Panasonic

heating & cooling solutions

# Residential Air Conditioners



# QUALITY AIR FOR LIFE




Quality air has been a prime concern of many in today's world. While we spend most of our time indoors, we often take the perception that indoor air is cleaner than the outside air.

Panasonic is committed to advance frontiers through air quality improvement with "Quality Air For Life" initiatives and bring a great range of air solutions to mitigate indoor air concerns. Quality Air For Life solutions aim to deliver comfortable, clean air and clean energy solutions through four different enabling technologies: Air Purification, Air Conditioning, Air Connectivity and Air Ventilation.

# Quality Air Solutions at Home

Panasonic offers a wide range of air conditioning solutions to purify and heat/cool indoor spaces for comfort with energy efficiency for a lesser environmental impact. Connect with the Panasonic Comfort Cloud App that keeps you in touch with your home air conditioner remotely while you're away from home.




**AIR PURIFICATION**
Purifies air and surfaces 24 hours a day




**AIR CONNECTIVITY**
Stay connected and in control anywhere, anytime




**AIR CONDITIONING**
Comfortable warm/cool air for you and your family




**AIR EFFICIENCY**
Eco-friendly and cost saving technologies for sustainable living


| | | | |
|---|---|---|---|
| SPECIFICATIONS OF AERO Z SERIES | 20 | SPECIFICATIONS OF DEVELOPER RZ SERIES | 22 |
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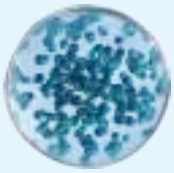



# 24-HOUR AIR PURIFICATION

## with nanoe™ X + Comfort Cloud

Your health starts with you at home from the outside world. nanoe™ X with hydroxyl radicals contained in water helps families to ensure constantly clean and safe indoor environments by inhibiting bacteria, viruses, mould and other pollutants while deodorising for clean and fresh air.

Choose Panasonic air conditioners equipped with nanoe™ X and stay connected by downloading the Panasonic Comfort Cloud App* to manage your air conditioners with one device.



nanoe™X
**(Air Purification)**

+

Panasonic
Comfort Cloud App
**(Air Connectivity)**



*A router with internet connection is required to connect your air conditioner with Panasonic Comfort Cloud App. The CZ-TACG1 accessory is required for AC models (DEVELOPER RZ SERIES, FLOOR CONSOLE, SLIM DUCTED and MINI CASSETTE). CZ-RTC6BLW or CZ-CAPWFC1 accessory is required for MINI CASSETTE WITH nanoe™ X.
Built-in Wi-Fi is only available for AERO Z SERIES model.
*Indoor temperature display and some functions are not available through the App for all models.

# Stay Safe Indoors with 24-Hour nanoe™ X Air Purification[1]

nanoe™ X technology with the benefits of hydroxyl radicals can effectively inhibit adhered and airborne pollutants, and reduce odours. You can switch ON nanoe™ X mode with the air conditioning operation ON or OFF to actively clean your air when you are at home or operate independently when you are away from home.

nanoe™ X mode operates on low energy consumption and requires no maintenance – thanks to the titanium-made nanoe™ X device. nanoe™ X keeps you and your family safe indoors with 24-hour active air purification.

nanoe™X




Switch nanoe™ X mode ON to inhibit pollutants and deodorise while you're away.

*Energy consumption may vary depending on models.



Provides a cleaner and comfortable space for you and your loved ones.

# Smartify Your Air Conditioner Anytime, Anywhere

Take control of single or multiple air conditioning units wherever you are. Purify your home with the Panasonic Comfort Cloud App on your mobile device on-the-move or use your voice assistant-enabled devices for hands-free help at home.

## Purify On-The-Go




Switch on nanoe™ X mode without cooling/heating while away from home.

## Convenience at Your Command




Turn ON/OFF your air conditioner with cooling/heating mode using Voice Control.

[1] The nanoe™ X mode can be run independently from cooling/heating mode, and needs to be ON for the 24-hour air purification to function.

# Activate nanoe™ X All Day Long

## 24-hour Air Purification

MORNING

### WAKE UP REFRESHED



Kick start the day at breakfast with quality air that refreshes and energises your morning.

