5.00 (1.5 - 5.3)	6.95	1,490 (250 - 1,540)	A	745	2.60	3.00	5.60 (1.1 - 7.2)	5.45	1,230 (210 - 1,720)	A
	2.8* + 3.2	2.30	2.70	5.00 (1.5 - 5.3)	7.80	1,670 (250 - 1,800)	C	835	2.60	3.00	5.60 (1.1 - 7.2)	6.15	1,390 (210 - 1,720)	A
	3.2 + 3.2	2.60	2.60	5.20 (1.5 - 5.4)	7.10	1,520 (250 - 1,580)	A	760	2.80	2.80	5.60 (1.1 - 7.2)	5.35	1,210 (210 - 1,700)	A

*The specifications are different from other type of indoor units when 2.8kW duct type or floor/ceiling type is connected to CU-2E18CBPG.

CU-3E18EBE

A.E.C. : Annual Energy Consumption

	Indoor Units Capacity	Cooling Operation: Cooling Capacity Room A (kW)	Room B (kW)	Room C (kW)	Total (kW)	Running Current (A)	Power Input (W)	Cooling Class	A.E.C.# (kW)	Heating Operation: Heating Capacity Room A (kW)	Room B (kW)	Room C (kW)	Total (kW)	Running Current (A)	Power Input (W)	Heating Class
1 room	2.2	2.20	–	–	2.20 (1.8 - 2.9)	2.50	500 (340 - 810)	A	250	3.20	–	–	3.20 (1.2 - 4.1)	3.70	740 (300 - 1,230)	A
	2.8	2.80	–	–	2.80 (1.8 - 2.9)	3.30	700 (340 - 810)	A	350	4.00	–	–	4.00 (1.2 - 4.3)	5.00	1,050 (300 - 1,230)	A
	3.2	3.20	–	–	3.20 (1.8 - 3.8)	3.70	800 (340 - 1,360)	A	400	4.50	–	–	4.50 (1.2 - 5.8)	5.80	1,230 (300 - 2,100)	A
	4.0	4.00	–	–	4.00 (1.8 - 4.3)	5.60	1,240 (340 - 1,990)	A	620	5.60	–	–	5.60 (1.2 - 6.8)	7.70	1,720 (300 - 2,930)	C
	5.0	5.00	–	–	5.00 (1.9 - 5.7)	6.80	1,550 (340 - 2,130)	A	775	6.80	–	–	6.80 (1.2 - 6.9)	9.20	2,100 (300 - 2,520)	C
2 room	2.2 + 2.2	2.20	2.20	–	4.40 (1.9 - 6.2)	4.90	1,110 (350 - 2,100)	A	555	2.90	2.90	–	5.80 (1.4 - 7.0)	6.40	1,450 (310 - 2,550)	A
	2.2 + 2.8	2.20	2.80	–	5.00 (1.9 - 6.2)	6.20	1,410 (350 - 2,100)	A	705	2.85	3.55	–	6.40 (1.4 - 7.0)	7.60	1,720 (310 - 2,550)	A
	2.2 + 3.2	2.10	3.10	–	5.20 (1.9 - 6.3)	6.60	1,490 (350 - 2,110)	A	745	2.85	3.95	–	6.80 (1.4 - 7.3)	8.20	1,840 (310 - 2,520)	A
	2.2 + 4.0	1.85	3.35	–	5.20 (1.9 - 6.4)	6.40	1,450 (350 - 2,110)	A	725	2.45	4.35	–	6.80 (1.4 - 7.3)	7.90	1,800 (310 - 2,510)	A
	2.2 + 5.0	1.60	3.60	–	5.20 (1.9 - 6.8)	5.70	1,290 (360 - 2,150)	A	645	2.10	4.70	–	6.80 (1.4 - 8.0)	6.70	1,520 (310 - 2,200)	A
	2.8 + 2.8	2.60	2.60	–	5.20 (1.9 - 6.2)	6.80	1,540 (350 - 2,100)	A	770	3.40	3.40	–	6.80 (1.4 - 7.0)	8.50	1,930 (310 - 2,550)	B
	2.8 + 3.2	2.45	2.75	–	5.20 (1.9 - 6.3)	6.50	1,480 (350 - 2,110)	A	740	3.20	3.60	–	6.80 (1.4 - 7.3)	8.10	1,840 (310 - 2,520)	A
	2.8 + 4.0	2.15	3.05	–	5.20 (1.9 - 6.4)	6.40	1,440 (350 - 2,110)	A	720	2.85	3.95	–	6.80 (1.4 - 7.3)	8.00	1,800 (310 - 2,510)	A
	2.8 + 5.0	1.85	3.35	–	5.20 (1.9 - 6.8)	5.70	1,290 (360 - 2,150)	A	645	2.45	4.35	–	6.80 (1.4 - 8.0)	6.70	1,520 (310 - 2,200)	A
	3.2 + 3.2	2.60	2.60	–	5.20 (1.9 - 6.4)	6.40	1,450 (350 - 2,120)	A	725	3.40	3.40	–	6.80 (1.4 - 7.5)	7.70	1,750 (310 - 2,490)	A
	3.2 + 4.0	2.30	2.90	–	5.20 (1.9 - 6.5)	6.30	1,410 (350 - 2,120)	A	705	3.05	3.75	–	6.80 (1.4 - 7.5)	7.80	1,750 (310 - 2,470)	A
	3.2 + 5.0	2.05	3.15	–	5.20 (1.9 - 6.9)	5.50	1,250 (360 - 2,150)	A	625	2.65	4.15	–	6.80 (1.4 - 8.0)	6.60	1,500 (310 - 2,180)	A
	4.0 + 4.0	2.60	2.60	–	5.20 (1.9 - 6.5)	6.20	1,410 (350 - 2,120)	A	705	3.40	3.40	–	6.80 (1.4 - 7.6)	7.50	1,710 (310 - 2,470)	A
	4.0 + 5.0	2.30	2.90	–	5.20 (1.9 - 6.9)	5.50	1,250 (360 - 2,160)	A	625	3.00	3.80	–	6.80 (1.4 - 8.0)	6.60	1,500 (310 - 2,170)	A
3 room	2.2 + 2.2 + 2.2	1.73	1.73	1.73	5.20 (1.9 - 7.2)	5.40	1,240 (360 - 2,170)	A	620	2.26	2.26	2.26	6.78 (1.5 - 8.1)	6.70	1,530 (320 - 2,120)	A
	2.2 + 2.2 + 2.8	1.59	1.59	2.02	5.20 (1.9 - 7.2)	5.40	1,240 (360 - 2,170)	A	620	2.10	2.10	2.60	6.80 (1.5 - 8.1)	6.70	1,530 (320 - 2,120)	A
	2.2 + 2.2 + 3.2	1.51	1.51	2.19	5.20 (1.9 - 7.2)	5.40	1,230 (360 - 2,180)	A	615	2.00	2.00	2.80	6.80 (1.4 - 8.3)	6.50	1,490 (320 - 2,110)	A
	2.2 + 2.2 + 4.0	1.36	1.36	2.48	5.20 (1.8 - 7.3)	5.40	1,230 (360 - 2,180)	A	615	1.80	1.80	3.20	6.80 (1.6 - 8.3)	6.40	1,460 (320 - 2,110)	A
	2.2 + 2.8 + 2.8	1.47	1.87	1.87	5.20 (1.9 - 7.2)	5.40	1,240 (360 - 2,170)	A	620	1.95	2.45	2.45	6.80 (1.5 - 8.1)	6.70	1,530 (320 - 2,120)	A
	2.2 + 2.8 + 3.2	1.40	1.78	2.03	5.20 (1.9 - 7.2)	5.40	1,230 (360 - 2,180)	A	615	1.85	2.30	2.60	6.80 (1.4 - 8.3)	6.50	1,490 (320 - 2,110)	A
	2.2 + 2.8 + 4.0	1.27	1.62	2.31	5.20 (1.8 - 7.3)	5.40	1,220 (360 - 2,180)	A	610	1.70	2.10	3.00	6.80 (1.6 - 8.3)	6.50	1,420 (320 - 2,110)	A
	2.2 + 3.2 + 3.2	1.33	1.93	1.93	5.20 (1.8 - 7.3)	5.40	1,220 (360 - 2,180)	A	610	1.80	2.50	2.50	6.80 (1.6 - 8.3)	6.30	1,430 (320 - 2,100)	A
	2.8 + 2.8 + 2.8	1.73	1.73	1.73	5.19 (1.9 - 7.2)	5.40	1,240 (360 - 2,170)	A	620	2.25	2.25	2.25	6.80 (1.5 - 8.1)	6.70	1,530 (320 - 2,120)	A
	2.8 + 2.8 + 3.2	1.65	1.65	1.89	5.20 (1.9 - 7.2)	5.40	1,230 (360 - 2,180)	A	615	2.20	2.20	2.45	6.80 (1.4 - 8.3)	6.50	1,490 (320 - 2,110)	A

