

AIR CONDITIONER 2010/2011



INVERTER

ECO PATROL

ADVANCED*PLUS

e-ion Air Purifying System with Patrol Sensor

BUILT-IN GENIUS | **Panasonic**

ADVANCED FEATURES

In 2009 Panasonic was awarded the highly coveted Good Design Award which is a comprehensive program for the evaluation and encouragement of design organised by Japan Industrial Design Promotion Organisation (JIDPO).



ECO INTELLIGENCE by design

Nature is never wasteful and always strives to achieve perfect balance. These are two aspects of Nature that have inspired the design of Panasonic's new range of air conditioners. Not only have we adopted Nature's gentle, flowing curves, but we have also emulated its intuitive intelligence by using minimal energy to assure you of a consistent supply of clean and healthy air.



INVERTER

Self-adjusts compressor's rotational speed to deliver cost-efficient, energy-saving performance at all times.

ECO PATROL

Responds intuitively to the level of human presence and activity in the room to adjust coolness for maximum comfort and maximum savings.



ADVANCED+PLUS

e-ion Air Purifying System with **Patrol Sensor**

Alerts you to changes in the degree of air cleanliness and activates the air purifying function for cleaner, healthier air.

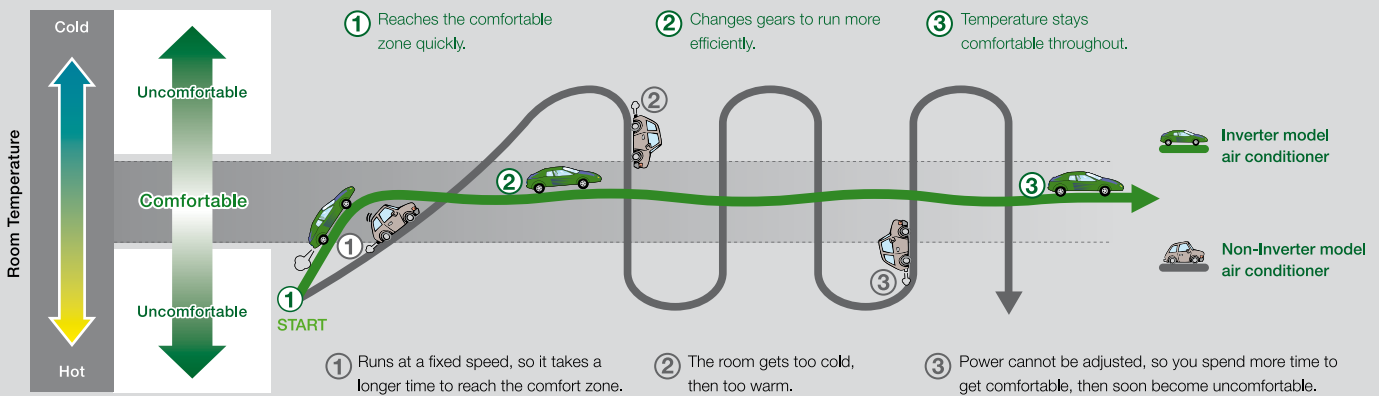


ENERGY-SAVING PERFORMANCE

More Precise Temperature Control

An Intelligent Inverter air conditioner varies its power output to maintain the temperature more precisely. By contrast, a non-Inverter model maintains the temperature by switching the compressor ON and OFF – more electricity is used and temperature is uneven!

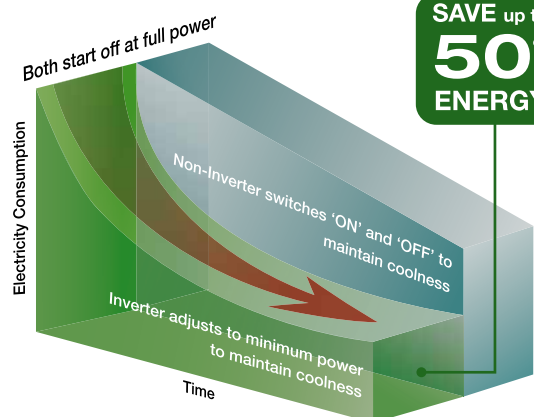
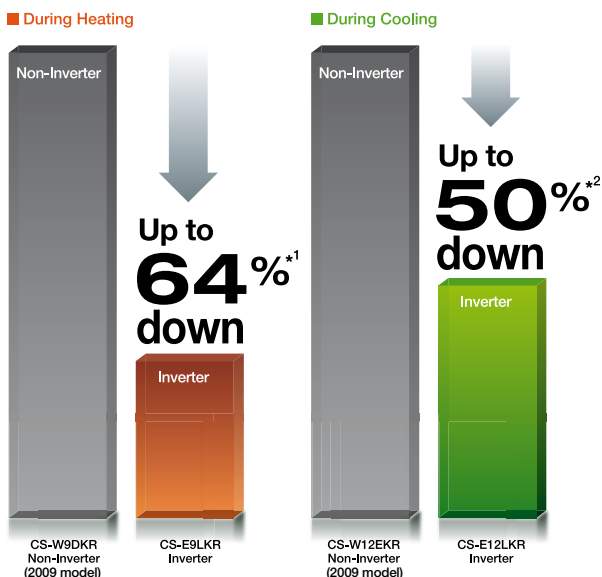
Performance Comparison Using Cars as an Analogy



Outstanding performance and energy savings

The exceptional energy-saving performance of Panasonic Intelligent Inverter air conditioners ranks among the highest in the industry. The secret lies in its precision control. After reaching the set temperature, an Intelligent Inverter air conditioner continually adjusts compressor rotation speed to operate with minimum power – giving you up to 50% energy savings during cooling operation, and 64% energy savings during heating operation. By contrast, a non-Inverter unit operates on an ON-OFF cycle to maintain the temperature – so it uses twice as much electricity.

eco ideas



^{*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

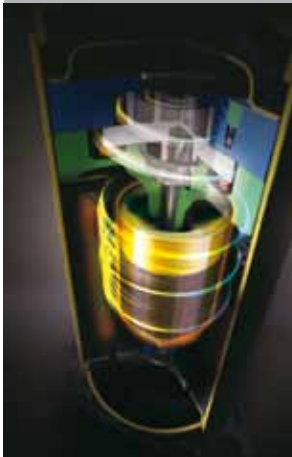
^{*2} Comparison of cumulative electricity consumption during 8 hours of cooling. (Panasonic in-house comparison) Test conditions: Room temperature at start: 35°C / Setting temperature: 25°C

*Comparison of CS-E12LKR Inverter and non-Inverter air conditioners when operating 8 hours a day, for one year

*Test Conditions <Room Size> 16,2m²; Outside temp.: DB35°C / WB24°C. Set temp.: 25°C; Fan Speed / Airflow Direction: Hi Fan / Auto Swing

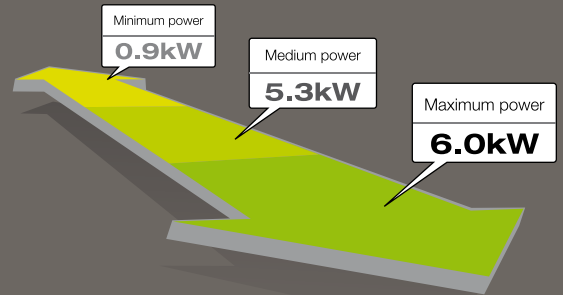
*Operation starts from indoor temperature DB35°C / WB24°C, until it achieves the set temperature 25°C, total operation for 8 hours.

Optimum Performance



Thanks to a wider power output range, the Intelligent Inverter can vary its cooling power to meet different room occupancy levels. By adjusting the compressor's rotation performance to provide optimum speed at all times, it is able to achieve and maintain the set temperature more cost-efficiently than a non-Inverter.

Even Wider Output Power Range

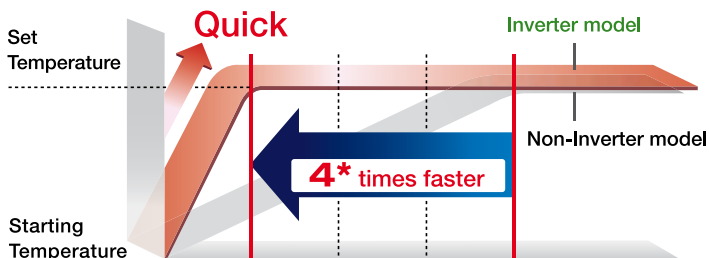


Graph shows the CS-E18LKR Inverter model's wide power output range during cooling

Quick Comfort

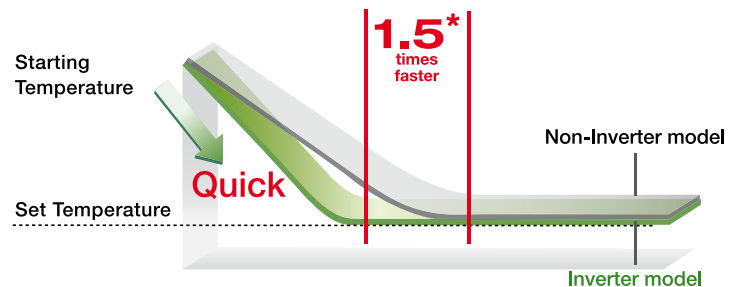
As soon as an Inverter air conditioner is switched on, it provides the exact amount of power needed to rapidly cool or heat the room. This enables it to heat a room 4 times faster, and cool a room 1.5 times faster, than non-inverter models. So you're comfortable soon after you arrive home on a hot summer day, or on a cold winter morning.