Odours | Allergens | Bacteria & Viruses

NOON

### AWAY FROM HOME




Control your home air conditioner remotely, with the Panasonic Comfort Cloud App to inhibit pollutants indoors, even when you are away from home.

Bacteria & Viruses | Hazardous Substances | Mould

EVENING

### FAMILY EVENING MOMENTS



Return home to cooling/heating and refreshing air as nanoe™ X inhibits pollutants with the air conditioner, while cool/heat your home at the same time.

Odours | Pollen | Bacteria & Viruses

NIGHT

### PRECIOUS NIGHT SLEEP



Enjoy a good night's sleep while nanoe™ X keeps your air clean and safe throughout the night. nanoe™ X also helps to moisturise skin and hair for a refreshing morning the next day.

Moisturise Hair & Skin | Bacteria & Viruses

# nanoe™ X, Technology with the Benefits of Hydroxyl Radicals

Known as nature's detergent, hydroxyl radicals (also known as OH radicals) are natural reactive molecules looking to react with other elements such as hydrogen. This reaction enables hydroxyl radicals to inhibit the growth of pollutants.

**Panasonic's nanoe™ X technology brings these benefits to the comfort of your home to purify surfaces, soft furnishings and the indoor environment for a pleasant and comfortable living space.**

## How the nanoe™ X device generates hydroxyl radicals contained in water?



1. Atomised electrode produces condensation.
2. Electrical discharge is applied to the water.
3. Hydroxyl radicals contained in water are generated and released to the room.

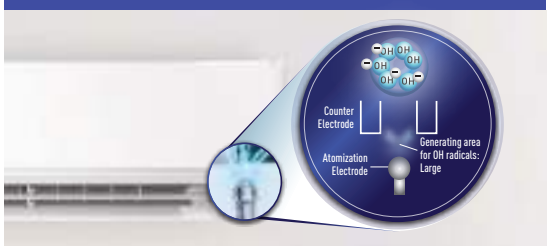
# Uniqueness of nanoe™ X

### Fills Space Actively



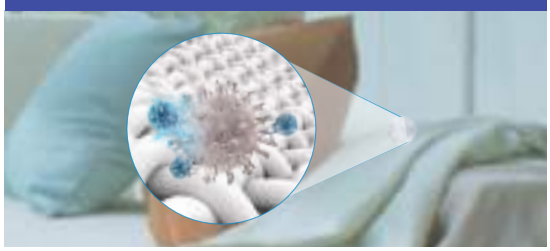
nanoe™ X actively fills the entire room and goes beyond the filter to inhibit adhered and airborne pollutants.

### Maintenance-Free




No maintenance, no replacement required. nanoe™ X is a filter-free solution using a titanium-made atomised electrode that does not require maintenance.

### Effective on Fabrics and Surfaces



Sized smaller than a steam droplet, nanoe™ X penetrates deeply into cloth fabrics to inhibit and deodorise effectively.

### Safe to Use



The safety of nanoe™ X has been tested in labs and institutions.

Visit our website for a list of safety data:
www.panasonic.com/global/consumer/clean/hydroxyl/technology.html

# 7 Effects of nanoe™ X

nanoe™ X technology effectively inhibits 5 types of pollutants, deodorises and moisturises with the benefits of hydroxyl radicals contained in water.

| Deodorises | Inhibits 5 Types of Pollutants | | | | | Moisturises |
|---|---|---|---|---|---|---|
| Odours | Bacteria & Viruses | Mould | Allergens | Pollen | Hazardous Substances | Skin & Hair |

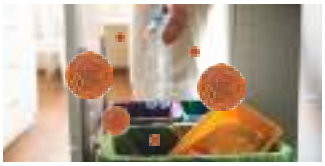
## Deodorises Various Types of Odours

nanoe™ X reduces strong, adhesive odours[1] by deeply penetrating into fabrics, resulting in lasting freshness in your living space.


