

# Panasonic

ideas for life

Air Conditioners  
2007 / 2008



*e-ion* Air Purifying System & **INVERTER**





































## A New Dimension in Air Quality and Comfort












Experience a new dimension in comfort with Panasonic's new air conditioners. Better air quality than ever, surprising energy savings and fine temperature control – these advanced models have it all.

# Model Line-Up Choose the Best Inverter



Single Inverter Split <b>INVERTER</b> Wall-Mounted		
	Deluxe	Deluxe Wide
Indoor	<b>NEW</b>  p.10	<b>NEW</b>  p.10
Capacity (kW)	2.5 <b>CS-E9GKR</b> (CU-E9GKR)  3.5 <b>CS-E12GKR</b> (CU-E12GKR)  4.5 <b>CS-E15GKR</b> (CU-E15GKR) 5.0 6.0 6.5 8.0	   <b>CS-E18GKR</b> (CU-E18GKR)  <b>CS-E21GKR</b> (CU-E21GKR) <b>CS-E24GKR</b> (CU-E24GKR) <b>CS-E28GKR</b> (CU-E28GKR)
Exclusive Features	     	    

Single Split Wall-Mounted		
	Deluxe	Deluxe Wide
Indoor	 p.12	 p.12
Capacity (kW)	2.0 <b>CS-W7DKR</b> (CU-W7DKR)  2.5 <b>CS-W9DKR</b> (CU-W9DKR) 3.5 <b>CS-W12EKR</b> (CU-W12EKR) Different Design [DEO Filter] 5.0 6.5	   <b>CS-W18DKR</b> (CU-W18DKR) <b>CS-W24EKR</b> (CU-W24EKR) Different Design [DEO Filter]
Exclusive Features	      	     

 e-ion Air Purifying System  
  Patrol Sensor  
  Quiet Mode (Indoor)  
  Quiet Mode (Outdoor)  
  Supersonic Air Purifying System  
  Super alleru-buster filter (Super alleru-buster + Catechin + Bio)  
  Ion Freshener  
 DEO Deodorising Filter  
  Blue Fin Condenser  
  Remote Controller  
  Star Rating (Cooling)

## Industry-leading quiet operation for more comfort

### Quiet Mode

The new Quiet Mode is even more effective than before. As well as providing quieter indoor unit operation, it offers a new function that also reduces outdoor unit noise.

**Indoor unit**



The Quiet Mode reduces operation noise to a quiet 21dB\* for a comfortable night's sleep.

\* CS-E9/E12GKR: In the Quiet Mode during cooling operation with low fan speed

**Outdoor unit**

**NEW**



Noise is 5dB quieter than during regular operation, so don't worry about bothering your neighbours.

\* CS-E15/E18/E21/E28GKR: In the Quiet Mode during cooling/heating operation with low fan speed



# e-ion Air Purifying System with Patrol Sensor

A revolutionary new mechanism catches dust particles and brings them back to the filter, working with the Patrol Sensor to thoroughly clean the air.

Industry first\*<sup>1</sup>



03

Dust is negatively charged and airborne bacteria and mould are inactivated

## Total Clean Mechanism

01

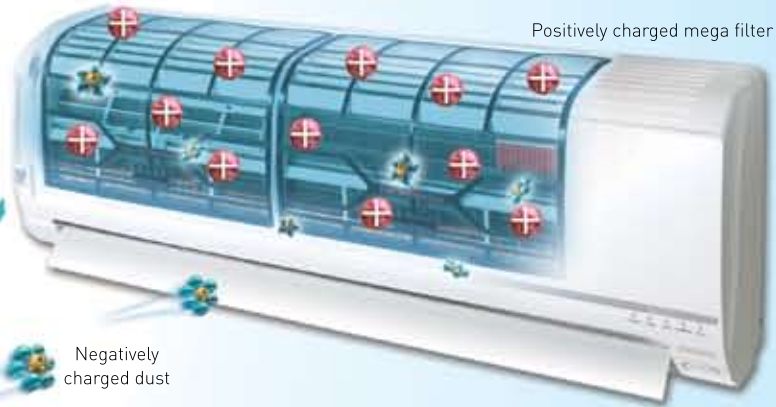
*Detects the Dirt*  
**Patrol Sensor**

02

*Shoots and Catches*  
**Active e-ion Generator**

\*<sup>1</sup> For an air conditioner with a dust collection system that releases negative ions from an ion generator to negatively charge dust particles and then collect them with the entire surface of a positively charged filter. [As of June, 2007]

Positively charged mega filter



Negatively charged dust



04

Electrically collected by the e-ion filter



Sensor monitors air quality

3 trillion<sup>\*2</sup>  
Active e-ions



Active e-ions are discharged

Faster dust collection than ever before!  
About 5 times more efficient.

03

*Charges and Inactivates*  
**Active e-ion**

04

*Captures Electrically*  
**Positively Charged Mega Filter**

<sup>\*2</sup> 3 trillion is the simulated number of active e-ions under the mentioned conditions.  
Actual measured active e-ions at the centre of the room (13m<sup>2</sup>):100k/cc  
Calculated number of active e-ions in the entire room assuming they are evenly distributed. 05

# Patrol Sensor

A sensor monitors dirt in a room 24 hours a day!