CU-3E23CBPG

A.E.C. : Annual Energy Consumption

	Indoor Units Capacity	Cooling Operation: Cooling Capacity Room A (kW)	Room B (kW)	Room C (kW)	Total (kW)	Running Current (A)	Power Input (W)	Cooling Class	A.E.C.# (kW)	Heating Operation: Heating Capacity Room A (kW)	Room B (kW)	Room C (kW)	Total (kW)	Running Current (A)	Power Input (W)	Heating Class
1 room	2.2	2.20	–	–	2.20 (1.9 - 2.7)	2.25	450 (380 - 620)	A	225	3.20	–	–	3.20 (1.7 - 4.1)	3.85	840 (370 - 1,310)	A
	2.8	2.80	–	–	2.80 (2.0 - 3.4)	2.95	620 (380 - 900)	A	310	4.00	–	–	4.00 (1.7 - 4.3)	5.40	1,210 (370 - 1,400)	C
	3.2	3.20	–	–	3.20 (2.0 - 3.9)	3.40	720 (380 - 1,090)	A	360	4.50	–	–	4.50 (1.7 - 5.7)	5.85	1,310 (370 - 1,910)	B
	4.0	4.00	–	–	4.00 (2.0 - 4.4)	4.60	1,030 (380 - 1,390)	A	515	5.60	–	–	5.60 (1.8 - 7.2)	8.35	1,900 (370 - 2,920)	D
	5.0	5.00	–	–	5.00 (2.1 - 5.2)	7.15	1,610 (400 - 1,800)	B	805	7.10	–	–	7.10 (2.1 - 7.3)	12.4	2,840 (430 - 2,890)	F
2 room	2.2 + 2.2	2.20	2.20	–	4.40 (2.1 - 5.0)	4.45	980 (400 - 1,260)	A	490	3.15	3.15	–	6.30 (1.8 - 8.6)	6.25	1,410 (400 - 2,570)	A
	2.2 + 2.8	2.20	2.80	–	5.00 (2.1 - 6.1)	5.50	1,230 (400 - 1,880)	A	615	3.10	4.00	–	7.10 (2.1 - 8.6)	7.55	1,700 (420 - 2,570)	A
	2.2 + 3.2	2.20	3.20	–	5.40 (2.2 - 7.0)	6.10	1,370 (400 - 2,790)	A	685	3.05	4.45	–	7.50 (2.2 - 8.7)	7.75	1,740 (420 - 2,970)	A
	2.2 + 4.0	2.20	4.00	–	6.20 (2.2 - 7.1)	8.00	1,820 (400 - 2,790)	A	910	2.90	5.30	–	8.20 (2.4 - 8.7)	8.85	2,010 (440 - 2,970)	A
	2.2 + 5.0	2.10	4.70	–	6.80 (2.5 - 7.1)	9.85	2,240 (460 - 2,800)	B	1,120	2.65	5.95	–	8.60 (3.2 - 9.0)	9.50	2,160 (530 - 2,960)	A
	2.8 + 2.8	2.80	2.80	–	5.60 (2.2 - 6.9)	6.85	1,550 (400 - 2,780)	A	775	3.85	3.85	–	7.70 (2.3 - 8.7)	8.45	1,930 (440 - 3,040)	A
	2.8 + 3.2	2.80	3.20	–	6.00 (2.2 - 7.0)	7.55	1,700 (400 - 2,790)	A	850	3.70	4.30	–	8.00 (2.4 - 8.8)	8.60	1,970 (440 - 3,020)	A
	2.8 + 4.0	2.80	4.00	–	6.80 (2.2 - 7.1)	10.5	2,390 (400 - 2,790)	C	1,195	3.55	5.05	–	8.60 (2.1 - 9.0)	9.55	2,175 (530 - 3,030)	A
	2.8 + 5.0	2.45	4.35	–	6.80 (2.5 - 7.2)	9.85	2,230 (460 - 2,800)	B	1,115	3.10	5.50	–	8.60 (3.2 - 9.0)	9.50	2,150 (530 - 3,010)	A
	3.2 + 3.2	3.20	3.20	–	6.40 (2.2 - 7.3)	8.15	1,860 (400 - 2,810)	A	930	4.20	4.20	–	8.40 (2.5 - 9.0)	9.05	2,050 (470 - 2,970)	A
	3.2 + 4.0	3.00	3.80	–	6.80 (2.5 - 7.3)	9.65	2,200 (460 - 2,810)	B	1,100	3.80	4.80	–	8.60 (3.2 - 9.0)	9.20	2,090 (530 - 2,970)	A
	3.2 + 5.0	2.65	4.15	–	6.80 (2.6 - 7.4)	9.30	2,120 (460 - 2,820)	A	1,060	3.35	5.25	–	8.60 (3.2 - 9.0)	9.15	2,080 (530 - 2,950)	A
	4.0 + 4.0	3.40	3.40	–	6.80 (2.5 - 7.3)	9.65	2,190 (460 - 2,810)	B	1,095	4.30	4.30	–	8.60 (3.2 - 9.0)	9.15	2,080 (530 - 2,970)	A
	4.0 + 5.0	3.00	3.80	–	6.80 (2.7 - 7.4)	9.30	2,110 (480 - 2,820)	A	1,055	3.80	4.80	–	8.60 (3.2 - 9.1)	9.15	2,070 (530 - 2,950)	A
	5.0 + 5.0	3.40	3.40	–	6.80 (2.8 - 7.4)	9.15	2,070 (480 - 2,820)	A	1,035	4.30	4.30	–	8.60 (3.5 - 9.1)	9.15	2,070 (590 - 2,940)	A
3 room	2.2 + 2.2 + 2.2	2.20	2.20	2.20	6.60 (2.2 - 7.7)	8.10	1,850 (410 - 2,450)	A	925	2.86	2.86	2.86	8.58 (3.1 - 8.9)	8.50	1,940 (500 - 2,800)	A
	2.2 + 2.2 + 2.8	2.10	2.10	2.60	6.80 (2.5 - 8.1)	8.70	1,980 (460 - 2,820)	A	990	2.65	2.65	3.30	8.60 (3.2 - 8.9)	8.70	1,980 (510 - 2,800)	A
	2.2 + 2.2 + 3.2	1.95	1.95	2.90	6.80 (2.5 - 8.1)	8.80	1,990 (460 - 2,790)	A	995	2.50	2.50	3.60	8.60 (3.2 - 9.0)	8.60	1,960 (510 - 2,780)	A
	2.2 + 2.2 + 4.0	1.80	1.80	3.20	6.80 (2.6 - 8.2)	8.60	1,970 (460 - 2,790)	A	985	2.25	2.25	4.10	8.60 (3.2 - 8.8)	8.50	1,940 (510 - 2,760)	A
	2.2 + 2.2 + 5.0	1.60	1.60	3.60	6.80 (2.8 - 8.3)	8.60	1,960 (490 - 2,790)	A	980	2.00	2.00	4.60	8.60 (3.2 - 8.8)	8.45	1,920 (510 - 2,760)	A
	2.2 + 2.8 + 2.8	1.90	2.45	2.45	6.80 (2.5 - 8.1)	8.50	1,950 (460 - 2,780)	A	975	2.40	3.10	3.10	8.60 (3.2 - 9.0)	8.45	1,930 (510 - 2,730)	A
	2.2 + 2.8 + 3.2	1.80	2.35	2.65	6.80 (2.6 - 8.1)	8.70	1,980 (460 - 2,790)	A	990	2.30	2.95	3.35	8.60 (3.2 - 8.8)	8.45	1,930 (510 - 2,760)	A
	2.2 + 2.8 + 4.0	1.65	2.15	3.00	6.80 (2.7 - 8.2)	8.60	1,960 (490 - 2,790)	A	980	2.10	2.70	3.80	8.60 (3.2 - 9.0)	8.35	1,910 (510 - 2,760)	A
	2.2 + 2.8 + 5.0	1.50	1.90	3.40	6.80 (2.8 - 8.3)	8.50	1,950 (490 - 2,790)	A	975	1.90	2.40	4.30	8.60 (3.5 - 9.0)	8.45	1,920 (560 - 2,730)	A
	2.2 + 3.2 + 3.2	1.70	2.55	2.55	6.80 (2.7 - 8.3)	8.60	1,970 (460 - 2,800)	A	985	2.20	3.20	3.20	8.60 (3.2 - 9.1)	8.35	1,910 (500 - 2,710)	A
	2.2 + 3.2 + 4.0	1.60	2.30	2.90	6.80 (2.8 - 8.3)	8.50	1,950 (490 - 2,800)	A	975	2.00	2.95	3.65	8.60 (3.2 - 9.0)	8.25	1,890 (500 - 2,710)	A
	2.8 + 2.8 + 2.8	2.26	2.26	2.26	6.78 (2.6 - 8.1)	8.50	1,940 (460 - 2,820)	A	970	2.86	2.86	2.86	8.58 (3.2 - 9.0)	8.35	1,910 (510 - 2,760)	A
	2.8 + 2.8 + 3.2	2.15	2.15	2.50	6.80 (2.7 - 8.2)	8.60	1,960 (490 - 2,790)	A	980	2.75	2.75	3.10	8.60 (3.2 - 9.0)	8.45	1,920 (510 - 2,760)	A
	2.8 + 2.8 + 4.0	2.00	2.00	2.80	6.80 (2.8 - 8.2)	8.50	1,950 (490 - 2,790)	A	975	2.50	2.50	3.60	8.60 (3.3 - 9.0)	8.35	1,900 (530 - 2,760)	A
	2.8 + 3.2 + 3.2	2.10	2.35	2.35	6.80 (2.7 - 8.3)	8.60	1,960 (490 - 2,800)	A	980	2.60	3.00	3.00	8.60 (3.2 - 9.0)	8.35	1,900 (500 - 2,710)	A
	2.8 + 3.2 + 4.0	1.90	2.20	2.70	6.80 (2.8 - 8.4)	8.50	1,950 (490 - 2,800)	A	975	2.40	2.75	3.45	8.60 (3.5 - 9.1)	8.30	1,880 (560 - 2,710)	A
	3.2 + 3.2 + 3.2	2.26	2.26	2.26	6.78 (2.8 - 8.5)	8.60	1,960 (490 - 2,800)	A	980	2.86	2.86	2.86	8.58 (3.3 - 9.1)	8.10	1,850 (520 - 2,670)	A

