



Panasonic

Air Conditioner

INTELLIGENT ECO SENSORS

ECONAVI

INVERTER





INTELLIGENT ECO SENSORS



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.



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.





COOL.

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



ECO.

We want to enjoy cool comfort in a sustainable way.

INTELLIGENT ECO SENSORS
ECONAVI + **INVERTER**

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.

nano-e®

nano-e® 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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TOGETHER.

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

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

1 AIRBORNE
Removal of airborne particles

Airborne particles:

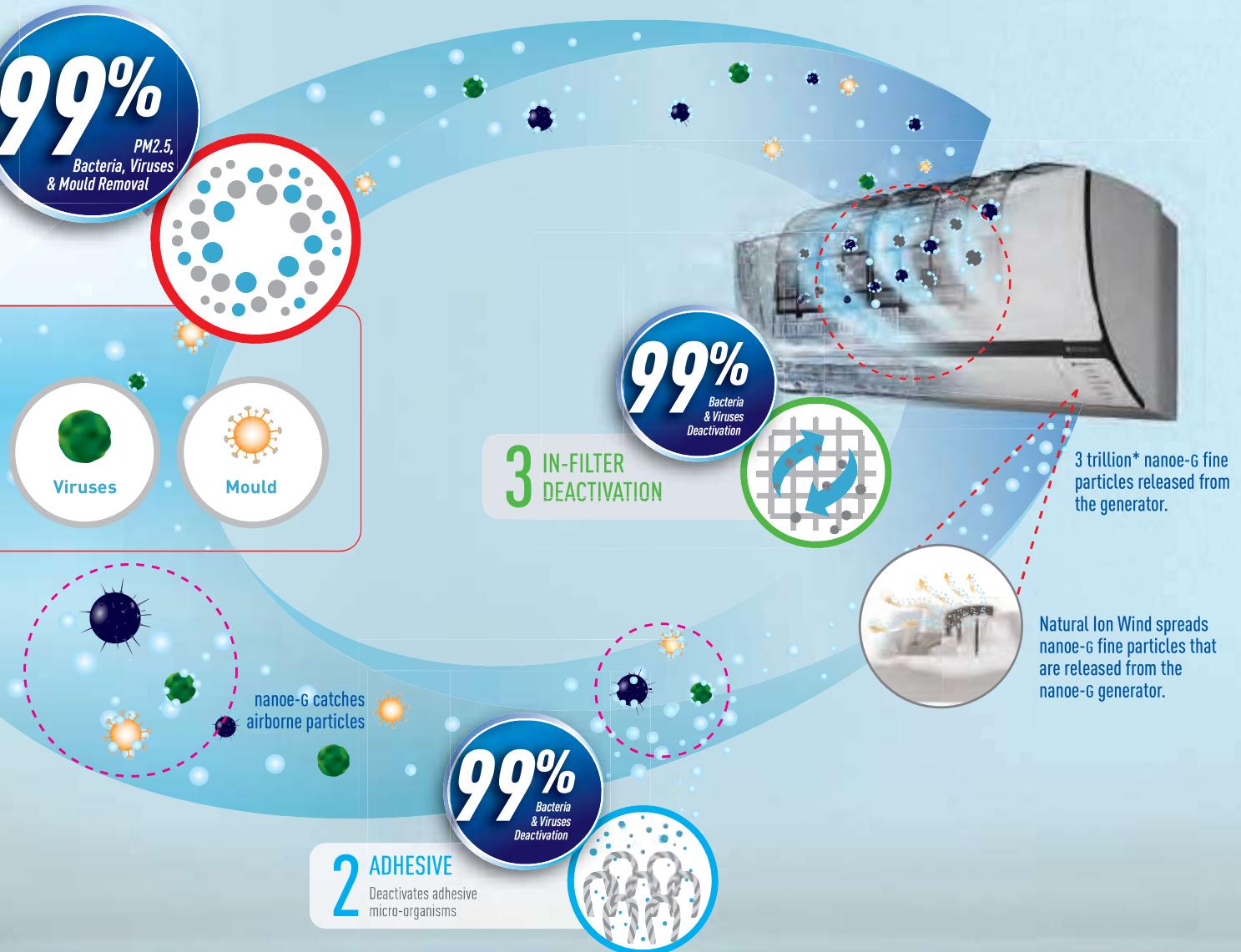


Bacteria



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.



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.



nanoe-G

ECONAVI **INVERTER**

ECONAVI + INVERTER



* 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.

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



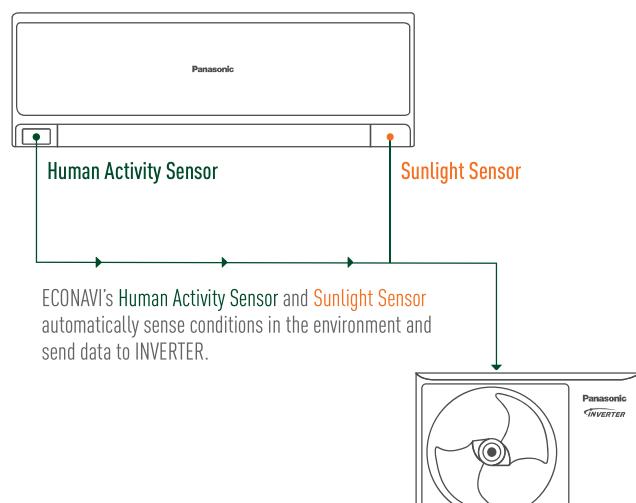
8 HOURS ^{*1} or



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.

ECONAVI AND INVERTER, WORKING TOGETHER FOR BETTER ENERGY SAVINGS



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



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

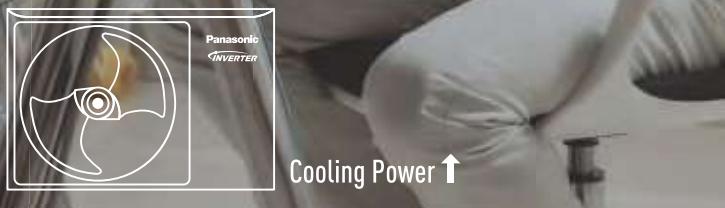


Sunlight Detection:
HIGH Intensity



Activity Detection:
LOW activity

Temperature Wave:
LOW activity



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



3 ENERGY SAVING

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

*Activity Detection
Temperature Wave
Absence Detection*

*Area Search
Sunlight 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

PRODUCT LINE-UP

Wall-Mounted | Inverter Deluxe Single-Split Type



CS-S9PKZW | CS-S12PKZW | CS-S15PKZW



CS-S18PKZW | CS-S24PKZW | CS-S28PKZ



Wireless



Wired (Optional)



Wireless



Wired (Optional)

INVERTER

ECONAVI

nano-e-G

Cooling Models

ECONAVI	°C	AUTO/COMFORT	Wind Pattern
nano-e-G	Wind Pattern	Wind Pattern	Wind Pattern
mode	Wind Pattern	Wind Pattern	Wind Pattern
Wind Pattern	Wind Pattern	Wind Pattern	Wind Pattern
15m (1)	20m (2)	30m (3)	Wind Pattern
CS-S9PKZW CS-S12PKZW CS-S15PKZW	CS-S18PKZW CS-S24PKZW	CS-S28PKZ	(Optional)

(): Outdoor Unit

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
	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]
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)	m³/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
	Outdoor	[dB-A]	[47]	[48]	[50]	[50]	[53]
Dimensions	Height	mm	290 [511]	290 [542]	290 [542]	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 [31-5/16]
	Width	mm	870 [650]	870 [780]	870 [780]	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]
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 15.88	ø 15.88
		inch	3/8	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	20
	Maximum Elevation Length	m	5	5	15	15	20
	Additional Refrigerant Gas*	g/m	15	15	15	20	30
Power Supply		Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor

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

Blue Fin
Condenser

CU-S9PKZ



CU-S12PKZ
CU-S15PKZ



CU-S18PKZ
CU-S24PKZ



CU-S28PKZ



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.

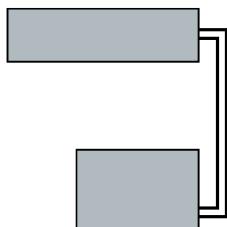
Pump Down Method When Reuse Existing Piping (R22 Model) for R410A Model

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.

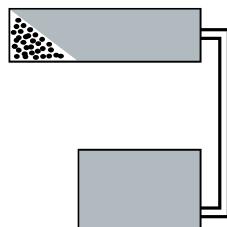
Proper Pump Down Method

1. Operate air-conditioner at cooling mode for 10 -15 minutes,



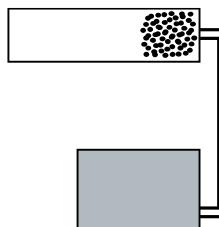
Most Important Process Purpose:
To make the oil & refrigerant mix together.
These two components are separated when the air-conditioner is switched off.

2. After 10 -15 minutes of pre-operation, close the 2-way valve.
After 3 minutes, close the 3-way valve.



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

3, Take out air conditioner 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.