Air is monitored both during air conditioner operation and when it's switched off. When dirt is detected, the air purifying function is started to immediately clean the air in the room.

## How It Works

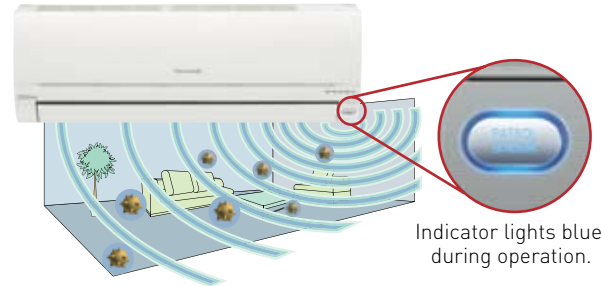
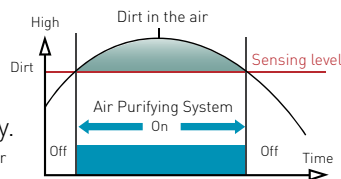
### ■ Monitoring

Whether the air conditioner is operating or not, the sensor constantly monitors dirt in the air.

### ■ Detection

The sensor measures the dirt in the air, and above a certain level the air is judged to be dirty.

If dirt concentration exceeds the sensing level, the Air Purifying System is switched on.

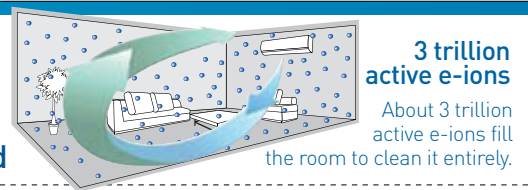


**This kind of dirt is detected**

- Cigar smoke
- Cooking smoke
- Sweat or body odour
- Garbage odour
- Pet odour

# Active e-ion

Shot out to catch and inactivate airborne bacteria and mould



## Active e-ions have two actions

### Negative Charging

Negatively charges dust particles for effective collection.

### Inactivating

Inactivates bacteria and mould to make them harmless.

## Inactivating Effect

### ■ Active e-ion: inactivating mechanism

The same inactivating mechanism for mould and viruses.

Active e-ions stick to the surface of bacteria. OH radicals work on the cell wall. The bacteria are inactivated.

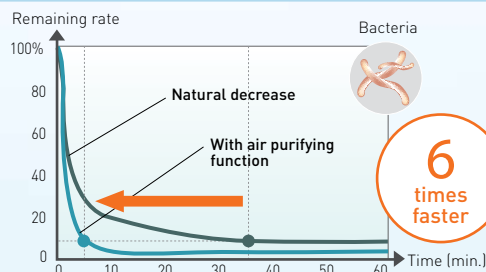
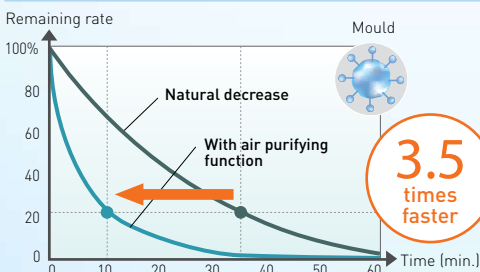
The illustration is simulated

### ■ Target substances

**Inactivates more than 99\***

\*99% inactivation was certified as indicated below.  
 Certificated by Japan Food Research Laboratories  
 • Test report number: No. 205010211-001 Bacteria: Staphylococcus aureus subsp. aureus (NBRC12732) • Test report number: No. 204101750-001 Virus: Influenza virus A

## Removal performance Change in airborne mould and bacteria



### Measurement conditions

Certificated by Japan Food Research Laboratories  
 Test report number: 304110078-001  
 Test method: The e-ion Air Purifying System was operated in a test room (10m<sup>2</sup>) and changes in airborne mould and bacteria were measured by means of the Air Sampler Method (MAS100).



# Mega e-ion Filter

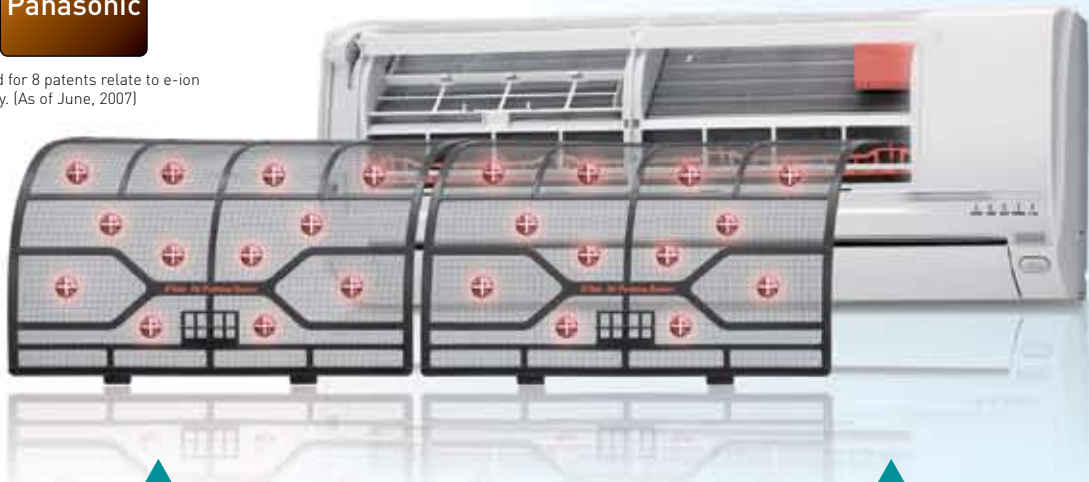
Big and electric – that's why the dust can't escape!