Comparison of Heating Speed



* Comparison of CS-E9LKR Inverter Vs non-Inverter models during heating.

Comparison of Cooling Speed



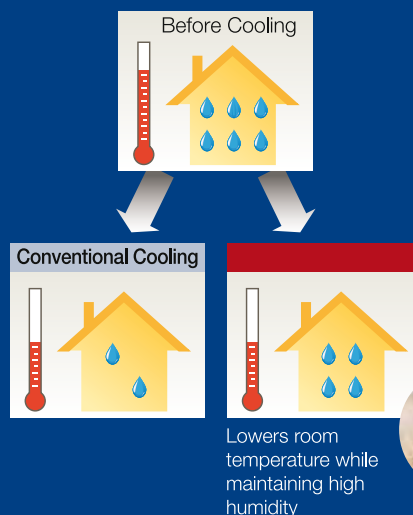
* Comparison of CS-E12LKR Inverter Vs non-Inverter models during cooling.

Mild Dry Cooling

- Fine control helps prevent a rapid decrease in room humidity while maintaining the set temperature. (Maintains an RH* up to 10% higher than cooling operation)
*RH : Relative Humidity
- Ideal when sleeping with the air conditioner on.



The effect was verified by Professor Norio Isoda of Nara Women's University (Sep 2008)



Based on findings from the Skin Moisture Decrease Test, Professor Norio Isoda of Nara Women's University concluded that a high humidity environment improves skin moisture compared to a low humidity environment (with a difference in humidity of 10% or more). Precise temperature control helps prevent a rapid decrease in room humidity while maintaining the set temperature. Thus, Mild Dry Cooling can help to minimise dry skin and dry throat – common effects of regular cooling operation.



INCREASED ENERGY-SAVINGS



Enjoy Uninterrupted Comfort and Increased Energy Savings

For those who welcome energy savings without having to give up uninterrupted cooling and heating, the Eco Patrol sensor is the answer.

As soon as it is activated via remote control, the Eco Patrol sensor detects the level of human presence or activity in a room and adjusts the temperature accordingly. **Saving you the hassle** of having to remember to turn the air conditioner on or off, the temperature up or down – while **saving you up to 10% in electricity costs.**

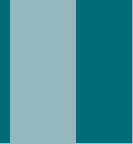
Up to 10% additional energy savings

The energy-saving benefit of Eco Patrol is maximised when the air conditioners is left switched on in a room that is used intermittently. For example, when the room is empty for two hours, the air conditioner self-adjusts to raise the temperature by 2°C for up to 10% additional energy savings. When someone re-enters, the air conditioner reverts to the set temperature to provide uninterrupted comfort.

*1 Total savings during Cooling:
60% (Inverter: 50% + Eco Patrol: 10%)

Comparison between an Inverter model with Eco Patrol and non Inverter model without Eco Patrol. Both operating for 8 hours.





HERE'S WHY THE ECO PATROL SENSOR IS SO GREAT!

It senses people's movements.

It recognises people by "infrared rays + movement" and determines the amount of activity.

It senses the entire room in real-time.

It constantly checks people's movements in the room, and quickly adapts to changes.

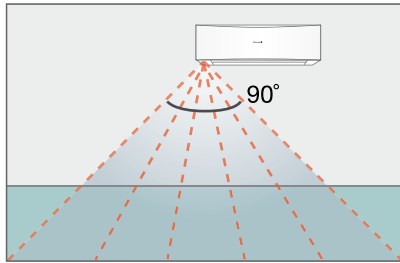
High-Precision Sensing.

Its wide field of view senses up to 7 metres away with high precision.

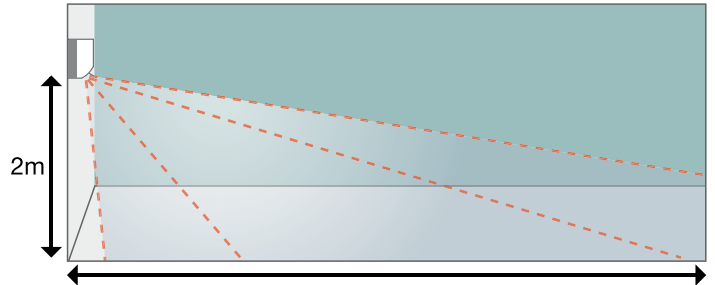
ECO PATROL

Eco Patrol's Coverage Capabilities

Eco Patrol's high-precision sensor can detect any moving object within its detection zone.



Angle of detection



7m

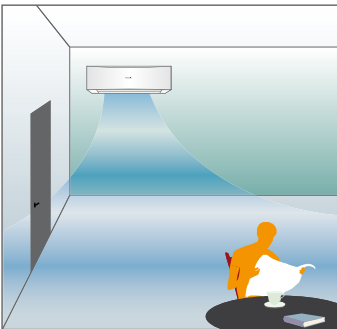
Area of detection

Eco Patrol's Operation

Eco Patrol optimises operation as cooling and heating requirements change.

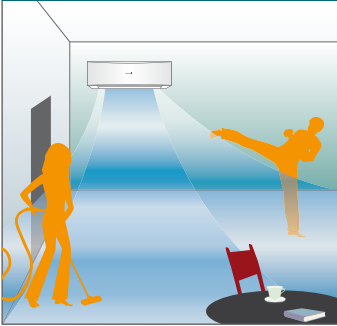
DETECTION

Senses human presence and activity level

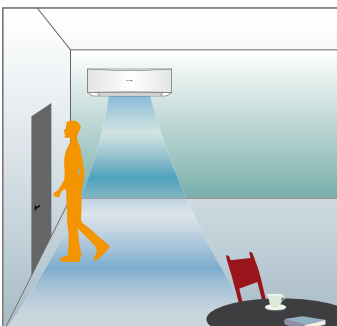


ANALYSIS

Records if there are any changes



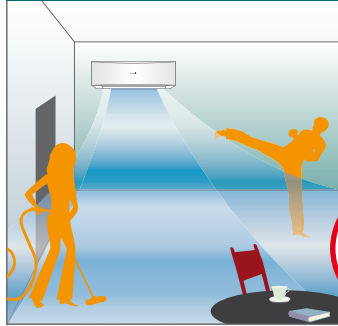
When the activity level goes up...



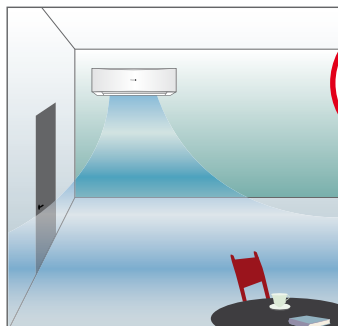
When everyone leaves...

ADJUSTMENT

Increases or decreases power accordingly



Higher-power operation provides uninterrupted comfort.



