



Reliability

Our R&D focuses on ease of use, and our history of rigorous quality control is unmatched in the industry. As a result, with more than 50 years of experience, Panasonic has sold over 70 million air conditioner units in Japan and around the world.



1958
Our first "Home Cooler" is launched.

Operating Test in Harsh Conditions



Checking the oil condition inside the compressor under various extremely cold and hot conditions.

An operating durability test is conducted in a high-temperature, high-humidity test chamber at a temperature of up to 55°C and a low-temperature test chamber down to 20°C.

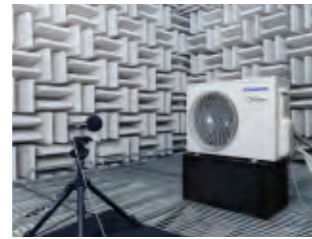
Environmental Test



Sunshine simulation.

An air conditioner is operated in a test room simulating a living room testing cooling speed, cooling efficiency, and temperature and humidity differences throughout the room.

Noise Test



The operating noise of the indoor and outdoor units is measured in a high-performance anechoic chamber. The noise test verifies that the operating noise is low enough to allow the user to talk and sleep comfortably while the product is operating.

Waterproof Test



A resin-potted circuit board.

Potential problems are checked by tests such as showering the unit for a predetermined amount of time. Contact sections on printed circuit boards are also resin-potted to prevent adverse effects caused by an unlikely exposure of droplets to water.

- Please read the Installation Instructions carefully before installing the unit, and the Operating Instructions before using it.
- Specifications are subject to change without prior notice.
- The contents of this catalogue are accurate as of December 2013.
- Due to printing considerations, the actual colours may vary slightly from those shown.
- All graphics are provided merely for the purpose of illustrating a point.



Do not add or replace refrigerant other than the specified type. Manufacturer is not responsible for the damage and deterioration in safety due to usage of other refrigerant.



The best among the rest

Awarded Asia Trusted Brand 2013 by Reader's Digest

This year, Panasonic Air Conditioners received Reader's Digest Asia Trusted Brand Award based on 6 key attributes: trustworthiness and credibility, quality, value, understanding of consumer needs, innovation and social responsibility. Thank you for your continuing support over the years and we look forward to delivering more innovative products in the future.

Panasonic

Air Conditioner

INTELLIGENT ECO SENSORS

ECONAVI

INVERTER



INTELLIGENT ECO SENSORS

ECONAVI

Panasonic ECONAVI appliances automatically sense conditions in your environment and optimize operation.

Energy efficiency is the key to enjoying a comfortable lifestyle while doing right by the environment. Intelligent eco sensors automatically sense the conditions in your home environment, allowing ECONAVI appliances to optimize their operation throughout the day and night.

ECONAVI + *INVERTER*

Inside, the INVERTER also leverages sensor data to achieve high-precision control of temperature, timing, power use, and other parameters. Thanks to these advanced Panasonic technologies, ECONAVI appliances minimize waste, energy and water consumption while making your life even more comfortable and convenient.



Remark: Product availability, model names and specification may vary according to country or region. Please check with Panasonic sales companies or Authorized Local Distributors in each respective country or region.



SUNLIGHT SENSOR
Cooling power is reduced when sunlight is less intense to reduce energy consumption.



We like our living spaces to be as comfortable as possible.

We want to enjoy cool comfort in a sustainable way.

We can achieve this by combining the best of our technologies.



ECONAVI detects where energy is normally wasted and adjusts cooling power accordingly. Then, **INVERTER** leverages **ECONAVI** sensor data and varies compressor rotation speed. This helps to optimize cooling operation and reduce wasteful cooling.

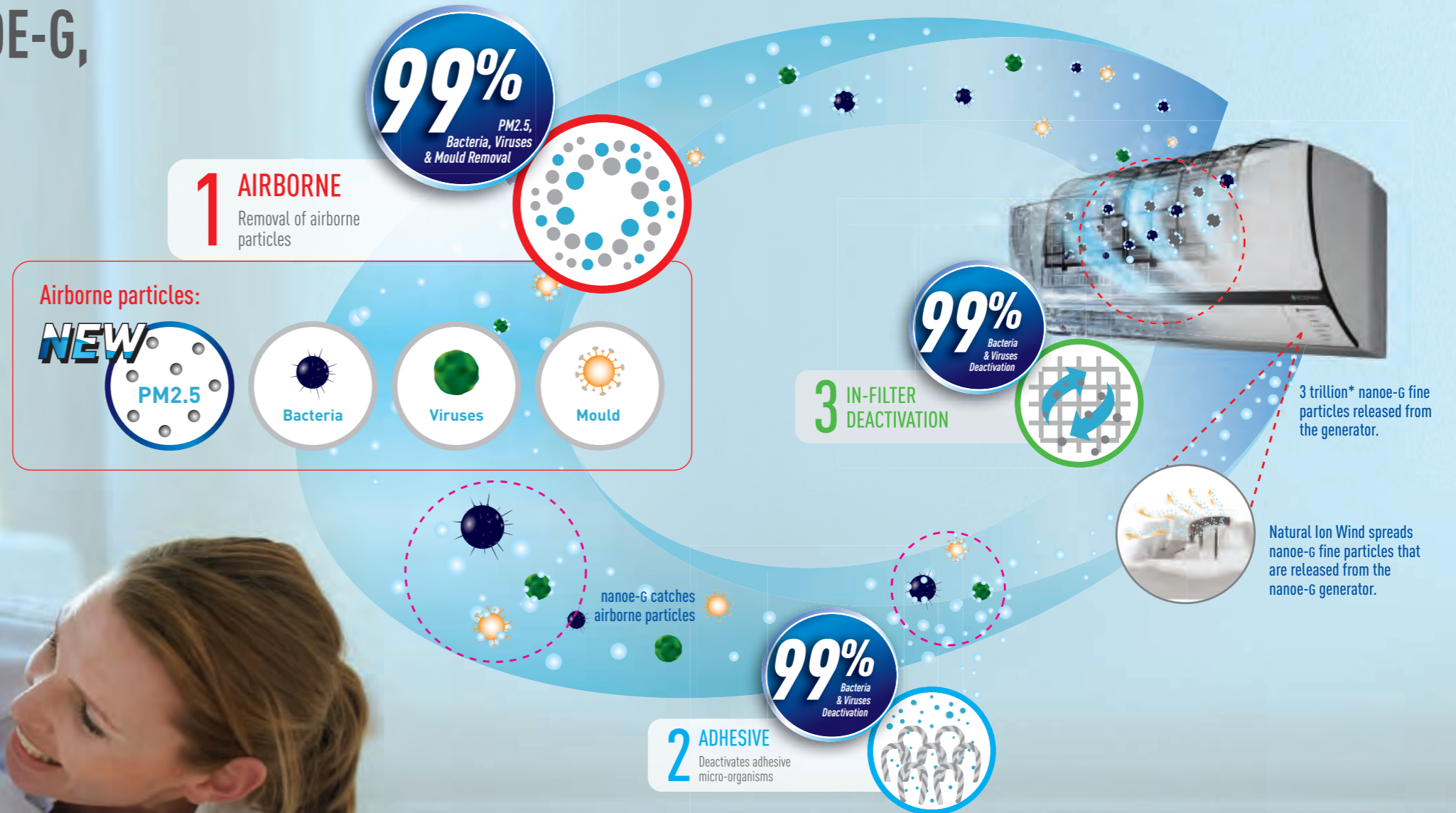


nanoe-G uses nano-technology fine particles that work effectively on micro-organisms in the air, on surfaces and even in the filter to ensure a cleaner living environment.

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STAY WORRY-FREE WITH NANOE-G, ONLY WITH PANASONIC



Remark:
* 3 trillion is the simulated number of nanoe-G fine particles under the mentioned conditions. Actual measured nanoe-G fine particles at the centre of the room (13m²):100k/cc calculated number of nanoe-G fine particles in the entire room assuming they are evenly distributed.



Panasonic Air Conditioner Gives You Cleaner and Fresher Air with Nanoe-G

Nanoe-G works effectively on airborne particles like bacteria, viruses, mould, and even PM2.5 pollutants, even when the air conditioner is switched off. What's more, the ECONAVI and Inverter technologies work intelligently together to maximise energy savings. With this perfect match, you can put your worries behind and enjoy the big things in everyday life.



THE PERFECT ENERGY SAVING MATCH

INTELLIGENT ECO SENSORS



ECONAVI and INVERTER intelligently work together, adapting to the way you live and optimizing operation accordingly to save energy.

ECONAVI

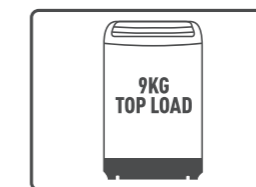
- 5 energy saving features monitor activity and room conditions to detect where energy is normally wasted.

INVERTER

- Varies compressor speed according to ECONAVI sensor data.
- Achieves precise temperature control.

By combining the abilities of these two innovations, you can achieve up to 65% energy savings.

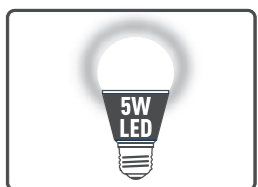
In 1 hour, ECONAVI + INVERTER saves energy equivalent to



4 HOURS*¹ or



8 HOURS*¹ or



100 HOURS*¹

*1 Comparison of 1.5HP Inverter model with ECONAVI (with Dual Human Activity Sensor, Sunlight Sensor, and Temperature Wave) ON and 1.5HP Standard non-Inverter (Cooling). Total hours may vary depending on product availability, model name and specifications in different countries or regions.



* Comparison of 1.5HP Inverter model with ECONAVI (with Dual Human Activity Sensor, Sunlight Sensor, and Temperature Wave) ON and 1.5HP Standard non-Inverter (Cooling)

Inverter with ECONAVI:
 ECONAVI ON, Outside Temperature: 35°C/24°C
 Remote setting temperature: 25°C with Fan Speed (High)
 Vertical Airflow direction: Auto, Horizontal Airflow direction: ECONAVI mode
 Setting temperature goes up 2°C in total, 1°C controlled by ECONAVI activity level detection and another 1°C controlled by ECONAVI light intensity detection.
 Temperature Wave is ON

Standard Non-Inverter without ECONAVI:
 Outside Temperature: 35°C/24°C
 Remote setting temperature: 25°C with Fan Speed (High)
 Vertical Airflow direction: Auto, Horizontal Airflow direction: Front

Total power consumption amount is measured for 2 hours under stable operation. At Panasonic Amenity Room (size: 16.6m²)
 This is the maximum energy saving value, and the effect differs according to conditions in installation and usage.

ECONAVI AND INVERTER, WORKING TOGETHER FOR BETTER ENERGY SAVINGS



Area Search :
DIRECTS airflow



Cooling Power ↑

1 POWERFUL COOLING



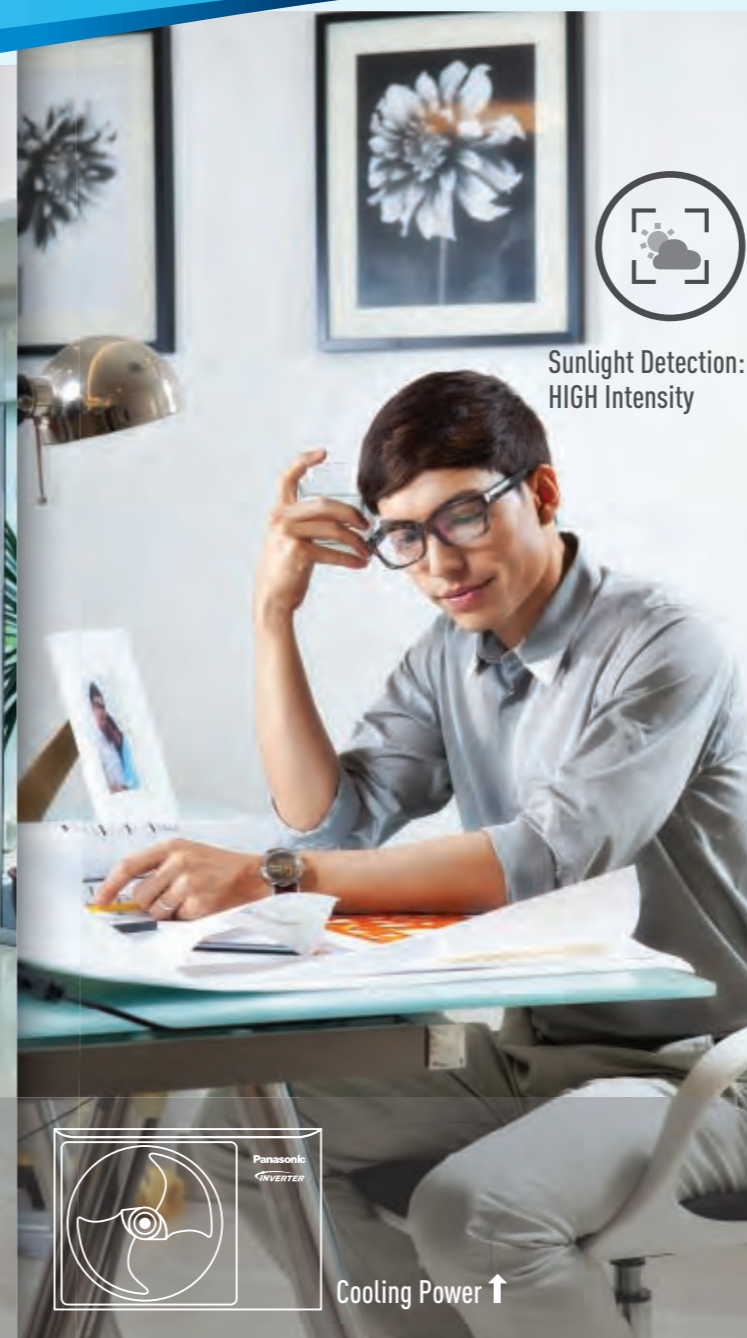
ECONAVI's Area Search detects your location and directs airflow toward you so you are always cool. It also reduces the waste of cooling unoccupied areas of the room, thus saving energy.