PRODUCT LINE-UP

Wall-Mounted | Inverter Standard Single-Split Type

INVERTER



CS-PS9NKZ



CS-PS9NKZ | CS-PS12NKZ



Wireless



Wired (Optional)



CS-PS18NKZ



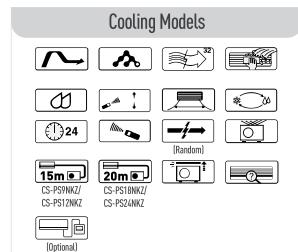
CS-PS18NKZ | CS-PS24NKZ



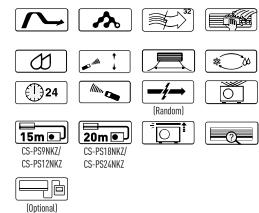
Wireless



Wired (Optional)



Cooling Models



SPECIFICATIONS

(): Outdoor Unit

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	V	240	240	240
	Running Current	A	3.3	4.2	6.9
	Power Input	W	710 (225~920)	880 (260~1,170)	1,580 (290~1,730)
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)	m³/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
	Outdoor	(dB-A)	{47}	{48}	{49}
Dimensions	Height	mm	290 (511)	290 (542)	290 (542)
		inch	11-7/16 (20-1/8)	11-7/16 (21-11/32)	11-7/16 (21-11/32)
	Width	mm	870 (650)	870 (780)	1,070 (780)
		inch	34-9/32 (25-19/32)	34-9/32 (30-23/32)	42-5/32 (30-23/32)
	Depth	mm	214 (230)	214 (289)	240 (289)
		inch	8-7/16 (9-1/16)	8-7/16 (11-13/32)	9-15/32 (11-13/32)
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
		inch	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 12.70	ø 12.70
		inch	3/8	1/2	1/2
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10
	Maximum Pipe Length	m	15	15	20
	Maximum Elevation Length	m	5	5	15
	Additional Refrigerant Gas*	g/m	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



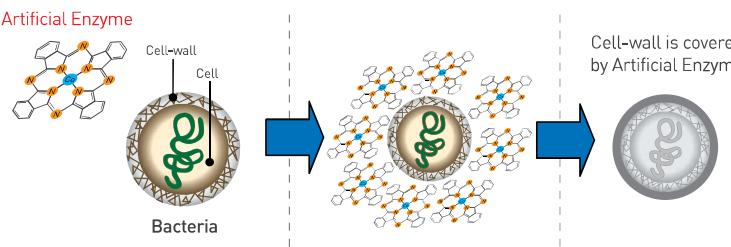
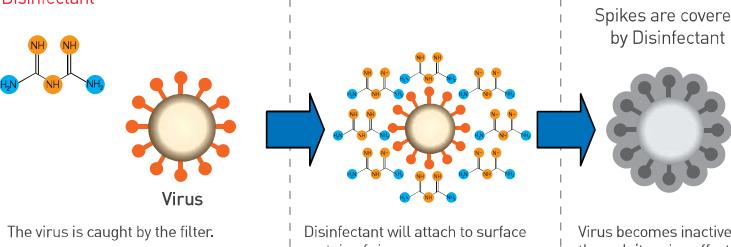
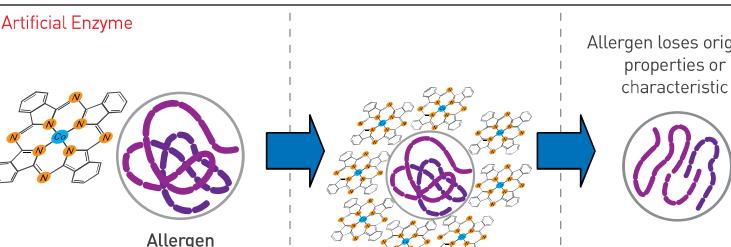
CLEANER AIR



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
DEACTIVATES 99% of filter-captured Bacteria *1	Anti-bacterial <small>*1 Bacteria deactivation was certified by Boken Quality Evaluation Institute. Test Report No: 10042459-1 and 10042459-2</small> <small>Bacteria: <i>Staphylococcus aureus</i> NBRC 12732 : <i>Escherichia coli</i> NBRC 3972</small>	 <small>Cell-wall</small> <small>Cell</small> <small>Bacteria</small> <small>Artificial Enzyme</small> <small>Remark: The above are not actual images of target substance structure. Image drawn is for illustration purpose.</small>
DEACTIVATES 99% of filter-captured Viruses *2	Anti-virus <small>*2 Virus deactivation was certified by Osaka Prefectural Institute of Public Health. Test Report No: 313360397</small> <small>Virus: Influenza (H3N2) A/Hong Kong</small>	 <small>Disinfectant</small> <small>Virus</small> <small>Spikes are covered by Disinfectant</small> <small>Remark: The above are not actual images of target substance structure. Image drawn is for illustration purpose.</small>
DEACTIVATES 99% of filter-captured Allergen *3	Anti-allergen <small>*3 Allergen deactivation was certified by Shinshu University. Test Report No:</small> <small>Allergen: Cider Pollen Allergen Cry j1</small>	 <small>Allergen</small> <small>Artificial Enzyme</small> <small>Allergen loses original properties or characteristic</small> <small>'Denatured' allergen will no longer keep its original property as allergen; therefore, it is harmless.</small> <small>Remark: The above are not actual images of target substance structure. Image drawn is for illustration purpose.</small>
INHIBITS Mould *4 Growth	Anti-mould <small>*4 Certified by Boken Quality Evaluation Institute. Test Report No: 000366-3</small> <small>Mould: <i>Aspergillus niger</i> ATCC 6275</small>	<small>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.'</small>

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

With a single outdoor unit, control up to 4 indoor units. [Maximum]

Outdoor Unit

- Space-saving
- Single Split Type CU-S9PKZ
- CU-4S27NKZ

Inverter control

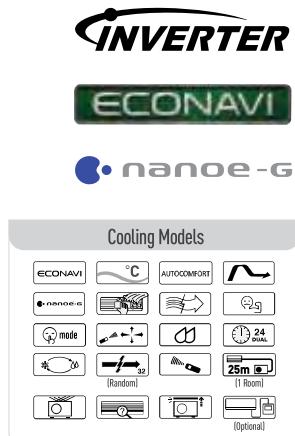
The inverter offers energy-saving efficiency, quick comfort, and flexible power control. Our compressor saves more energy while reducing vibration, noise and unit size.

INVERTER DUAL-SPLIT MODEL



Models	CU-2S18PKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)
2 Rooms	 	Port A 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

Models	CU-3S27MKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)																								
3 Rooms	 	<table border="1"> <tr> <td>Port A</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> </tr> <tr> <td>Port B</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> </tr> <tr> <td>Port C</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> </tr> </table>	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 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

Models	CU-4S27NKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)																																
4 Rooms	 	<table border="1"> <tr> <td>Port A</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> </tr> <tr> <td>Port B</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> </tr> <tr> <td>Port C</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> </tr> <tr> <td>Port D</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> </tr> </table>	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
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.

SPECIFICATIONS

Wall-Mounted | Inverter Deluxe Multi-Split Type

INDOOR

Model		DUAL-SPLIT 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	240		240
	Running Current	3.4		4.2
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	40 / 29	44 / 32
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	290
	Width	mm	870	870
	Depth	mm	214	214
Net Weight Indoor		kg	9	9
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35
	Gas Side	mm	ø 9.52	ø 9.52
Pipe Extension	Standard Pipe Length	m	7.5	7.5
Power Supply			Outdoor	Outdoor

INDOOR

Model		TRIPLE-SPLIT 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	240	240	240	240
	Running Current	3.5	3.9	5.6	6.8
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	40 / 29	44 / 32	45 / 32
Moisture Removal		L/h	1.6	1.8	2.3
Air Circulation (Indoor/Hi)		m³/min.	9.6	10.5	12.6
		cfm	340	370	445
Fan Output		W	24	24	40
Dimensions	Height	mm	290	290	290
	Width	mm	870	870	870
	Depth	mm	214	214	214
Net Weight Indoor		kg	9	9	12
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 9.52
Pipe Extension	Standard Pipe Length	m	7.5	7.5	5.0
Power Supply			Outdoor	Outdoor	Outdoor

INDOOR

Model		QUADRUPLE-SPLIT 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
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
		inch	34-9/32	34-9/32	34-9/32
Net Weight	Depth	mm	214	214	214
		inch	8-7/16	8-7/16	8-7/16
	kg	kg	9	9	9
		lb	20	20	20
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 9.52
		inch	3/8	3/8	3/8
Power Supply		Outdoor	Outdoor	Outdoor	Outdoor

OUTDOOR

Model		DUAL-SPLIT MODEL		TRIPLE-SPLIT MODEL	QUADRUPLE-SPLIT 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	-
	W/W	3.60		3.60	3.64
Electrical Data	Voltage	V	240		240
	Running Current	A	6.1		9.4
	Power Input [Min ~ Max]	W	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.

SPECIFICATIONS

Wall-Mounted | Inverter Deluxe Multi-Split Type

INVERTER DUAL-SPLIT MODEL (CU-2S18PKZ)

Indoor Unit Combination		Total	Cooling Capacity (kW)				Power Input (W)		Current (A)	Moisture Removal L/h
			A	B	Total	min ~ max	Rated	min ~ max	240V	
1 Room	2.8	2.8	2.80	—	2.80	1.10 ~ 3.50	750	220 ~ 1,000	3.40	1.6
	3.2	3.2	3.20	—	3.20	1.10 ~ 4.00	920	220 ~ 1,220	4.20	1.8
2 Room	2.8 + 2.8	5.6	2.40	2.40	4.80	1.50 ~ 5.80	1,310	250 ~ 1,690	5.90	1.5 + 1.5
	2.8 + 3.2	6.0	2.30	2.70	5.00	1.50 ~ 5.90	1,490	250 ~ 1,710	6.75	1.5 + 1.6
	3.2 + 3.2	6.4	2.50	2.50	5.00	1.50 ~ 6.00	1,400	250 ~ 1,750	6.10	1.5 + 1.5

INVERTER TRIPLE-SPLIT MODEL (CU-3S27MKZ)