Using the force of attraction between positive and negative charges, the e-ion Filter – which is 7 times bigger and finer than ever – powerfully captures dust particles.

**8** patents\* applied for

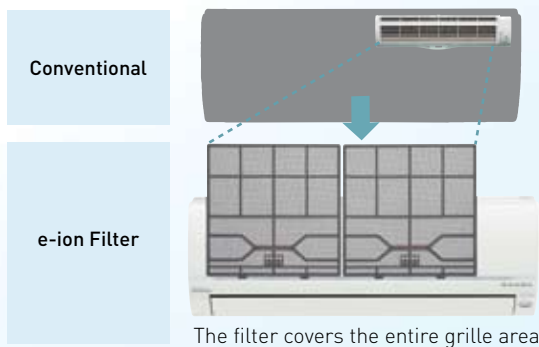
**Only from Panasonic** \*1

\*Panasonic has applied for 8 patents relate to e-ion Air Purifying technology. (As of June, 2007)

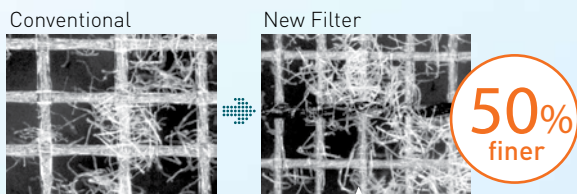


## Thorough Collection with a Bigger, Finer Filter

The mega size air purifying filter covers almost the same area as the intake grille to prevent dust from escaping.



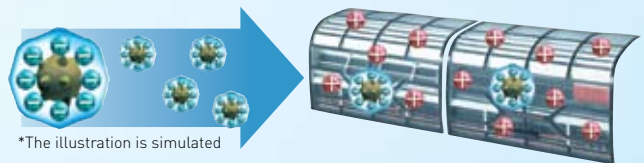
## Ultra-fine mesh



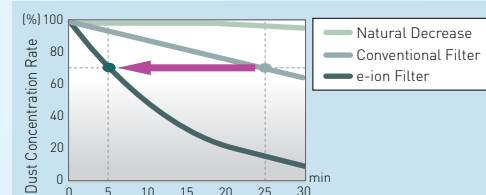
Also captures microscopic dust (100~1,000µm)

## More Effective Collection with Electric Action

The entire filter is positively charged to powerfully attract negatively charged dust.



## Changes in dust concentration



About **5** times\*<sup>2</sup> more efficient

\*Panasonic in-house investigation.

## Electric charging



Electric Induction Fibres extend across the entire area of the filter.

- 1 Active e-ion Power Module
- 2 Positive Charging Electric Wire
- 3 Electric Induction Fibres positively charge the entire filter.

\*1 For an air conditioner with a dust collection system that releases negative ions from an ion generator to negatively charge dust particles and then collect them with the entire surface of a positively charged filter. (As of June, 2007)  
\*2 After 5 cigarettes were smoked in a roughly 20m<sup>3</sup> room, air conditioner operation was started and the decrease in particulate concentration was measured with a dust meter.

# Inverter Technology



## Advanced Inverter Performance —The Difference in Power and Comfort

The inverter circuit provides optimum power control and extremely efficient operation by changing the frequency of the power supply. So even though you get speedy, flexible operation, you use less electricity than conventional units.

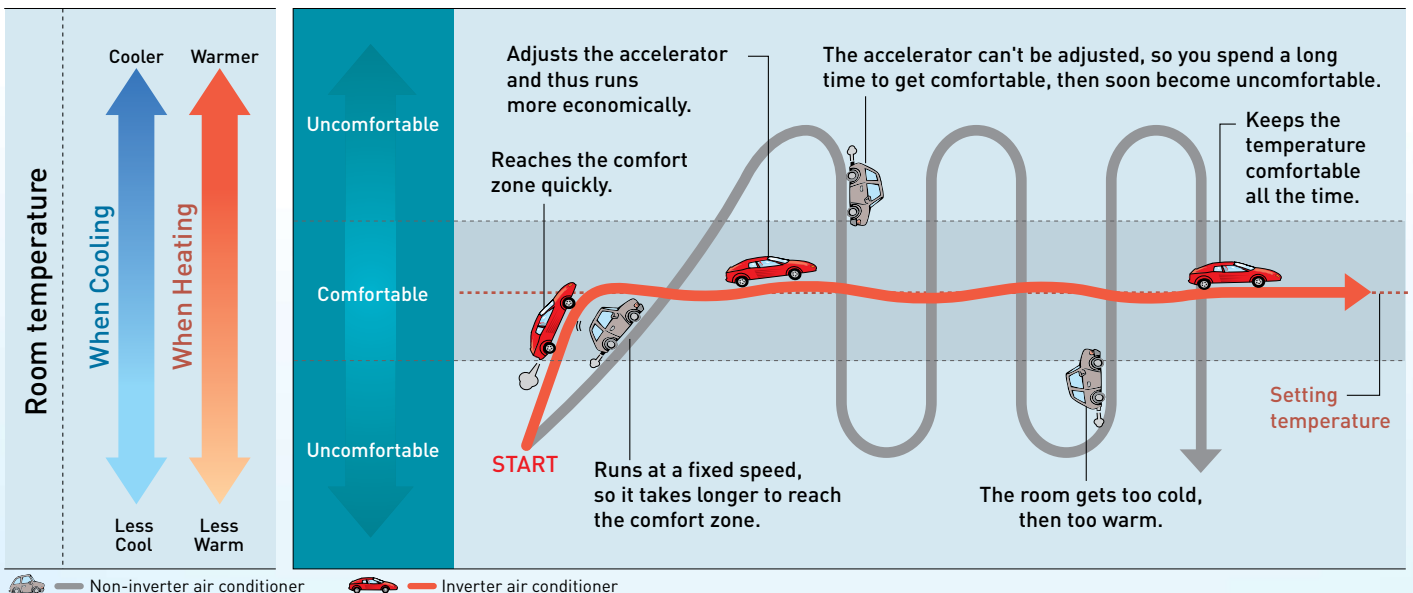
### WHAT'S AN INVERTER?