CU-4E27CBPG

A.E.C. : Annual Energy Consumption

	Indoor Units Capacity	Cooling Operation: Cooling Capacity Room A (kW)	Room B (kW)	Room C (kW)	Room D (kW)	Total (kW)	Running Current (A)	Power Input (W)	Cooling Class	A.E.C.# (kW)	Heating Operation: Heating Capacity Room A (kW)	Room B (kW)	Room C (kW)	Room D (kW)	Total (kW)	Running Current (A)	Power Input (W)	Heating Class
1 room	2.2	2.20	–	–	–	2.20 (1.9 - 2.7)	2.25	450 (380 - 620)	A	225	3.20	–	–	–	3.20 (1.7 - 4.7)	3.85	840 (370 - 1,830)	A
	2.8	2.80	–	–	–	2.80 (2.0 - 3.4)	2.95	620 (380 - 900)	A	310	4.00	–	–	–	4.00 (1.7 - 4.8)	5.40	1,210 (370 - 1,900)	C
	3.2	3.20	–	–	–	3.20 (2.0 - 3.9)	3.40	720 (380 - 1,090)	A	360	4.50	–	–	–	4.50 (1.7 - 5.8)	5.85	1,310 (370 - 2,290)	B
	4.0	4.00	–	–	–	4.00 (2.0 - 4.4)	4.60	1,030 (380 - 1,390)	A	515	5.60	–	–	–	5.60 (1.8 - 7.2)	8.35	1,900 (370 - 3,560)	D
	5.0	5.00	–	–	–	5.00 (2.1 - 5.2)	7.15	1,610 (400 - 1,800)	B	805	7.10	–	–	–	7.10 (2.1 - 7.3)	12.4	2,840 (430 - 3,560)	F
2 room	2.2 + 2.2	2.20	2.20	–	–	4.40 (2.1 - 5.0)	4.45	980 (400 - 1,260)	A	490	3.20	3.20	–	–	6.40 (1.8 - 9.4)	6.50	1,480 (400 - 3,550)	A
	2.2 + 2.8	2.20	2.80	–	–	5.00 (2.1 - 6.1)	5.50	1,230 (400 - 1,880)	A	615	3.10	4.00	–	–	7.10 (2.1 - 9.4)	7.55	1,700 (420 - 3,510)	A
	2.2 + 3.2	2.20	3.20	–	–	5.40 (2.2 - 7.0)	6.10	1,370 (400 - 2,790)	A	685	3.05	4.45	–	–	7.50 (2.2 - 9.8)	7.65	1,740 (420 - 3,490)	A
	2.2 + 4.0	2.20	4.00	–	–	6.20 (2.2 - 7.1)	8.00	1,820 (400 - 2,790)	A	910	3.00	5.30	–	–	8.30 (2.4 - 9.8)	9.05	2,060 (440 - 3,440)	A
	2.2 + 5.0	2.10	4.90	–	–	7.00 (2.5 - 7.2)	11.0	2,500 (460 - 2,800)	D	1,250	2.70	6.10	–	–	8.80 (3.2 - 9.9)	9.90	2,260 (530 - 3,400)	A
	2.8 + 2.8	2.80	2.80	–	–	5.60 (2.2 - 6.9)	6.85	1,550 (400 - 2,780)	A	775	3.85	3.85	–	–	7.70 (2.3 - 9.4)	8.85	2,020 (440 - 3,480)	A
	2.8 + 3.2	2.80	3.20	–	–	6.00 (2.2 - 7.0)	7.55	1,700 (400 - 2,790)	A	850	3.80	4.30	–	–	8.10 (2.4 - 9.8)	8.70	1,980 (440 - 3,460)	A
	2.8 + 4.0	2.80	4.00	–	–	6.80 (2.2 - 7.1)	10.0	2,280 (400 - 2,790)	C	1,140	3.55	5.05	–	–	8.60 (2.1 - 9.8)	9.65	2,175 (530 - 3,390)	A
	2.8 + 5.0	2.55	4.55	–	–	7.10 (2.5 - 7.2)	11.5	2,610 (460 - 2,800)	D	1,305	3.25	5.75	–	–	9.00 (3.2 - 9.9)	10.5	2,390 (530 - 3,370)	A
	3.2 + 3.2	3.20	3.20	–	–	6.40 (2.2 - 7.3)	8.15	1,860 (400 - 2,810)	A	930	4.25	4.25	–	–	8.50 (2.5 - 10.1)	9.30	2,110 (470 - 3,390)	A
	3.2 + 4.0	3.10	3.90	–	–	7.00 (2.5 - 7.3)	10.6	2,410 (460 - 2,810)	C	1,205	3.90	4.90	–	–	8.80 (3.2 - 10.1)	9.85	2,230 (530 - 3,340)	A
	3.2 + 5.0	2.90	4.50	–	–	7.40 (2.6 - 7.4)	12.3	2,820 (460 - 2,880)	D	1,410	3.60	5.60	–	–	9.20 (3.2 - 10.1)	10.5	2,390 (530 - 3,300)	A
	4.0 + 4.0	3.60	3.60	–	–	7.20 (2.5 - 7.3)	11.5	2,620 (460 - 2,810)	D	1,310	4.55	4.55	–	–	9.10 (3.2 - 10.1)	10.3	2,360 (530 - 3,320)	A
	4.0 + 5.0	3.25	4.05	–	–	7.30 (2.7 - 7.4)	11.7	2,670 (480 - 2,820)	D	1,335	4.20	5.20	–	–	9.40 (3.2 - 10.2)	10.9	2,480 (530 - 3,300)	A
	5.0 + 5.0	3.75	3.75	–	–	7.50 (2.8 - 7.6)	12.5	2,860 (480 - 2,870)	D	1,430	4.70	4.70	–	–	9.40 (3.5 - 10.2)	10.9	2,470 (590 - 3,290)	A
3 room	2.2 + 2.2 + 2.2	2.20	2.20	2.20	–	6.60 (2.2 - 7.8)	7.40	1,660 (410 - 2,490)	A	830	2.87	2.87	2.87	–	8.61 (3.1 - 10.4)	8.80	1,990 (500 - 3,250)	A
	2.2 + 2.2 + 2.8	2.15	2.15	2.70	–	7.00 (2.5 - 8.1)	8.25	1,890 (460 - 2,850)	A	945	2.70	2.70	3.40	–	8.80 (3.2 - 10.4)	8.85	2,010 (510 - 3,220)	A
	2.2 + 2.2 + 3.2	2.10	2.10	3.10	–	7.30 (2.5 - 8.2)	8.70	1,980 (460 - 2,790)	A	990	2.60	2.60	3.70	–	8.90 (3.2 - 10.4)	8.95	2,030 (510 - 3,220)	A
	2.2 + 2.2 + 4.0	2.05	2.05	3.70	–	7.80 (2.6 - 8.2)	10.3	2,330 (460 - 2,830)	A	1,165	2.40	2.40	4.40	–	9.20 (3.2 - 10.4)	9.50	2,150 (510 - 3,180)	A
	2.2 + 2.2 + 5.0	1.85	1.85	4.30	–	8.00 (2.8 - 8.3)	10.8	2,460 (490 - 2,820)	A	1,230	2.20	2.20	5.00	–	9.40 (3.2 - 10.4)	9.30	2,120 (510 - 3,180)	A
	2.2 + 2.8 + 2.8	2.10	2.65	2.65	–	7.40 (2.5 - 8.1)	9.40	2,140 (460 - 2,790)	A	1,070	2.50	3.25	3.25	–	9.00 (3.2 - 10.4)	9.20	2,090 (510 - 3,190)	A
	2.2 + 2.8 + 3.2	2.00	2.60	3.00	–	7.60 (2.6 - 8.2)	9.85	2,240 (460 - 2,840)	A	1,120	2.45	3.15	3.60	–	9.20 (3.2 - 10.4)	9.30	2,110 (510 - 3,180)	A
	2.2 + 2.8 + 4.0	1.95	2.50	3.55	–	8.00 (2.7 - 8.2)	11.0	2,510 (490 - 2,800)	B	1,255	2.30	2.90	4.20	–	9.40 (3.2 - 10.4)	9.50	2,160 (510 - 3,140)	A
	2.2 + 2.8 + 5.0	1.75	2.25	4.00	–	8.00 (2.8 - 8.3)	10.8	2,460 (490 - 2,800)	A	1,230	2.05	2.65	4.70	–	9.40 (3.5 - 10.4)	9.15	2,080 (560 - 3,150)	A
	2.2 + 3.2 + 3.2	2.00	2.95	2.95	–	7.90 (2.7 - 8.3)	10.1	2,290 (460 - 2,810)	A	1,145	2.40	3.45	3.45	–	9.30 (3.2 - 10.5)	9.40	2,130 (500 - 3,180)	A
	2.2 + 3.2 + 4.0	1.90	2.70	3.40	–	8.00 (2.8 - 8.4)	10.4	2,380 (490 - 2,840)	A	1,190	2.20	3.20	4.00	–	9.40 (3.2 - 10.5)	9.50	2,150 (500 - 3,140)	A