Indoor Unit Combination		Total	Cooling Capacity (kW)				Power Input (W)		Current (A)	Moisture Removal L/h	
			A	B	C	Total	min ~ max	Rated	min ~ max		
1 Room	2.8	2.8	2.80			2.80	1.70 ~ 3.40	700	380 ~ 890	3.5	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	5.6	2.3
	5.0	5.0	5.00			5.00	1.90 ~ 5.80	1,460	400 ~ 1,890	6.8	2.7
2 Room	2.8 + 2.8	5.6	2.80	2.80		5.60	1.70 ~ 6.40	1,750	420 ~ 2,600	8.0	1.6 + 1.6
	2.8 + 3.2	6.0	2.80	3.20		6.00	1.70 ~ 6.50	2,010	420 ~ 2,600	9.2	1.6 + 1.8
	2.8 + 4.0	6.8	2.80	4.00		6.80	2.50 ~ 7.30	2,420	550 ~ 3,330	11.0	1.6 + 2.3
	2.8 + 5.0	7.8	2.69	4.81		7.50	2.70 ~ 7.70	2,810	530 ~ 3,310	12.7	1.6 + 2.6
	3.2 + 3.2	6.4	3.20	3.20		6.40	2.30 ~ 7.10	2,290	570 ~ 3,350	10.4	1.8 + 1.8
	3.2 + 4.0	7.2	3.20	4.00		7.20	2.50 ~ 7.40	2,770	550 ~ 3,330	12.5	1.8 + 2.3
	3.2 + 5.0	8.2	2.93	4.57		7.50	2.80 ~ 7.70	2,760	530 ~ 3,310	12.5	1.7 + 2.5
	4.0 + 4.0	8.0	3.75	3.75		7.50	2.70 ~ 7.60	2,870	540 ~ 3,310	13.0	2.2 + 2.2
	4.0 + 5.0	9.0	3.33	4.17		7.50	2.80 ~ 7.80	2,600	530 ~ 3,300	11.8	1.9 + 2.4
	5.0 + 5.0	10.0	3.75	3.75		7.50	2.90 ~ 8.00	2,440	520 ~ 3,300	11.1	2.2 + 2.2
3 Room	2.8 + 2.8 + 2.8	8.4	2.50	2.50	2.50	7.50	2.40 ~ 7.60	2,740	580 ~ 3,170	12.4	1.5 + 1.5 + 1.5
	2.8 + 2.8 + 3.2	8.8	2.39	2.39	2.72	7.50	2.40 ~ 7.70	2,690	580 ~ 3,170	12.2	1.5 + 1.5 + 1.6
	2.8 + 2.8 + 4.0	9.6	2.19	2.19	3.12	7.50	2.60 ~ 8.00	2,490	600 ~ 3,260	11.3	1.4 + 1.4 + 1.8
	2.8 + 2.8 + 5.0	10.6	1.98	1.98	3.54	7.50	2.80 ~ 8.00	2,250	600 ~ 2,910	10.2	1.3 + 1.3 + 2.0
	2.8 + 3.2 + 3.2	9.2	2.28	2.61	2.61	7.50	2.40 ~ 7.70	2,690	580 ~ 3,180	12.2	1.5 + 1.6 + 1.6
	2.8 + 3.2 + 4.0	10.0	2.10	2.40	3.00	7.50	2.60 ~ 8.00	2,450	600 ~ 3,200	11.1	1.4 + 1.5 + 1.7
	2.8 + 3.2 + 5.0	11.0	1.91	2.18	3.41	7.50	2.80 ~ 8.00	2,250	600 ~ 2,910	10.2	1.2 + 1.4 + 2.0
	2.8 + 4.0 + 4.0	10.8	1.94	2.78	2.78	7.50	2.70 ~ 8.00	2,290	600 ~ 3,020	10.4	1.3 + 1.6 + 1.6
	2.8 + 4.0 + 5.0	11.8	1.78	2.54	3.18	7.50	2.80 ~ 8.00	2,170	580 ~ 2,760	9.8	1.1 + 1.6 + 1.8
	2.8 + 5.0 + 5.0	12.8	1.64	2.93	2.93	7.50	2.80 ~ 8.00	2,070	520 ~ 2,650	9.4	1.0 + 1.7 + 1.7
	3.2 + 3.2 + 3.2	9.6	2.50	2.50	2.50	7.50	2.40 ~ 7.70	2,650	590 ~ 3,190	12.0	1.5 + 1.5 + 1.5
	3.2 + 3.2 + 4.0	10.4	2.31	2.31	2.88	7.50	2.60 ~ 8.00	2,450	600 ~ 3,210	11.1	1.5 + 1.5 + 1.7
	3.2 + 3.2 + 5.0	11.4	2.11	2.11	3.28	7.50	2.80 ~ 8.00	2,250	600 ~ 2,920	10.2	1.4 + 1.4 + 1.9
	3.2 + 4.0 + 4.0	11.2	2.14	2.68	2.68	7.50	2.80 ~ 8.00	2,290	600 ~ 2,960	10.4	1.4 + 1.6 + 1.6
	3.2 + 4.0 + 5.0	12.2	1.97	2.46	3.07	7.50	2.80 ~ 8.00	2,170	580 ~ 2,760	9.8	1.3 + 1.5 + 1.7
	3.2 + 5.0 + 5.0	13.2	1.82	2.84	2.84	7.50	2.80 ~ 8.00	2,060	520 ~ 2,650	9.4	1.2 + 1.7 + 1.7
	4.0 + 4.0 + 4.0	12.0	2.50	2.50	2.50	7.50	2.80 ~ 8.00	2,170	590 ~ 2,820	9.8	1.5 + 1.5 + 1.5
	4.0 + 4.0 + 5.0	13.0	2.31	2.31	2.88	7.50	2.80 ~ 8.00	2,070	540 ~ 2,650	9.4	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.

INVERTER QUADRUPLE-SPLIT MODEL (CU-4S27NKZ)

Indoor Unit Combination		Total	Cooling Capacity (kW)						Power Input (W)		Current (A)	Moisture Removal L/h
			Room A	Room B	Room C	Room D	Total	min ~ max	Rated	min ~ max		
1 Room	2.8	2.8	2.80				2.80	1.7 ~ 3.4	700	380 ~ 890	3.5	1.6
	3.2	3.2	3.20				3.20	1.7 ~ 4.0	800	380 ~ 1,200	3.9	1.8
	4.0	4.0	4.00				4.00	1.7 ~ 4.8	1,180	380 ~ 1,480	5.6	2.3
	5.0	5.0	5.00				5.00	1.9 ~ 5.8	1,460	400 ~ 1,890	6.8	2.7
2 Room	2.8 + 2.8	5.6	2.80	2.80			5.60	1.7 ~ 6.4	1,750	420 ~ 2,600	8.0	1.6 + 1.6
	2.8 + 3.2	6.0	2.80	3.20			6.00	1.7 ~ 6.5	2,010	420 ~ 2,600	9.2	1.6 + 1.8
	2.8 + 4.0	6.8	2.80	4.00			6.80	2.5 ~ 7.3	2,420	550 ~ 3,330	11.0	1.6 + 2.3
	2.8 + 5.0	7.8	2.69	4.81			7.50	2.7 ~ 7.7	2,810	530 ~ 3,310	12.7	1.6 + 2.6
	3.2 + 3.2	6.4	3.20	3.20			6.40	2.3 ~ 7.1	2,290	570 ~ 3,350	10.4	1.8 + 1.8
	3.2 + 4.0	7.2	3.20	4.00			7.20	2.5 ~ 7.4	2,770	550 ~ 3,330	12.5	1.8 + 2.3
	3.2 + 5.0	8.2	2.93	4.57			7.50	2.8 ~ 7.7	2,760	530 ~ 3,310	12.5	1.7 + 2.5
	4.0 + 4.0	8.0	3.75	3.75			7.50	2.7 ~ 7.6	2,870	540 ~ 3,310	13.0	2.2 + 2.2
	4.0 + 5.0	9.0	3.33	4.17			7.50	2.8 ~ 7.8	2,600	530 ~ 3,300	11.8	1.9 + 2.4
	5.0 + 5.0	10.0	3.75	3.75			7.50	2.9 ~ 8.0	2,440	520 ~ 3,300	11.1	2.2 + 2.2
3 Room	2.8 + 2.8 + 2.8	8.4	2.50	2.50	2.50		7.50	2.4 ~ 7.6	2,740	580 ~ 3,170	12.4	1.5 + 1.5 + 1.5
	2.8 + 2.8 + 3.2	8.8	2.39	2.39	2.72		7.50	2.4 ~ 7.7	2,690	580 ~ 3,170	12.2	1.5 + 1.5 + 1.6
	2.8 + 2.8 + 4.0	9.6	2.19	2.19	3.12		7.50	2.6 ~ 8.0	2,490	600 ~ 3,260	11.3	1.4 + 1.4 + 1.8
	2.8 + 2.8 + 5.0	10.6	1.98	1.98	3.54		7.50	2.8 ~ 8.0	2,250	600 ~ 2,910	10.2	1.3 + 1.3 + 2.0
	2.8 + 3.2 + 3.2	9.2	2.28	2.61	2.61		7.50	2.4 ~ 7.7	2,690	580 ~ 3,180	12.2	1.5 + 1.6 + 1.6
	2.8 + 3.2 + 4.0	10.0	2.10	2.40	3.00		7.50	2.6 ~ 8.0	2,450	600 ~ 3,200	11.1	1.4 + 1.5 + 1.7
	2.8 + 3.2 + 5.0	11.0	1.91	2.18	3.41		7.50	2.8 ~ 8.0	2,250	600 ~ 2,910	10.2	1.2 + 1.4 + 2.0
	2.8 + 4.0 + 4.0	10.8	1.94	2.78	2.78		7.50	2.7 ~ 8.0	2,290	600 ~ 3,020	10.4	1.3 + 1.6 + 1.6
	2.8 + 4.0 + 5.0	11.8	1.78	2.54	3.18		7.50	2.8 ~ 8.0	2,170	580 ~ 2,760	9.8	1.1 + 1.6 + 1.8
	2.8 + 5.0 + 5.0	12.8	1.64	2.93	2.93		7.50	2.8 ~ 8.0	2,070	520 ~ 2,650	9.4	1.0 + 1.7 + 1.7
	3.2 + 3.2 + 3.2	9.6	2.50	2.50	2.50		7.50	2.4 ~ 7.7	2,650	590 ~ 3,190	12.0	1.5 + 1.5 + 1.5
	3.2 + 3.2 + 4.0	10.4	2.31	2.31	2.88		7.50	2.6 ~ 8.0	2,450	600 ~ 3,210	11.1	1.5 + 1.5 + 1.7
	3.2 + 3.2 + 5.0	11.4	2.11	2.11	3.28		7.50	2.8 ~ 8.0	2,250	600 ~ 2,920	10.2	1.4 + 1.4 + 1.9
	3.2 + 4.0 + 4.0	11.2	2.14	2.68	2.68		7.50	2.8 ~ 8.0	2,290	600 ~ 2,960	10.4	1.4 + 1.6 + 1.6
	3.2 + 4.0 + 5.0	12.2	1.97	2.46	3.07		7.50	2.8 ~ 8.0	2,170	580 ~ 2,760	9.8	1.3 + 1.5 + 1.7
	3.2 + 5.0 + 5.0	13.2	1.82	2.84	2.84		7.50	2.8 ~ 8.0	2,060	520 ~ 2,650	9.4	1.2 + 1.7 + 1.7
	4.0 + 4.0 + 4.0	12.0	2.50	2.50	2.50		7.50	2.8 ~ 8.0	2,170	590 ~ 2,820	9.8	1.5 + 1.5 + 1.5
	4.0 + 4.0 + 5.0	13.0	2.31	2.31	2.88		7.50	2.8 ~ 8.0	2,070	540 ~ 2,650	9.4	1.5 + 1.5 + 1.7
4 Room	2.8 + 2.8 + 2.8 + 2.8	11.2	1.88	1.88	1.88	1.88	7.50	2.8 ~ 8.0	2,060	520 ~ 2,650	9.4	1.2 + 1.2 + 1.2 + 1.2
	2.8 + 2.8 + 2.8 + 3.2	11.6	1.81	1.81	1.81	2.07	7.50	2.8 ~ 8.0	2,060	520 ~ 2,650	9.4	1.2 + 1.2 + 1.2 + 1.3
	2.8 + 2.8 + 2.8 + 4.0	12.4	1.69	1.69	1.69	2.43	7.50	2.8 ~ 8.0	2,060	520 ~ 2,590	9.4	1.1 + 1.1 + 1.1 + 1.5
	2.8 + 2.8 + 2.8 + 5.0	13.4	1.57	1.57	1.57	2.79	7.50	2.8 ~ 8.0	2,060	520 ~ 2,530	9.4	1.0 + 1.0 + 1.0 + 1.6
	2.8 + 2.8 + 3.2 + 3.2	12.0	1.75	1.75	2.00	2.00	7.50	2.8 ~ 8.0	2,060	520 ~ 2,650	9.4	1.1 + 1.1 + 1.3 + 1.3
	2.8 + 2.8 + 3.2 + 4.0	12.8	1.64	1.64	1.88	2.34	7.50	2.8 ~ 8.0	2,060	520 ~ 2,590	9.4	1.0 + 1.0 + 1.2 + 1.5
	2.8 + 3.2 + 3.2 + 3.2	12.4	1.68	1.94	1.94	1.94	7.50	2.8 ~ 8.0	2,060	520 ~ 2,650	9.4	1.1 + 1.3 + 1.3 + 1.3
	2.8 + 3.2 + 3.2 + 4.0	13.2	1.59	1.82	1.82	2.27	7.50	2.8 ~ 8.0	2,060	520 ~ 2,590	9.4	1.0 + 1.2 + 1.2 + 1.5
	3.2 + 3.2 + 3.2 + 3.2	12.8	1.88	1.88	1.88	1.88	7.50	2.8 ~ 8.0	2,060	520 ~ 2,590	9.4	1.2 + 1.2 + 1.2 + 1.2