BBQ Odour


Sweat Odour


Cigarette Odour


Garbage Odour

### How nanoe™ X Reduces Odour



nanoe™ X reaches odour in fabric



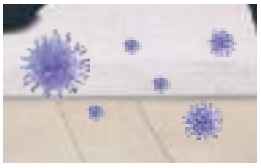
Hydroxyl radicals break down odour-causing substances



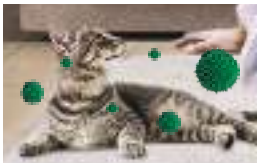
Odour is eliminated

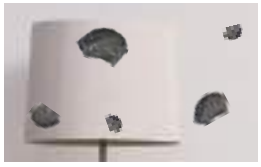
## Inhibits 5 Types of Pollutants

nanoe™ X inhibits airborne and adhered pollutants[2], providing better air quality for your loved ones.


Bacteria & Viruses


Mould


Allergens


Hazardous Substances


Pollen

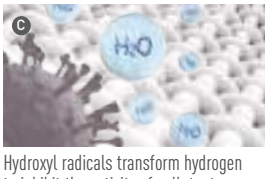
### How nanoe™ X Inhibits Pollutants



nanoe™ X reaches pollutants in fabrics



Hydroxyl radicals take hydrogen away from pollutants



Hydroxyl radicals transform hydrogen to inhibit the activity of pollutants

[1] Please refer to page 46 [2] Please refer to page 47 [3] Please refer to page 53

# Manage at Ease Using Panasonic Comfort Cloud App

Bringing simplicity and convenience to your fingertips, Panasonic Comfort Cloud application gives you complete control of your air conditioning units anytime, anywhere.

Turn ON nanoe™ Mode
Switching Air Con Mode
Adjust Air Swing & Fan Speed
Set timer

Track Energy Consumption
Error Notifications
User Assignment & Management

The Panasonic Comfort Cloud application enables your mobile device to act as a remote controller, synchronising with your air conditioner in a matter of seconds. Perfect for multiple air conditioning units in single and multiple locations.