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

## The advantages of an inverter air conditioner

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





## More Advantages with Panasonic



### ● e-scroll Compressor

#### Saves energy:

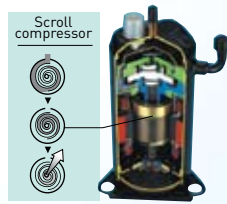
Newly developed bearing reduces oscillation and mechanical loss.

#### Compact size, light weight:

New DC motor with rare-earth magnet and no accumulator.

#### Less noise and vibration:

Smooth, continuously operating vortex blades.



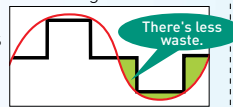
15,000 Btu/h and above models

### ● DC Inverter (Hyper Wave Inverter)

Original Panasonic inverter circuit technology provides detailed motor current control. A comfortable room temperature is maintained with less energy, vibration, and noise.

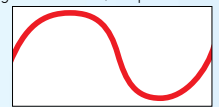
#### ■ Our conventional inverter

The current waveform deviates from the motor voltage waveform, so power is wasted.



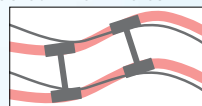
#### ■ Hyper Wave Inverter

The current waveform closely matches the motor voltage waveform, so power consumption is reduced.

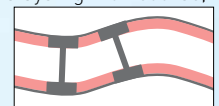


#### Compare this to a car rounding a corner

Power is wasted when the car swings off course.



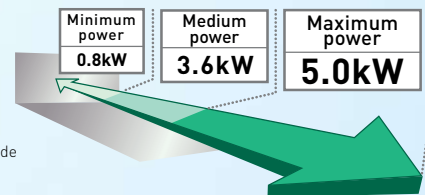
When the car stays right on course, there's no power loss.



15,000 Btu/h and above models

### ● Even Wider Output Power Range

Provides higher energy saving and finer room temperature adjustment.



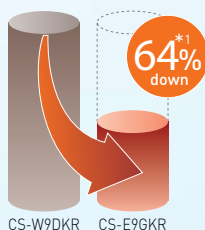
The graph shows the CS-E9GKR's wide power output range during heating.

## Energy-saving

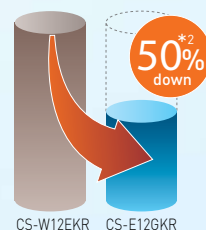
For optimum use of limited energy resources, an inverter air conditioner features an inverter circuit providing extremely efficient operation. Improved heat exchanger and compressor performance, precise microcomputer control and other innovations further assure dramatically boosted efficiency. So even though you get speedy, flexible operation, you use less electricity.

#### ■ Electric Consumption

During heating:



During Cooling:

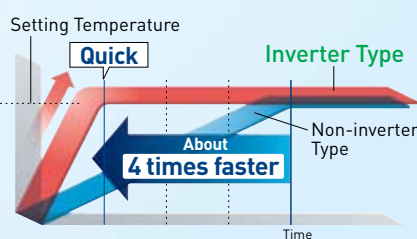


\*1 Comparison of cumulative electricity consumption during heating to reach the setting temperature (Panasonic in-house comparison) Test conditions: Indoor and outdoor temperature: 7°C / Setting temperature: 25°C / Fan speed: High \*2 Comparison of cumulative electricity consumption during 8 hours of cooling (Panasonic in-house comparison) Test conditions: Room temperature at start: 35°C / Setting temperature: 25°C

## 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 a quarter 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

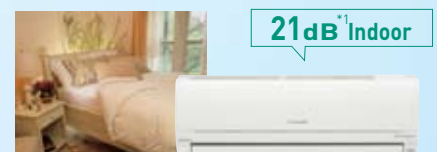


\*Comparison of 9,000 Btu inverter and non-inverter models during heating.