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

PRODUCT LINE-UP

Wall-Mounted | Inverter Multi-Combination Type

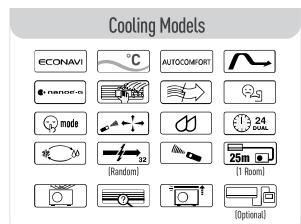
WALL-MOUNTED



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



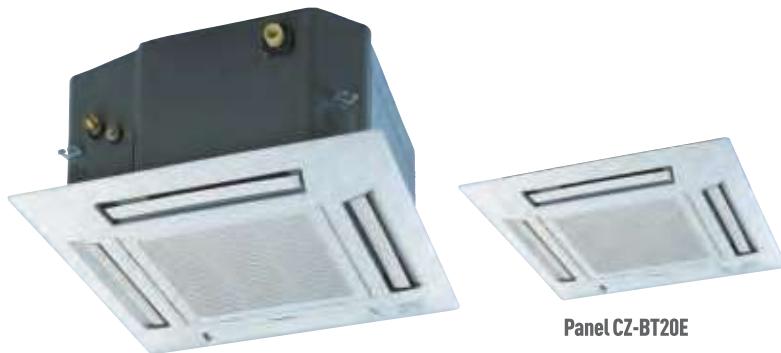
Wireless Wired (Optional)



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

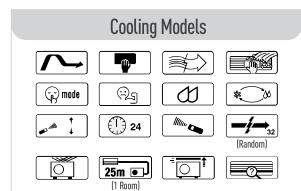
MINI CASSETTE



Panel CZ-BT20E



Wireless



Models	CU-3S27KKZ	Indoor Units: Possible Combination Patterns (Must be within capacity range)																														
3 Rooms	 	<table> <tr> <td>Port A</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> <td>or</td> <td>6.0</td> </tr> <tr> <td>Port B</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> <td>or</td> <td>6.0</td> </tr> <tr> <td>Port C</td> <td>2.8</td> <td>or</td> <td>3.2</td> <td>or</td> <td>4.0</td> <td>or</td> <td>5.0</td> <td>or</td> <td>6.0</td> </tr> </table>	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
Port A	2.8	or	3.2	or	4.0	or	5.0	or	6.0																							
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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	8.6
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	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 12.70
Pipe Extension	Standard Pipe Length	m	7.5	7.5	7.5	5.0
Power Supply			Outdoor	Outdoor	Outdoor	Outdoor

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
Sound Pressure Level	Indoor {Hi/Lo}	{dB-A}	34 / 26	36 / 28
Moisture Removal		L/h	1.8	2.7
Air Circulation {Indoor/Hi}	m³/min.		10.5	11.0
	cfm		370	390
Fan Output		W	40	40
Dimensions	Height	mm	260	260
	Width	mm	575	575
	Depth	mm	575	575
Net Weight Indoor		kg	18	18
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35
	Gas Side	mm	ø 9.52	ø 9.52
Pipe Extension	Standard Pipe Length	m	7.5	5.0
Power Supply			Outdoor	Outdoor

SPECIFICATIONS

Wall-Mounted | Inverter Multi-Combination Type

OUTDOOR

Model			CU-3S27KKZ
Cooling Capacity	Btu/h [Min ~ Max]	kW [Min ~ Max]	25,600 (9,550~30,700) 7.50 (2.80~9.00)
EER	Btu/hW		12.4
	W/W		3.6
Electrical Data	Voltage	V	240
	Running Current	A	9.2
	Power Input	W [Min ~ Max]	2,060 (520~2,830)
Sound Pressure Level	Outdoor (Hi/Lo)	(dB-A)	49
Maximum Current		A	15.2
Starting Current		A	10.1
Compressor Output		W	1,300
Fan Output		W	60
Dimensions	Height	mm	795
	Width	mm	875 (+95)
	Depth	mm	320
Net Weight Outdoor		kg	68
Pipe Extension**	Chargeless Pipe Length	m	30
	Maximum Pipe Length	1 Room	25
		Total	60
	Maximum Elevation Length	m	15
	Additional Refrigerant Gas*	g/m	20

* 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)	Moisture Removal L/h	
			A	B	C	Total	min ~ max	Rated	min ~ max		
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
3 Room	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
	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	
Cooling Models	CS-S9PKZW CS-S12PKZW CS-S15PKZW	CS-S19PKZW CS-S24PKZW CS-S28PKZ	CS-P59NKZ CS-PS12NKZ	CS-PS18NKZ CS-PS24NKZ	CS-S9PKZW CS-S12PKZW CS-S15PKZW CS-S18PKZW	CS-S9PKZW CS-S12PKZW CS-S15PKZW CS-S18PKZW CS-S24PKZW	
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]	
Reliability							
Random Auto Restart [32 Restart Patterns] (Random)	●	●	●	●	●	●	
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.

Temperature Wave

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

AUTOCOMFORT

Detects high activity levels and adjusts cooling power to improve comfort.

Inverter Control

Varies the rotation speed of the compressor for higher energy savings.



Quiet Mode



Powerful Mode



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.

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.



Airflow Direction Control (Up & Down)



Manual Horizontal Airflow Direction Control



Automatic Operation Mode

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.

Anti-Bacterial Filter

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



One-Touch Air Filter



Removable, Washable Panel



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.

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

Random Auto Restart



Long Piping



Self-Diagnostic Function



Blue Fin Condenser



Top-Panel Maintenance Access



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

Convenience

Reliability

OPTIONAL ACCESSORIES

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

THE SYSTEM OF MODEL NUMBERS FOR SPLIT MODELS

- ① Model Type
CS : Split Type (Indoor Unit)
CU : Split Type (Outdoor Unit)
CZ : Accessories

- ② Connection Configuration
<Indoor Unit>
W : Multi Split
<Outdoor Unit>
n : (n) Rooms Multi

- 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

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

ECONAVI TECHNICAL EXPLANATION

1 ABSENCE DETECTION

Reduces cooling power when you are not around.



2 SUNLIGHT DETECTION

Adjusts cooling power to changes in sunlight intensity.



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.

4 AREA SEARCH

Directs airflow to wherever you are in the room.

**3 TEMPERATURE WAVE**

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

**5 ACTIVITY DETECTION**

Adapts cooling power to your daily activities.