## AERO Z SERIES WITH BUILT-IN Wi-Fi

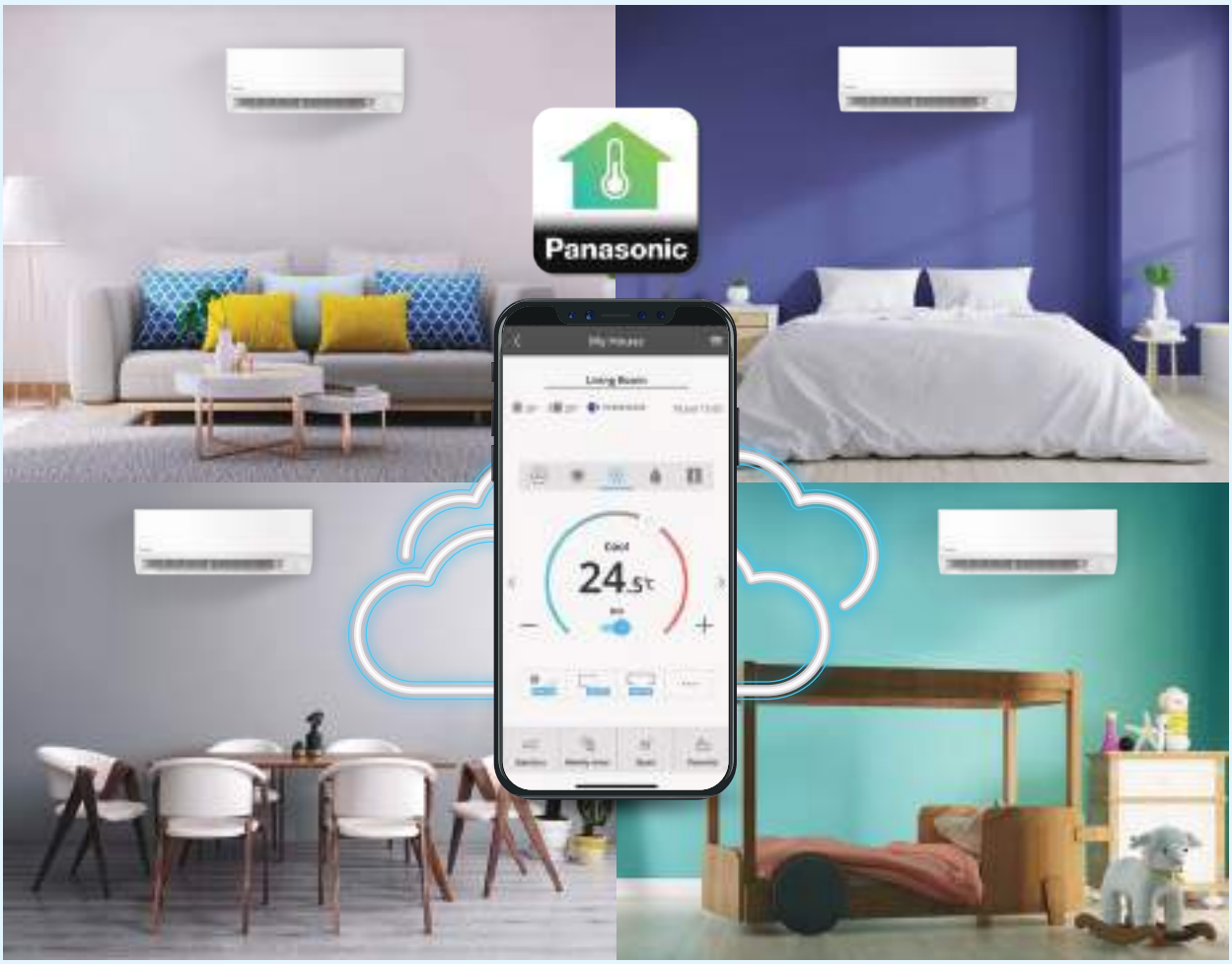


Easy connectivity to Panasonic Comfort Cloud and removes the need to purchase and install optional network adaptor

## DEVELOPER RZ SERIES WITH OPTIONAL NETWORK ADAPTOR




Optional network adaptor is required



# Smartify Your Air

## Applicable for Residential Properties and Premises

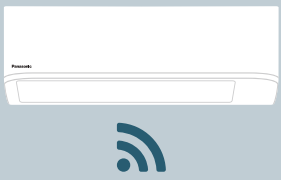
## SMART CONTROL

### Control Multiple Air Conditioners in Single/Multiple Locations

#### Managing Air Conditioners in Single Location




# Requirements for Connecting with Panasonic Comfort Cloud App



### Indoor Unit-Network

Air Conditioner equipped with built-in Wi-Fi/ optional network adaptor (CZ-TACG1/ CZ-CAPWFC1)/ CONEX Wired Remote Controller*



### Other Hardware Requirements*

Router - Internet - Smartphone
(Required 2.4GHz transmission channel)

*Purchase and subscribe separately.




**Compatible Device and Browsers**

1. iOS 9.0 or above
2. Android™ 5.0 Lollipop or later

### Download Free App

App Store | Google Play

*For AC models (DEVELOPER RZ SERIES, FLOOR CONSOLE, SLIM DUCTED and MINI CASSETTE), you need accessory CZ-TACG1 connected to port CN-CNT. CZ-RTC6BLW or CZ-CAPWFC1 accessory is required for MINI CASSETTE WITH nanoe™ X. Built-in Wi-Fi is only available for AERO Z SERIES model.
*Indoor temperature display and some functions are not available through the App for all models.
Screen capture based on current Comfort Cloud app version 1.12.0




# Embrace Intelligent Living, with Voice Control

Upgrade to an effortless, yet easy control with voice control that connects with your air conditioner for a seamless and integrated experience for the whole family.

## Seamless Simple Setup

Panasonic
Comfort Cloud App

**1** Setup your Comfort Cloud App

**2** Set up your Google Nest or Amazon Echo devices and App

Panasonic
Comfort Cloud App

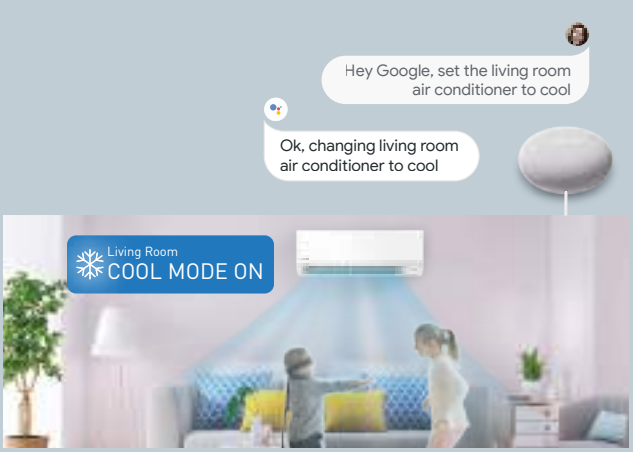
**3** Link your Google Nest or Amazon Echo devices with the Comfort Cloud App