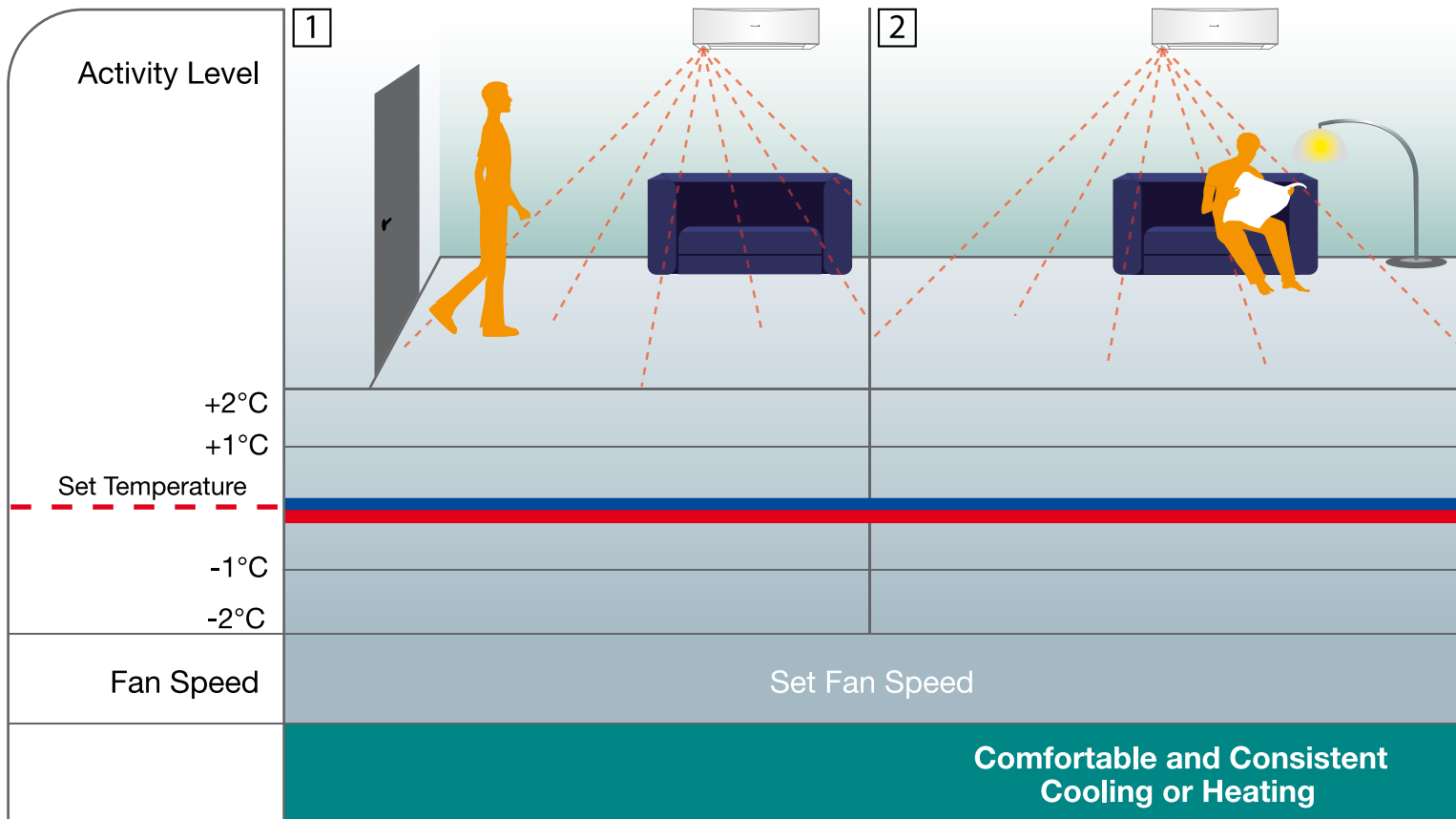
Lower-power operation saves energy.

MAXIMUM COMFORT

MAXIMUM SAVINGS

UNINTERRUPTED COOLING AND HEATING

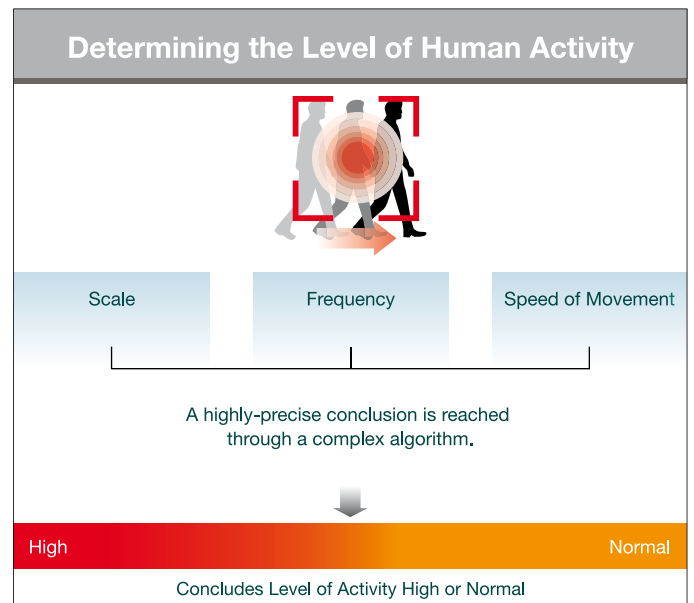
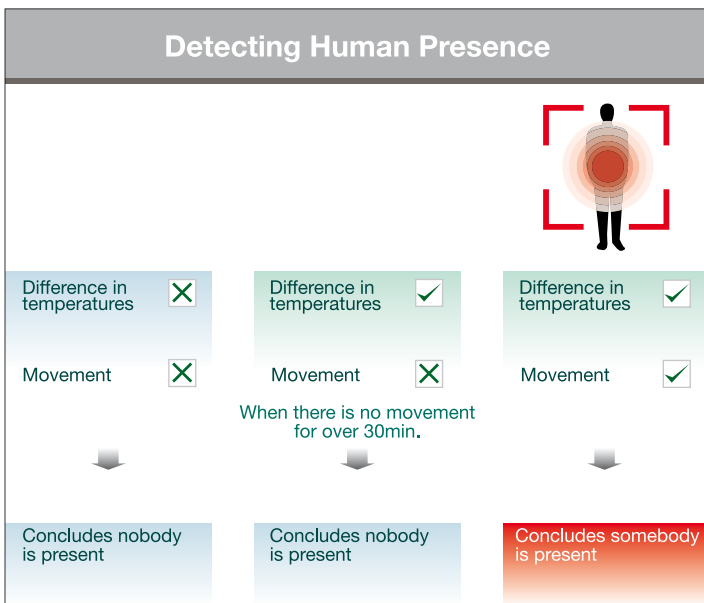
Monitoring human presence and activity level for maximum comfort



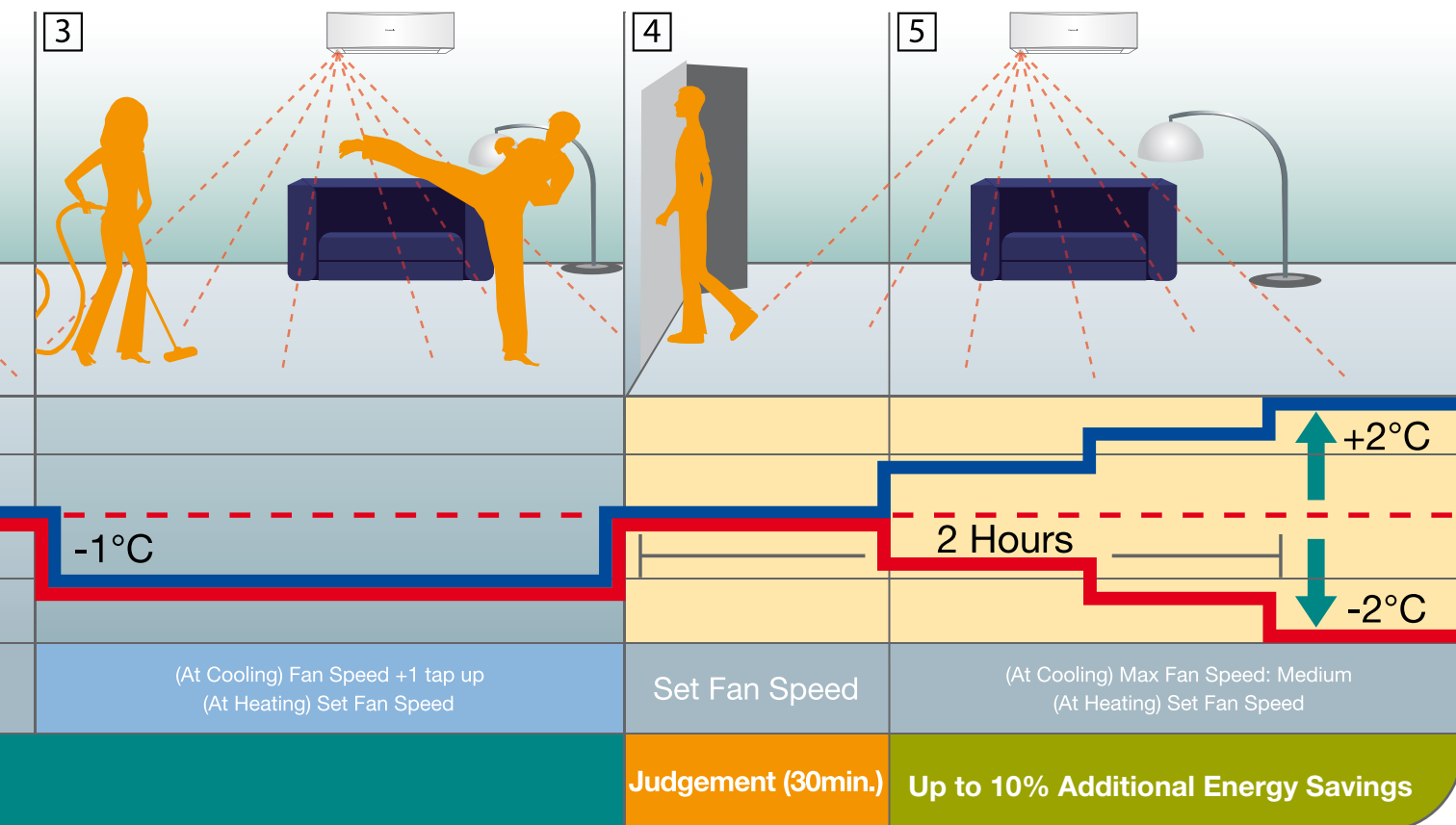
■ Cooling ■ Heating

High-Precision Sensing

All objects emit infrared rays which, although invisible, can be detected as heat by Eco Patrol's sensor if it is within the detection zone. When an object moves within its detection zone, Eco Patrol compares the object's temperature with the room temperature to determine if it is human, and level of activity based on its movement.



and maximum savings



Differentiating Objects

Eco Patrol's sensor technology uses factors such as speed, frequency and temperature of every object to determine if it is human.