## Quiet Mode



The indoor unit delivers whisper-quiet operation and the noise of the outdoor unit has also been reduced. Better still, using the Quiet Mode lowers noise even further to just 21dB for the indoor unit and 41dB for the outdoor unit. So now you can enjoy a comfortable night's sleep without bothering the neighbours.



\*1 CS-E9/E12GKR: In the Quiet mode during cooling operation with low fan speed \*2 CU-E15GKR: In the Quiet mode during cooling / heating operation with low fan speed

# Single Inverter Split Wall-Mounted

Deluxe

**NEW**



CS-E9GKR/E12GKR



Remote  
Controller



CU-E9GKR/  
E12GKR



CU-E15GKR

Model No	CS-E9GKR	CS-E12GKR	CS-E15GKR
Capacity(kW)	2.60 (0.80~3.00)/3.60(0.80~5.00)	3.50(0.80~4.00)/4.90(0.80~6.70)	4.40 (0.90~5.00)/5.50(0.90~7.10)
(Btu/h)	8,870(2,730~10,200)/12,300(2,730~17,100)	11,900(2,730~13,600)/16,700(2,730~22,800)	15,000(3,070~17,100)/18,800(3,070~24,200)
EER/COP(W/W)	4.33/4.26	3.63/3.89	3.21/3.50
Star Rating	6.0/6.0	6.0/5.5	4.5/4.5



CS-E9GKR/E12GKR

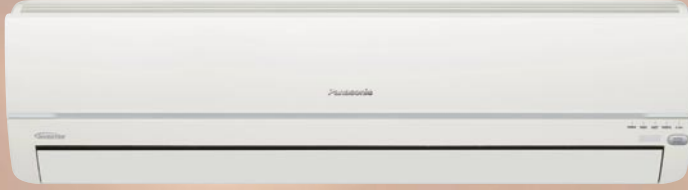


CU-E15GKR



## Deluxe Wide

**NEW**



CS-E18GKR



Remote Controller



CU-E18GKR/  
E21GKR



CU-E24GKR/  
E28GKR

Model No	CS-E18GKR	CS-E21GKR
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)
(Btu/h)	18,100(3,070~20,500)/22,500(3,070~27,300)	21,500(3,070~24,200)/24,600(3,070~29,000)
EER/COP(W/W)	3.21/3.69	3.06/3.60
Star Rating	5.0/5.0	4.0/4.5

Model No	CS-E24GKR	CS-E28GKR
Capacity(kW)	7.40(0.90~8.10)/8.60(0.90~9.90)	8.10(0.90~8.60)/9.60(0.90~11.00)
(Btu/h)	25,200(3,070~27,600)/29,300(3,070~33,800)	27,600(3,070~29,300)/32,700(3,070~37,500)
EER/COP(W/W)	3.02/3.43	2.98/2.95
Star Rating	4.0/4.0	3.5/3.0



CU-E18GKR

Feature Comparison >> p.13

Specifications >> p.16



In the Quiet mode during cooling operation with low fan speed

Star Rating(Cooling)





# Single Split Wall-Mounted

## Deluxe



CS-W7DKR

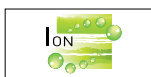
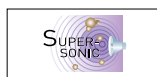


CU-W7DKR/  
W9DKR



CU-W12EKR

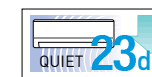
Model No	CS-W7DKR	CS-W9DKR	CS-W12EKR Different design (DEO Filter)
Capacity(kW)	2.30/2.45	2.75/3.05	3.60/3.90
(Btu/h)	7,840/8,350	9,380/10,400	12,300/13,300
EER/COP(W/W)	3.19/3.58	3.14/3.53	3.27/3.58
Star Rating	5.0/6.0	4.5/5.5	4.5/4.5



Except CS-W12EKR



CS-W12EKR



CS-W7DKR/W9DKR



## Deluxe Wide



Large  
Remote  
Controller



CU-W18DKR/W24EKR



Model No	CS-W18DKR	CS-W24EKR Different design (DEO Filter)
Capacity(kW)	5.30/5.75	7.03/7.80
(Btu/h)	18,100/19,600	24,000/26,600
EER/COP(W/W)	2.93/3.19	2.97/3.17
Star Rating	4.0/3.5	3.5/3.0



Except CS-W24EKR



CS-W24EKR

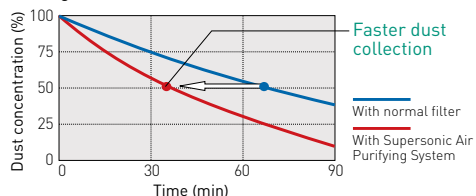


## Supersonic Air Purifying System with SUPER alleru-buster

**Supersonic Air Purifying System**  
Faster dust collection

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.

### Changes in dust concentration



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

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 <b>99%</b> of all filter-captured allergens
Anti-virus protection	Inactivates more than <b>99%</b> of all filter-captured viruses
Anti-bacteria/Anti-mould protection	Enzymatic action eliminates more than <b>99%</b> 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.