Please refer to page 30-35



Coming home is now even more relaxing. Thanks to INVERTER which cools the room faster at start up. So you can get comfortable quicker.

Please refer to page 36-37



Sunlight Detection:
HIGH Intensity



Cooling Power ↑

2 COOLING COMFORT



ECONAVI's Sunlight Detection adjusts cooling power according to sunlight intensity. Keeping you cool when it's hot outside.

Please refer to page 30-35



Panasonic INVERTER air conditioners intelligently adapt to the different room occupancy levels. This ensures constant cooling comfort.

Please refer to page 36-37



Activity Detection:
LOW activity



Temperature Wave:
LOW activity



Cooling Power ↓

3 ENERGY SAVING



ECONAVI activates 5 energy saving features which automatically sense conditions in your home environment and optimises operation accordingly.

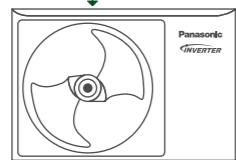
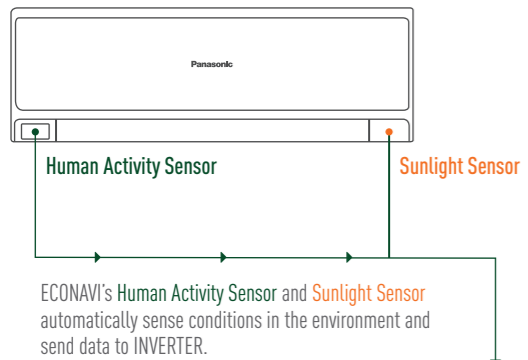
- Activity Detection
- Area Search
- Temperature Wave
- Sunlight Detection
- Absence Detection

Please refer to page 30-35



ECONAVI sends data to INVERTER which varies compressor speed accordingly, minimizing energy consumption and subsequently reducing your electricity bill.

Please refer to page 36-37



Then, INVERTER varies compressor rotation speed to maintain precise room temperature, thus minimizing wasteful cooling.



CS-S9PKZW | CS-S12PKZW | CS-S15PKZW



Wireless



Wired (Optional)



CS-S18PKZW | CS-S24PKZW | CS-S28PKZ



Wireless

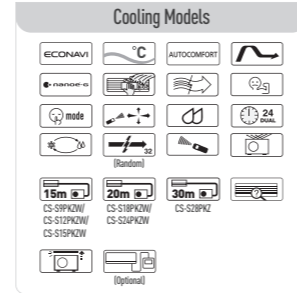


Wired (Optional)

INVERTER

ECONAVI

nanoe-G



**REUSE
COMPATIBLE
PIPING**

REUSE R22 PIPING

Be eco-friendly without hassle, thanks to the new Panasonic Inverter Air Conditioner with ECONAVI. It allows you to save up to 50% energy while running your air conditioner. Now you can switch from your non-inverter air conditioner to a Panasonic Inverter Air Conditioner without messy hacking of walls or ugly exposed piping; and you even save money by keeping your existing R22 gas piping.

* Efficient Pump Down Method, you can keep your R22 gas piping while using the new R410A gas. That's how easy Panasonic makes it for you to save money and change to an eco-friendly lifestyle without sacrificing on comfort. To know more, please contact your local Panasonic distributor for further details.

- Saving energy and money.
- Using existing piping, no hacking needed.
- No sacrifice on comfort.

SPECIFICATIONS

Model	(50Hz)	CS-S9PKZW (CU-S9PKZ)	CS-S12PKZW (CU-S12PKZ)	CS-S15PKZW (CU-S15PKZ)	CS-S18PKZW (CU-S18PKZ)	CS-S24PKZW (CU-S24PKZ)	CS-S28PKZ (CU-S28PKZ)	
Cooling Capacity	Btu/h	8,530 [2,860-10,900]	11,000 [3,140-13,600]	15,000 [3,650-17,100]	17,700 [3,750-20,500]	20,500 [3,820-24,200]	23,500 [3,920-29,000]	
	kW	2.50 [0.84-3.20]	3.23 [0.92-4.00]	4.40 [1.07-5.00]	5.20 [1.10-6.00]	6.00 [1.12-7.10]	6.90 [1.15-8.50]	
EER	Btu/hW	13.3	12.4	11.4	12.6	12.2	11.6	
	kW	3.91	3.65	3.33	3.69	3.57	3.40	
Electrical Data	Voltage	V	240	240	240	240	240	
	Running Current	A	3.1	4.3	6.0	6.2	7.4	9.0
	Power Input	W	640 [225-870]	885 [260-1,140]	1,320 [285-1,520]	1,410 [290-1,670]	1,680 [320-2,020]	2,030 [350-2,700]
Moisture Removal	L/h	1.5	1.8	2.4	2.9	3.3	3.9	
	Pt/h	3.2	3.8	5.1	6.1	7.0	8.2	
Air Circulation (Indoor/Hi)	m ³ /min.	9.6	10.5	12.6	18.1	18.5	18.4	
	cfm	340	370	445	640	655	650	
Noise Level	Indoor (H/L)	(dB-A)	36/26	38/28	43/30	45/36	46/37	47/37
	Outdoor	(dB-A)	{47}	{48}	{50}	{50}	{50}	{53}
Dimensions	Height	mm	290 [511]	290 [542]	290 [542]	290 [695]	290 [695]	290 [795]
		inch	11-7/16 [20-1/8]	11-7/16 [21-11/32]	11-7/16 [21-11/32]	11-7/16 [27-3/8]	11-7/16 [27-3/8]	11-7/16 [31-5/16]
	Width	mm	870 [650]	870 [780]	870 [780]	1,070 [875]	1,070 [875]	1,070 [875]
		inch	34-9/32 [25-19/32]	34-9/32 [30-23/32]	34-9/32 [30-23/32]	42-5/32 [34-15/32]	42-5/32 [34-15/32]	42-5/32 [34-15/32]
Depth	mm	214 [230]	214 [289]	214 [289]	240 [320]	240 [320]	240 [320]	
	inch	8-7/16 [9-1/16]	8-7/16 [11-13/32]	8-7/16 [11-13/32]	9-15/32 [12-5/8]	9-15/32 [12-5/8]	9-15/32 [12-5/8]	
Net Weight	kg	9 [24]	9 [30]	9 [31]	12 [44]	12 [46]	12 [62]	
	lb	20 [53]	20 [66]	20 [68]	26 [97]	26 [101]	26 [137]	
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35	
		inch	1/4	1/4	1/4	1/4	1/4	
	Gas Side	mm	ø 9.52	ø 12.70	ø 12.70	ø 12.70	ø 15.88	ø 15.88
		inch	3/8	1/2	1/2	1/2	5/8	5/8
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	7.5	10	10	
	Maximum Pipe Length	m	15	15	15	20	30	
	Maximum Elevation Length	m	5	5	5	15	20	
	Additional Refrigerant Gas*	g/m	15	15	15	15	20	30
Power Supply		Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	

[]: Outdoor Unit

Caution For CS-S9/S12/S15/S18/S24PKZW/S28PKZ [Important] Please do not use copper pipes that are less than 0.6mm in thickness.

* When pipes are not extended from the standard pipe length, the required amount of refrigerant is already in the unit.
 • Specification based on JIS C 9612 Standard.

OUTDOOR



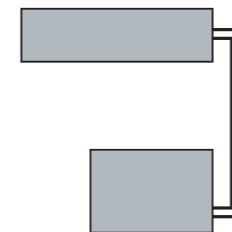
Pump Down Method When Reuse Existing Piping (R22 Model) for R410A Model

The compressor oil of R22 model is insoluble with the compressor oil of R410A model. The mixing of compressor oils may cause damage to the compressor unit.

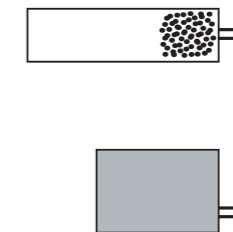
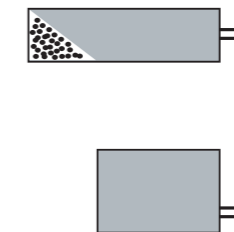
POSSIBILITY OF MIXING	TO REUSE OLD PIPING
<ul style="list-style-type: none"> • The reuse of R22 model piping is dangerous because of its compressor oil. • The reuse of R22 model piping is only recommended when it is unavoidable. E.g. concealed piping. • When reusing R22 model piping, a pump down procedure must be carried out properly to ensure compressor oil which remains inside piping is collected away. 	<ul style="list-style-type: none"> • Piping of R22 model can be reused only when air-conditioner is properly pumped down. • The purpose of the pump down procedure is to collect back the compressor oil (which is mixed with refrigerant and circulating inside refrigeration cycle) properly into the outdoor unit of the air-conditioner.

Proper Pump Down Method

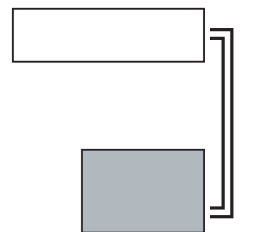
- Operate air-conditioner at cooling mode for 10 - 15 minutes.
- After 10 - 15 minutes of pre-operation, close the 2-way valve. After 3 minutes, close the 3-way valve.
- Take out air conditioner unit.



Most Important Process Purpose:
To make the oil & refrigerant mix together. These two components are separated when the air-conditioner is switched off.



Mixed refrigerant & oil will be collected into the outdoor unit.



Only very small amount of oil remain inside piping, which is acceptable.

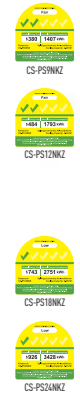
IN CASE THE PUMP DOWN METHOD CANNOT BE DONE, PLEASE ENSURE THE REFRIGERANT PIPING IS CLEANED AND FREE FROM CONTAMINANTS SUCH AS MINERAL OIL AND MOISTURE.

NEW AIR CONDITIONER INSTALLATION

EVACUATION OF THE EQUIPMENT

*After completion of Pump Down Procedure.
*Please do not use copper pipes that are less than 0.6mm in thickness.

*After completion of indoor and outdoor piping connections, evacuation of equipment MUST be processed.



CS-PS9NKZ | CS-PS12NKZ



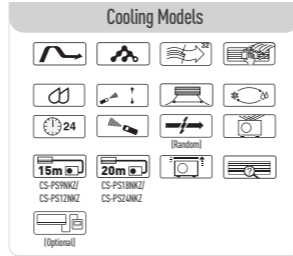
Wireless Wired (Optional)



CS-PS18NKZ | CS-PS24NKZ



Wireless Wired (Optional)



SPECIFICATIONS

Model	(50Hz)	CS-PS9NKZ (CU-PS9NKZ)	CS-PS12NKZ (CU-PS12NKZ)	CS-PS18NKZ (CU-PS18NKZ)	CS-PS24NKZ (CU-PS24NKZ)	
Cooling Capacity	Btu/h	8,530 (2,860-10,900)	10,600 (3,140-13,600)	17,700 (3,750-20,500)	20,500 (3,820-22,600)	
	kW	2.50 (0.84-3.20)	3.10 (0.92-4.00)	5.20 (1.10-6.00)	6.00 (1.12-6.63)	
EER	Btu/hW	12.0	12.1	11.2	11.1	
	kW	3.52	3.52	3.29	3.26	
Electrical Data	Voltage	240	240	240	240	
	Running Current	A	3.3	4.2	6.9	7.9
	Power Input	W	710 (225-920)	880 (260-1,170)	1,580 (290-1,730)	1,840 (320-2,040)
Moisture Removal	L/h	1.5	1.8	2.9	3.3	
	Pt/h	3.2	3.8	6.1	7.0	
Air Circulation (Indoor/Hi)	m ³ /min.	10.1	10.9	18.1	18.5	
	cfm	355	385	640	650	
Noise Level	Indoor (H/L)	(dB-A)	36/26	38/28	45/36	46/37
	Outdoor	(dB-A)	{47}	{48}	{49}	{50}
Dimensions	Height	mm	290 (511)	290 (542)	290 (542)	290 (695)
		inch	11-7/16 (20-1/8)	11-7/16 (21-11/32)	11-7/16 (21-11/32)	11-7/16 (27-3/8)
	Width	mm	870 (650)	870 (780)	1,070 (780)	1,070 (875)
		inch	34-9/32 (25-19/32)	34-9/32 (30-23/32)	42-5/32 (30-23/32)	42-5/32 (34-15/32)
Depth	mm	214 (230)	214 (289)	240 (289)	240 (320)	
	inch	8-7/16 (9-1/16)	8-7/16 (11-13/32)	9-15/32 (11-13/32)	9-15/32 (12-5/8)	
Net Weight	kg	9 (24)	9 (29)	12 (32)	12 (46)	
	lb	20 (53)	20 (64)	26 (71)	26 (101)	
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 12.70	ø 12.70	ø 15.88
		inch	3/8	1/2	1/2	5/8
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10	10
	Maximum Pipe Length	m	15	15	20	20
	Maximum Elevation Length	m	5	5	15	15
	Additional Refrigerant Gas*	g/m	15	15	15	20
Power Supply		Outdoor	Outdoor	Outdoor	Outdoor	

Caution For CS-PS9/PS12/PS18/PS24NKZ (Important) Please do not use copper pipes that are less than 0.6mm in thickness.