Electrical products



Difference in temperatures	<input checked="" type="checkbox"/>
+	
Movement	<input type="checkbox"/>
↓	
Concludes it is not human.	

Pets



Difference in temperatures	<input checked="" type="checkbox"/>
+	
Movement	<input checked="" type="checkbox"/>
↓	
Possibility to conclude it is human*.	

From the difference in temperatures and the nature of the object's movement, Eco Patrol can determine if it's human*.

*The sensor may deem pets as humans, unless it moves within the detection zone at speeds that are not humanly possible.

A rolling ball



Difference in temperatures	<input type="checkbox"/>
+	
Movement	<input checked="" type="checkbox"/>
↓	
Concludes it is not human.	

Small insects



Difference in temperatures	<input checked="" type="checkbox"/>
+	
Movement	<input checked="" type="checkbox"/>
↓	
Concludes it is not human.	

Both changes may be detected, but they are too small to have any effect on the sensor.

AIR PURIFYING TECHNOLOGY

ADVANCED+PLUS

e-ion Air Purifying System with Newly Designed Patrol Sensor

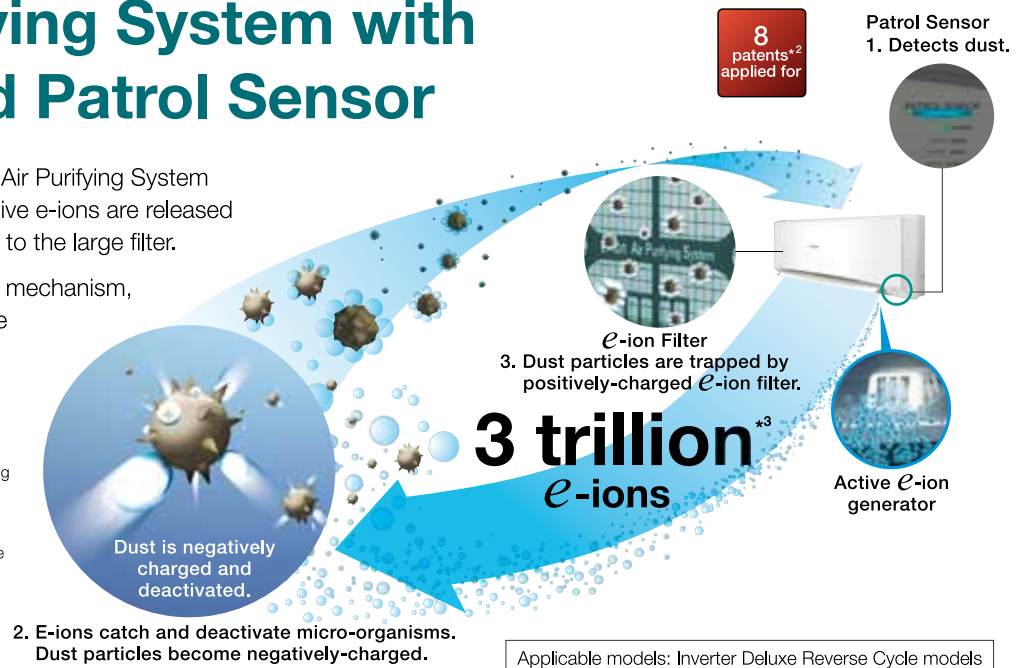
Panasonic's original, highly acclaimed e-ion Air Purifying System is now 15%*¹ more efficient than before. Active e-ions are released to catch dust particles and bring them back to the large filter.

Thanks to this revolutionary boomerang-like mechanism, air is purified throughout the room to provide a healthy, relaxing living environment.

*¹ Compared to 2007 year's models.

*² Panasonic has applied for 8 patents related to e-ion Air Purifying technology. (As of May, 2010)

*³ 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 (13m²):100k/cc Calculated number of active e-ions in the entire room assuming they are evenly distributed.



THIS IS PANASONIC'S REVOLUTIONARY MECHANISM

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.

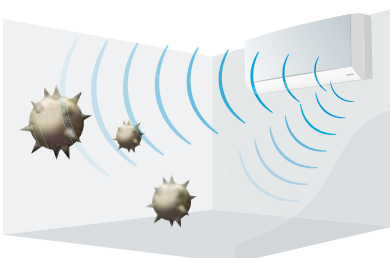


DETECTS

PATROL SENSOR

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

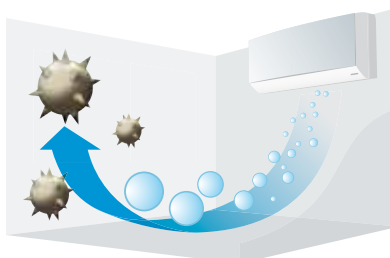
If dirt concentration exceeds the sensing level, the Air Purifying System is switched on.



CATCHES & DEACTIVATES

E-ION ACTION

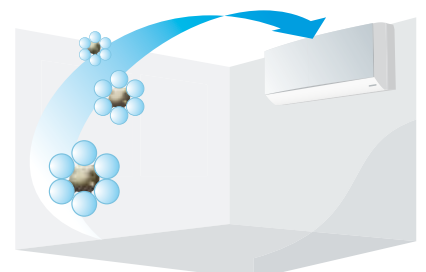
Three trillion e-ions are released to catch floating dust particles. The ions also deactivate bacteria and viruses.



CAPTURES ELECTRICALLY

E-ION FILTER

The filter is positively-charged, so negatively-charged dust particles are electrically attracted. This electrical action assures that dust is efficiently captured.



Active e-ion

- Active e-ions can deactivate 99% of bacteria*¹ and virus*² activities.
- e-ions Air Purifying System can rapidly reduce airborne mould and bacteria*³

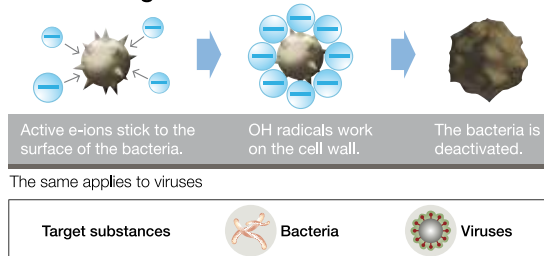
99% deactivation was certified by Japan Food Research Laboratories

*¹ Test report number: No. 205010211-001
Bacteria: Staphylococcus aureus subsp. aureus (NBRC12732)

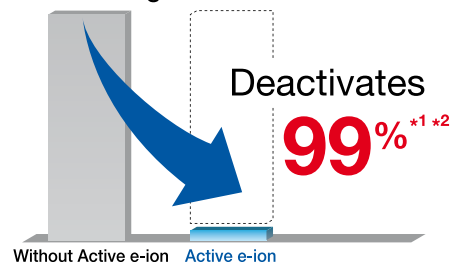
*² Test report number: No. 204101750-001
Virus: Influenza virus A

*³ Test report number: 304110078-001
Test method: The e-ion Air Purifying System was operated in a test room (10m²) and changes in airborne mould and bacteria were measured by means of the Air Sampler Method (MAS100)

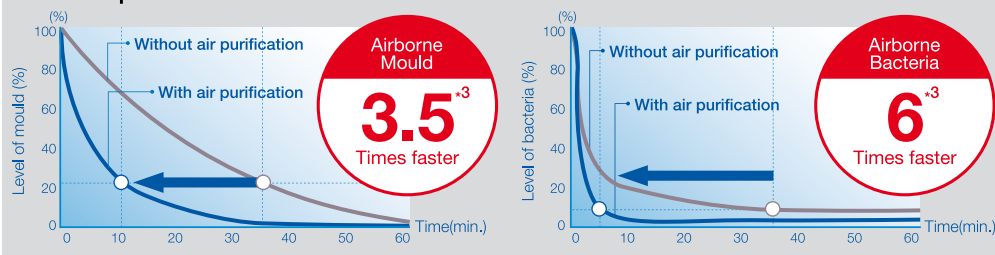
Deactivating mechanism



Deactivating effect



Removal performance

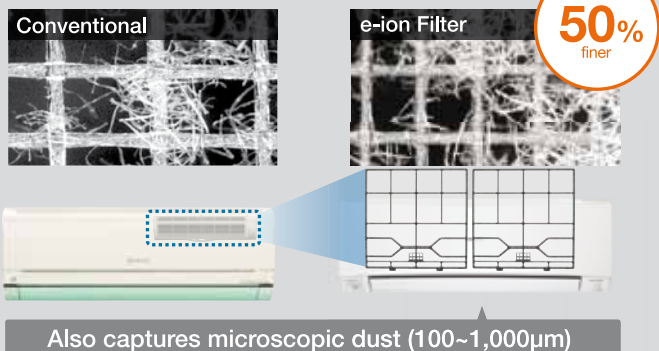


e-ion Filter

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 airborne dust particles.