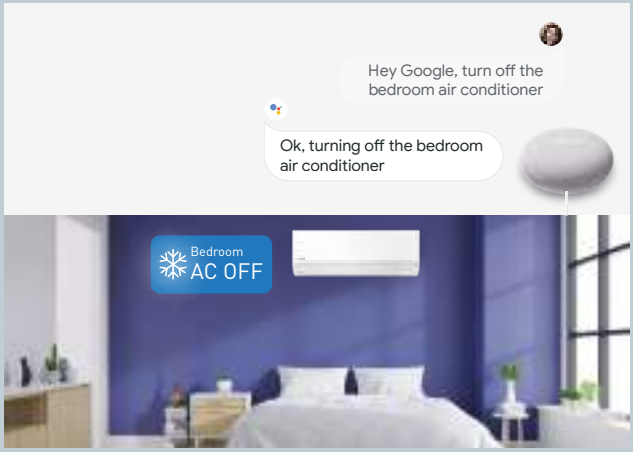
# Smart Voice Control

## One Device for Multiple Air Conditioners

Utilising a single device to control multiple air conditioners simultaneously, control of all your air conditioners using your voice.

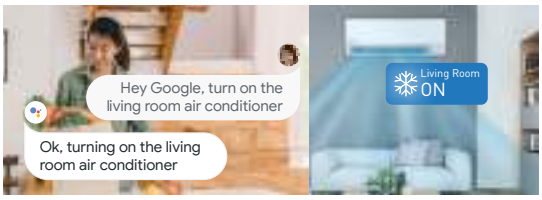
### Voice Assistant Enabled Devices




## Contactless Command for Your Convenience

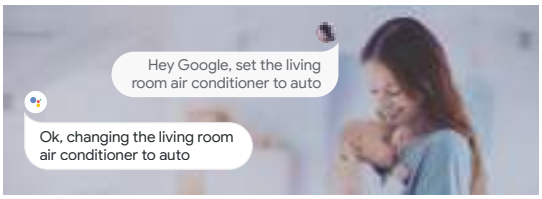
Control your air conditioner using just your voice, without the touch of a button.




### TURN ON/OFF AIR CONDITIONER

**Additional help when you have a hectic day**

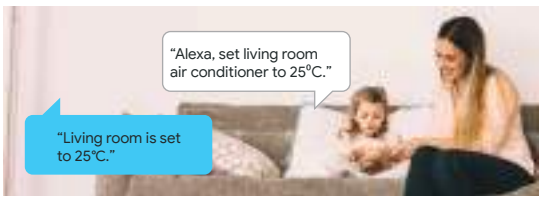
Conveniently turn ON/OFF air conditioner when your hands are full.




### CHANGE MODE

**Convenience Control for blissful rest**

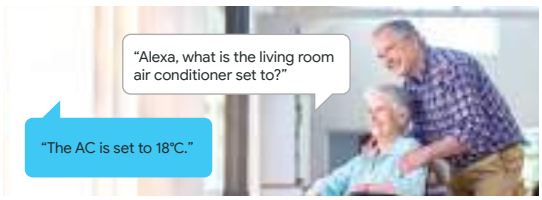
Changing air conditioner mode with ease when preparing a comfortable space for your little ones.




### ADJUST TEMPERATURE

**Easy control for uninterrupted quality time**

Adjust air conditioner temperature for your family comfort with a simple voice command.




### CHECK CURRENT STATUS

**Hands-free convenience for the whole family**

Easy access for the elderly to check current AC operation status and adjust AC setting.