# Feature Comparison



		Single Inverter Split		Single Split		
		Wall-Mounted		Wall-Mounted		
		CS-E9GKR CS-E12GKR CS-E15GKR	CS-E18GKR CS-E21GKR CS-E24GKR CS-E28GKR	CS-W7DKR CS-W9DKR CS-W12EKR	CS-W18DKR CS-W24EKR	
Healthy Air Quality	e-ion Air Purifying System	●	●			
	Patrol Sensor	●	●			
	Supersonic Air Purifying System			●	●	
	SUPER alleru-buster filter			●	●	
	Ion Freshener			● (W7/W9)	● (W18)	
	Deodorising Filter			● (W12)	● (W24)	
	One-Touch Air Filter			●	●	
	Odour-Removing Function	●	●	●	●	
	Removable, Washable Panel	●	●	●	●	
Comfortable	Inverter Control	●	●			
	Quiet Mode	Indoor	●	●	●	●
		Outdoor	● (E15)	●		
	Powerful Mode	●	●	●	●	
	Soft Dry Operation Mode	●	●	●	●	
	Wide & Long Airflow Vane	●				
	Personal Airflow Creation		●		●	
	Airflow Direction Control (Up & Down)	●		●		
	Manual Horizontal Airflow Direction Control	●		●		
	Auto Changeover (Inverter)	●	●			
	Auto Changeover			●	●	
Hot Start Control	●	●	●	●		
Convenient	24-Hour ON&OFF Real Setting Timer	●	●	●	●	
	LCD Wireless Remote Controller	●	●	●	●	
Reliable	Blue Fin Condenser	●	●	●	●	
	Random Auto Restart	●	●	●	●	
	Long Piping	15m	20m(E18/E21) 30m(E24/E28)	10m(W7/W9) 15m(W12)	25m	
	Plug Type & Ampere Capacity <small>*The plug must be installed</small>	Outdoor Power Supply	Outdoor Power Supply	Ⓢ 10A	Ⓢ 10A(W18) Ⓢ 20A(W24)	
	Top-Panel Maintenance Access	●	●	●	●	
	Self-Diagnostic Function	●	●			

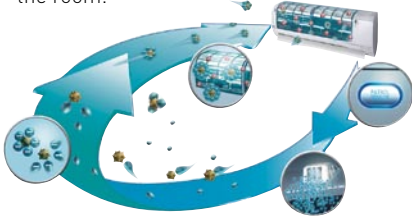
# Feature Explanations

## Healthy Air Quality



### e-ion Air Purifying System

Active e-ions are shot out to catch dust and inactivate airborne bacteria and mould. The positively charged mega filter attracts dust to thoroughly clean the room.



### Patrol Sensor

Air is monitored both during air conditioner operation and when it's switched off. When dirt is detected, the air purifying function is started to immediately clean the air in the room.



### 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.



### Deodorising Filter

The photocatalytic filter absorbs odour particles from cigarette smoke and pet and household smells. The deodorisation effect is regenerated when the filter is exposed to sunlight.



### Odour-Removing Function

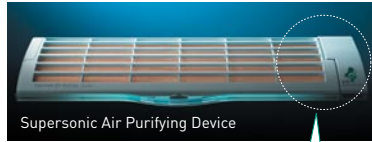
With this function, there's no unpleasant odour when the unit starts up. That's because the fan remains off momentarily, while the source of the odour inside the air conditioner is suppressed.

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



### 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



### Anti-Mould, One-Touch Air Filter



### 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.

## 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

The Quiet Mode reduces both indoor and outdoor unit operating sound. This function is especially convenient for operation near a sleeping baby and at night-time.

#### Indoor unit:



As quiet as a sound of leaves on a tree

Approx. **21dB**



#### Outdoor unit:



As quiet as a library

Approx. **41dB**



20dB 40dB

\* Based on in-house Panasonic measurement standards



### 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.



## The System of Model Numbers for Split Models

CU - E 9 G K R  
1 2 3 4

### 1 Model Type

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

### 2 Function

E : Inverter Reverse Cycle  
W : Reverse Cycle

### 3 Type

K : Wall-Mounted Type

### 4 Capacity

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

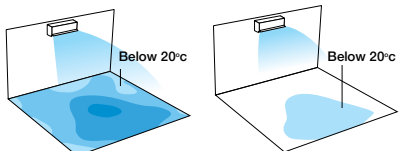


### Wide & Long Airflow Vane

This newly designed vane has been integrated with the louver to send the air further. Sends air to every corner of the room to keep the whole room comfortable.



#### Wide & Long Airflow Vane vs Conventional



Conditions: .Our simulated-house facility 13.2m<sup>2</sup>  
.Set temperature 25°C

### 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.

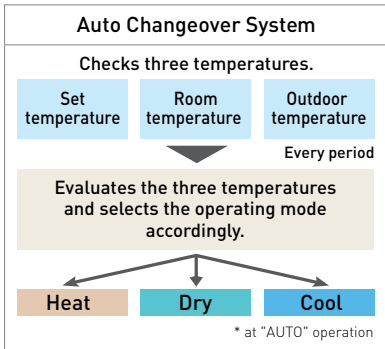
#### • Left & Right Airflow — 5 Patterns + Auto



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

### Auto Changeover (Inverter)

#### Auto Changeover



### 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.

### Airflow Direction Control (Up & Down)

### Manual Horizontal Airflow Direction Control

### 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.

## Convenient

### 24-Hour ON & OFF Real Setting Timer

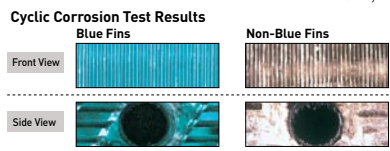
The start or stop operation time (hour and minute) can be set at one time. Or both of the times for start and stop operation can be set.