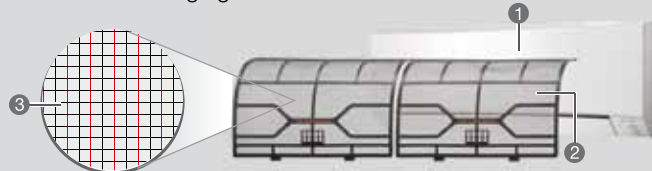
Bigger Size, Finer Mesh

The filter covers the entire grille area.



Electric Charging

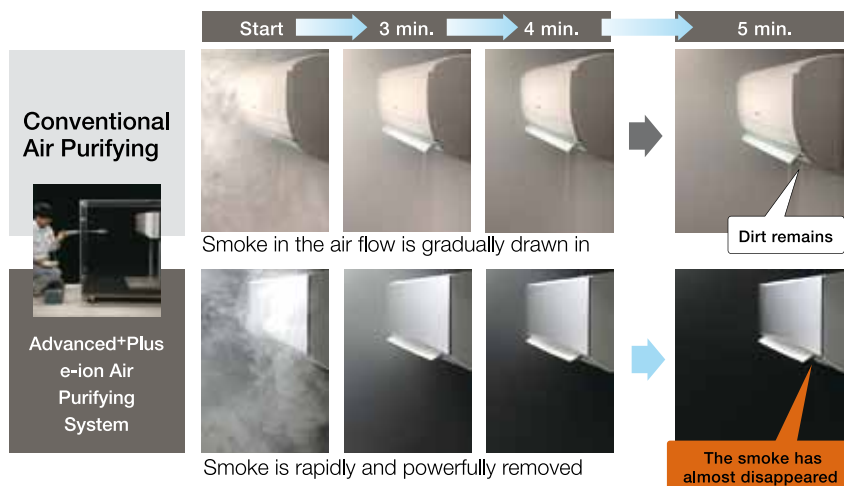
Electric Induction Fibres extend across the entire area of the filter for charging.



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

Electric Dust Collection for More Efficient Purification

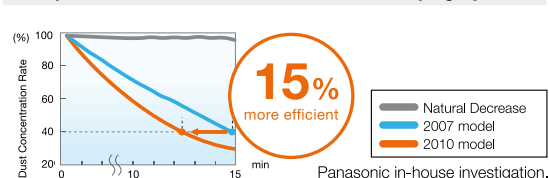
A smoke collection test demonstrates the exceptional purifying performance.



Comparison with Conventional Filter



Comparison with Conventional e-ion Air Purifying System

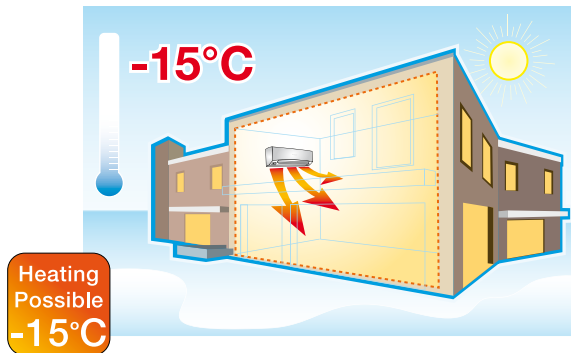


*² After 5 cigarettes were smoked in a roughly 20m³ room, air conditioner operation was started and the decrease in particulate concentration was measured with a dust meter.

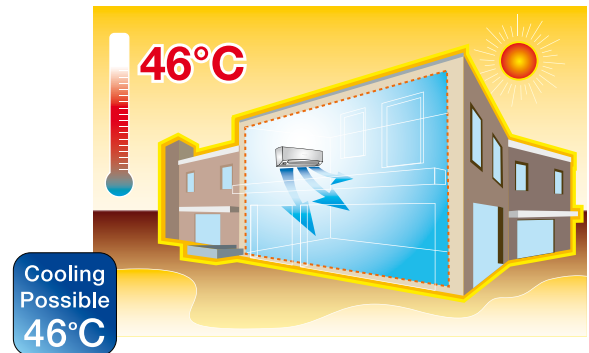
PANASONIC VERSATILE FEATURES

Wide Operating Temperature Range

Panasonic Air Conditioners are perfectly designed to suit Australia's climate with outstanding operating temperature range.



Providing outstanding cold climate performance, Panasonic Air Conditioners let you enjoy stable heating even when the outside temperature is below freezing. Units operate down to -15°C . Add to this exceptional durability and reliability and you are looking at worry-free operation for comfort during winter.



Cooling is possible even when the outside temperature is up to 46°C . The highly durable compressors and fan motors found inside Panasonic Air Conditioners help to maintain room comfort even under the hottest conditions.

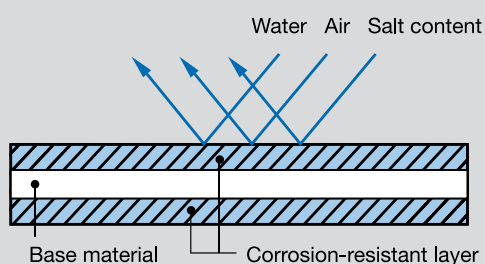
Blue Fin Condenser

Lasts 3 Times Longer

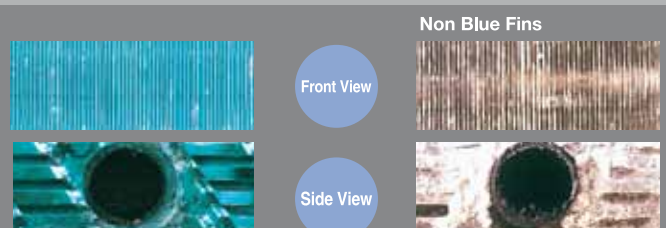
An air conditioner's performance depends largely on its condenser, which can take a beating from exposure to salty air, wind, dust and other corrosive factors. Panasonic has found a way to triple the life of our condensers, using a layer of our original anti-rust coating. This special coating lets you enjoy more years of reliable comfort plus extra economy over the long run.



Special Coating Layer (Fin Cross-section)



Cyclic Corrosion Test Results



Test Proven – Durability that lasts 3 times longer

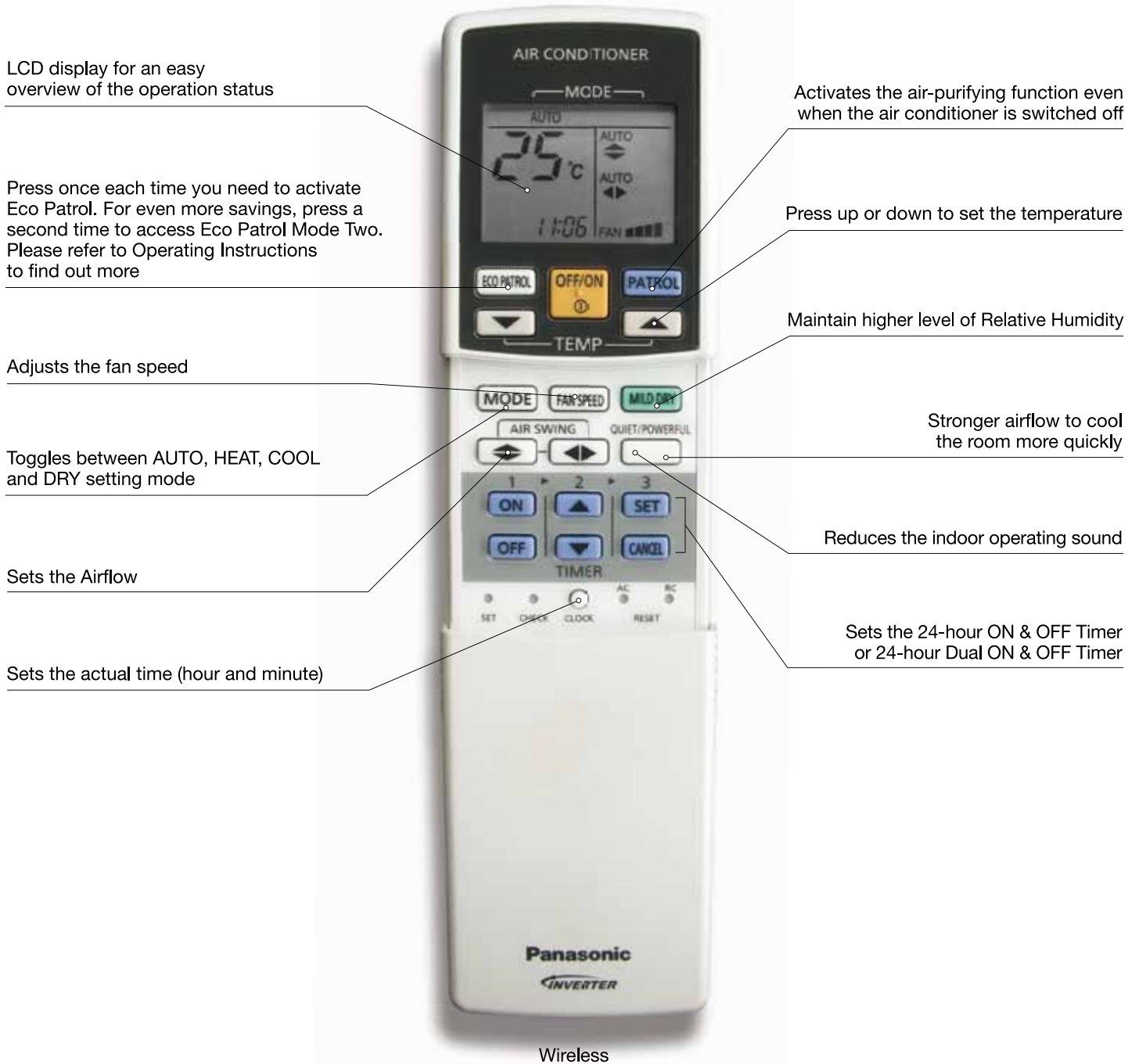
Panasonic's condenser has 3 times higher resistance against corrosion. This special coating assures longer condenser life for years of reliable comfort.