### Compatible Device and Browsers

1. iOS 9.0 or above
2. Android™ 5.0 Lollipop or later

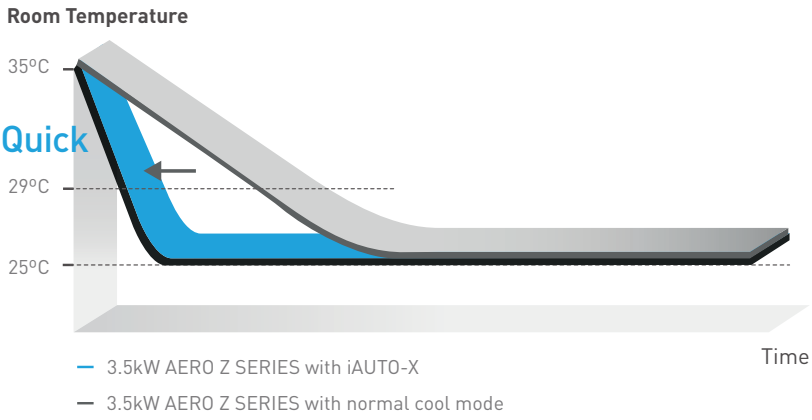
App Store GooglePlay

- Google, Android, Google Nest, Google Play, and Google Home are trademarks of Google LLC.
- Google Nest requires a Wi-Fi network, a nearby electical outlet, a compatible mobile device, and a Google Account.
- Alexa compatible AC devices is available for CS-Z*AKRW, CS-Z*AKRW-1, CS-Z80YKR, CS-RZ*AKRW, CS-RZ80YKR, CS-Z*UFRAW, CS-Z*UD3RAW & S-*PY3E.




# Faster Cooling with iAUTO-X[1]

iAUTO-X provides strong faster cooling through the use of Panasonic Thermal Enhancement Technology (P-TECh) enabling the compressor to achieve maximum frequency quickly from start-up.
With the new iAUTO-X function, you can reactivate iAUTO-X for faster cooling even after reaching stable temperatures.







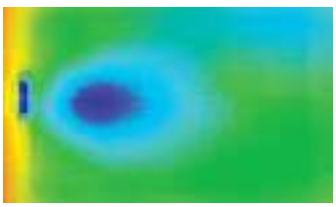
*** Comparison of iAUTO-X Mode & normal COOL mode by using 3.5kW AERO Z SERIES**

**iAUTO-X Mode:**
iAUTO-X Mode, Outside temperature : 35°C/24°C
Remote setting temperature : 25°C, with Fan Speed: Auto
Horizontal Airflow direction : Auto
Vertical Airflow direction : Straight

**Normal Mode:**
Cool Mode, Outside temperature : 35°C/24°C
Remote setting temperature : 25°C, with Fan Speed: High
Horizontal Airflow direction : Middle
Vertical Airflow direction : Straight

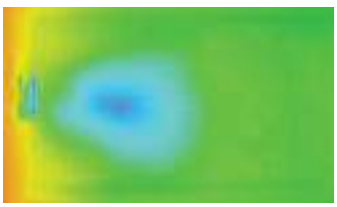
Total time needed to cool down the room from 35°C to 29°C is measured.
At Panasonic Amenity Room [size:16.6m²]
The effect differs according to conditions in installation and usage.

## New iAUTO-X

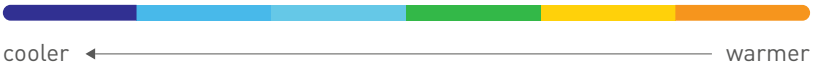


Concentrated airflow cools instantly.
Room is evenly cooled.

## Normal Cool Mode



Cool air blows downwards and cools the room at a slow pace, resulting in uneven cooling.





# Stay Warm/Cool With Faster, Further Airflow

Panasonic's air solutions offer ideal heating/cooling airflow to keep your family warm and comfortable.

AEROWINGS



### Heating

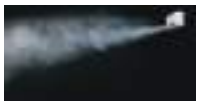
- AEROWINGS twin flaps direct airflow down along the floor to rapidly create a warm space with better comfort levels.



### Cooling

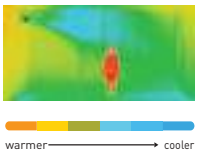
- AEROWINGS twin flaps move upward to spread fast and cool air across the room and to the ceiling, then showers down gently for even cooling distribution.