* When pipes are not extended from the standard pipe length, the required amount of refrigerant is already in the unit.
 • Specification based on JIS C 9612 Standard.

OUTDOOR



CU-PS9NKZ



CU-PS12NKZ
CU-PS18NKZ



CU-PS24NKZ



CLEANER AIR

Anti-bacterial Filter

The Anti-Bacterial Filter combines three effects in one: anti-bacteria, anti-virus and anti-allergen protection to provide clean air.



HOW ANTI-BACTERIAL FILTER WORKS

EFFECTIVENESS	TARGET SUBSTANCE AND SUBSTANCE NAME	MECHANISM
<p>DEACTIVATES</p> <p>99%</p> <p>of filter-captured Bacteria *1</p>	<p>Anti-bacterial</p> <p>*1 Bacteria deactivation was certified by Boken Quality Evaluation Institute. Test Report No: 10042459-1 and 10042459-2 Bacteria: <i>Staphylococcus aureus</i> NBRC 12732 <i>Escherichia coli</i> NBRC 3972</p>	<p>Artificial Enzyme</p> <p>Bacteria is caught by the filter. Artificial Enzyme will attach to surface of bacteria. Bacteria becomes inactive by preventing its growth.</p> <p>Cell-wall Cell Cell-wall is covered by Artificial Enzyme</p> <p>Remark: The above are not actual images of target substance structure. Image drawn is for illustration purpose.</p>
<p>DEACTIVATES</p> <p>99%</p> <p>of filter-captured Viruses *2</p>	<p>Anti-virus</p> <p>*2 Virus deactivation was certified by Osaka Prefectural Institute of Public Health. Test Report No: 313360397 Virus: Influenza (H3N2) A/Hong Kong</p>	<p>Disinfectant</p> <p>The virus is caught by the filter. Disinfectant will attach to surface protein of virus. Virus becomes inactive through 'tanning effect' making them harmless.</p> <p>Spikes are covered by Disinfectant</p> <p>Remark: The above are not actual images of target substance structure. Image drawn is for illustration purpose.</p>
<p>DEACTIVATES</p> <p>99%</p> <p>of filter-captured Allergen *3</p>	<p>Anti-allergen</p> <p>*3 Allergen deactivation was certified by Shinshu University. Test Report No: Allergen: Cider Pollen Allergen Cry j1</p>	<p>Artificial Enzyme</p> <p>The allergen is caught by the filter. Artificial Enzyme will 'denature' the filter-captured allergen. 'Denatured' allergen will no longer keep its original properties or characteristic as allergen; therefore, it is harmless.</p> <p>Allergen loses original properties or characteristic</p> <p>When allergen is denatured, the strand of amino acid is "teased" apart hence changing the shape. In this way, allergen will lose its original properties or characteristic as allergen, thus making them harmless.</p> <p>Remark: The above are not actual images of target substance structure. Image drawn is for illustration purpose.</p>
<p>INHIBITS</p> <p>Mould *4 Growth</p>	<p>Anti-mould</p> <p>*4 Certified by Boken Quality Evaluation Institute. Test Report No: 000366-3 Mould: <i>Aspergillus niger</i> ATCC 6275</p>	<p>The mould will be caught by the filter. Fungicide will attach to surface protein of mould. 'Fungicide inhibits mould from growing by preventing the cell-wall composition.'</p>

ADVANTAGES OF THE MULTI INVERTER SYSTEM

Indoor Unit

A variety of indoor units

Air-quality features
(Wall-Mounted type only)
• nanoe-g

Adjusts the operation settings for each indoor unit independently

Outdoor Unit


Space-saving

Single Split Type CU-S9PKZ

BIG SPACE SAVINGS!
CU-4S27NKZ

Inverter control
The inverter offers energy-saving efficiency, quick comfort, and flexible power control. Our compressor saves more energy while reducing vibration, noise and unit size.

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



INVERTER DUAL-SPLIT MODEL



Wireless



Wired (Optional)



INVERTER


ECONAVI

nanoe-G

Cooling Models



CS-S9PKZW + CS-S12PKZW

Models	CU-2S18PKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)
2 Rooms		Port A 2.8 or 3.2 Either unit Port B 2.8 or 3.2 Either unit

• It is possible to have a combination of wall-mounted models (CS-S9, S12PKZW) for the [CU-2S18PKZ] Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INVERTER TRIPLE-SPLIT MODEL



Wireless



Wired (Optional)



INVERTER


ECONAVI

nanoe-G

Cooling Models



CS-S9PKZW + CS-S12PKZW + CS-S15PKZW + CS-S18PKZW

Models	CU-3S27MKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)
3 Rooms		Port A 2.8 or 3.2 or 4.0 or 5.0 Port B 2.8 or 3.2 or 4.0 or 5.0 Port C 2.8 or 3.2 or 4.0 or 5.0

• It is possible to have a combination of wall-mounted models (CS-S9, S12, S15, S18PKZW) for the [CU-3S27MKZ] Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INVERTER QUADRUPLE-SPLIT MODEL



Wireless (Standard)



Wired (Optional)



INVERTER

ECONAVI

nanoe-G

Cooling Models



CS-S9PKZW + CS-S12PKZW + CS-S15PKZW + CS-S18PKZW

Models	CU-4S27NKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)
4 Rooms		Port A 2.8 or 3.2 or 4.0 or 5.0 Port B 2.8 or 3.2 or 4.0 or 5.0 Port C 2.8 or 3.2 or 4.0 or 5.0 Port D 2.8 or 3.2 or 4.0 or 5.0

• It is possible to have a combination of wall-mounted models (CS-S9, S12, S15, S18PKZW) for the [CU-4S27NKZ] Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INDOOR

		DUAL-SPLIT MODEL	
Model		CS-S9PKZW	CS-S12PKZW
Operation		1-Unit	1-Unit
Cooling Capacity	Btu/h (Min ~ Max)	9,550 (3,750~11,900)	10,900 (3,750~13,600)
	kW (Min ~ Max)	2.80 (1.10~3.50)	3.20 (1.10~4.00)
EER	Btu/hW	12.7	11.8
	W/W	3.73	3.48
Electrical Data	Voltage	V	240
	Running Current	A	3.4
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	40 / 29
Moisture Removal	L/h	1.6	1.8
Air Circulation (Indoor/Hi)	m³/min.	9.5	10.8
	cfm	355	380
Fan Output	W	40	24
Dimensions	Height	mm	290
	Width	mm	870
	Depth	mm	214
Net Weight Indoor	kg	9	9
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35
	Gas Side	mm	ø 9.52
Pipe Extension	Standard Pipe Length	m	7.5
Power Supply		Outdoor	Outdoor

INDOOR

		QUADRUPLE-SPLIT MODEL				
Model		CS-S9PKZW	CS-S12PKZW	CS-S15PKZW	CS-S18PKZW	
Cooling Capacity	Btu/h (Min ~ Max)	9,550 (5,800~11,600)	10,900 (5,800~13,600)	13,600 (5,800~16,400)	17,100 (6,480~19,800)	
	kW (Min ~ Max)	2.80 (1.70~3.40)	3.20 (1.70~4.00)	4.00 (1.70~4.80)	5.00 (1.90~5.80)	
EER	W/W	4.00	4.00	3.39	3.42	
Electrical Data	Voltage	V	240	240	240	
	Running Current	A	3.5	3.9	5.6	6.8
Moisture Removal	L/h	1.6	1.8	2.3	2.7	
Air Circulation (Indoor/Hi)	m³/min.	9.6	10.5	12.6	18.1	
	cfm	340	370	445	640	
Dimensions	Height	mm	290	290	290	
		inch	11-7/16	11-7/16	11-7/16	
	Width	mm	870	870	870	1,070
		inch	34-9/32	34-9/32	34-9/32	42-5/32
	Depth	mm	214	214	214	240
		inch	8-7/16	8-7/16	8-7/16	9-15/32
Net Weight	kg	9	9	9	12	
	lb	20	20	20	26	
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 9.52	ø 9.52
	inch	3/8	3/8	3/8	3/8	
Power Supply		Outdoor	Outdoor	Outdoor	Outdoor	

INDOOR

		TRIPLE-SPLIT MODEL				
Model		CS-S9PKZW	CS-S12PKZW	CS-S15PKZW	CS-S18PKZW	
Operation		1-Unit	1-Unit	1-Unit	1-Unit	
Cooling Capacity	Btu/h (Min ~ Max)	9,550 (5,800~11,600)	10,900 (5,800~13,600)	13,600 (5,800~16,400)	17,100 (6,480~19,800)	
	kW (Min ~ Max)	2.80 (1.70~3.40)	3.20 (1.70~4.00)	4.00 (1.70~4.80)	5.00 (1.90~5.80)	
EER	Btu/hW	13.6	13.6	11.5	11.7	
	W/W	4.00	4.00	3.39	3.39	
Electrical Data	Voltage	V	240	240	240	
	Running Current	A	3.5	3.9	5.6	6.8
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	40 / 29	44 / 32	45 / 32	47 / 38
Moisture Removal	L/h	1.6	1.8	2.3	2.7	
Air Circulation (Indoor/Hi)	m³/min.	9.6	10.5	12.6	18.1	
	cfm	340	370	445	640	
Fan Output	W	24	24	40	40	
Dimensions	Height	mm	290	290	290	
	Width	mm	870	870	870	1,070
	Depth	mm	214	214	214	240
Net Weight Indoor	kg	9	9	9	12	
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
	Gas Side	mm	ø 9.52	ø 9.52	ø 9.52	ø 9.52
Pipe Extension	Standard Pipe Length	m	7.5	7.5	7.5	5.0
Power Supply		Outdoor	Outdoor	Outdoor	Outdoor	

OUTDOOR

		DUAL-SPLIT MODEL	TRIPLE-SPLIT MODEL	QUADRUPLE-SPLIT MODEL	
Model		CU-2S18PKZ	CU-3S27MKZ	CU-4S27NKZ	
Cooling Capacity	Btu/h (Min ~ Max)	17,100 (5,120~20,500)	25,600 (9,550~27,300)	25,600 (9,550~27,300)	
	kW (Min ~ Max)	5.00 (1.50~6.00)	7.50 (2.80~8.00)	7.50 (2.80~8.00)	
EER	Btu/hW	12.2	12.4	-	
Electrical Data	W/W	3.60	3.60	3.64	
	Voltage	V	240	240	
	Running Current	A	6.1	9.4	
	Power Input	W (Min ~ Max)	1,400 (250~1,750)	2,060 (520~2,650)	2,060 (520~2,650)
Sound Pressure Level	Outdoor (Hi/Lo)	(dB-A)	49	49	49
Maximum Current	A	12	15.2	15.2	
Starting Current	A	6.6	10.2	10.2	
Compressor Output	W	900	1,300	1,300	
Fan Output	W	40	44	44	
Dimensions	Height	mm	619	695	695
	Width	mm	824 (+70)	875 (+95)	875 (+95)
	Depth	mm	299	320	320
Net Weight Outdoor	kg	37	57	57	
Pipe Extension**	Chargeless Pipe Length	m	20	30	35
	Maximum Pipe Length	1 Room	20	25	25
		Total	30	60	60
	Maximum Elevation Length	m	10	15	15
	Additional Refrigerant Gas*	g/m	15	20	20

* When pipes are not extended from the standard pipe length, the required amount of refrigerant is already in the unit.