Note: According to Panasonic test results.

Easy-to-use Remote Controller

Wireless Remote Controller

Panasonic's wireless remote controller features a large Liquid Crystal Display (LCD) panel which makes it extremely user-friendly. So you can sit back and enjoy easy operation and long-lasting comfort from your Panasonic Air Conditioner.



Deluxe Wide Reverse Cycle Remote pictured. Exact button configuration varies by model.

QUIET OPERATION

Quiet operation for more comfort

Quiet Mode

Quiet Mode during cooling and heating provides quieter indoor operation as well as reducing the outdoor unit noise level.

Indoor unit

21dB*



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

* CS-E9LKR: during cooling/heating operation, CS-E12LKR: during cooling operation with low fan speed in the Quiet Mode.

Outdoor unit

-5dB*¹



Noise is 5dB*¹ quieter than during regular operation, so less chance of bothering your neighbours.

*¹ CU-E15/E18/E21/E24/E28/S24/S28 LKR: In the Quiet Mode during cooling/heating operation with low fan speed

MODEL LINE-UP



INVERTER SINGLE-SPLIT TYPE | Wall-Mounted

Deluxe Reverse Cycle Pg 16

NEW

Capacity (kW)

- 2.6 **CS-E9LKR (CU-E9LKR)**
- 3.5 **CS-E12LKR (CU-E12LKR)**
- 4.4 **CS-E15LKR (CU-E15LKR)**
- 5.3
- 6.3
- 7.4
- 8.0

Versatile Features

Deluxe Wide Reverse Cycle Pg 16

NEW

Capacity (kW)

- 5.3 **CS-E18LKR (CU-E18LKR)**
- 6.3 **CS-E21LKR (CU-E21LKR)**
- 7.4 **CS-E24LKR (CU-E24LKR)**
- 8.0 **CS-E28LKR (CU-E28LKR)**

Versatile Features

INVERTER SINGLE-SPLIT TYPE | Wall-Mounted

Deluxe Cooling Pg 18

NEW

Capacity (kW)

- 2.6 **CS-S9LKR (CU-S9LKR)**
- 3.5 **CS-S12LKR (CU-S12LKR)**
- 4.4
- 5.3
- 6.3
- 7.4
- 8.0

Versatile Features

Deluxe Wide Cooling Pg 18

NEW

Capacity (kW)

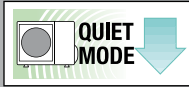
- 7.4 **CS-S24LKR (CU-S24LKR)**
- 8.0 **CS-S28LKR (CU-S28LKR)**

Versatile Features

- ECO Patrol
- Advanced+Plus e-ion Air Purifying System
- Patrol Sensor
- Mild Dry Cooling
- Economy Mode
- 24-Hour Dual ON/OFF Real Setting Timer
- Quiet Mode (Indoor/cooling)
- SUPER Allergy-buster filter
- Blue Fin Condenser
- Large Remote Controller
- Star Rating (Heating)
- Star Rating (Cooling)
- Heating Operation Lower Limit
- Cooling Operation Higher Limit



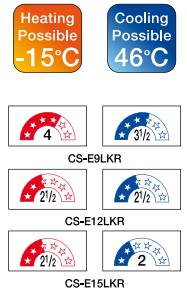
Deluxe Reverse Cycle



Except CU-E9/E12LKR



NEW



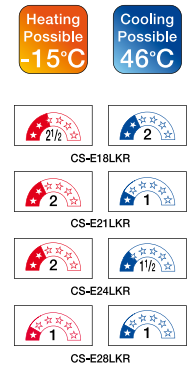
**CS-E9LKR
CS-E12LKR**

CS-E15LKR

Features



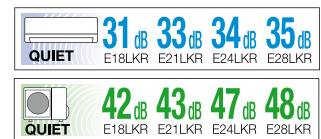
NEW



**CS-E18LKR
CS-E21LKR**

**CS-E24LKR
CS-E28LKR**

Features



Outdoor



CU-E9LKR/E12LKR



CU-E15LKR/E18LKR/E21LKR/E24LKR/E28LKR



The figure shown is the value during cooling operation with low fan speed in the Quiet mode.

2-in-1 Value with the Air Purifying Function Plus Energy Saving!



Advanced+Plus e-ion Air Purifying System

e-ions are released to catch particles and deactivate bacteria and virus activities. The positively-charged e-ion filter attracts dust particles to thoroughly clean the air.



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.



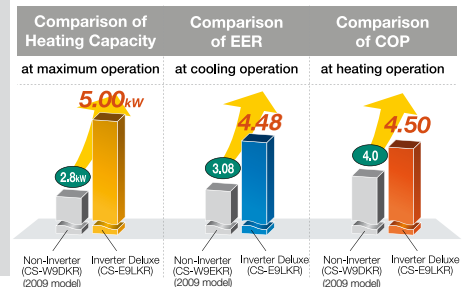
ECO PATROL

Eco Patrol detects human presence and activity levels. It then adjusts the temperature and fan speed accordingly to give more comfort and energy savings.



Industry Leading Energy Saving Rating Achieved by Inverter Technology

On top of the powerful heating, the longer you use the unit the more you can enjoy class-leading operation efficiency, which means an even bigger energy saving effect.