	2.2 + 3.2 + 5.0	1.70	2.45	3.85	–	8.00 (2.8 - 8.3)	10.9	2,470 (490 - 2,840)	A	1,235	2.00	2.90	4.50	–	9.40 (3.7 - 10.5)	9.55	2,170 (620 - 3,140)	A
	2.2 + 4.0 + 4.0	1.70	3.15	3.15	–	8.00 (2.8 - 8.4)	10.4	2,380 (490 - 2,810)	A	1,190	2.00	3.70	3.70	–	9.40 (3.6 - 10.5)	9.30	2,110 (620 - 3,110)	A
	2.2 + 4.0 + 5.0	1.60	2.85	3.55	–	8.00 (2.8 - 8.3)	10.9	2,470 (490 - 2,810)	A	1,235	1.85	3.35	4.20	–	9.40 (3.9 - 10.5)	9.30	2,120 (660 - 3,110)	A
	2.2 + 5.0 + 5.0	1.40	3.30	3.30	–	8.00 (2.9 - 8.4)	10.7	2,430 (490 - 2,830)	A	1,215	1.70	3.85	3.85	–	9.40 (4.1 - 10.5)	9.55	2,170 (700 - 3,120)	A
	2.8 + 2.8 + 2.8	2.60	2.60	2.60	–	7.80 (2.6 - 8.1)	10.8	2,450 (460 - 2,820)	B	1,225	3.08	3.08	3.08	–	9.24 (3.2 - 10.4)	9.55	2,170 (510 - 3,160)	A
	2.8 + 2.8 + 3.2	2.55	2.55	2.90	–	8.00 (2.7 - 8.2)	11.0	2,510 (490 - 2,810)	B	1,255	3.00	3.00	3.40	–	9.40 (3.2 - 10.4)	9.65	2,190 (510 - 3,150)	A
	2.8 + 2.8 + 4.0	2.35	2.35	3.30	–	8.00 (2.8 - 8.2)	11.0	2,510 (490 - 2,790)	B	1,255	2.75	2.75	3.90	–	9.40 (3.3 - 10.4)	9.40	2,140 (530 - 3,130)	A
	2.8 + 2.8 + 5.0	2.10	2.10	3.80	–	8.00 (2.8 - 8.3)	10.8	2,460 (490 - 2,790)	A	1,230	2.50	2.50	4.40	–	9.40 (3.8 - 10.4)	9.20	2,100 (640 - 3,120)	A
	2.8 + 3.2 + 3.2	2.40	2.80	2.80	–	8.00 (2.7 - 8.4)	10.4	2,380 (490 - 2,850)	A	1,190	2.90	3.25	3.25	–	9.40 (3.2 - 10.5)	9.55	2,170 (500 - 3,150)	A
	2.8 + 3.2 + 4.0	2.25	2.55	3.20	–	8.00 (2.8 - 8.4)	10.4	2,380 (490 - 2,820)	A	1,190	2.65	3.00	3.75	–	9.40 (3.5 - 10.5)	9.40	2,130 (560 - 3,120)	A
	2.8 + 3.2 + 5.0	2.05	2.30	3.65	–	8.00 (2.8 - 8.4)	10.3	2,340 (490 - 2,830)	A	1,170	2.40	2.70	4.30	–	9.40 (3.9 - 10.5)	9.50	2,150 (660 - 3,120)	A
	2.8 + 4.0 + 4.0	2.10	2.95	2.95	–	8.00 (2.8 - 8.4)	10.4	2,380 (490 - 2,800)	A	1,190	2.40	3.50	3.50	–	9.40 (3.8 - 10.5)	9.05	2,060 (640 - 3,080)	A
	2.8 + 4.0 + 5.0	1.90	2.70	3.40	–	8.00 (2.8 - 8.4)	10.3	2,340 (490 - 2,800)	A	1,170	2.20	3.20	4.00	–	9.40 (4.0 - 10.5)	9.20	2,100 (680 - 3,080)	A
	2.8 + 5.0 + 5.0	1.70	3.15	3.15	–	8.00 (2.9 - 8.5)	10.3	2,340 (520 - 2,800)	A	1,170	2.10	3.65	3.65	–	9.40 (4.2 - 10.5)	9.40	2,140 (700 - 3,080)	A
	3.2 + 3.2 + 3.2	2.66	2.66	2.66	–	7.98 (2.8 - 8.5)	10.1	2,300 (490 - 2,830)	A	1,150	3.13	3.13	3.13	–	9.39 (3.3 - 10.5)	9.50	2,160 (520 - 3,180)	A
	3.2 + 3.2 + 4.0	2.45	2.45	3.10	–	8.00 (2.8 - 8.4)	10.5	2,390 (490 - 2,800)	A	1,195	2.90	2.90	3.60	–	9.40 (3.7 - 10.5)	9.40	2,140 (620 - 3,150)	A
	3.2 + 3.2 + 5.0	2.25	2.25	3.50	–	8.00 (2.8 - 8.4)	10.5	2,390 (490 - 2,830)	A	1,195	2.65	2.65	4.10	–	9.40 (4.0 - 10.5)	9.40	2,130 (680 - 3,120)	A
	3.2 + 4.0 + 4.0	2.30	2.85	2.85	–	8.00 (2.8 - 8.4)	10.5	2,390 (490 - 2,820)	A	1,195	2.70	3.35	3.35	–	9.40 (3.9 - 10.5)	9.30	2,120 (660 - 3,120)	A
	3.2 + 4.0 + 5.0	2.10	2.60	3.30	–	8.00 (2.9 - 8.4)	10.3	2,350 (490 - 2,820)	A	1,175	2.45	3.10	3.85	–	9.40 (4.1 - 10.5)	9.20	2,100 (700 - 3,100)	A
	3.2 + 5.0 + 5.0	1.90	3.05	3.05	–	8.00 (2.9 - 8.5)	10.3	2,350 (520 - 2,810)	A	1,175	2.30	3.55	3.55	–	9.40 (4.2 - 10.5)	9.05	2,060 (700 - 3,080)	A
	4.0 + 4.0 + 4.0	2.66	2.66	2.66	–	7.98 (2.9 - 8.4)	10.5	2,390 (490 - 2,840)	A	1,195	3.13	3.13	3.13	–	9.39 (4.0 - 10.5)	9.20	2,100 (680 - 3,080)	A
	4.0 + 4.0 + 5.0	2.45	2.45	3.10	–	8.00 (2.9 - 8.4)	10.5	2,390 (520 - 2,810)	A	1,195	2.90	2.90	3.60	–	9.40 (4.2 - 10.5)	9.15	2,080 (700 - 3,080)	A
4 room	2.2 + 2.2 + 2.2 + 2.2	2.00	2.00	2.00	2.00	8.00 (2.7 - 8.8)	9.50	2,150 (490 - 2,840)	A	1,075	2.35	2.35	2.35	2.35	9.40 (3.2 - 10.5)	9.15	2,080 (550 - 3,140)	A
	2.2 + 2.2 + 2.2 + 2.8	1.85	1.85	1.85	2.45	8.00 (2.8 - 8.8)	9.40	2,140 (490 - 2,880)	A	1,070	2.20	2.20	2.20	2.80	9.40 (3.2 - 10.5)	9.05	2,060 (550 - 3,120)	A
	2.2 + 2.2 + 2.2 + 3.2	1.80	1.80	1.80	2.60	8.00 (2.8 - 8.9)	9.40	2,130 (490 - 2,880)	A	1,065	2.10	2.10	2.10	3.10	9.40 (3.4 - 10.5)	9.30	2,120 (590 - 3,180)	A
	2.2 + 2.2 + 2.2 + 4.0	1.65	1.65	1.65	3.05	8.00 (2.8 - 8.9)	9.30	2,110 (490 - 2,870)	A	1,055	1.95	1.95	1.95	3.55	9.40 (3.8 - 10.5)	9.20	2,090 (640 - 3,140)	A
	2.2 + 2.2 + 2.2 + 5.0	1.50	1.50	1.50	3.50	8.00 (2.8 - 8.9)	9.30	2,110 (490 - 2,840)	A	1,055	1.80	1.80	1.80	4.00	9.40 (4.0 - 10.5)	9.30	2,120 (680 - 3,110)	A
	2.2 + 2.2 + 2.8 + 2.8	1.75	1.75	2.25	2.25	8.00 (2.8 - 8.8)	9.40	2,130 (490 - 2,870)	A	1,065	2.05	2.05	2.65	2.65	9.40 (3.5 - 10.5)	9.05	2,050 (610 - 3,110)	A
	2.2 + 2.2 + 2.8 + 3.2	1.70	1.70	2.15	2.45	8.00 (2.8 - 8.9)	9.30	2,120 (490 - 2,870)	A	1,060	2.00	2.00	2.50	2.90	9.40 (3.7 - 10.5)	9.20	2,100 (620 - 3,160)	A
	2.2 + 2.2 + 2.8 + 4.0	1.55	1.55	2.00	2.90	8.00 (2.8 - 8.9)	9.20	2,090 (490 - 2,840)	A	1,045	1.85	1.85	2.35	3.35	9.40 (3.9 - 10.5)	9.10	2,070 (660 - 3,110)	A