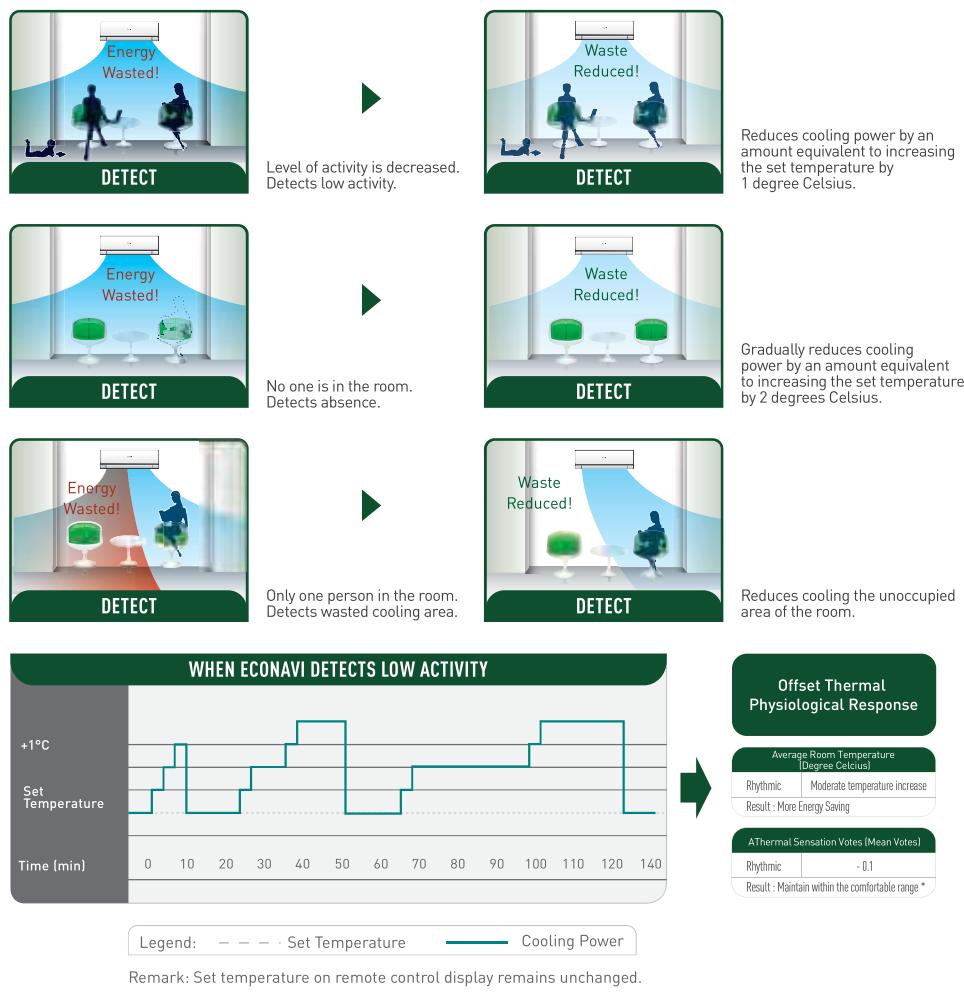
Panasonic

**Human
Activity Sensor****Sunlight
Sensor**

ECONAVI TECHNICAL EXPLANATION

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:



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**.

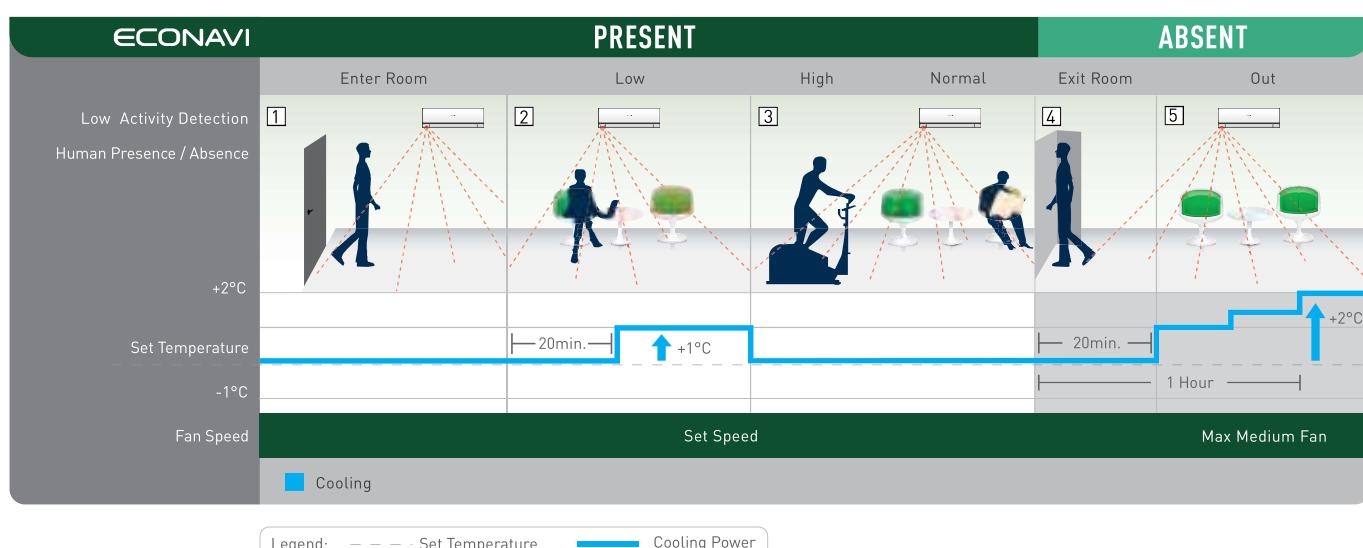
Area Search

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

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.



ECONAVI is switched on when it is SUNNY.



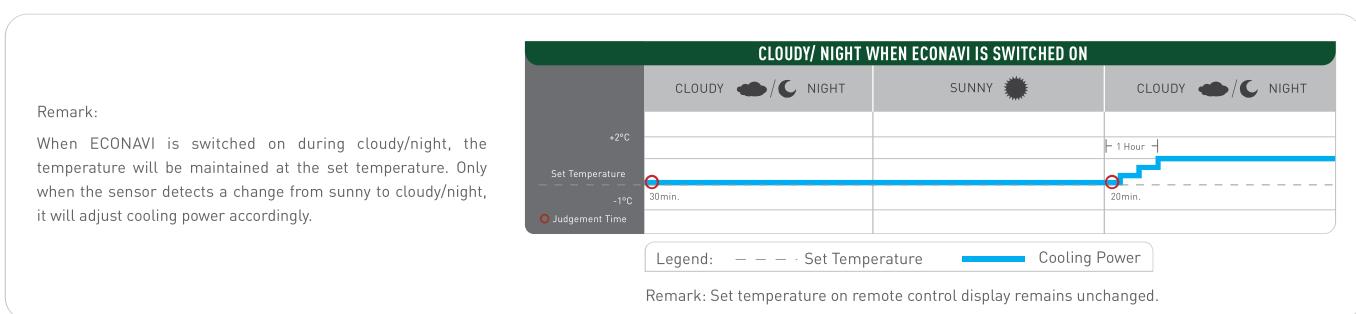
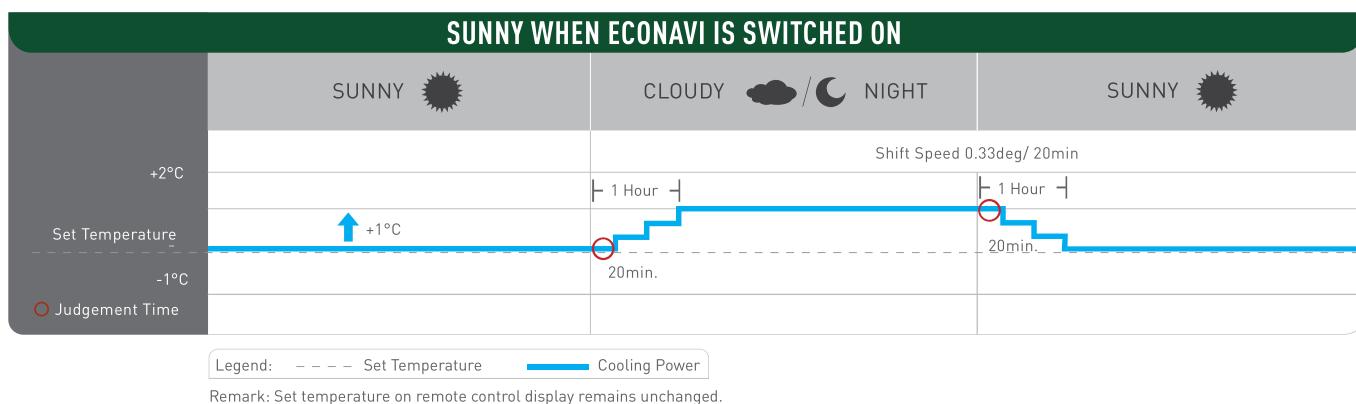
ECONAVI detects less cooling power is required.



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?



ECONAVI TECHNICAL EXPLANATION

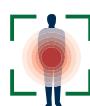
HUMAN ACTIVITY SENSOR

High-Precision Sensing

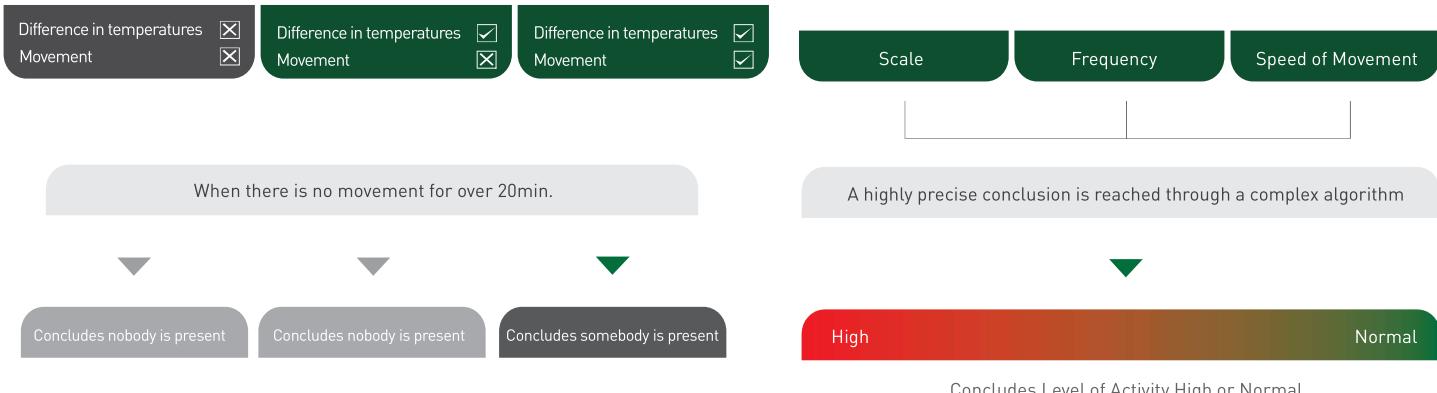
All objects emit infrared rays which, although invisible, can be detected as heat by ECONAVI's Human Activity Sensor if it is within the detection zone. When an object moves within its detection zone, ECONAVI compares the object's temperature with the room temperature to determine if it is human, and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