WALL-MOUNTED



CS-S9PKZW | CS-S12PKZW | CS-S15PKZW
CS-S18PKZW | CS-S24PKZW



Wireless | Wired (Optional)

INVERTER
ECONAVI
nanoe-G

Cooling Models

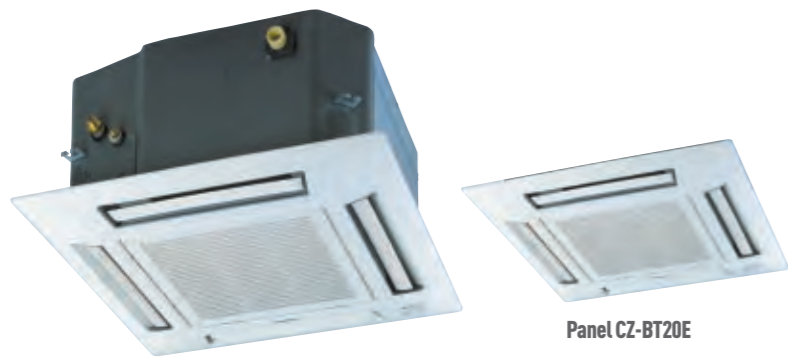
Models	CU-3S27KKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)
3 Rooms		Port A: 2.8 or 3.2 or 4.0 or 5.0 or 6.0 Port B: 2.8 or 3.2 or 4.0 or 5.0 or 6.0 Port C: 2.8 or 3.2 or 4.0 or 5.0 or 6.0

• It is possible to have a combination of wall-mounted models (CS-S9, S12, S15, S18, S24PKZW) and mini cassette models (CS-S12, S18, S24MB4ZW) for the [CU-3S27KKZ] Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INDOOR

Model	WALL-MOUNTED						
	CS-S9PKZW	CS-S12PKZW	CS-S15PKZW	CS-S18PKZW	CS-S24PKZW		
Operation	1-Unit	1-Unit	1-Unit	1-Unit	1-Unit		
Cooling Capacity	Btu/h (Min - Max)	9,550 (5,800-11,600)	10,900 (5,800-13,600)	13,600 (5,800-16,400)	17,100 (6,480-19,800)	20,500 (6,480-21,100)	
	kW (Min - Max)	2.80 (1.70-3.40)	3.20 (1.70-4.00)	4.00 (1.70-4.80)	5.00 (1.90-5.80)	6.00 (1.90-6.20)	
EER	Btu/hW	13.6	13.6	11.5	11.7	10.7	
	W/W	4.00	4.00	3.39	3.39	3.09	
Electrical Data	Voltage	V	240	240	240	240	
	Running Current	A	3.5	3.9	5.6	6.8	8.6
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	40 / 29	44 / 32	45 / 32	47 / 38	48 / 39
Moisture Removal		L/h	1.6	1.8	2.3	2.7	3.3
Air Circulation (Indoor/Hi)		m ³ /min.	9.6	10.5	12.6	18.1	18.5
		cfm	340	370	445	640	655
Fan Output		W	24	24	40	40	40
	Height	mm	290	290	290	290	290
Dimensions	Width	mm	870	870	870	1,070	1,070
	Depth	mm	214	214	214	240	240
Net Weight Indoor		kg	9	9	9	12	12
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35
	Gas Side	mm	ø 9.52	ø 9.52	ø 9.52	ø 9.52	ø 12.70
Pipe Extension	Standard Pipe Length	m	7.5	7.5	7.5	5.0	5.0
Power Supply			Outdoor	Outdoor	Outdoor	Outdoor	Outdoor

MINI CASSETTE



CS-S12MB4ZW | CS-S18MB4ZW
CS-S24MB4ZW

Panel CZ-BT20E



Wireless

INVERTER

Cooling Models

Models	CU-3S27KKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)
3 Rooms		Port A: 2.8 or 3.2 or 4.0 or 5.0 or 6.0 Port B: 2.8 or 3.2 or 4.0 or 5.0 or 6.0 Port C: 2.8 or 3.2 or 4.0 or 5.0 or 6.0

• It is possible to have a combination of wall-mounted models (CS-S9, S12, S15, S18, S24PKZW) and mini cassette models (CS-S12, S18, S24MB4ZW) for the [CU-3S27KKZ] Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INDOOR

Model	MINI CASSETTE				
	CS-S12MB4ZW	CS-S18MB4ZW	CS-S24MB4ZW		
Operation	1-Unit	1-Unit	1-Unit		
Cooling Capacity	Btu/h (Min - Max)	10,900 (5,800-13,600)	17,100 (6,480-19,800)	20,500 (6,480-21,100)	
	kW (Min - Max)	3.20 (1.70-4.00)	5.00 (1.90-5.80)	6.00 (1.90-6.20)	
EER	Btu/hW	13.6	11.7	10.7	
	W/W	4.00	3.39	3.09	
Electrical Data	Voltage	V	240	240	
	Running Current	A	3.9	6.7	8.6
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	34 / 26	36 / 28	41 / 33
Moisture Removal		L/h	1.8	2.7	3.3
Air Circulation (Indoor/Hi)		m ³ /min.	10.5	11.0	12.8
		cfm	370	390	450
Fan Output		W	40	40	40
	Height	mm	260	260	260
Dimensions	Width	mm	575	575	575
	Depth	mm	575	575	575
Net Weight Indoor		kg	18	18	18
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35
	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70
Pipe Extension	Standard Pipe Length	m	7.5	5.0	5.0
Power Supply			Outdoor	Outdoor	Outdoor

OUTDOOR

Model		CU-3S27KKZ
Cooling Capacity	Btu/h (Min - Max)	25,600 (9,550-30,700)
	kW (Min - Max)	7.50 (2.80-9.00)
EER	Btu/hW	12.4
	W/W	3.6
Electrical Data	Voltage	V
	Running Current	A
	Power Input (Min - Max)	W
Sound Pressure Level	Outdoor (Hi/Lo)	(dB-A)
Maximum Current	A	
Starting Current	A	
Compressor Output	W	
Fan Output	W	
Dimensions	Height	mm
	Width	mm
	Depth	mm
Net Weight Outdoor	kg	
Pipe Extension**	Chargeless Pipe Length	m
	Maximum Pipe Length	1 Room
		Total
	Maximum Elevation Length	m
Additional Refrigerant Gas*	g/m	

* When pipes are not extended from the standard pipe length, the required amount of refrigerant is already in the unit.

INVERTER MULTI-COMBINATION (CU-3S27KKZ)

Indoor Unit Combination	Total	Cooling Capacity (kW)				Power Input (W)		Current (A) 240V / 50Hz	Moisture Removal L/h		
		A	B	C	Total	min - max	Rated				
1 Room	2.8	2.8	2.80		2.80	1.70 - 3.40	700	380 - 890	3.4	1.6	
	3.2	3.2	3.20		3.20	1.70 - 4.00	800	380 - 1,200	3.9	1.8	
	4.0	4.0	4.00		4.00	1.70 - 4.80	1,180	380 - 1,480	5.5	2.3	
	5.0	5.0	5.00		5.00	1.90 - 5.80	1,460	400 - 1,890	6.7	2.7	
	6.0	6.0	6.00		6.00	1.90 - 6.20	1,920	400 - 2,070	8.6	3.3	
2 Room	2.8 + 2.8	5.6	2.80	2.80	5.60	1.70 - 6.70	1,750	420 - 2,340	7.9	1.6 + 1.6	
	2.8 + 3.2	6.0	2.80	3.20	6.00	1.70 - 6.70	2,010	420 - 2,340	9.0	1.6 + 1.8	
	2.8 + 4.0	6.8	2.80	4.00	6.80	2.50 - 7.60	2,420	550 - 2,990	10.8	1.6 + 2.3	
	2.8 + 5.0	7.8	2.69	4.81	7.50	2.70 - 8.00	2,810	530 - 2,980	12.6	1.6 + 2.6	
	2.8 + 6.0	8.8	2.39	5.11	7.50	2.70 - 8.00	2,810	530 - 2,980	12.6	1.5 + 2.8	
	3.2 + 3.2	6.4	3.20	3.20	6.40	2.30 - 7.40	2,290	570 - 3,010	10.3	1.8 + 1.8	
	3.2 + 4.0	7.2	3.20	4.00	7.20	2.50 - 7.70	2,770	550 - 2,990	12.4	1.8 + 2.3	
	3.2 + 5.0	8.2	2.93	4.57	7.50	2.80 - 8.00	2,760	530 - 2,970	12.4	1.7 + 2.5	
	3.2 + 6.0	9.2	2.61	4.89	7.50	2.80 - 8.00	2,760	530 - 2,970	12.4	1.6 + 2.7	
	4.0 + 4.0	8.0	3.75	3.75	7.50	2.70 - 7.90	2,870	540 - 2,980	12.9	2.2 + 2.2	
	4.0 + 5.0	9.0	3.33	4.17	7.50	2.80 - 8.10	2,600	530 - 2,970	11.6	1.9 + 2.4	
	4.0 + 6.0	10.0	3.00	4.50	7.50	2.80 - 8.10	2,600	530 - 2,970	11.6	1.7 + 2.5	
	5.0 + 5.0	10.0	3.75	3.75	7.50	2.90 - 8.30	2,440	520 - 2,970	10.9	2.2 + 2.2	
5.0 + 6.0	11.0	3.41	4.09	7.50	2.90 - 8.30	2,440	520 - 2,970	10.9	2.0 + 2.3		
6.0 + 6.0	12.0	3.75	3.75	7.50	2.90 - 8.30	2,440	520 - 2,970	10.9	2.2 + 2.2		
3 Room	2.8 + 2.8 + 2.8	8.4	2.50	2.50	2.50	7.50	2.40 - 7.90	2,740	580 - 2,840	12.3	1.5 + 1.5 + 1.5
	2.8 + 2.8 + 3.2	8.8	2.39	2.39	2.72	7.50	2.40 - 8.00	2,690	580 - 2,850	12.1	1.5 + 1.5 + 1.6
	2.8 + 2.8 + 4.0	9.6	2.19	2.19	3.12	7.50	2.60 - 8.40	2,490	600 - 2,930	11.2	1.4 + 1.4 + 1.8
	2.8 + 2.8 + 5.0	10.6	1.98	1.98	3.54	7.50	2.80 - 8.80	2,250	600 - 3,010	10.1	1.3 + 1.3 + 2.0
	2.8 + 2.8 + 6.0	11.6	1.81	1.81	3.88	7.50	2.80 - 8.80	2,250	600 - 3,010	10.1	1.2 + 1.2 + 2.3
	2.8 + 3.2 + 3.2	9.2	2.28	2.61	2.61	7.50	2.40 - 8.00	2,690	580 - 2,860	12.1	1.5 + 1.6 + 1.6
	2.8 + 3.2 + 4.0	10.0	2.10	2.40	3.00	7.50	2.60 - 8.40	2,450	600 - 2,930	11.0	1.4 + 1.5 + 1.7
	2.8 + 3.2 + 5.0	11.0	1.91	2.18	3.41	7.50	2.80 - 8.80	2,250	600 - 3,020	10.1	1.2 + 1.4 + 2.0
	2.8 + 3.2 + 6.0	12.0	1.75	2.00	3.75	7.50	2.80 - 8.80	2,250	600 - 3,020	10.1	1.1 + 1.3 + 2.2
	2.8 + 4.0 + 4.0	10.8	1.94	2.78	2.78	7.50	2.70 - 8.70	2,290	600 - 3,000	10.3	1.3 + 1.6 + 1.6
	2.8 + 4.0 + 5.0	11.8	1.78	2.54	3.18	7.50	2.80 - 9.00	2,170	580 - 3,050	9.7	1.1 + 1.6 + 1.8
	2.8 + 4.0 + 6.0	12.8	1.64	2.34	3.52	7.50	2.80 - 9.00	2,170	580 - 3,050	9.7	1.0 + 1.5 + 2.0
	2.8 + 5.0 + 5.0	12.8	1.64	2.93	2.93	7.50	2.80 - 9.00	2,070	520 - 2,830	9.3	1.0 + 1.7 + 1.7
	3.2 + 3.2 + 3.2	9.6	2.50	2.50	2.50	7.50	2.40 - 8.00	2,650	590 - 2,860	11.9	1.5 + 1.5 + 1.5
	3.2 + 3.2 + 4.0	10.4	2.31	2.31	2.88	7.50	2.60 - 8.40	2,450	600 - 2,940	11.0	1.5 + 1.5 + 1.7
	3.2 + 3.2 + 5.0	11.4	2.11	2.11	3.28	7.50	2.80 - 8.80	2,250	600 - 3,020	10.1	1.4 + 1.4 + 1.9
	3.2 + 3.2 + 6.0	12.4	1.94	1.94	3.62	7.50	2.80 - 8.80	2,250	600 - 3,020	10.1	1.3 + 1.3 + 2.1
3.2 + 4.0 + 4.0	11.2	2.14	2.68	2.68	7.50	2.80 - 8.70	2,290	600 - 3,000	10.3	1.4 + 1.6 + 1.6	
3.2 + 4.0 + 5.0	12.2	1.97	2.46	3.07	7.50	2.80 - 9.00	2,170	580 - 3,060	9.7	1.3 + 1.5 + 1.7	
3.2 + 4.0 + 6.0	13.2	1.82	2.27	3.41	7.50	2.80 - 9.00	2,170	580 - 3,060	9.7	1.2 + 1.5 + 2.0	
3.2 + 5.0 + 5.0	13.2	1.82	2.84	2.84	7.50	2.80 - 9.00	2,060	520 - 2,830	9.2	1.2 + 1.7 + 1.7	
4.0 + 4.0 + 4.0	12.0	2.50	2.50	2.50	7.50	2.80 - 9.00	2,170	590 - 3,040	9.7	1.5 + 1.5 + 1.5	
4.0 + 4.0 + 5.0	13.0	2.31	2.31	2.88	7.50	2.80 - 9.00	2,070	540 - 2,830	9.3	1.5 + 1.5 + 1.7	

• Specification based on JIS C 9612 standard.
 • A minimum of 2 indoor units must be connected.
 • Switchable between 8.5amp or 11amp.