	2.2 + 2.2 + 2.8 + 5.0	1.45	1.45	1.85	3.25	8.00 (2.9 - 8.9)	9.30	2,110 (520 - 2,880)	A	1,055	1.70	1.70	2.15	3.85	9.40 (4.1 - 10.5)	9.20	2,090 (700 - 3,100)	A
	2.2 + 2.2 + 3.2 + 3.2	1.65	1.65	2.35	2.35	8.00 (2.8 - 8.9)	9.20	2,090 (500 - 2,870)	A	1,045	1.90	1.90	2.80	2.80	9.40 (3.8 - 10.5)	9.30	2,110 (640 - 3,190)	A
	2.2 + 2.2 + 3.2 + 4.0	1.50	1.50	2.20	2.80	8.00 (2.8 - 8.9)	9.15	2,080 (500 - 2,840)	A	1,040	1.80	1.80	2.55	3.25	9.40 (4.0 - 10.5)	9.15	2,080 (680 - 3,150)	A
	2.2 + 2.2 + 3.2 + 5.0	1.40	1.40	2.05	3.15	8.00 (2.9 - 9.0)	8.95	2,040 (520 - 2,860)	A	1,020	1.65	1.65	2.40	3.70	9.40 (4.1 - 10.5)	9.30	2,110 (700 - 3,080)	A
	2.2 + 2.2 + 4.0 + 4.0	1.40	1.40	2.60	2.60	8.00 (2.9 - 9.0)	9.05	2,060 (520 - 2,850)	A	1,030	1.65	1.65	3.05	3.05	9.40 (4.1 - 10.5)	9.05	2,050 (700 - 3,110)	A
	2.2 + 2.2 + 4.0 + 5.0	1.30	1.30	2.40	3.00	8.00 (2.9 - 9.0)	8.85	2,020 (520 - 2,880)	A	1,010	1.55	1.55	2.80	3.50	9.40 (4.2 - 10.5)	9.15	2,080 (700 - 3,060)	A
	2.2 + 2.8 + 2.8 + 2.8	1.70	2.10	2.10	2.10	8.00 (2.8 - 8.8)	9.30	2,120 (490 - 2,850)	A	1,060	1.90	2.50	2.50	2.50	9.40 (3.8 - 10.5)	8.95	2,040 (640 - 3,080)	A
	2.2 + 2.8 + 2.8 + 3.2	1.60	2.05	2.05	2.30	8.00 (2.8 - 8.9)	9.20	2,100 (490 - 2,850)	A	1,050	1.85	2.40	2.40	2.75	9.40 (3.9 - 10.5)	9.15	2,080 (660 - 3,130)	A
	2.2 + 2.8 + 2.8 + 4.0	1.50	1.90	1.90	2.70	8.00 (2.8 - 8.9)	9.40	2,130 (490 - 2,860)	A	1,065	1.75	2.25	2.25	3.15	9.40 (4.0 - 10.5)	9.05	2,050 (680 - 3,080)	A
	2.2 + 2.8 + 2.8 + 5.0	1.40	1.75	1.75	3.10	8.00 (2.9 - 8.9)	9.30	2,110 (520 - 2,860)	A	1,055	1.65	2.05	2.05	3.65	9.40 (4.2 - 10.5)	9.15	2,080 (700 - 3,080)	A
	2.2 + 2.8 + 3.2 + 3.2	1.55	1.95	2.25	2.25	8.00 (2.8 - 8.9)	9.40	2,130 (500 - 2,850)	A	1,065	1.80	2.30	2.65	2.65	9.40 (4.0 - 10.5)	9.20	2,090 (680 - 3,180)	A
	2.2 + 2.8 + 3.2 + 4.0	1.45	1.85	2.10	2.60	8.00 (2.9 - 9.0)	9.15	2,070 (520 - 2,860)	A	1,035	1.70	2.15	2.45	3.10	9.40 (4.1 - 10.5)	9.05	2,060 (700 - 3,120)	A
	2.2 + 2.8 + 3.2 + 5.0	1.30	1.70	1.95	3.05	8.00 (2.9 - 9.0)	8.95	2,030 (520 - 2,840)	A	1,015	1.55	2.00	2.30	3.55	9.40 (4.2 - 10.5)	9.20	2,090 (700 - 3,080)	A
	2.2 + 2.8 + 4.0 + 4.0	1.35	1.75	2.45	2.45	8.00 (2.9 - 9.0)	8.95	2,040 (520 - 2,870)	A	1,020	1.60	2.00	2.90	2.90	9.40 (4.2 - 10.5)	8.95	2,030 (700 - 3,080)	A
	2.2 + 3.2 + 3.2 + 3.2	1.55	2.15	2.15	2.15	8.00 (2.8 - 9.1)	8.95	2,040 (500 - 2,870)	A	1,020	1.75	2.55	2.55	2.55	9.40 (4.0 - 10.6)	9.30	2,110 (680 - 3,120)	A
	2.2 + 3.2 + 3.2 + 4.0	1.40	2.05	2.05	2.50	8.00 (2.9 - 9.1)	8.85	2,020 (520 - 2,840)	A	1,010	1.60	2.40	2.40	3.00	9.40 (4.1 - 10.6)	9.15	2,080 (700 - 3,080)	A
	2.2 + 3.2 + 3.2 + 5.0	1.30	1.90	1.90	2.90	8.00 (3.0 - 9.2)	8.80	2,000 (530 - 2,870)	A	1,000	1.55	2.20	2.20	3.45	9.40 (4.2 - 10.6)	9.30	2,110 (700 - 3,060)	A
	2.2 + 3.2 + 4.0 + 4.0	1.30	1.90	2.40	2.40	8.00 (2.9 - 9.1)	9.20	2,090 (520 - 2,860)	A	1,045	1.55	2.25	2.80	2.80	9.40 (4.2 - 10.6)	9.05	2,060 (700 - 3,060)	A
	2.8 + 2.8 + 2.8 + 2.8	2.00	2.00	2.00	2.00	8.00 (2.8 - 8.8)	9.30	2,110 (490 - 2,840)	A	1,055	2.35	2.35	2.35	2.35	9.40 (3.9 - 10.5)	8.95	2,030 (660 - 3,080)	A
	2.8 + 2.8 + 2.8 + 3.2	1.95	1.95	1.95	2.15	8.00 (2.8 - 8.9)	9.20	2,090 (490 - 2,870)	A	1,045	2.25	2.25	2.25	2.65	9.40 (4.0 - 10.5)	9.05	2,060 (680 - 3,100)	A
	2.8 + 2.8 + 2.8 + 4.0	1.80	1.80	1.80	2.60	8.00 (2.9 - 8.9)	9.30	2,120 (520 - 2,850)	A	1,060	2.10	2.10	2.10	3.10	9.40 (4.1 - 10.5)	8.95	2,040 (700 - 3,070)	A
	2.8 + 2.8 + 2.8 + 5.0	1.65	1.65	1.65	3.05	8.00 (2.9 - 8.9)	9.30	2,110 (520 - 2,850)	A	1,055	1.95	1.95	1.95	3.55	9.40 (4.2 - 10.5)	9.15	2,070 (700 - 3,070)	A
	2.8 + 2.8 + 3.2 + 3.2	1.85	1.85	2.15	2.15	8.00 (2.9 - 9.0)	9.15	2,080 (500 - 2,870)	A	1,040	2.20	2.20	2.50	2.50	9.40 (4.0 - 10.5)	9.15	2,070 (680 - 3,140)	A
	2.8 + 2.8 + 3.2 + 4.0	1.75	1.75	2.00	2.50	8.00 (2.9 - 9.0)	9.05	2,050 (520 - 2,880)	A	1,025	2.05	2.05	2.35	2.95	9.40 (4.2 - 10.5)	8.95	2,040 (700 - 3,080)	A
	2.8 + 2.8 + 4.0 + 4.0	1.65	1.65	2.35	2.35	8.00 (3.0 - 9.0)	8.95	2,040 (520 - 2,860)	A	1,020	1.95	1.95	2.75	2.75	9.40 (4.2 - 10.5)	8.85	2,020 (700 - 3,070)	A
	2.8 + 3.2 + 3.2 + 3.2	1.85	2.05	2.05	2.05	8.00 (2.9 - 9.1)	8.95	2,030 (520 - 2,860)	A	1,015	2.05	2.45	2.45	2.45	9.40 (4.1 - 10.6)	9.20	2,090 (700 - 3,100)	A
	2.8 + 3.2 + 3.2 + 4.0	1.70	1.95	1.95	2.40	8.00 (2.9 - 9.1)	8.85	2,010 (520 - 2,880)	A	1,005	1.95	2.30	2.30	2.85	9.40 (4.2 - 10.6)	9.15	2,070 (700 - 3,080)	A
	3.2 + 3.2 + 3.2 + 3.2	2.00	2.00	2.00	2.00	8.00 (2.9 - 9.2)	8.80	2,000 (530 - 2,850)	A	1,000	2.35	2.35	2.35	2.35	9.40 (4.2 - 10.6)	9.30	2,110 (700 - 3,080)	A
	3.2 + 3.2 + 3.2 + 4.0	1.90	1.90	1.90	2.30	8.00 (3.0 - 9.2)	8.70	1,980 (530 - 2,870)	A	990	2.20	2.20	2.20	2.80	9.40 (4.2 - 10.6)	9.10	2,080 (700 - 3,060)	A