### LCD Wireless Remote Controller

## Reliable

### Blue Fin Condenser

Condensers can take a beating from exposure to salty air, rain and other corrosive factors. Panasonic has tripled the life of our condensers with an original anti-rust coating.



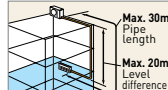
This was tested by: 1. Matsushita Air Conditioning R&D Centre Sdn. Bhd.  
2. A third party authorized research institute in Malaysia.

### 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-E28GKR \*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.

### 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.

**QUALITY SYSTEM**  
SIRIM

**ISO 9001 Certification**  
CERTIFIED TO MS ISO 9001: 2000  
Panasonic HA Air-Conditioning (M) Sdn. Bhd. (PHAAM)  
Registration No.: AR 1010

This Panasonic air conditioner factory in Malaysia has received ISO 9001 certification. ISO 9001 Certification attests to the excellent quality assurance systems in place at this factory.

**About ISO 9001 Certification**  
ISO 9001 certification is granted only when thorough examination has shown that products are designed, manufactured, marketed and serviced by a system of quality that is complied with the internationally recognized ISO 9001 quality assurance standard. The Malaysian factory was certified by the world renowned SIRIM organization.

**Environmental Management Systems Approval Certificate**

**ENVIRONMENTAL SYSTEM**  
SIRIM

**UKAS ENVIRONMENTAL MANAGEMENT**  
074

MS ISO 14001 CERT. NO. P06860001

**CERTIFIED TO MS ISO 14001: 2004**  
Panasonic HA Air-Conditioning (M) Sdn. Bhd. (PHAAM)  
Certification No.: P06860001

**Standard Warranty**

**5 year**  
FULL WARRANTY

**Panasonic**

# Specifications

## Single Inverter Split



Cooling ( ): Outdoor Unit  
Heating

EER: Cooling Efficiency  
COP: Heating Efficiency

Model No. (50Hz/240V)	Cooling Capacity Heating Capacity		Air Flow L/s	Dehumid L/h	Running Current A	Power Input kW	EER COP	Star Rating	Sound Pressure Level*1 dB (A)		Sound Power Level dB	Net Weight kg	Dimensions Height x Width x Depth mm	Maximum Pipe Length*2 m	Power Supply
	kW	Btu/h							Indoor (Hi/Lo/S-Lo)	Outdoor (Hi/S-Lo)					
<b>CS-E9GKR</b> <b>(CU-E9GKR)</b>	2.60 (0.80-3.00) 3.60 (0.80-5.00)	8,870 (2,730-10,200) 12,300 (2,730-17,100)	173 183	1.6	2.8 3.8	0.60 (0.175-0.78) 0.845 (0.165-1.36)	4.33 4.26	6.0 6.0	39 / 26 / 21 40 / 27 / 24	46 / — 47 / —	59 60	9 (34)	280 x 799 x 183 (540 x 780 x 289)	15	Outdoor
<b>CS-E12GKR</b> <b>(CU-E12GKR)</b>	3.50 (0.80-4.00) 4.90 (0.80-6.70)	11,900 (2,730-13,600) 16,700 (2,730-22,800)	187 195	2.0	4.3 5.6	0.965 (0.185-1.20) 1.26 (0.175-1.89)	3.63 3.89	6.0 5.5	42 / 29 / 21 42 / 33 / 30	48 / — 50 / —	61 63	9 (35)	280 x 799 x 183 (540 x 780 x 289)	15	Outdoor
<b>CS-E15GKR</b> <b>(CU-E15GKR)</b>	4.40 (0.90-5.00) 5.50 (0.90-7.10)	15,000 (3,070-17,100) 18,800 (3,070-24,200)	183 197	2.4	6.2 7.0	1.37 (0.215-1.60) 1.57 (0.245-2.25)	3.21 3.50	4.5 4.5	43 / 32 / 25 43 / 35 / 32	46 / 41 46 / 41	59 59	9 (47)	280 x 799 x 183 (750 x 875 x 345)	15	Outdoor
<b>CS-E18GKR</b> <b>(CU-E18GKR)</b>	5.30 (0.90-6.00) 6.60 (0.90-8.00)	18,100 (3,070-20,500) 22,500 (3,070-27,300)	253 278	2.9	7.3 7.9	1.65 (0.215-2.05) 1.79 (0.245-2.65)	3.21 3.69	5.0 5.0	44 / 37 / 34 44 / 37 / 34	47 / 42 47 / 42	60 60	10 (49)	275 x 998 x 230 (750 x 875 x 345)	20	Outdoor
<b>CS-E21GKR</b> <b>(CU-E21GKR)</b>	6.30 (0.90-7.10) 7.20 (0.90-8.50)	21,500 (3,070-24,200) 24,600 (3,070-29,000)	270 288	3.5	9.0 8.8	2.06 (0.215-2.40) 2.00 (0.245-2.70)	3.06 3.60	4.0 4.5	45 / 37 / 34 45 / 37 / 34	48 / 43 49 / 44	61 62	10 (51)	275 x 998 x 230 (750 x 875 x 345)	20	Outdoor
<b>CS-E24GKR</b> <b>(CU-E24GKR)</b>	7.40 (0.90-8.10) 8.60 (0.90-9.90)	25,200 (3,070-27,600) 29,300 (3,070-33,800)	282 305	4.3	11.0 11.1	2.45 (0.35-2.70) 2.51 (0.36-3.20)	3.02 3.43	4.0 4.0	47 / 38 / 35 47 / 38 / 35	52 / 47 52 / 47	66 66	11 (63)	275 x 998 x 230 (795 x 900 x 320)	30	Outdoor
<b>CS-E28GKR</b> <b>(CU-E28GKR)</b>	8.10 (0.90-8.60) 9.60 (0.90-11.00)	27,600 (3,070-29,300) 32,700 (3,070-37,500)	295 312	4.8	12.0 14.4	2.72 (0.35-2.95) 3.25 (0.36-3.79)	2.98 2.95	3.5 3.0	49 / 38 / 35 48 / 38 / 35	53 / 48 53 / 48	67 67	11 (63)	275 x 998 x 230 (795 x 900 x 320)	30	Outdoor