Detecting Human Presence

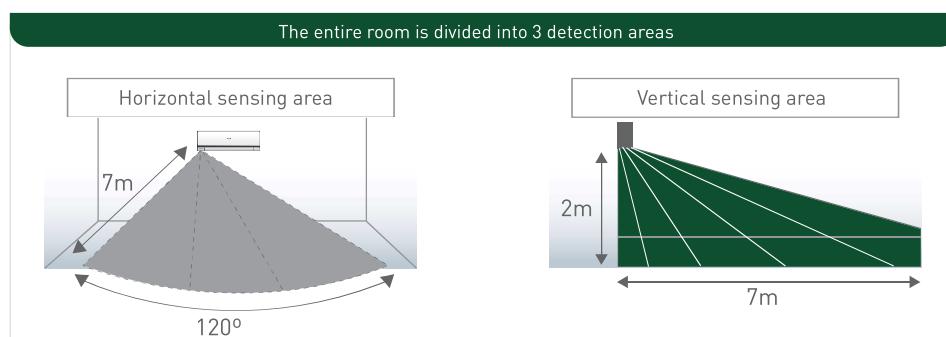


Determining the Level of Human Activity



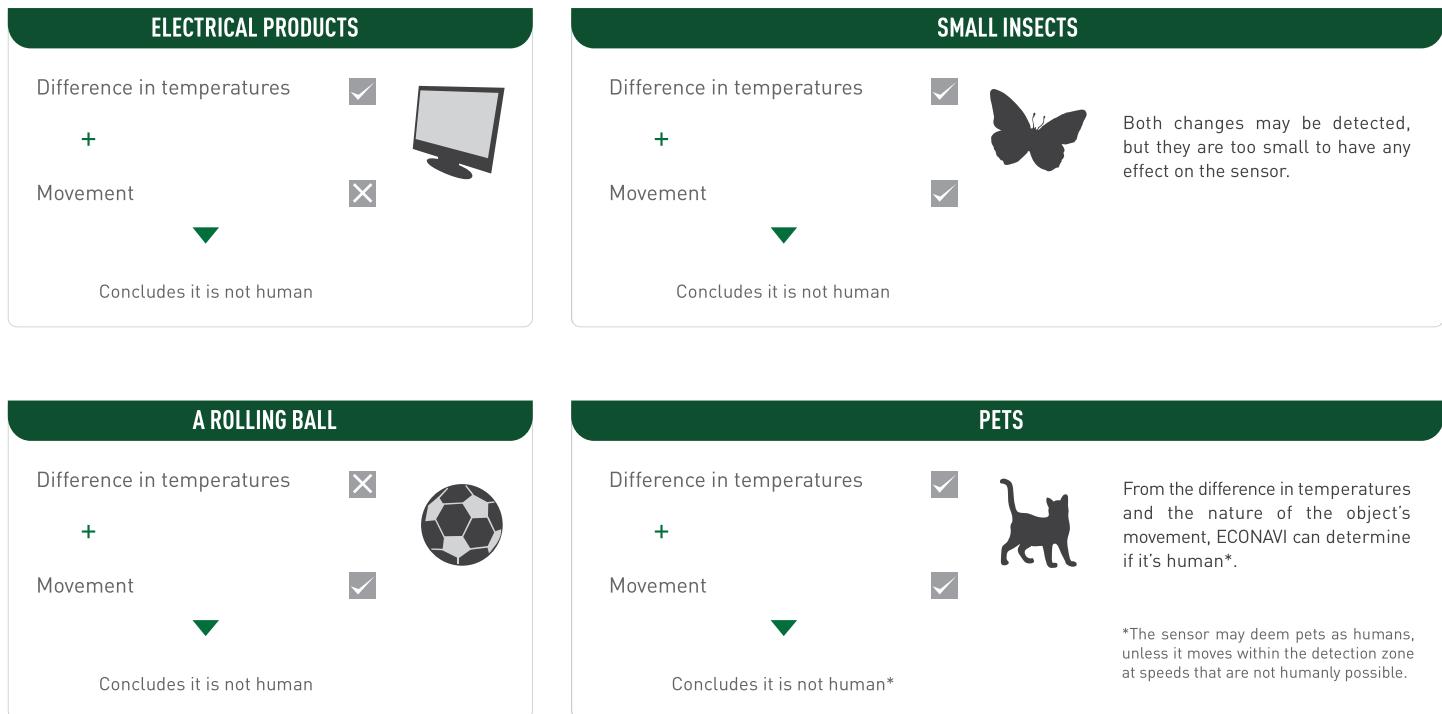
Coverage Capabilities

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



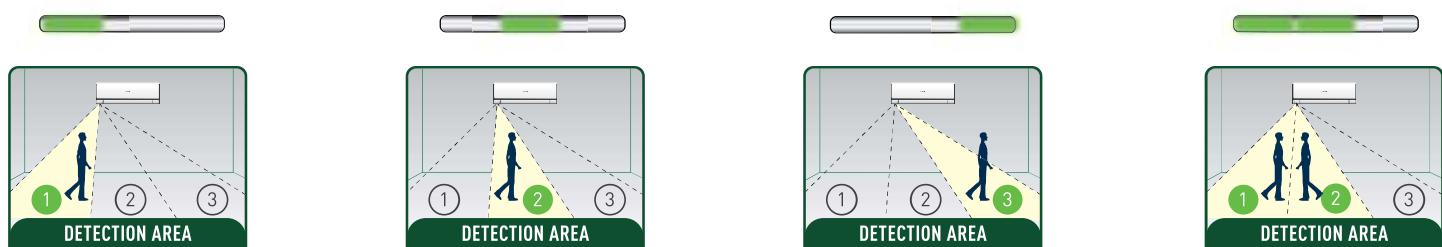
Remark: Applicable for dual sensor.

Differentiating Objects



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.



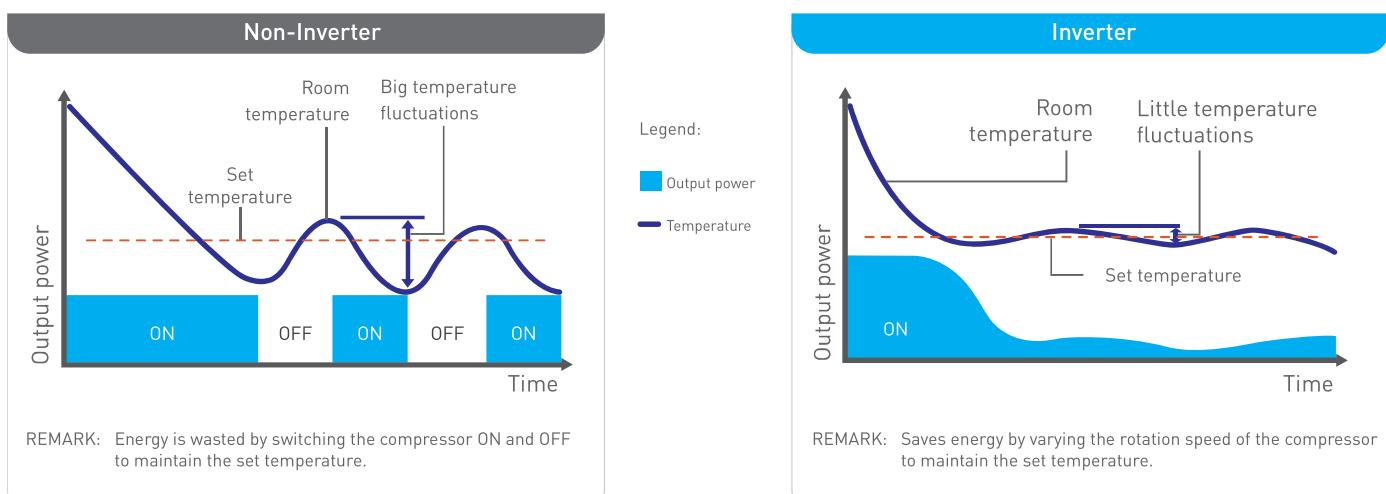
Remark: When detecting any change in movements, there will be a time delay between the LED indicator lighting up and a change of airflow direction. This is to avoid over-sensitive louver movements which will not contribute to energy savings.

INVERTER TECHNICAL EXPLANATION

REDUCES ELECTRICITY CONSUMPTION

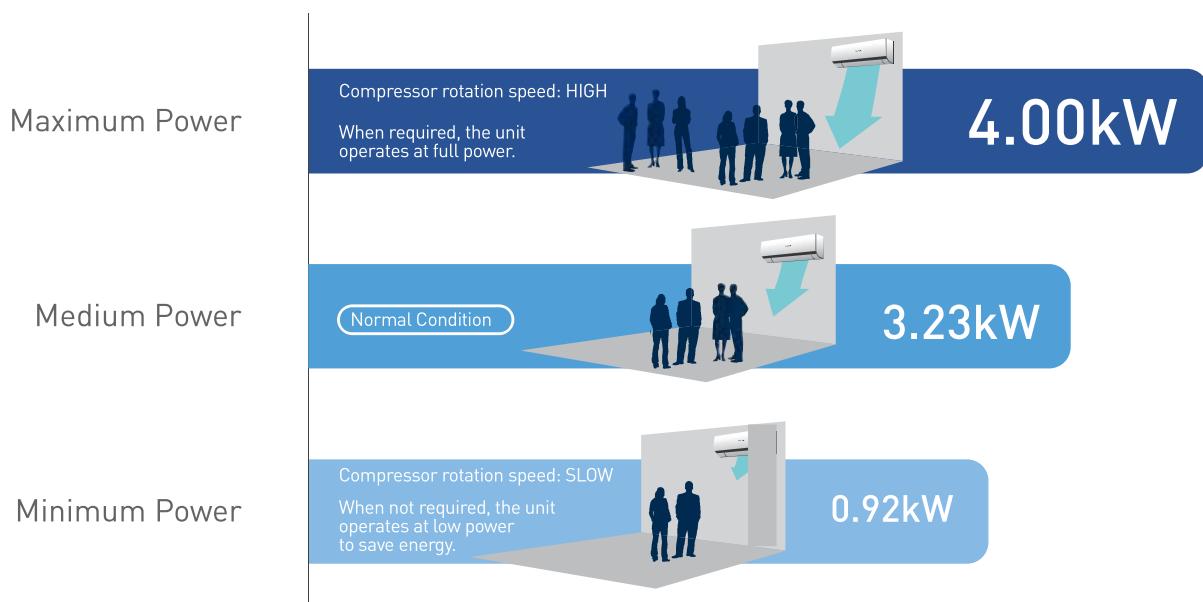
Panasonic INVERTER air conditioners give you exceptional energy saving performance while ensuring you stay comfortable at all times. A conventional non-INVERTER air conditioner can only operate at a constant speed which is too powerful to maintain the set temperature. Thus, it switches the compressor 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