Multi Inverter Split Approximate Cooling and Heating Capacities

- The capacities shown here cover the operating patterns of all indoor unit combinations.
- How to Read the Table
  Indoor unit combinations are shown here as the number of units operating, and their capacity class.

Note: When the Multi Inverter Split Type is used to operate two or more indoor units simultaneously, the capacity of each indoor unit may be lower than that when operating only one indoor unit. Be sure to refer to the following table to select the appropriate models.

2 rooms	2.2 + 2.2	A combination of two 2.2-kW indoor units
	2.2 + 2.8	A combination of one 2.2-kW indoor unit and one 2.8-kW indoor unit

Specifications

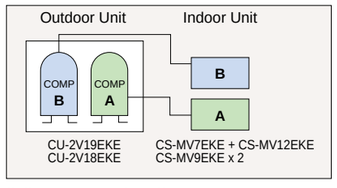
Multi Split R410A

Model (50Hz)		CS-MV9EKEx2 (CU-2V14EKE)		CS-MV9EKEx2 (CU-2V18EKE)		Unit **B: CS-MV7EKE** Unit **A: CS-MV12EKE** (CU-2V19EKE)		
Operation		1 Unit	2 Units	1 Unit	2 Units	1 Unit **B**	1 Unit **A**	2 Units **B+A**
Cooling Capacity	kW	2.94	3.63	2.65	5.30	2.06	3.48	5.54
	kcal/h	2,530	3,120	2,280	4,560	1,770	2,990	4,760
EER	W/W	2.49	2.93	3.05	3.05	2.86	2.83	3.01
Electrical Data Voltage	V	230	230	230	230	230	230	230
Running Current	A	5.3	5.6	4.0	8.0	3.2	5.5	8.3
Power Input	W	1,180	1,240	870	1,740	720	1,230	1,840
Noise: Sound Pressure Level Indoor (Hi/Lo)	dB(A)	36/26	36/26	36/26	36/26	33/26	39/29	**B** 33/26 **A** 39/29
Noise: Outdoor (Hi)	dB(A)	47	47	55	55	55	55	55
Noise: Sound Power Level* Indoor (Hi)	dB	49	49	49	49	46	52	**B** 46 **A** 52
Noise: Outdoor (Hi)	dB	62	62	70	70	70	70	70
Moisture Removal	L/h	1.7	2.1	1.6	2.9	1.3	2.0	3.0
Air Circulation (Indoor/Hi)	m³/min	9.1		9.1		7.9	9.6	**B** 7.9 **A** 9.6
Dimensions Indoor (Outdoor) Height	mm	280 (540)		280 (651)		280 (651)		
Width	mm	799 (760)		799 (893)		799 (893)		
Depth	mm	183 (250)		183 (345)		183 (345)		
Net Weight Indoor (Outdoor)	kg	9 (34)		9 (64)		9 (66)		
Refrigerant Pipe Diameter Liquid Side	mm inch	6.35 1/4"		6.35 1/4"		6.35 1/4"		
Gas Side	mm inch	9.52 3/8"		9.52 3/8"		**B** 9.52 3/8"	**A** 12.70 1/2"	
Pipe Extension Minimum Pipe Length	m	3		3		3		
Maximum Pipe Length**	m	15		15		15		
Power Supply		Outdoor		Outdoor		Outdoor		
Energy Saving Classification: Cooling Class		E	C	B	B	C	C	B
Annual Energy Consumption	kW	590	620	435	870	360	615	920