Specifications

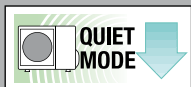
Model (50Hz)			CS-E9LKR (CU-E9LKR)	CS-E12LKR (CU-E12LKR)	CS-E15LKR (CU-E15LKR)	CS-E18LKR (CU-E18LKR)	CS-E21LKR (CU-E21LKR)	CS-E24LKR (CU-E24LKR)	CS-E28LKR (CU-E28LKR)
Cooling Capacity	kW		2.60 (0.80 ~ 3.00)	3.50 (0.80 ~ 4.00)	4.40 (0.90 ~ 5.00)	5.30 (0.90 ~ 6.00)	6.30 (0.90 ~ 7.10)	7.40 (0.90 ~ 8.10)	8.00 (0.90 ~ 8.60)
	Btu/h		8,870 (2,730 ~ 10,200)	11,900 (2,730 ~ 13,600)	15,000 (3,070 ~ 17,100)	18,100 (3,070 ~ 20,500)	21,500 (3,070 ~ 24,200)	25,200 (3,070 ~ 27,600)	27,300 (3,070 ~ 29,300)
EER	W/W		4.48	3.98	3.46	3.56	3.09	3.18	3.02
Heating Capacity*	kW		3.60 (0.80 ~ 5.00)	4.90 (0.80 ~ 6.70)	5.50 (0.90 ~ 7.10)	6.35 (0.90 ~ 8.00)	7.20 (0.90 ~ 8.50)	8.60 (0.90 ~ 9.90)	9.60 (0.90 ~ 11.00)
	Btu/h		12,300 (2,730 ~ 17,100)	16,700 (2,730 ~ 22,800)	18,800 (3,070 ~ 24,200)	21,700 (3,070 ~ 27,300)	24,600 (3,070 ~ 29,000)	29,300 (3,070 ~ 33,800)	32,700 (3,070 ~ 37,500)
COP	W/W		4.50	3.89	3.74	3.76	3.64	3.45	2.95
Star Rating			3.5 / 4.0	2.5 / 2.5	2.0 / 2.5	2.0 / 2.5	1.0 / 2.0	1.5 / 2.0	1.0 / 1.0
Electrical Data	Voltage	V	240	240	240	240	240	240	240
	Running Current	A	2.7 / 3.6	3.9 / 5.5	5.8 / 6.6	6.7 / 7.7	9.0 / 8.8	10.5 / 11.3	12.0 / 14.9
	Power Input	kW	0.58 (0.175 ~ 0.78) 0.80 (0.165 ~ 1.36)	0.88 (0.185 ~ 1.20) 1.26 (0.175 ~ 1.89)	1.27 (0.215 ~ 1.60) 1.47 (0.245 ~ 2.25)	1.49 (0.215 ~ 2.05) 1.69 (0.245 ~ 2.65)	2.04 (0.215 ~ 2.40) 1.98 (0.245 ~ 2.70)	2.33 (0.35 ~ 2.70) 2.49 (0.36 ~ 3.20)	2.65 (0.35 ~ 2.95) 3.25 (0.36 ~ 3.79)
Noise	Sound Pressure Level**	Indoor (Hi/Lo/S-Lo)	38/25/21 39/27/21	41/26/21 41/29/26	43/30/23 43/31/27	42/34/31 42/33/29	45/36/33 45/35/32	46/37/34 46/37/34	49/38/35 48/38/35
		Outdoor (Hi/S-Lo)	46 / — 46 / —	48 / — 49 / —	46 / 41 46 / 41	47 / 42 47 / 42	48 / 43 49 / 44	52 / 47 52 / 47	53 / 48 53 / 48
	Sound Power Level	Outdoor (Hi/S-Lo)	61 / — 61 / —	63 / — 64 / —	61 / 56 61 / 56	61 / 56 61 / 56	62 / 57 63 / 58	66 / 61 66 / 61	67 / 62 67 / 62
Dehumid	L/h		1.6	2.0	2.4	2.9	3.5	4.3	4.7
Air Flow	L/s		178 / 202	202 / 207	213 / 233	267 / 295	263 / 273	307 / 339	340 / 349
Dimensions	Indoor H x W x D	mm	290x870x204	290x870x204	290x870x204	290x1070x235	290x1070x235	290x1070x235	290x1070x235
	Outdoor H x W x D	mm	540x780x289	540x780x289	795x875x320	795x875x320	795x875x320	795x875x320	795x875x320
Net Weight	Indoor (Outdoor)	kg	9 (34)	9 (35)	9 (50)	12 (50)	12 (50)	12 (59)	12 (60)
Refrigerant Pipe Diametre	Liquid Side/Gas Side	mm	6.35 / 9.52	6.35 / 12.70	6.35 / 12.70	6.35 / 12.70	6.35 / 12.70	6.35 / 15.88	6.35 / 15.88
Pipe Extension Length	Min.~Max.	m	3~15	3~15	3~15	3~20	3~20	3~30	3~30
Pipe Length for Additional Gas		m	7.5	7.5	7.5	10	10	10	10
Additional Refrigerant Gas		g/m	20	20	20	20	20	30	30
Power Supply			Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Operating Temperature Range (Outdoor)	Degree °C		16~46 / -15~24	16~46 / -15~24	16~46 / -15~24	16~46 / -15~24	16~46 / -15~24	16~46 / -15~24	16~46 / -15~24

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

- * Maximum heating capacity shown are the values based on powerful operation.
- ** Sound pressure level specification is measured according to JIS C9612.
- 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.

Deluxe Cooling



Except CU-S9/S12LKR



NEW



Large Remote Controller

Cooling Possible 46°C

2 1/2
CS-S9LKR

2
CS-S12LKR

CS-S9LKR

CS-S12LKR

Features

21 dB
QUIET S9/S12LKR

NEW



Large Remote Controller

Cooling Possible 46°C

1 1/2
CS-S24LKR

1
CS-S28LKR

CS-S24LKR

CS-S28LKR

Features

35 dB
QUIET S24/S28LKR

47 dB 48 dB
QUIET S24LKR S28LKR

Outdoor



CU-S9LKR/S12LKR



CU-S24LKR/S28LKR



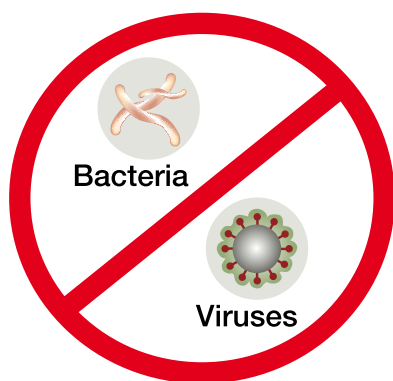
The figure shown is the value during cooling operation with low fan speed in the Quiet mode.

Clean, Comfortable Air and Energy Saving Performance



SUPER alleru-buster filter

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 healthy.



Economy Mode

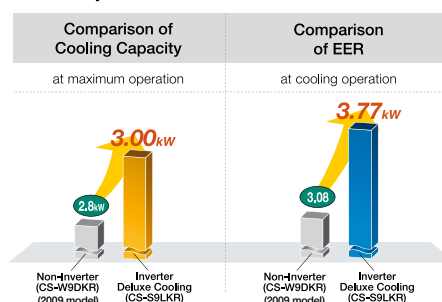
The Economy mode reduces energy consumption by up to 20%* compared to the Normal mode by automatically adjusting the set temperature by up to 2°C. It's ideal when you want to maintain room temperature for gentle cooling.



* Panasonic figures, at an outside temperature of DB35°C/WB24°C and set temperature of 25°C (Cooling operation).

Highest Energy Saving Rating Achieved by Inverter Technology

Panasonic's high-efficiency technologies meet stringent energy-saving standards. Our new deluxe cooling models have attained Energy - Efficiency Rating 2.5 star, which places them as one of the industry's top class of energy savers. This means you can use these models everyday, without having to worry about the electricity bill.



Specifications

Model		(50Hz)	CS-S9LKR (CU-S9LKR)	CS-S12LKR (CU-S12LKR)	CS-S24LKR (CU-S24LKR)	CS-S28LKR (CU-S28LKR)	
Cooling Capacity		kW	2.60 (0.80 ~ 3.00)	3.50 (0.80 ~ 4.00)	7.40 (0.90 ~ 7.70)	8.00 (0.90 ~ 8.40)	
		Btu/h	8,870 (2,730 ~ 10,200)	11,900 (2,730 ~ 13,600)	25,200 (3,070 ~ 26,300)	27,300 (3,070 ~ 28,600)	
EER		W/W	3.88	3.65	3.18	3.02	
Star Rating			2.5	2.0	1.5	1.0	
Electrical Data	Voltage	V	240	240	240	240	
	Running Current	A	3.2	4.4	10.6	12.0	
	Power Input	kW	0.67 (0.18 ~ 0.88)	0.96 (0.19 ~ 1.33)	2.33 (0.35 ~ 2.70)	2.65 (0.35 ~ 2.95)	
Noise	Sound Pressure Level*	Indoor (Hi/Lo/S-Lo)	dB(A)	37/26/21	38/28/21	47/38/35	49/38/35
		Outdoor (Hi/S-Lo)	dB(A)	47 / —	48 / —	52 / 47	53 / 48
	Sound Power Level	Outdoor (Hi/S-Lo)	dB	62 / —	63 / —	66 / 61	67 / 62
Dehumid		L/h	1.6	2.0	4.3	4.7	
Air Flow		L/s	168	178	307	340	
Dimensions	Indoor H x W x D	mm	290x870x204	290x870x204	290x1070x235	290x1070x235	
	Outdoor H x W x D	mm	540x780x289	540x780x289	795x875x320	795x875x320	
Net Weight	Indoor (Outdoor)	kg	9 (29)	9 (29)	12 (56)	12 (57)	
Refrigerant Pipe Diameter	Liquid Side/Gas Side	mm	6.35 / 9.52	6.35 / 12.70	6.35 / 15.88	6.35 / 15.88	
Pipe Extension Length	Min.-Max.	m	3~15	3~15	3~30	3~30	
Pipe Length for Additional Gas		m	7.5	7.5	10	10	
Additional Refrigerant Gas		g/m	15	15	30	30	
Power Supply			Outdoor	Outdoor	Outdoor	Outdoor	
Operating Temperature Range (Outdoor)		Degree °C	16 ~ 46	16 ~ 46	16 ~ 46	16 ~ 46	

Rating Conditions

	Cooling
Inside air temperature	27°C DB / 19°C WB
Outside air temperature	35°C DB

* Sound pressure level specification is measured according to JIS C9612.

- 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.