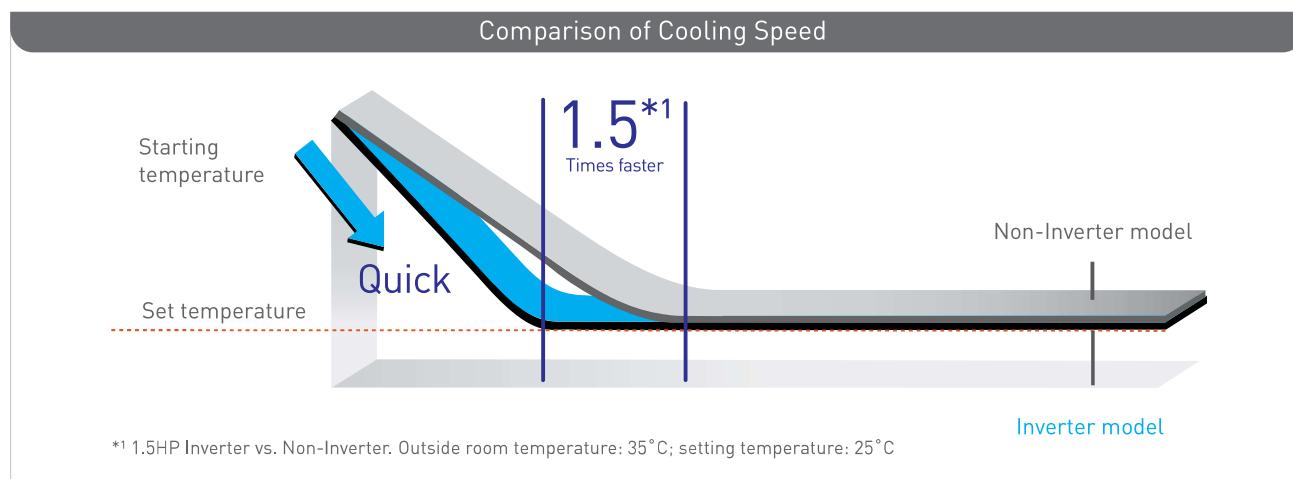
Precise temperature control with a wide power output range enables an inverter air conditioner to meet different room occupancy levels – thus ensuring constant comfort.



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.



Inverter model (CS-S10PKH)



Average temperature 28.9°C

About 1.5 times
faster than a Non-Inverter AC

After 7.5 min.

After 11.5 min.

warmer

Non-Inverter model (CS-C9PKH)



Average temperature 30.4°C

After 7.5 min.



Average temperature 29°C

After 11.5 min.

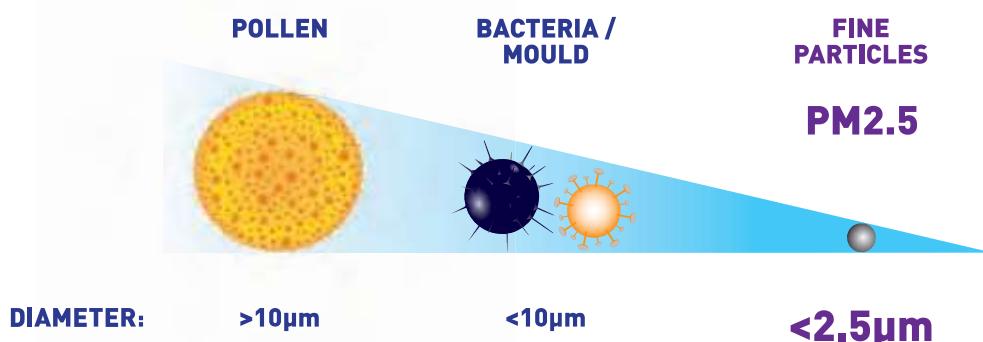
cooler

Test conditions <Powerful cooling> Powerful mode: ON Outside temp.: DB35°C/WB24°C Set temp.: 25°C Fan speed/airflow direction : Hi Fan/Auto swing, Vertical Vane Straight

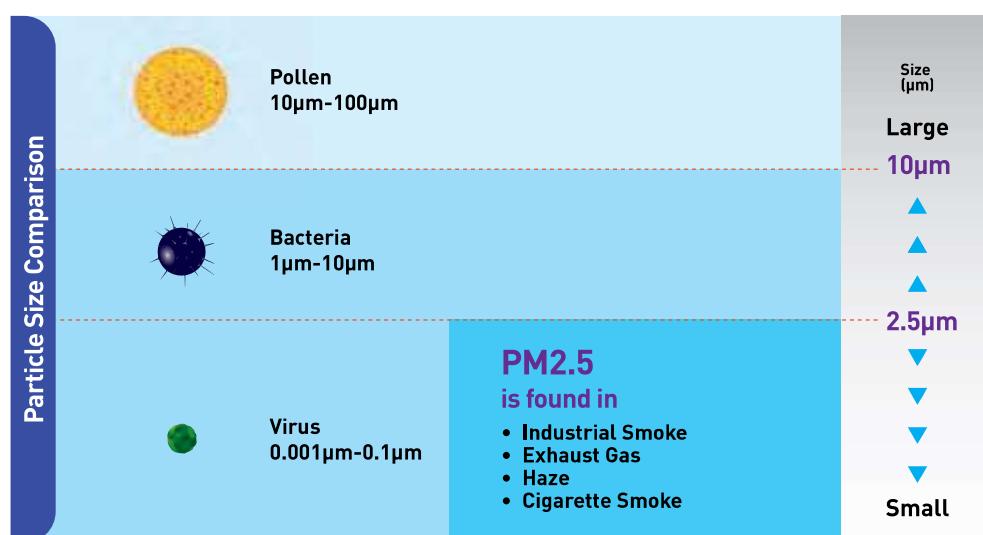
nanoe-G TECHNICAL EXPLANATION

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



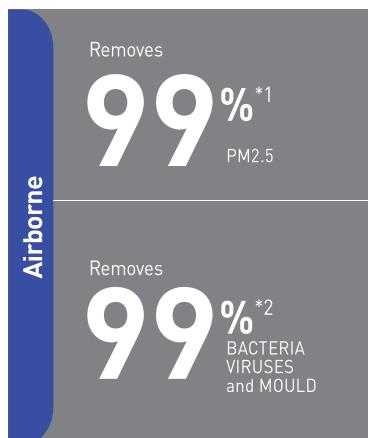
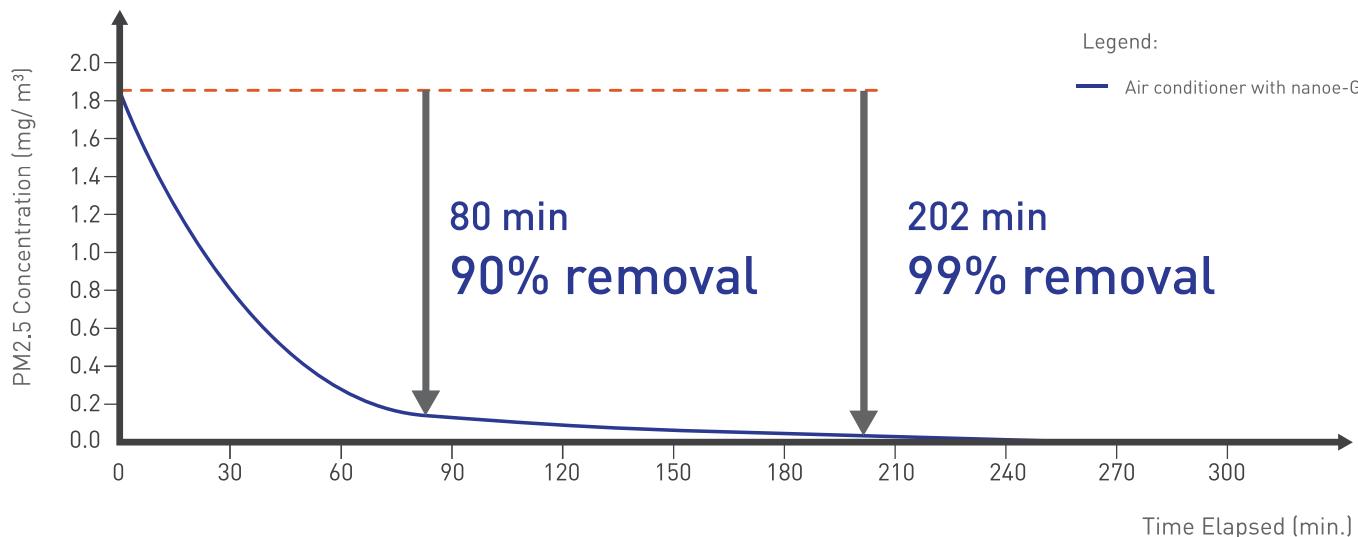
SOURCES OF PM2.5

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

Serial Measurement of PM2.5 Concentration



*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 [φX-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.

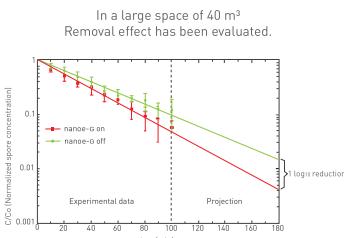
All tests are not demonstrated under actual usage situation.

nanoe-G TECHNICAL EXPLANATION

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



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.