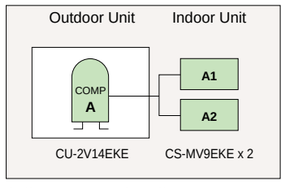
Multi Split R410A

Model (50Hz)		Unit **B, A1, A2:CS-MV9EKEx3** (CU-3V20EKE)				
Operation		1 Unit **B**	1 Unit **A1 or A2**	2 Units **B+A1 or A2**	2 Units **A1+A2**	3 Units **B+A1+A2**
Cooling Capacity	kW	2.68	2.89	5.57	3.74	6.42
	kcal/h	2,300	2,490	4,790	3,220	5,520
EER	W/W	2.95	2.58	2.87	3.12	3.23
Electrical Data Voltage	V	230	230	230	230	230
Running Current	A	4.1	5.0	8.6	5.3	8.9
Power Input	W	910	1,120	1,940	1,200	1,990
Noise: Sound Pressure Level Indoor (Hi/Lo)	dB(A)	36/26	36/26	36/26	36/26	36/26
Noise: Outdoor (Hi)	dB(A)	56	56	56	56	56
Noise: Sound Power Level* Indoor (Hi)	dB	49	49	49	49	49
Noise: Outdoor (Hi)	dB	71	71	71	71	71
Moisture Removal	L/h	1.6	1.7	3.0	2.2	3.6
Air Circulation (Indoor/Hi)	m³/min	9.1	9.1	9.1	9.1	9.1
Dimensions Indoor (Outdoor) Height	mm	280 (651)				
Width	mm	799 (893)				
Depth	mm	183 (345)				
Net Weight Indoor (Outdoor)	kg	9 (66)				
Refrigerant Pipe Diameter Liquid Side	mm inch	6.35 1/4"				
Gas Side	mm inch	9.52 3/8"				
Pipe Extension Minimum Pipe Length	m	3				
Maximum Pipe Length**	m	15				
Power Supply		Outdoor				
Energy Saving Classification: Cooling Class		C	E	C	B	A
Annual Energy Consumption	kW	455	560	970	600	995

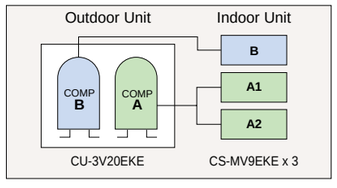
Multi Split Type : System Configuration



2-Compressor Dual Split Type
Two compressors independently drive two indoor units so there is no loss in capacity when both indoor units are operating.



1-Compressor Dual Split Type
A single compressor can cool one or two rooms as required.



2-Compressor Triple Split Type
One compressor drives one indoor unit to cool one room, while another drives two indoor units to cool two rooms.

* The cooling sound power level specification is based on EUROVENT Document 6/C/006-97.
** Additional Gas might be required for some models.
\# For models with the Air Purifying Filter, the specifications indicate values with the filter removed.

Rating Conditions

	Cooling	Heating
Inside air temperature	27°C DB/19°C WB	20°C DB
Outside air temperature	35°C DB/24°C WB	7°C DB/6°C WB

Caution (Important)
Please do not use copper pipes which the thickness is less than 0.8mm.

ISO 9000 Series Certification

QUALITY SYSTEM
SIRIM

CERTIFIED TO MS ISO 9002: 1994
Panasonic HA Air-Conditioning (M) Sdn. Bhd. (PHAAM)
Registration No.: AR 0866

TÜV CERT
DIN EN ISO 9001
Certificate: 09 100 5766

CERTIFIED TO DIN EN ISO 9001: 1994
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.
AIR-CONDITIONER DIVISION
Certificate Registration No.09 100 5766

Environmental Management Systems Approval Certificate

ENVIRONMENTAL SYSTEM
SIRIM
UKAS ENVIRONMENTAL MANAGEMENT
074
MS ISO 14001 CERT. NO. MO 15802127

CERTIFIED TO MS ISO 14001: 1997
Panasonic HA Air-Conditioning (M) Sdn. Bhd. (PHAAM)
Certification No.: M015802127

UKAS ENVIRONMENTAL MANAGEMENT
001

CERTIFIED TO ISO 14001: 1996
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.
AIR-CONDITIONER DIVISION
Approval Certificate No.: 771754

Feature Explanations

Healthy Air Quality

AC Robot (Auto Cleaning Robot)

Automatically removes dust from the filter and exhausts it outside the unit to keep the inside clean.

The vacuum nozzle slides over the filter after each use* to vacuum the dust and exhaust it outside automatically.

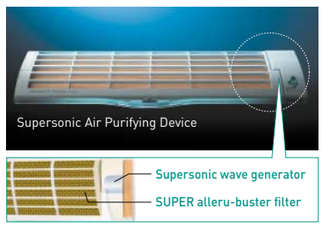
*The size of the area to be cleaned is determined based on cumulative operating hours and fan speed.

Ion Freshener

It is known that areas rich in negative ions, like near waterfalls and forests, generally make people feel refreshed. With Panasonic split air conditioner, the same refreshing feeling can be felt just by pushing a single button.

Supersonic Air Purifying System

The Supersonic Air Purifying System incorporated in the indoor unit generates supersonic waves. The system works in combination with the filter to collect dust and dirt in the air for faster, more efficient air purification.



SUPER alleru-buster filter

The SUPER alleru-buster filter combines three effects in one — anti-allergen, anti-virus, and anti-bacteria protection — to keep room air clean and healthful.

Anti-allergen protection

Inactivates more than **99%** of all filter-captured allergens

Here, inactivate means to suppress normal activity. This inactivation of mite allergens has been verified by the University of Edinburgh in the UK.

Anti-virus protection

Inactivates more than **99%** of all filter-captured viruses

Anti-bacteria/Anti-mould protection

Enzymatic action eliminates more than **99%** of all filter-captured bacteria

Air Quality Indicator

This indicator helps monitor the condition of the air quality in the room, and tells when ventilation is needed.

You turn on AC with window closed

Green Lamp: Air quality is normal

Orange Lamp: Air quality is deteriorating, and it is recommended to let in fresh air (i.e. open the window)

Red Lamp: Air quality is very poor and ventilation is needed immediately

You start to let fresh air in

Orange Lamp: Air quality is improving

Green Lamp: Air quality resumed normal

You can stop the ventilation

Anti-Mould, One-Touch Air Filter

Odour-Removing Function

With this function, there's no unpleasant odour when the unit starts up. That's because the fan remains off momentarily, while the source of the odour inside the air conditioner is suppressed.

*The unit must be in cool or dry mode and the fan speed must be set to automatic.

Removable, Washable Panel

The front panel is easy to keep clean. It removes quickly with a simple one-step operation and can be washed in water. A clean front panel promotes smoother, more efficient performance, which can save energy.

Ventilation Control

You can ventilate the room by simply pressing the remote control button. Dirty air is carried outside to keep the room fresh and clean.

Comfortable

Inverter Control

An inverter air conditioner provides optimum power control, which is impossible for conventional units. The secret lies in the inverter circuit. By changing the frequency of power supply, this circuit alters the rotation speed of the compressor, which is the heart of the air conditioner. The result is comfortable, economical air conditioning.

Quiet Mode

Simply press a button to reduce the indoor unit operating sound by about 3 dB. This function is especially convenient for operation near a sleeping baby.

Press a QUIET button → 3dB Down

Powerful Mode

Pressing the Powerful button cools or heats the room quickly. It provides fast comfort, with full power and a strong airflow. This is perfect for use immediately after coming home, or when unexpected guests arrive.

Soft Dry Operation Mode

Starts with cooling to dehumidify. Then provides continuous breeze at low frequency to keep room dry without much change in temperature.

Personal Airflow Creation

Vertical and horizontal air flow patterns can be combined as desired to gain the greatest possible comfort, with operation possible even from a distance by remote control.

• Up & Down Airflow — 5 Patterns + Auto

When you don't want airflow directed right at you. | When you want direct airflow. | When you want to warm yourself thoroughly from the feet up.