FEATURES COMPARISON AND EXPLANATION

FEATURES COMPARISON

Split Type	Inverter Deluxe		Inverter Standard		Inverter Deluxe Multi-Split	Inverter Multi-Combination	
	Wall-Mounted						Mini Cassette
	CS-S9PKZW CS-S12PKZW CS-S15PKZW	CS-S18PKZW CS-S24PKZW CS-S28PKZ	CS-PS9NKZ CS-PS12NKZ	CS-PS18NKZ CS-PS24NKZ	CS-S9PKZW CS-S12PKZW CS-S15PKZW CS-S18PKZW	CS-S9PKZW CS-S12PKZW CS-S15PKZW CS-S18PKZW CS-S24PKZW	CS-S12MB4ZW CS-S18MB4ZW CS-S24MB4ZW
Cooling Models							
Comfort							
ECONAVI	●	●			●	●	
Temperature Wave	●	●			●	●	
AUTOCOMFORT	●	●			●	●	
Inverter Control	●	●	●	●	●	●	●
Quiet Mode	●	●			●	●	●
Powerful Mode	●	●			●	●	●
Soft Dry Operation Mode	●	●	●	●	●	●	●
Personal Airflow Creation	●	●			●	●	
Airflow Direction Control (Up & Down)			●	●			●
Manual Horizontal Airflow Direction Control			●	●			●
Automatic Operation Mode (Cooling)	●	●	●	●	●	●	●
Cleaner Air							
nanoe-g	●	●			●	●	
Anti-Bacterial Filter			●	●			
Odour-Removing Function	●	●	●	●	●	●	●
Removable, Washable Panel	●	●	●	●	●	●	●
Anti-Mould, One-Touch Air Filter							●
Convenience							
24-Hour Dual ON & OFF Real Setting Timer	●	●			●	●	
24-Hour ON & OFF Real Setting Timer			●	●			●
LCD Wireless Remote Control	●	●	●	●	●	●	●
Wired Remote Control	● (Optional)	● (Optional)	● (Optional)	● (Optional)	● (Optional)	● (Optional)	● (Optional)
Reliability							
Random Auto Restart (32 Restart Patterns)	●	●	●	●	●	●	●
Blue Fin Condenser	●	●	●	●	●	●	●
Long Piping (Numbers indicate the maximum pipe length)	15m	20m (S18/S24) 30m (S28)	15m	20m	**refer page 21	**refer page 26	**refer page 26
Top-Panel Maintenance Access	●	●	●	●	●	●	●
Self-Diagnostic Function	●	●	●	●	●	●	●

FEATURES EXPLANATION

Comfort			
ECONAVI Detects and reduces waste for more energy savings.	Quiet Mode	Airflow Direction Control (Up & Down)	
Temperature Wave Rhythmic temperature-controlled pattern to save energy without sacrificing comfort.	Powerful Mode	Manual Horizontal Airflow Direction Control	
AUTOCOMFORT Detects high activity levels and adjusts cooling power to improve comfort.	Soft Dry Operation Mode Starts with cooling to dehumidify, then provides continuous breeze at a low frequency to keep a room dry without much change to the temperature.	Automatic Operation Mode	
Inverter Control Varies the rotation speed of the compressor for higher energy savings.	Personal Airflow Creation Vertical and horizontal airflow patterns can be combined as desired to achieve optimum comfort, with operation possible by remote even from a distance.		
Cleaner Air			
nanoe-g nanoe-g works effectively on airborne particles including PM2.5, adhesive and in-filter micro-organisms such as bacteria, viruses and mould ensuring a cleaner living environment.	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.	
Anti-Bacterial Filter The Anti-Bacterial Filter combines three effects in one: anti-allergen, anti-virus and anti-bacteria protection to provide clean air.	Removable, Washable Panel		
Convenience			
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.	24-Hour ON & OFF Real Setting Timer The exact operating time (hour and minute) of the air conditioner can be set in advance. From here on, the unit will operate in accordance to these preset hours every day until the system is reset.	LCD Wireless Remote Control	
		Wired Remote Control	
Reliability			
Random Auto Restart	Long Piping	Self-Diagnostic Function Should a malfunction occur, the unit diagnoses the problem and shows the corresponding alphanumeric code. This allows for quicker servicing.	
Blue Fin Condenser	Top-Panel Maintenance Access		

OPTIONAL ACCESSORIES

Filters	Pipe Size Reducer	Pipe Size Expander	Remote Control
<p>Anti-Bacterial Filter</p> <p>CZ-SA22P</p> <p>CS-PS9NKZ CS-PS12NKZ CS-PS18NKZ CS-PS24NKZ</p>	<p>Use at the indoor unit's connection port</p> <p>CZ-MA1P</p> <p>CS-S12PKZW CS-S15PKZW CS-S18PKZW CS-S12MB4ZW CS-S18MB4ZW</p> <p>CZ-MA3P</p> <p>CS-S24PKZW CS-S24MB4ZW</p>	<p>Use at the outdoor unit's connection port</p> <p>CZ-MA2P</p> <p>CS-S24PKZW CS-S24MB4ZW</p>	<p>Wired Remote Control</p> <p>CZ-RD514C</p> <p>CS-S9PKZW CS-PS9NKZ CS-S12PKZW CS-PS12NKZ CS-S15PKZW CS-PS18NKZ CS-S18PKZW CS-PS24NKZ CS-S24PKZW CS-S28PKZ</p>

THE SYSTEM OF MODEL NUMBERS FOR SPLIT MODELS

1 Model Type CS : Split Type (Indoor Unit) CU : Split Type (Outdoor Unit) CZ : Accessories	CS — [] S 9 P K Z W
2 Connection Configuration <Indoor Unit> W : Multi Split <Outdoor Unit> n : (n) Rooms Multi	CU — [2] S 18 P K Z
3 Function S : Cooling Only (Inverter Deluxe) PS : Cooling Only (Standard)	
4 Capacity Value = Capacity (Btu/h) x 1/1000, e.g. 9,000 Btu/h x 1/1000 = 9	
5 Type K : Wall-Mounted Type	

Rating Conditions	
Inside air temperature	27°C DB (19°C WB)
Outside air temperature	35°C DB (24°C WB)



2 SUNLIGHT DETECTION
Adjusts cooling power to changes in sunlight intensity.



1 ABSENCE DETECTION
Reduces cooling power when you are not around.



3 TEMPERATURE WAVE
Rhythmic temperature-controlled pattern to save energy without sacrificing comfort.



4 AREA SEARCH
Directs airflow to wherever you are in the room.



5 ACTIVITY DETECTION
Adapts cooling power to your daily activities.



5 FEATURES SAVING ENERGY ALL AT ONCE.

ECONAVI WITH INTELLIGENT ECO SENSORS

ECONAVI Intelligent Sensors detect unconscious waste of energy using the Human Activity Sensor and Sunlight Sensor. It is able to monitor human location, movements, absence and sunlight intensity. It then automatically adjusts cooling power to save energy efficiently with uninterrupted comfort and convenience.



Human Activity Sensor

Sunlight Sensor



HUMAN ACTIVITY SENSOR

ECONAVI monitors activity and room conditioners to detect where energy is normally wasted, then adjusts cooling power accordingly. With Intelligent Eco Sensors, it adjusts to changes in human movement, activity levels, absence and sunlight intensity. With a touch of a button, 5 energy saving features get activated:

DETECT

Level of activity is decreased. Detects low activity.

DETECT

Reduces cooling power by an amount equivalent to increasing the set temperature by 1 degree Celsius.

DETECT

No one is in the room. Detects absence.

DETECT

Gradually reduces cooling power by an amount equivalent to increasing the set temperature by 2 degrees Celsius.

DETECT

Only one person in the room. Detects wasted cooling area.

DETECT

Reduces cooling the unoccupied area of the room.

Activity Detection

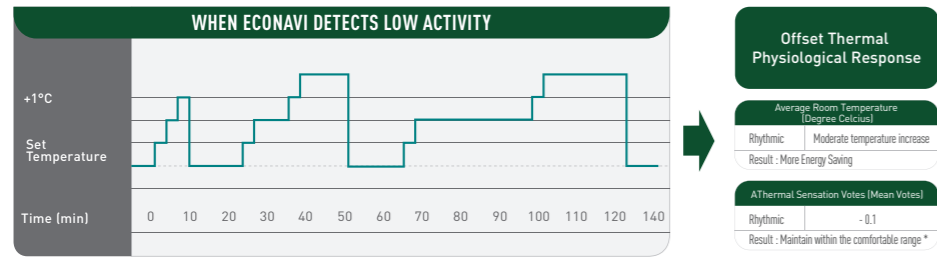
ECONAVI detects changes in activity levels and reduces the waste of **cooling with unnecessary power**.

Absence Detection

ECONAVI detects human absence in the room and reduces the waste of **cooling an empty room**.

Area Search

ECONAVI detects changes in human movements and reduces the waste of **cooling the unoccupied area of the room**.

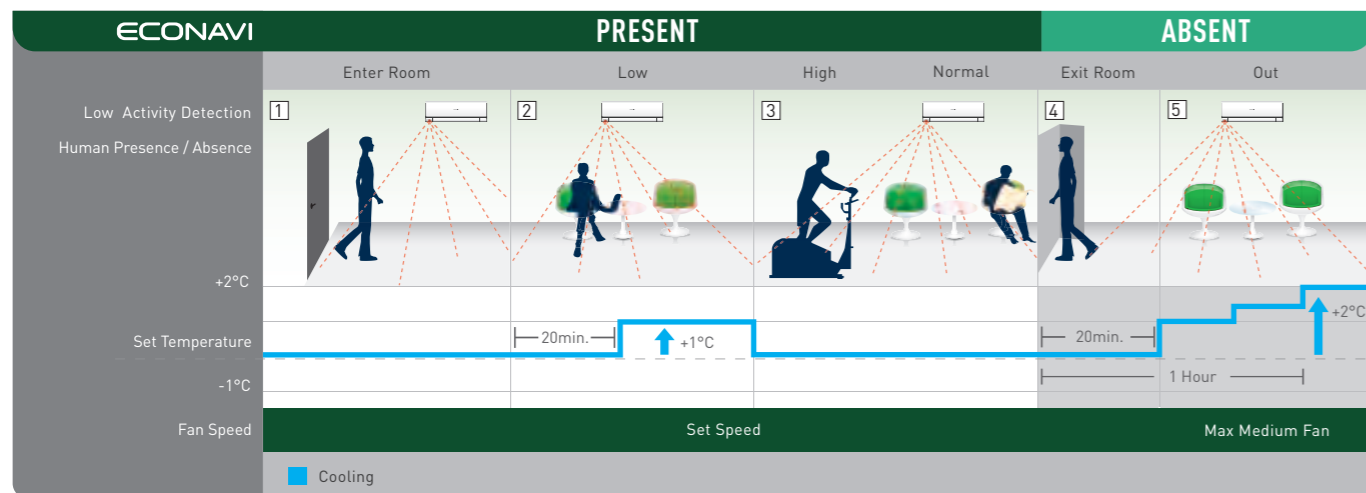


Offset Thermal Physiological Response	
Average Room Temperature (Degree Celsius)	
Rhythmic	Moderate temperature increase
Result: More Energy Saving	
AThermal Sensation Votes (Mean Votes)	
Rhythmic	-0.1
Result: Maintain within the comfortable range *	

Temperature Wave

ECONAVI with Temperature Wave incorporates a unique pattern of Temperature Shifting Control to realise even **more energy savings without sacrificing comfort**.

HOW DOES ECONAVI HUMAN ACTIVITY WORK?



SUNLIGHT SENSOR

Sunlight Detection

ECONAVI detects changes in sunlight intensity in the room and judges whether it is sunny or cloudy/night. It reduces the waste of **cooling under less sunlight conditions**.

SUNNY

ECONAVI is switched on when it is SUNNY.

DETECT

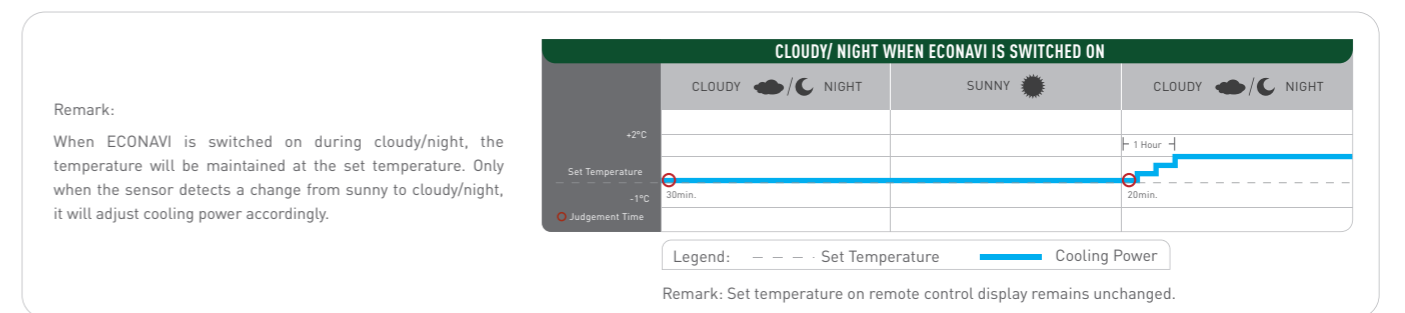
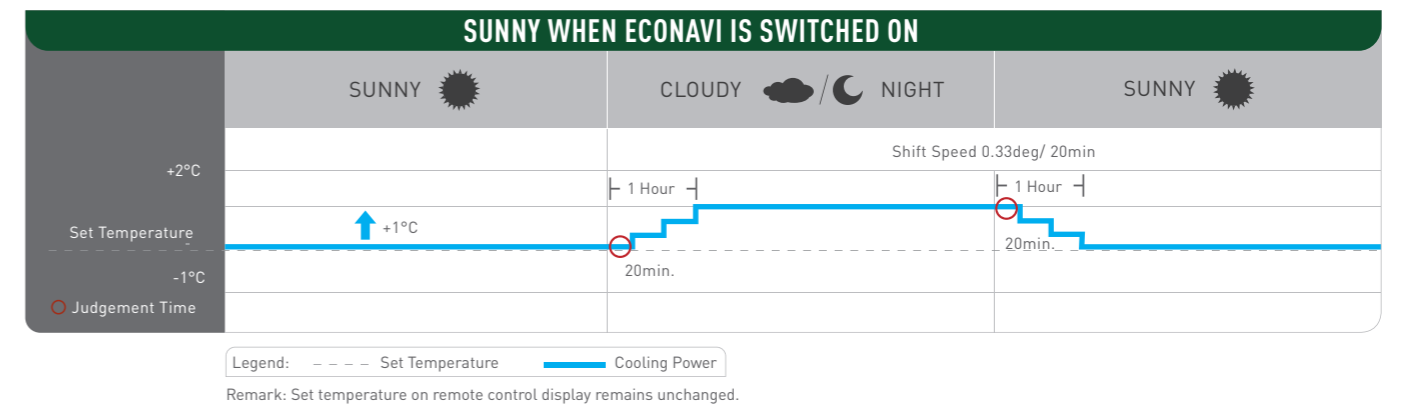
ECONAVI detects less cooling power is required.