## Single Split



Model No. (50Hz/240V)	Cooling Capacity Heating Capacity		Air Flow L/s	Dehumid L/h	Running Current A	Power Input kW	EER COP	Star Rating	Sound Pressure Level*1 dB (A)		Sound Power Level dB	Net Weight kg	Dimensions Height x Width x Depth mm	Maximum Pipe Length*2 m	Power Supply
	kW	Btu/h							Indoor (Hi/Lo/S-Lo)	Outdoor (Hi)					
<b>CS-W7DKR</b> <b>(CU-W7DKR)</b>	2.30 2.45	7,840 8,350	132 152	1.5	3.2 3.0	0.72 0.685	3.19 3.58	5.0 6.0	34/26/23 36/26/23	47 49	62 64	9 (26)	280 x 799 x 183 (510 x 650 x 230)	10	Indoor
<b>CS-W9DKR</b> <b>(CU-W9DKR)</b>	2.75 3.05	9,380 10,400	143 162	1.6	3.8 3.8	0.875 0.865	3.14 3.53	4.5 5.5	36/26/23 39/26/23	49 50	64 65	9 (29)	280 x 799 x 183 (510 x 650 x 230)	10	Indoor
<b>CS-W12EKR</b> <b>(CU-W12EKR)</b>	3.60 3.90	12,300 13,300	178 182	2.1	5.0 4.9	1.1 1.09	3.27 3.58	4.5 4.5	41/29/26 42/29/26	50 50	65 66	8 (35)	280 x 799 x 183 (540 x 780 x 289)	15	Indoor
<b>CS-W18DKR</b> <b>(CU-W18DKR)</b>	5.30 5.75	18,100 19,600	255 267	2.9	7.8 7.8	1.81 1.80	2.93 3.19	4.0 3.5	43/38/35 42/38/35	50 51	63 64	11.0 (56.0)	275 x 998 x 230 (750 x 875 x 345)	25	Indoor
<b>CS-W24EKR</b> <b>(CU-W24EKR)</b>	7.03 7.80	24,000 26,600	290 303	4.0	11.1 11.7	2.37 2.46	2.97 3.17	3.5 3.0	47/41/38 46/41/38	53 54	66 67	11.0 (63.0)	275 x 998 x 230 (750 x 875 x 345)	25	Indoor

\*1 Sound Pressure Level is measured according to JIS C 9612.

\*2 Additional Gas might be required for some models.

## Rating Conditions

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

- Power plugs are not supplied with the unit.
- Electrical work must be installed by a licensed electrician. Be sure to use the correct rating of the power plug and mains circuit for the model to be installed.
- Please read the Installation Instructions carefully before installing the unit, and read the Operating Instructions before using.



The Matsushita Group actively develops environmentally-conscious products.

### Energy

Our energy-conservation technologies help to minimise energy consumption.

### Materials

None of the products we ship contain any specified chemical substances\* regardless of market.

\* Lead, cadmium, hexavalent chromium, mercury, specified bromine flame retardants (PBB, PBDE)

### Factories

Our manufacturing sites around the world have acquired ISO 14001 certification.

**Panasonic**  
ideas for life

Panasonic Australia Pty Limited.  
ACN 001 592 187 ABN 83 001 592 187

HO/NSW: Austlink Corporate Park, 1 Garigal Rd,  
Belrose NSW 2085  
Ph: (02) 9986 7400 Fax: (02) 9986 7600

[www.panasonic.com.au](http://www.panasonic.com.au)

VIC/TAS 1 Keith Campbell Court, Scoresby VIC 3179  
Ph: (03) 9213 8888 Fax: (03) 9213 8810  
QLD 494 Nudgee Road, Hendra QLD 4011  
Ph: (07) 3308 6455 Fax: (07) 3308 6492  
SA Unit 2, 54 Grange Road, Welland SA 5007  
Phone: (08) 8300 9600 Fax: (08) 8346 4076  
WA 5/51-53 Kewdale Road, Welshpool WA 6105  
Ph: (08) 9352 2400 Fax: (08) 9352 2458

**Panasonic**  
**Customer**  
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