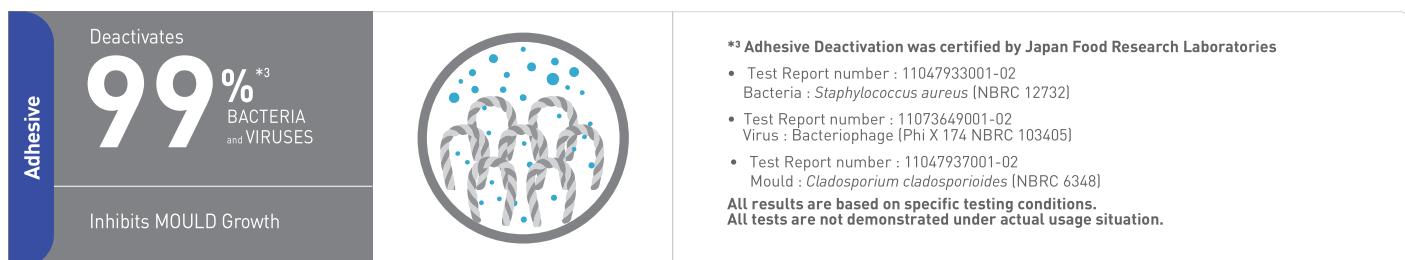
Target Substance	Substance Name	Effectiveness	Testing Institute	Test Report no	Method	Result
PM2.5	Cigarette Smoke (as PM2.5)	99%	FCG Research Institute, Inc	Test Report No. 25034	The AC with nanoe-g was operated in a test room (23m ³) and the concentration of PM2.5 was measured by PM2.5 Digital Dust Indicator.	99% removal from the air after 202 minutes of operation.
Bacteria	<i>Staphylococcus aureus</i> (NBRC 12732)	99%	Kitasato Research Center for Environmental Science	KRCS-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	<i>Escherichia coli</i> phage (øX-174 ATCC 13706-B1)	99%	Kitasato Research Center for Environmental Science	KRCS-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	KRCS-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.
Mould	Influenza (H1N1) 2009 virus	99%	Kitasato Research Center for Environmental Science	KRCS-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.	99% removal from the air after 5 minutes of operation.
	<i>Penicillium pinophilum</i> (NBRC 6345)	99%	Kitasato Research Center for Environmental Science	KRCS-Bio. Test Report No. 23_0140	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 90 minutes of operation.

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

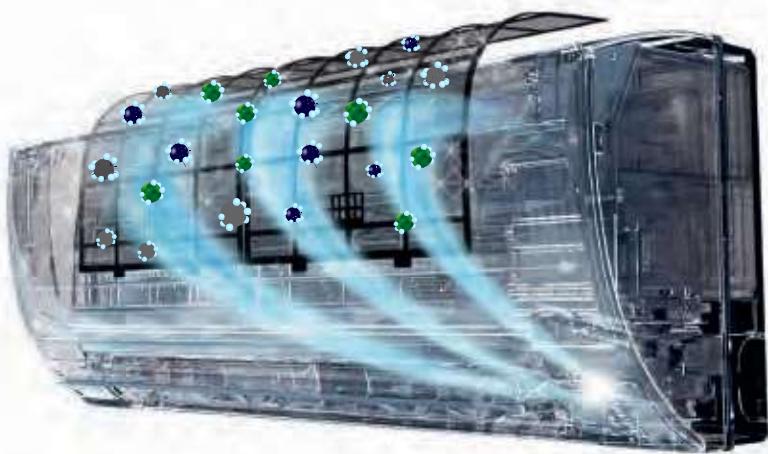
Adhesive

Target Substance	Substance Name	Effectiveness	Testing Institute	Test Report no	Method	Result
Bacteria	Staphylococcus aureus [NBRC 12732]	99%	Japan Food Research Laboratories	Test Report No. 11047933001-02	The AC with nanoe-g was operated in a test space (10m³) 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	Bacteriophage [Phi X 174 NBRC 103405]	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	Cladosporium cladosporioides [NBRC 6348]	Inhibit Mould Growth	Japan Food Research Laboratories	Test Report No. 11047937001-02	nanoe-g was operated in a test box (1m³) and colonies on the plate were counted.	The growth of the subject was inhibited. (>85% after 7 days)

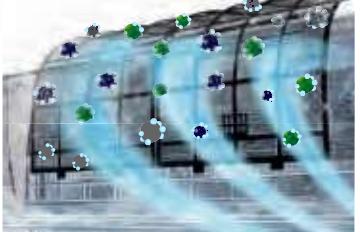
Remark: All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.



nanoe-G TECHNICAL EXPLANATION



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 with the louver slightly open 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 Louver : Low Louver Angle nanoe-G LED : On</p>		<p>Fan Operation : Off Louver : Closed nanoe-G LED : On</p>

Remark:

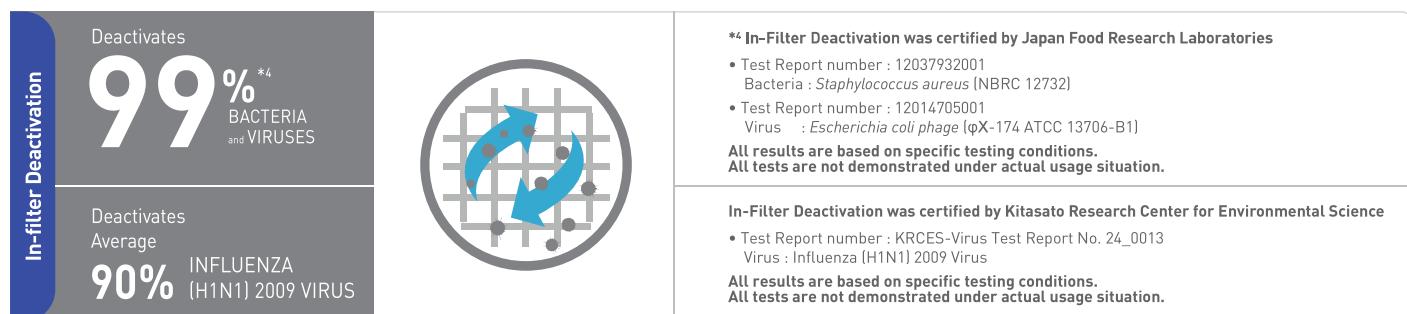
Depending on the Air Conditioner's accumulated operation time, nanoe-G In-Filter Deactivation may be activated only once a day.

THE EFFECTIVENESS OF nanoe-G

In-filter Deactivation

Target Substance	Substance Name	Effectiveness	Testing Institute	Test Report no	Method	Result
Bacteria	<i>Staphylococcus aureus</i> (NBRC 12732)	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	<i>Escherichia coli</i> phage (φX-174 ATCC 13706-B1)	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.



MODEL LINE-UP

Capacity [Btu/h] 9,000 12,000 15,000

Wall-Mounted
INVERTER DELUXE
SINGLE-SPLIT

Page 12

CS-S9PKZW
[CU-S9PKZ]

Inverter Deluxe

CS-S15PKZW
[CU-S15PKZ]

Inverter Standard

Wall-Mounted
INVERTER STANDARD
SINGLE-SPLIT

Page 14

CS-PS9NKZ
[CU-PS9NKZ]

Inverter Standard

CS-PS12NKZ
[CU-PS12NKZ]

Wall-Mounted
INVERTER DELUXE
DUAL-SPLIT
MULTI-SPLIT

Page 16

CS-S9PKZW
[CU-2S18PKZ]

Inverter Deluxe

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.

Wall-Mounted
INVERTER DELUXE
TRIPLE-SPLIT
MULTI-SPLIT

Page 17

CS-S9PKZW
[CU-3S27MKZ]

CS-S12PKZW
[CU-3S27MKZ]

CS-S15PKZW
[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.

Wall-Mounted
INVERTER DELUXE
QUADRUPLE-SPLIT
MULTI-SPLIT

Page 17

CS-S9PKZW
[CU-4S27NKZ]

CS-S12PKZW
[CU-4S27NKZ]

CS-S15PKZW
[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.

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

Page 22

CS-S9PKZW
[CU-3S27KKZ]

Inverter Deluxe

CS-S12PKZW
[CU-3S27KKZ]

CS-S15PKZW
[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, S24MB42W] for the [CU-3S27KKZ] Outdoor Unit Ports.
- A minimum of 2 indoor units must be connected.

Mini Cassette
INVERTER
MINI CASSETTE
MULTI-COMBINATION
SPLIT

Page 22



CS-S12MB4ZW
[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, S24MB42W] for the [CU-3S27KKZ] Outdoor Unit Ports.
- A minimum of 2 indoor units must be connected.

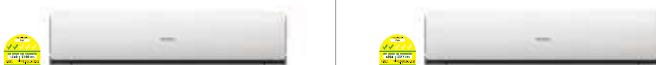
(): Outdoor Unit

Cooling Models

18,000

24,000

28,000

Inverter Deluxe Wide**CS-S18PKZW**
[CU-S18PKZ]**CS-S24PKZW**
[CU-S24PKZ]**CS-S28PKZ**
[CU-S28PKZ]**Features****Inverter Standard Wide****CS-PS18NKZ**
[CU-PS18NKZ]**CS-PS24NKZ**
[CU-PS24NKZ]**Inverter Deluxe Wide****CS-S18PKZW**
[CU-3S27MKZ]**CS-S18PKZW**
[CU-4S27NKZ]**CS-S18PKZW**
[CU-4S27NKZ]**Inverter Deluxe Wide****CS-S18PKZW**
[CU-3S27KKZ]**CS-S18PKZW**
[CU-3S27KKZ]**CS-S18MB4ZW**
[CU-3S27KKZ]**CS-S18MB4ZW**
[CU-3S27KKZ]**CS-S24MB4ZW**
[CU-3S27KKZ]



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.

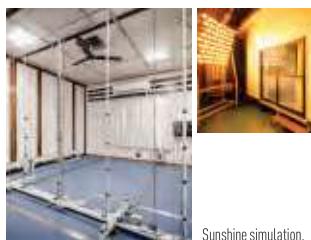
Operating Test in Harsh Conditions



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.