REDUCE WASTE

Set temperature remains unchanged. ECONAVI reduces cooling power by an amount equivalent to increasing the set temperature by 1 degree Celsius.

When weather changes from sunny to cloudy/night, ECONAVI detects less sunlight intensity and determines less cooling power is required. If cooling power remains the same, energy will be wasted. ECONAVI detects this waste and reduces cooling power by an amount equivalent to increasing the set temperature by 1 degree Celsius.

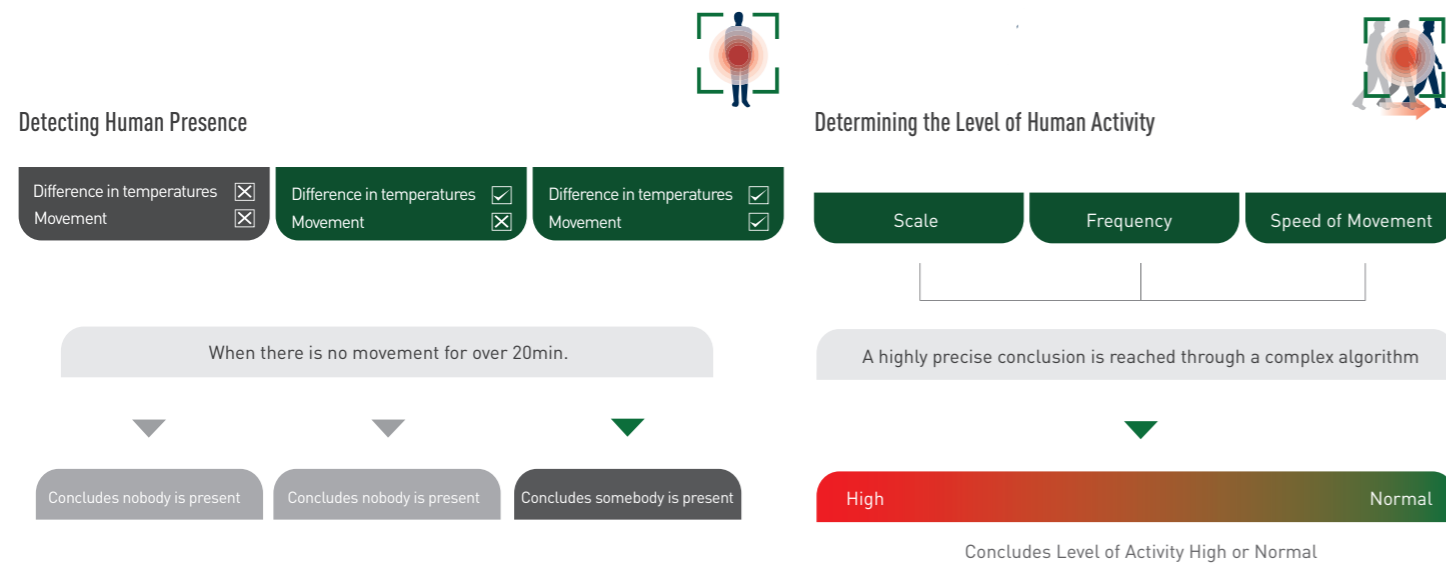
HOW DOES ECONAVI SUNLIGHT SENSOR WORK?



HUMAN ACTIVITY SENSOR

High-Precision Sensing

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

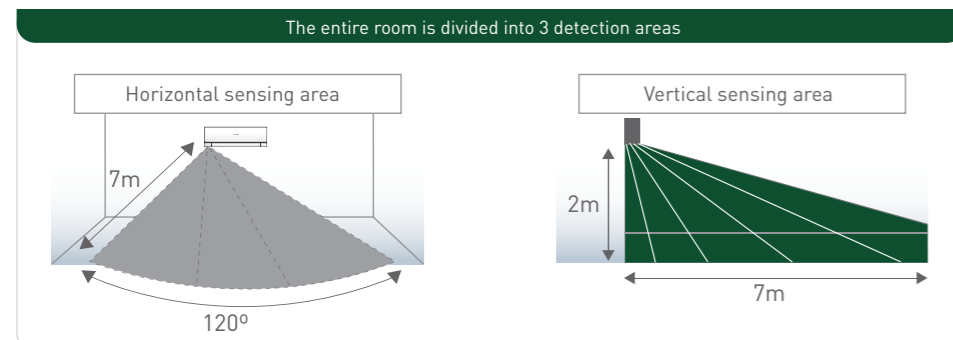


Differentiating Objects

ELECTRICAL PRODUCTS	SMALL INSECTS
Difference in temperatures <input checked="" type="checkbox"/> + Movement <input checked="" type="checkbox"/> Concludes it is not human	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.
A ROLLING BALL	PETS
Difference in temperatures <input checked="" type="checkbox"/> + Movement <input checked="" type="checkbox"/> Concludes it is not human	Difference in temperatures <input checked="" type="checkbox"/> + Movement <input checked="" type="checkbox"/> Concludes it is not human* From the difference in temperatures and the nature of the object's movement, ECONAVI 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.

Coverage Capabilities

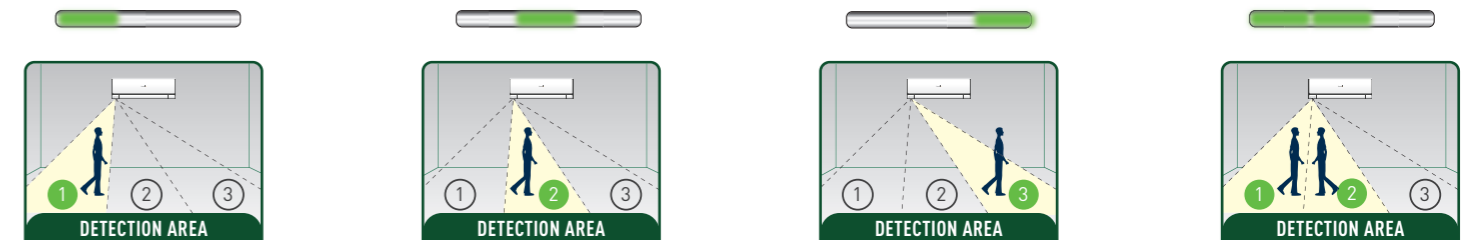
Human Activity Sensor covers a wider area due to its improved area detection function.



Remark: Applicable for dual sensor.

Sensor Detection Principle

Human Activity Sensor detects human activity level and directs airflow to occupied or high activity zone. LED indicators indicating ECONAVI is detecting and functioning.

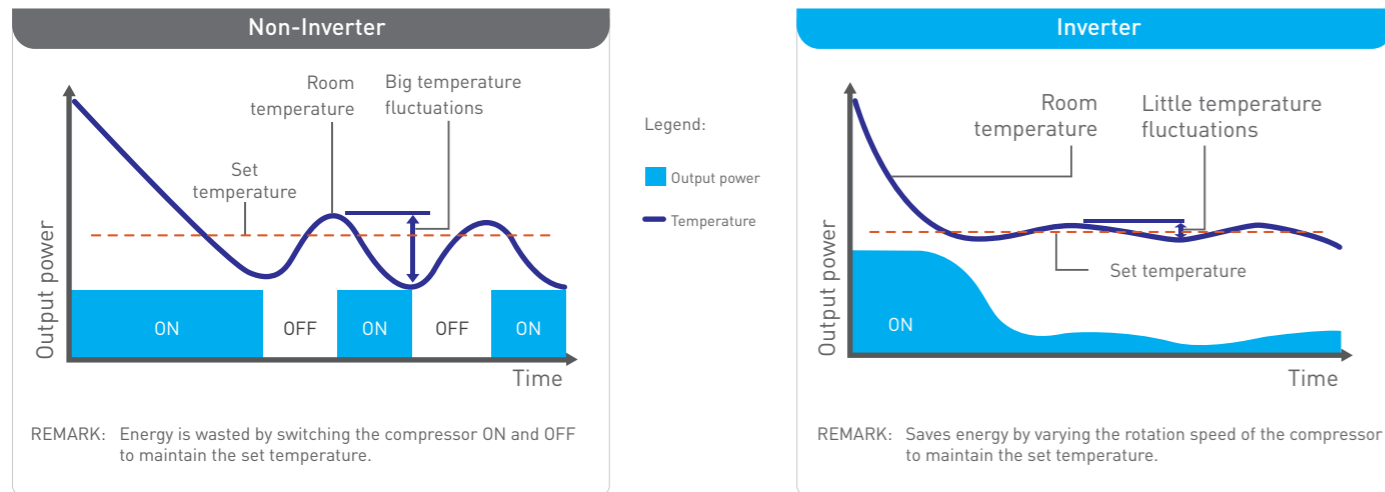


Remark: When detecting any change in movements, there will be a time delay between the LED indicator lighting up and a change of airflow direction. This is to avoid over-sensitive louver movements which will not contribute to energy savings.

REDUCES ELECTRICITY CONSUMPTION

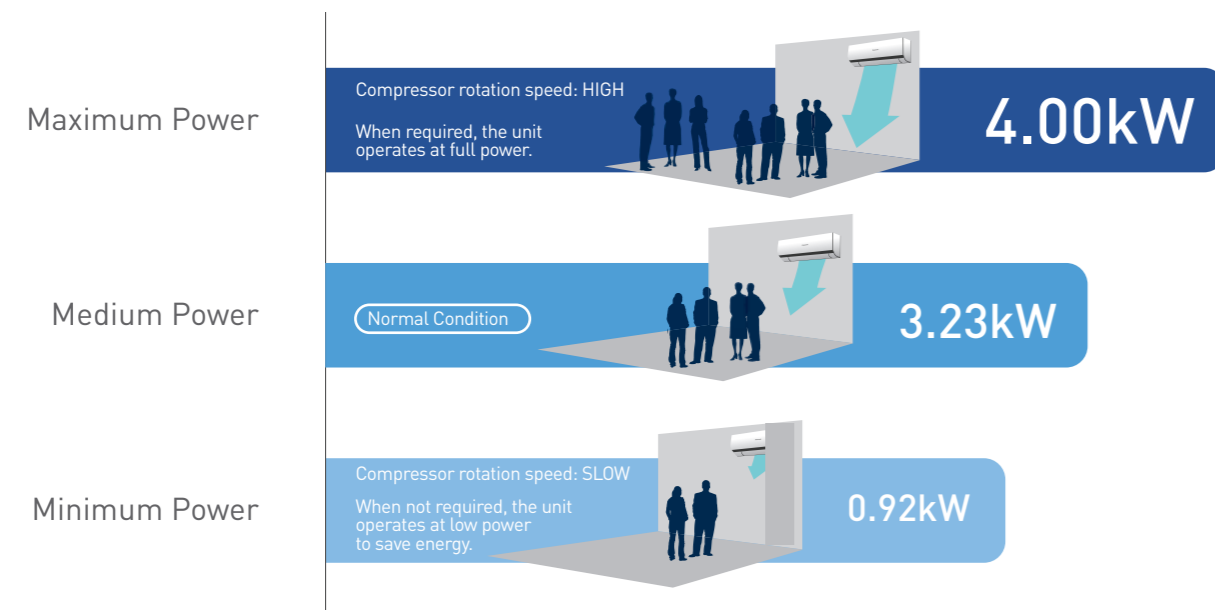
Panasonic INVERTER air conditioners give you exceptional energy saving performance while ensuring you stay comfortable at all times. A conventional non-INVERTER air conditioner can only operate at a constant speed which is too powerful to maintain the set temperature. Thus, it switches the compressor on and off repeatedly. This results in wider temperature fluctuations leading to wasteful consumption of energy. The Panasonic INVERTER air conditioner varies the rotation speed of the compressor, providing a precise method of maintaining the set temperature.