• Left & Right Airflow — 5 Patterns + Auto

To focus the airflow to one side of the room. | To focus the airflow to the centre. | For uniform airflow throughout the room.

Airflow Direction Control (Up & Down)

The flap swings up and down automatically, distributing air throughout the room. You can also adjust the airflow angle by remote control.

Sleep Mode

This mode switches to a light breeze and automatically changes the set temperature, stopping later during sleep. Gentle cooling or heating creates an environment for restful sleep, and it's economical.

Sleep Timer Mode

The unit can be programmed to turn off after a set time of up to seven hours.

Economy Mode

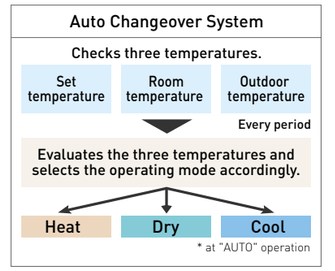
Economy mode uses up to 25%* less energy than normal mode.

*Panasonic figures, at an indoor temperature of 27C° and outdoor temperature of 35C°, with one hour of operation.

Auto Changeover (Inverter)

Auto Changeover

Sensors measure the room and outside temperatures periodically. Based on these temperatures and the set temperature, the microcomputer determines the most suitable operating mode as time passes.



Automatic Operation Mode (Cooling)

When the Automatic Operation button is pressed, the optimum mode (cooling, soft dry) is selected based on data from the Intake Air Sensor. The desired temperature setting can also be set (Low, Normal or High).

Hot Start Control

On the start of heating cycle and after defrost cycle, the indoor fan will start up once the indoor heat exchanger is warm.

Circulation Operation Mode

This mode circulates the air in the room, to minimize differences in air temperature.

Low Ambient Cooling

Room cooling is possible even when the outside temperature drops as low as –15°C. This unit is designed to withstand conditions where cooling is required even during cold winter months, such as in computer rooms where the equipment heat must be controlled.

Convenient

24-Hour ON & OFF Real Setting Timer

The start or stop operation time (hour and minute) can be set at one time. Or both of the times for start and stop operation can be set.

12-Hour ON & OFF Timer

LCD Wireless Remote Controller

Bilingual Sticker

This sticker, in the language* of the country in which it is used, makes operation easier with fast and simple confirmation of button functions.

*Select from 8 languages (French, German, Spanish, Dutch, Portuguese, Italian, Greek, or Russian)

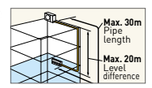
Reliable

Random Auto Restart

All models are now safe to operate without a starter. With the exclusive Random Auto Restart feature, the air conditioners automatically restart after power failure. Its 32 different recovery-timing patterns ensure that air conditioners in the same building resume one after another instead of all at the same time. This feature helps prevent power surges after a blackout and walls are nearer too.

Long Piping

The basic piping can be extended, allowing the outdoor unit to be installed farther away from the indoor unit and providing greater installation flexibility.



*The graph refers to the CS-W28BKP5 /V28BKP5 *Extendable length varies by model. *If the piping is extended past the basic pipe length, there's an extra charge for additional refrigerant.

Top-Panel Maintenance Access

Maintenance of the outdoor unit used to be quite a tedious chore, especially when the unit was installed on a narrow balcony or attached to the outer wall of a high-rise building. Now, maintenance can be performed by simply removing the top panel, making these tasks much quicker and easier.

Self-Diagnostic Function

Should a malfunction occur, the unit diagnoses the problem and shows the corresponding alphanumeric code. This allows quicker servicing.

Not all features found on all models.

Feature Comparison

Heat Pump Models
Cooling Models

		Single Inverter Split								Multi Inverter Split								Single Split										Multi Split
		Wall-Mounted					Floor or Ceiling	Cassette (4-way)	Hide-Away	Wall-Mounted			Floor or Ceiling	Cassette (1-way)	Cassette (4-way)	Hide-Away		Wall-Mounted							Floor or Ceiling		Wall-Mounted
		CS-XE9EKE CS-XE12EKE	CS-TE9DKE CS-TE12DKE	CS-E9DKEW CS-E12DKEW CS-E15EKEA CS-E15DKEW	CS-E18DKEW CS-E21DKES CS-E18EKEA CS-E21EKEA CS-E24EKES CS-E28EKE	CS-PE9DKE CS-PE12DKE	CS-E15DTEW CS-E18DTEW CS-E21DTES	CS-E15DB4EW CS-E18DB4EW CS-E21DB4ES CS-E15DD3EW	CS-E18DD3EW	CS-ME7DKEG CS-E9DKEW CS-E12DKEW CS-E15DKEW	CS-E18DKEW		CS-ME10DTEG CS-E15DTEW CS-E18DTEW	CS-ME7EB1E CS-ME10EB1E CS-ME12EB1E CS-ME14EB1E	CS-E15DB4EW CS-E18DB4EW	CS-ME10DD3EG CS-E15DD3EW CS-E18DD3EW	CS-W7DKE CS-W9DKE CS-W12DKE	CS-V7DKE CS-V9DKE CS-V12DKE	CS-W18DKE CS-W24DKE	CS-V18DKE CS-V24DKE	CS-V28EKE	CS-PW9DKE CS-PW12DKE	CS-PW18DKE	CS-W12CTP CS-W18CTP CS-W24CTP	CS-V12CTP CS-V18CTP CS-V24CTP	CS-MV7EKE CS-MV9EKE CS-MV12EKE
Healthy Air Quality	Auto Filter Cleaning Function	●																										
	Ion Freshener		●	●	●					●	●						●	●	●	●	●							●
	Supersonic Air Purifying System			●	●					●	●						●	●	●	●	●							●
	SUPER alleru-buster filter	● (long-life)	●	●	●	● (Option)	● (Option)	● (Option)		●	●		● (Option)	● (Option)	● (Option)		●	●	●	●	●	● (Option)	● (Option)				●
	Air Quality Indicator					●																●						
	Anti-Mould, One-Touch Air Filter	●	●	●	●	●	●	●		●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
	Odour-Removing Function	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Removable, Washable Panel	●	●	●	●	●		●		●	●			●	●		●	●	●	●	●	●	●					●
	Ventilation Control	●																										
Comfortable	Inverter Control	●	●	●	●	●	●	●	●	●	●		●	●	●	●												
	Quiet Mode	●	●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●							●
	Powerful Mode	●	●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●							●
	Soft Dry Operation Mode	●	●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●			●	●	●		●
	Personal Airflow Creation	●		●	●					●	●								●	●	●							●
	Airflow Direction Control (Up & Down)		●			●	●	●					●	●	●		●	●					●	●	●	●		
	Sleep Mode																								●	●		
	Economy Mode																											
	Auto Changeover (Inverter)	●	●	●	●	●	●	●	●	●	●		●	●	●	●												
	Auto Changeover																●		●				●	●	●			
	Automatic Operation Mode (Cooling)																	●		●	●					●	●	
	Hot Start Control	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●		●				●	●	●			
	Circulation Operation Mode																	●		●	●					●	●	
	Low Ambient Cooling			● (E15EKEA)	● [E18EKEA / E21EKEA]																							
Convenient	24-Hour ON&OFF Real Setting Timer	●	●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●		●				●
	12-Hour ON&OFF Timer					●																	●		●	●		
	LCD Wireless Remote Controller	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Bilingual Sticker	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Reliable	Random Auto Restart	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Long Piping	15m	15m	15m	20m(E18/E21) 30m(E24/E28)	15m	20m	20m	20m	30m/20m*(2E15/18) 50m/25m*(3E18/23) 70m/25m*(4E27)	30m/20m*(2E15/18) 50m/25m*(3E18/23) 70m/25m*(4E27)		30m/20m*(2E15/18) 50m/25m*(3E18/23) 70m/25m*(4E27)	50m/25m*(3E18/23) 70m/25m*(4E27)	50m/25m*(3E18/23) 70m/25m*(4E27)	30m/20m*(2E15/18) 50m/25m*(3E23) 70m/25m*(4E27)	10m(W7/W9) 15m(W12)	10m(V7/V9) 15m(V12)	25m	25m	30m	10m(PW9) 15m(PW12)	25m	15m(W12) 25m(W18/W24)	15m(V12) 25m(V18/V24)	15m(Total)
	Top-Panel Maintenance Access	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
	Self-Diagnostic Function	●	●	●	●	●	●	●	●	●	●		●	●	●	●												

* Total room / One room