FEATURE COMPARISON

INVERTER SINGLE-SPLIT TYPE





Deluxe Reverse Cycle		Deluxe Wide Reverse Cycle	
CS-E9LKR CS-E12LKR	CS-E15LKR	CS-E18LKR CS-E21LKR	CS-E24LKR CS-E28LKR

		Deluxe Reverse Cycle	Deluxe Wide Reverse Cycle
Healthier Air	Advanced ⁺ Plus e-ion Air Purifying System	●	●
	Patrol Sensor	●	●
	SUPER alleru-buster filter		
	One-Touch Air Filter	●	●
	Odour-Removing Function	●	●
	Removable, Washable Panel	●	●

		Deluxe Reverse Cycle	Deluxe Wide Reverse Cycle	
Comfort	Inverter Control	●	●	
	ECO Patrol	●	●	
	Mild Dry Cooling	●	●	
	Quiet Mode	Indoor	●	●
		Outdoor	● (E15)	●
	Powerful Mode	●	●	
	Economy Mode			
	Heating Operation Lower Limit	-15°C	-15°C	
	Cooling Operation Higher Limit	46°C	46°C	
	Soft Dry Operation Mode	●	●	
	Wide & Long Airflow Vane	●		
	Personal Airflow Creation		●	
	Airflow Direction Control (Up & Down)	●		
	Manual Horizontal Airflow Direction Control	●		
	Auto Changeover (Inverter)	●	●	
	Automatic Operation Mode			
Hot Start Control	●	●		

		Deluxe Reverse Cycle	Deluxe Wide Reverse Cycle
Convenience	24-Hour Dual ON/OFF Real Setting Timer	●	●
	LCD Wireless Remote Controller	● (Large)	● (Large)

		Deluxe Reverse Cycle	Deluxe Wide Reverse Cycle
Reliability	Blue Fin Condenser	●	●
	Random Auto Restart	●	●
	Long Piping	15m	20m(E18/E21) 30m(E24/E28)
	Plug Type & Ampere Capacity <small>*The plug must be installed</small>	Outdoor Power Supply	Outdoor Power Supply
	Top-Panel Maintenance Access	●	●
Self-Diagnostic Function	●	●	

Deluxe Cooling	Deluxe Wide Cooling
CS-S9LKR CS-S12LKR	CS-S24LKR CS-S28LKR
	

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46°C	46°C
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•	•

•	•
• (Large)	• (Large)

•	•
•	•
15m	30m
Outdoor Power Supply	Outdoor Power Supply
•	•
•	•



FEATURE EXPLANATIONS

Comfort

Inverter Control

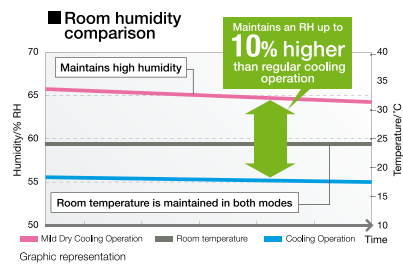
An inverter air conditioner provides optimum power control, which is impossible for conventional units. The secret lies in the inverter circuit. By changing the frequency of power supply, this circuit alters the rotation speed of the compressor, which is the heart of the air conditioner. The result is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

Eco Patrol

Eco Patrol detects human presence and activity levels. It then adjusts the temperature and fan speed accordingly to give more comfort and energy savings.

Mild Dry Cooling

Fine control helps prevent a rapid decrease in room humidity while maintaining the set temperature. Maintains an RH* of up to 10% higher than cooling operation. Ideal when sleeping with the air conditioner on.



*RH : Relative Humidity

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 the sound of leaves on a tree



Outdoor unit:



As quiet as a library



¹ CS-E5LKR: In the Quiet mode during heating/cooling operation with low fan speed.

CS-E12LKR: In the Quiet mode during cooling operation with low fan speed.

² CU-E15LKR: In the Quiet Mode during cooling/heating operation with low fan speed.

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.

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.



Economy Mode

The Economy mode reduces energy consumption by up to 20%* compared to the Normal mode by automatically adjusting the set temperature by up to 2°C. It's ideal when you want to maintain room temperature for gentle cooling and heating.



* Panasonic figures, at an outside temperature of DB35°C/WB24°C and set temperature of 25°C (Cooling operation)

Heating Operation Low Limit

Providing outstanding cold climate performance, Panasonic air conditioners let you enjoy stable heating even when the outside temperature is below freezing. Add to this exceptional durability and reliability and you're looking at worry-free operation for comfort during the harsh winter.

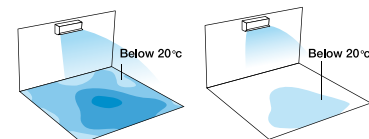
Cooling Operation Higher Limit

Cooling is possible even when the outside temperature is extremely hot. Highly durable compressor and fan motor helps to maintain room comfort even under the hottest conditions.

Wide & Long Airflow Vane

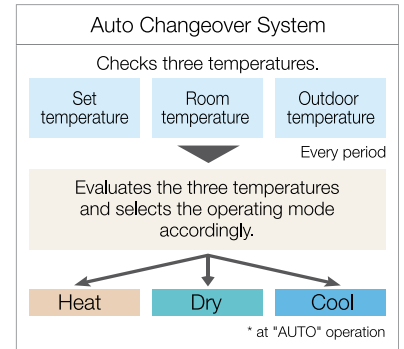
This newly designed vane has been integrated with the louver to send the air further to every corner of the room to keep the whole room comfortable.

Wide & Long Airflow Vane vs Conventional



Conditions: • Our simulated-house facility 13.2m²
• Set temperature 25°C

Auto Changeover (Inverter)



Automatic Operation Mode

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.

Personal Airflow Creation

Vertical and horizontal airflow 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)

Manual Horizontal Airflow Direction Control

Healthier Air


Advanced+Plus e-ion Air Purifying System

e-ions are released to catch dust particles and deactivate bacteria and virus activities. The positively-charged filter attracts dust particles 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.



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.

Anti-Mould, One-Touch Air Filter

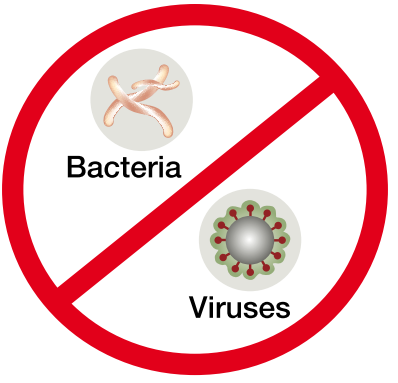
Odour-Reducing Function

With this function, there's a reduction in unpleasant odours 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.

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 healthy.



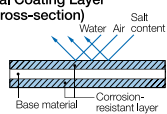
Reliability

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.



Special Coating Layer (Fin Cross-section)



Cyclic Corrosion Test Results

	Blue Fins	Non-Blue Fins
Front View		
Side View		

This was tested by: 1, Panasonic HA Air-Conditioning R&D (M) Sdn. Bhd., 2, A third party authorized research institute in Malaysia.

Random Auto Restart

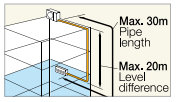
All models are now safe to operate without a starter. With the exclusive Random Auto Restart feature, the air conditioners automatically restart after power failure. Its 32 different recovery-timing patterns ensure that air conditioners in the same building resume one after another instead of all at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

Self-Diagnostic Function

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

Long Piping

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



The graph refers to the CS-E24/E28LKR. 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.

Convenience

LCD Wireless Remote Controller

24-Hour Dual ON & OFF Real Setting Timer

This feature enables you to preset two different sets of start/stop operation timer (hour and minute) within a 24-hour time frame.

The System of Model Numbers for Split Models

CS - E 9 L K R

1 2 3 4

- Model Type**
CS : Split Type (Indoor unit) CU : Split Type (Outdoor unit) CZ : Accessories
- Function**
E : Inverter Deluxe (Reverse cycle)
S : Inverter (Cooling only)
- Capacity**
Value = Capacity (Btu/h) x 1/1000e.g. 18,000 Btu/h x 1/1000 = 18
- Type**
K : Wall-Mounted Type

Quality Management System Certificate



Certified to ISO 9001: 2008
Cert. No.: MY-AR 1010



Certified to ISO 9001: 2008
Registration Number: 01209Q20645R5L

Certified to ISO 9001: 2008

Panasonic HA Air-Conditioning (M) Sdn.Bhd.
Cert. No.: MY-AR 1010

Certified to ISO 9001: 2008

Panasonic Home Appliances
Air-Conditioning (Guangzhou) Co., Ltd.
Registration Number:
01209Q20645R5L

Environmental Management System Certificate



Certified to ISO 14001: 2004
Cert. No.: MY-ER0112



Certified to ISO 14001: 2004
Registration Number: 02107E10411R3L

Certified to ISO 14001: 2004

Panasonic HA Air-Conditioning (M) Sdn.Bhd.
Cert. No.: MY-ER0112

Certified to ISO 14001: 2004

Panasonic Home Appliances
Air-Conditioning (Guangzhou) Co., Ltd.
Registration Number:
02107E10411R3L

Standard Warranty



Panasonic
Customer
care
centre
132600

For further information or location of your nearest Panasonic stockist please telephone Panasonic's Customer Care Centre on **132600**.

Visit our website at: panasonic.com.au
or email our Customer Care Centre on
pacc@au.panasonic.com



Panasonic leads the way... with "eco ideas"

'eco ideas' for Lifestyles

We will promote lifestyles with virtually zero CO₂ emissions all throughout the world

'eco ideas' for Business-styles

We will create and pursue a business-style which makes the best use of resources and energy

Panasonic

Panasonic Australia Pty. Limited.

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