Performance Comparison



Constant Comfort

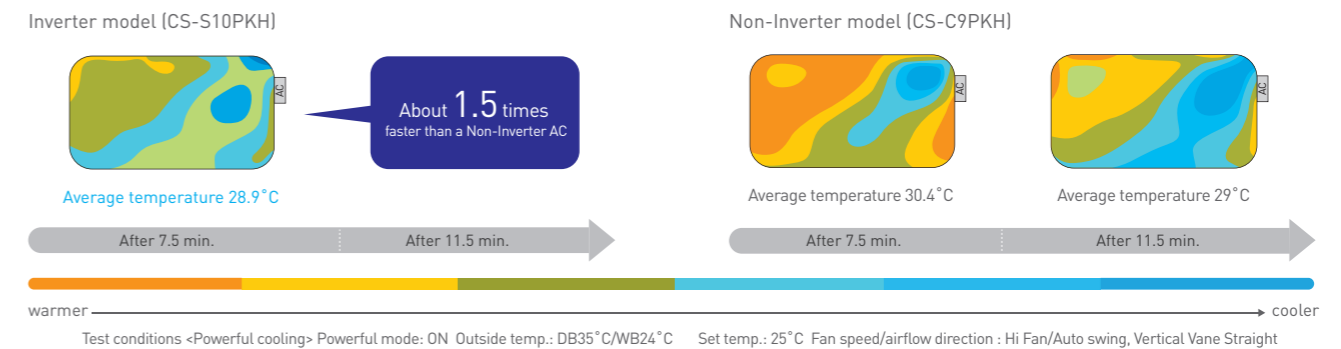
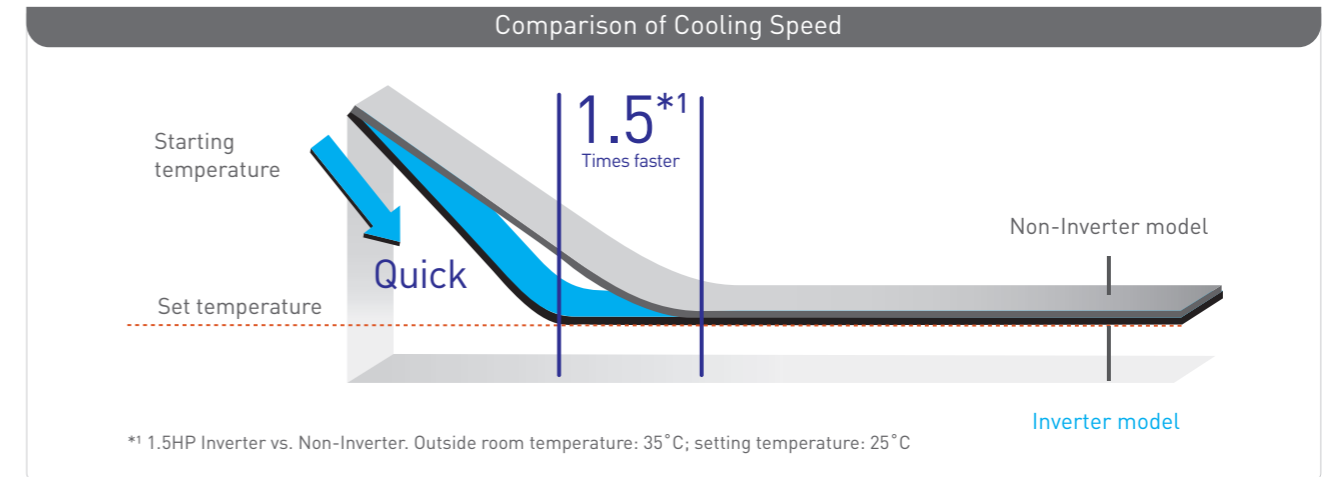
Precise temperature control with a wide power output range enables an inverter air conditioner to meet different room occupancy levels – thus ensuring constant comfort.



Graph shows the 1.5HP Inverter model's wide power output range during cooling.

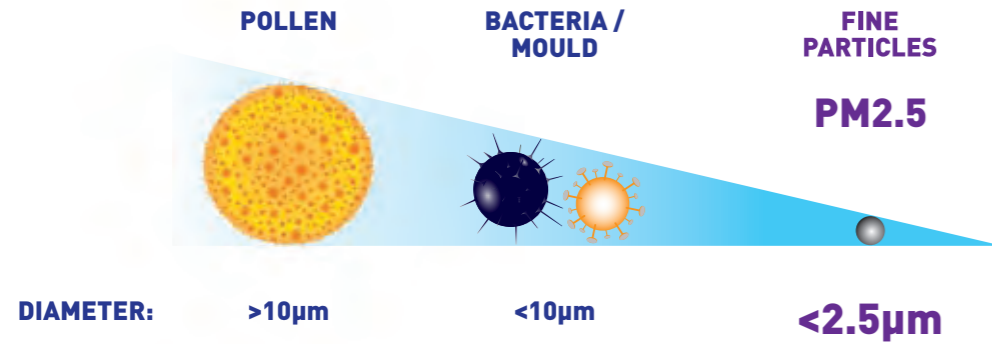
Quick Cooling

Panasonic INVERTER air conditioners can operate with higher cooling power during the start up period to cool the room 1.5 times faster than Non-INVERTER models.

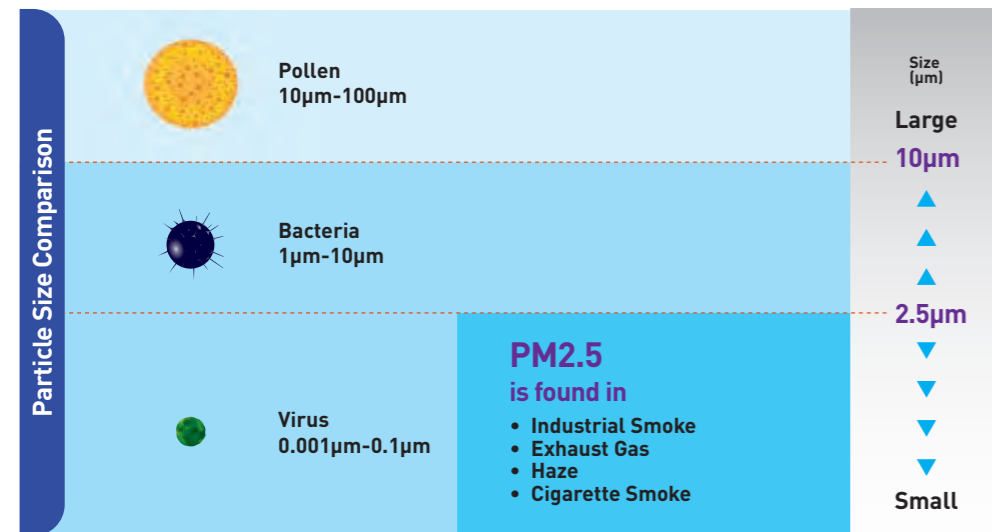


ABOUT PM2.5

"Particulate matter," also known as PM is made up of a number of components including extremely small particles and liquid droplets. Sized at less than 2.5 micrometers (PM2.5), these particles are said to pose health problems as they can easily enter our lungs.



PARTICLE SIZE COMPARISON

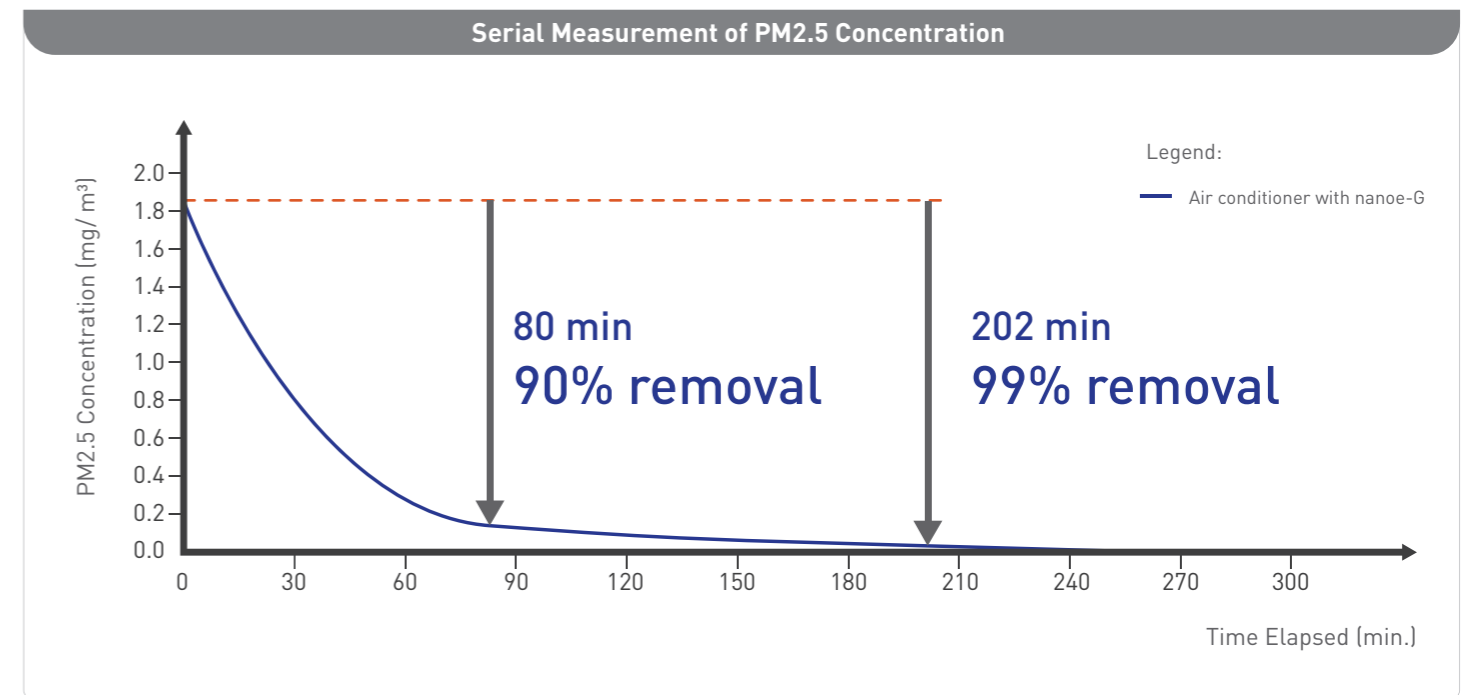


SOURCES OF PM2.5

PM2.5 can be found suspended in the air, including dust, dirt, smoke and liquid droplets. These fine particles come from man-made sources such as the combustion of fossil fuels, open burning and industrial processes as well as natural ones, which include sea sprays and dust carried by strong winds.



PM2.5 REMOVAL EFFICIENCY BASED ON TIME



Airborne

Removes **99%^{*1}** PM2.5

Removes **99%^{*2}** BACTERIA, VIRUSES and MOULD

***1 PM2.5 Removal was certified by FCG Research Institute, Inc**

- Test Report no. : 25034
- PM2.5 : Cigarette Smoke (as PM2.5)

Effectiveness is measured on 0.3µm-2.5µm. (Specific size only)
 This removal effect is not proven for all the airborne toxic substances.

All results are based on specific testing conditions.
 All tests are not demonstrated under actual usage situation.

***2 Airborne Removal was certified by Kitasato Research Center for Environmental Science**

- KRCEs-Bio. Test Report no. : 23_0182
- Bacteria : *Staphylococcus aureus* (NBRC 12732)
- KRCEs-Env. Test Report no. : 22_0008
- Virus : *Escherichia coli phage* (øX-174 ATCC 13706-B1)
- : Influenza (H1N1) 2009 Virus
- KRCEs-Env. Test Report no. : 23_0140
- Mould : *Penicillium pinophilum* (NBRC 6345)

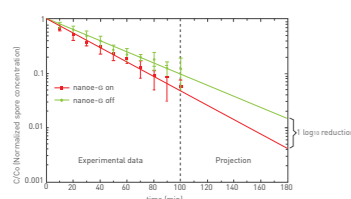
All results are based on specific testing conditions.
 All tests are not demonstrated under actual usage situation.

THE EFFECTIVENESS OF nanoe-G

Airborne

Data on removal of airborne bacteria was presented by HARVARD SCHOOL of Public Health researchers at Nano-Symposium at Kyoto University, 2012

In a large space of 40 m³
Removal effect has been evaluated.



The effect after 100 minutes in a 40 m³ test space [about the size of a 10 tatami mat room], not the effect in a space where actually used.

"Performance evaluation of a novel ionizer for air purification applications". Dr. S. Rudnick et al. Harvard School of Public Health, Environmental Health Nanoscience Lab.

A study of the removal effect of airborne bacteria by using an air-conditioner incorporating nanoe-G was carried out in a large space, and the results were presented at Nano-Symposium jointly held in September 2012 by Harvard University and Kyoto University.

Test methods: Bacteria removal method: Release of nanoe-G ions.

Target: Airborne bacteria, Test results: It is estimated that after three hours of operation the nanoe-G will achieve 2.7 log₁₀ reductions, ~ 1 log₁₀ reduction more, as compared to without nanoe-G.

Adhesive

Target Substance	Substance Name	Effectiveness	Testing Institute	Test Report no	Method	Result
Adhesive	Bacteria	99%	Japan Food Research Laboratories	Test Report No. 11047933001-02	The AC with nanoe-G was operated in a test space (10m ³) and viable cells were counted by pour plate method.	99% inactivation after 24 hour operation of nanoe-G. (compared to the original condition/ventilation mode)
	Virus	99%	Japan Food Research Laboratories	Test Report No. 11073649001-02	nanoe-G was operated in a test box (90 Litre) and phage infectivity titer was determined by plaque technique.	99% inactivation after 120 minutes operation of nanoe-G. (compared to non-operation)
	Mould	Inhibit Mould Growth	Japan Food Research Laboratories	Test Report No. 11047937001-02	nanoe-G was operated in a test box (1m ³) and colonies on the plate were counted.	The growth of the subject was inhibited. (>85% after 7 days)

Remark: All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

Target Substance	Substance Name	Effectiveness	Testing Institute	Test Report no	Method	Result	
Airborne	PM2.5	99%	FCG Research Institute, Inc	Test Report No. 25034	The AC with nanoe-G was operated in a test room (23m ³) and the concentration of PM2.5 was measured by PM2.5 Digital Dust Indicator.	99% removal from the air after 202 minutes of operation.	
	Bacteria	99%	Kitasato Research Center for Environmental Science	KRCES-Bio. Test Report No. 23_0182	The AC with nanoe-G was operated in a test room (25m ³) and aerosol was collected and bacterial count was calculated.	99% removal from the air after 150 minutes of operation.	
	Virus	Escherichia coli phage (øX-174 ATCC 13706-B1)	99%	Kitasato Research Center for Environmental Science	KRCES-Env. Test Report No. 22_0008	The AC with nanoe-G was operated in a test room (25m ³) and airborne phages were collected and phage count of the collected air was calculated.	99% removal from the air after 120 minutes of operation.
			99%	Kitasato Research Center for Environmental Science	KRCES-Env. Test Report No. 22_0008	nanoe-G was operated in a test chamber (200 Litre) and the phages were collected and phage count of the collected air was calculated.	99% removal from the air after 5 minutes of operation.
		Influenza (H1N1) 2009 virus	99%	Kitasato Research Center for Environmental Science	KRCES-Env. Test Report No. 22_0008	nanoe-G was operated in a test chamber (200 Litre) and the influenza viruses were collected and the virus titers were calculated by the Reed and Muench method. In view of health hazard associated with spatial distribution of Influenza (H1N1) 2009 virus, nanoe-G removal effectiveness cannot be tested in large test room (25m ³). When tested in 200 Litre chamber, nanoe-G was able to decrease Influenza (H1N1) 2009 virus (99%) when it was operated for 5 minutes. Additionally when tested in larger test room (25m ³), nanoe-G can remove 99.5% of Coli phage virus when operated for 120 minutes. It was validated that evaluation on the influenza virus could be speculated from the results on the phage according to the test results in a 200 Litre test chamber. It appeared that the air-conditioners in a larger test room (25m ³) would be able to remove the influenza virus as effectively as the phage.	99% removal from the air after 5 minutes of operation.
Mould	Penicillium pinophilum (NBRC 6345)	99%	Kitasato Research Center for Environmental Science	KRCES-Bio. Test Report No. 23_0140	The AC with nanoe-G was operated in a test room (25m ³) and aerosol was collected and fungal spores count was calculated.	99% removal from the air after 90 minutes of operation.	

Remark: All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

Adhesive

Deactivates

99%

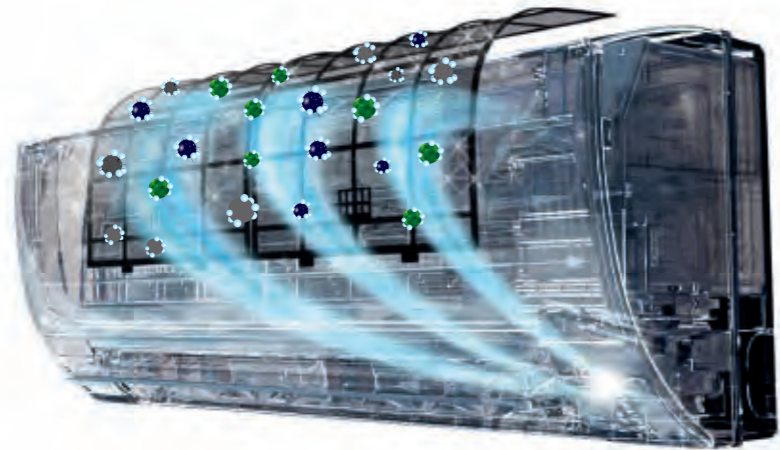
^{*3}
BACTERIA
and VIRUSES

Inhibits MOULD Growth

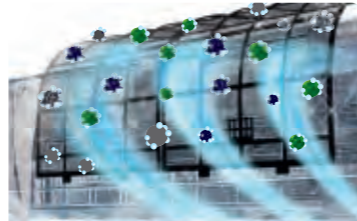
****3 Adhesive Deactivation was certified by Japan Food Research Laboratories**

- Test Report number : 11047933001-02
Bacteria : *Staphylococcus aureus* (NBRC 12732)
- Test Report number : 11073649001-02
Virus : Bacteriophage (Phi X 174 NBRC 103405)
- Test Report number : 11047937001-02
Mould : *Cladosporium cladosporioides* (NBRC 6348)

**All results are based on specific testing conditions.
All tests are not demonstrated under actual usage situation.**



HOW DOES IN-FILTER DEACTIVATION WORK?



1. Power "Off"	2. Fan Operation	3. nanoe-G Operation	4. Deactivation Effect
<p>The air-conditioner first has to be turned off.</p> <p>Remark: Main power must be switched on for the entire duration.</p>	<p>The fan operation will run automatically for 30 minutes to ensure the internal components are dry and free from condensation.</p> <p>Remark: The 30-minute fan operation is only applicable when the unit has been operated in COOL / DRY mode.</p>	<p>Natural Ion Wind spreads nanoe-G particles that are released from the nanoe-G generator.</p>	<p>nanoe-G deactivates bacteria and viruses that are trapped in the filter within 2 hours.</p>
	<p>Fan Operation : On</p> <p>Louver : Low Louver Angle</p> <p>nanoe-G LED : On</p>	<p>Fan Operation : Off</p> <p>Louver : Closed</p> <p>nanoe-G LED : On</p>	
<p>Remark: Depending on the Air Conditioner's accumulated operation time, nanoe-G In-Filter Deactivation may be activated only once a day.</p>			

THE EFFECTIVENESS OF nanoe-G

In-filter Deactivation

Target Substance	Substance Name	Effectiveness	Testing Institute	Test Report no	Method	Result
In-filter Deactivation	Bacteria	99%	Japan Food Research Laboratories	Test Report No. 12037932001	The test piece impregnated with <i>Staphylococcus aureus</i> was placed on the filter of the Air Conditioner indoor unit, and then nanoe-G was operated. After the test piece was collected, viable cells were counted. * test substance was placed on the 4 locations of the filter; upper/lower right and upper/lower left.	99% of deactivation after 2-hour nanoe-G operation.
	Virus	99%	Japan Food Research Laboratories	Test Report No. 12014705001	The test piece impregnated with <i>Escherichia coli</i> phage was placed on the filter of the Air Conditioner indoor unit, and then nanoe-G was operated. After the test piece was collected, phage infectivity titer was determined. * test substance was placed on the 4 locations of the filter; upper/lower right and upper/lower left.	99% of deactivation after 2-hour nanoe-G operation.
	Influenza (H1N1) 2009 Virus	Average 90% on filter (The percentage varies from 78.9% to 96.1% depending on its location)	Kitasato Research Center for Environmental Science	KRCES-Virus Test Report No. 24_0013	The test piece impregnated with Influenza (H1N1) 2009 Virus was placed on the filter of the Air Conditioner indoor unit, and then nanoe-G was operated. After the test piece was collected, virus infectivity titer was determined. * test substance was placed on the 4 locations of the filter; upper/lower right and upper/lower left.	Average 90% deactivation after 2-hour nanoe-G operation. (The percentage varies from 78.9% to 96.1%, depending on its location on filter)

Remark: All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

In-filter Deactivation	<p>Deactivates</p> <p>99%^{*4}</p> <p>BACTERIA and VIRUSES</p>		<p>** In-Filter Deactivation was certified by Japan Food Research Laboratories</p> <ul style="list-style-type: none"> • Test Report number : 12037932001 Bacteria : <i>Staphylococcus aureus</i> (NBRC 12732) • Test Report number : 12014705001 Virus : <i>Escherichia coli</i> phage (φX-174 ATCC 13706-B1) <p>All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.</p>
	<p>Deactivates</p> <p>Average</p> <p>90%</p> <p>INFLUENZA (H1N1) 2009 VIRUS</p>		<p>In-Filter Deactivation was certified by Kitasato Research Center for Environmental Science</p> <ul style="list-style-type: none"> • Test Report number : KRCES-Virus Test Report No. 24_0013 Virus : Influenza (H1N1) 2009 Virus <p>All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.</p>

MODEL LINE-UP

Capacity (Btu/h)

9,000

12,000

15,000

18,000

24,000

28,000

Wall-Mounted
INVERTER DELUXE
SINGLE-SPLIT

Page 12

Inverter Deluxe			Inverter Deluxe Wide		
 CS-S9PKZW (CU-S9PKZ)	 CS-S12PKZW (CU-S12PKZ)	 CS-S15PKZW (CU-S15PKZ)	 CS-S18PKZW (CU-S18PKZ)	 CS-S24PKZW (CU-S24PKZ)	 CS-S28PKZW (CU-S28PKZ)

INVERTER
ECONAVI
nanoe-G
REUSE COMPATIBLE PIPING

Wall-Mounted
INVERTER STANDARD
SINGLE-SPLIT

Page 14

Inverter Standard			Inverter Standard Wide		
 CS-PS9NKZ (CU-PS9NKZ)	 CS-PS12NKZ (CU-PS12NKZ)		 CS-PS18NKZ (CU-PS18NKZ)	 CS-PS24NKZ (CU-PS24NKZ)	

INVERTER
REUSE COMPATIBLE PIPING

Wall-Mounted
INVERTER DELUXE
DUAL-SPLIT
MULTI-SPLIT

Page 16





Inverter Deluxe			Inverter Deluxe Wide		
 CS-S9PKZW (CU-2S18PKZ)	 CS-S12PKZW (CU-2S18PKZ)				

• It is possible to have a combination of wall-mounted models (CS-S9, S12PKZW) for the (CU-2S18PKZ) Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INVERTER
ECONAVI
nanoe-G
REUSE COMPATIBLE PIPING

Wall-Mounted
INVERTER DELUXE
TRIPLE-SPLIT
MULTI-SPLIT

Page 17

 CS-S9PKZW (CU-3S27MKZ)	 CS-S12PKZW (CU-3S27MKZ)	 CS-S15PKZW (CU-3S27MKZ)	 CS-S18PKZW (CU-3S27MKZ)		
---	---	--	--	--	--

• It is possible to have a combination of wall-mounted models (CS-S9, S12, S15, S18PKZW) for the (CU-3S27MKZ) Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INVERTER
ECONAVI
nanoe-G
REUSE COMPATIBLE PIPING

Wall-Mounted
INVERTER DELUXE
QUADRUPLE-SPLIT
MULTI-SPLIT

Page 17

 CS-S9PKZW (CU-4S27NKZ)	 CS-S12PKZW (CU-4S27NKZ)	 CS-S15PKZW (CU-4S27NKZ)	 CS-S18PKZW (CU-4S27NKZ)		
---	---	--	--	--	--

• It is possible to have a combination of wall-mounted models (CS-S9, S12, S15, S18PKZW) for the (CU-4S27NKZ) Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INVERTER
ECONAVI
nanoe-G
REUSE COMPATIBLE PIPING

Wall-Mounted
INVERTER DELUXE
TRIPLE-SPLIT
MULTI-COMBINATION
SPLIT

Page 22

Inverter Deluxe			Inverter Deluxe Wide		
 CS-S9PKZW (CU-3S27KKZ)	 CS-S12PKZW (CU-3S27KKZ)	 CS-S15PKZW (CU-3S27KKZ)	 CS-S18PKZW (CU-3S27KKZ)	 CS-S24PKZW (CU-3S27KKZ)	

• It is possible to have a combination of wall-mounted models (CS-S9, S12, S15, S18, S24PKZW) and mini cassette (CS-S12, S18, S24MB4ZW) for the (CU-3S27KKZ) Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

INVERTER
ECONAVI
nanoe-G
REUSE COMPATIBLE PIPING

Mini Cassette
INVERTER
MINI CASSETTE
MULTI-COMBINATION
SPLIT

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	 CS-S12MB4ZW (CU-3S27KKZ)		 CS-S18MB4ZW (CU-3S27KKZ)	 CS-S24MB4ZW (CU-3S27KKZ)	
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• It is possible to have a combination of wall-mounted models (CS-S9, S12, S15, S18, S24PKZW) and mini cassette (CS-S12, S18, S24MB4ZW) for the (CU-3S27KKZ) Outdoor Unit Ports.
• A minimum of 2 indoor units must be connected.

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