## Shower Cooling Airflow Assessment



### Airflow Smoke Test

AEROWINGS directs airflow upwards over a wider area then showers down gently and evenly across the room.




### Temperature Distribution Test

AEROWINGS directs cool air further and higher towards the ceiling to avoid direct cooling.

## Upper and Lower Flap Blow

The floor console consists of upper and lower flap which enables double airflow for heating/cooling to improve comfort and temperature dispersion.



### Heating

- Upward and downward air flow uniformly warms the whole room, so even your feet are kept comfortably warm during colder weather.



### Cooling

- Upward air flow provides all-around cooling to the entire room for cooling comfort during warmer weather.



[1]Applicable to AERO Z SERIES [(5.0kW for CS-Z50AKRW-1), (6.0kW-8.0kW)] and DEVELOPER RZ SERIES (6.0kW-8.0kW).




# Better Living, Together with Eco-Friendly Technologies

Panasonic's Air Efficiency provides a sustainable living environment with technologies that reduce carbon emissions into the Earth's atmosphere while saving costs on the use of electricity, providing an eco-friendly solution for you and the environment.

Enjoy intelligent cooling with eco-friendly features such as reduced power usage, adjusted cooling/heating power and efficient energy usage for better savings and energy consumption that's good for both you and the environment, altogether.

INVERTER R32 REFRIGERANT AI ECONAVI

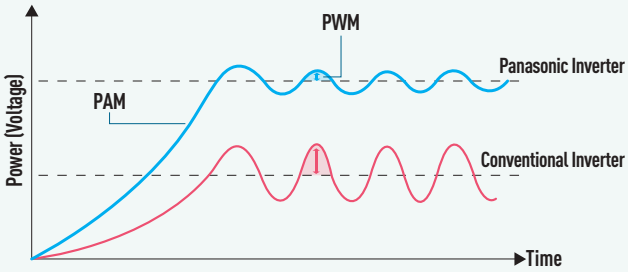


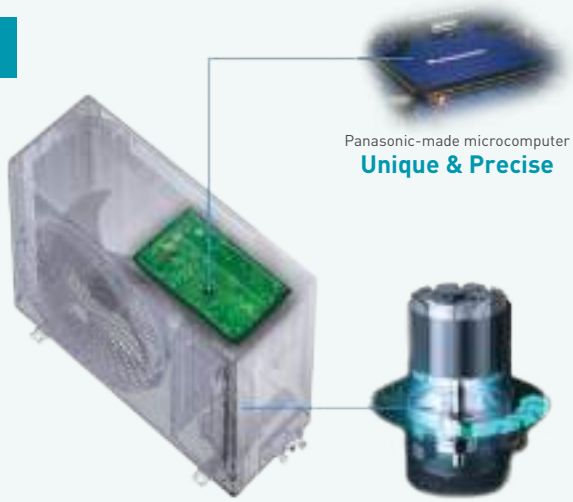

# Powerful Performance with Efficiency

Panasonic's Inverter reduces power consumption by varying the speed of the compressor according to the temperature changes with the aim of minimising the temperature fluctuations so you can enjoy consistent cooling/heating comfort.

## Quick Cooling/Heating and Constant Comfort

PAM (Pulse Amplitude Modulation) increases the power output to accelerate compressor speed at start up for quick cooling/heating and PWM (Pulse Width Modulated Wave) stabilises the set temperature without wasting energy, offering constant comfort.



Panasonic-made microcomputer
**Unique & Precise**

Panasonic-made compressor
**Gentle & Powerful**

## Benefits of Panasonic Inverter Technology

The energy-saving abilities of Inverters provide a host of benefits for your comfort, including fast cooling/heating upon start-up, constantly maintaining a set temperature, a wider power output range and reduced noise levels.

- **Fast cooling/heating at start-up**
- **Maintain a stable set temperature**
- **Wide output range**
- **Quiet operation**

## Reasons to Choose Panasonic Inverter Air-Conditioner



### Save on Your Electricity Bill

Panasonic inverter air conditioner prevents overcooling or overheating regardless of room size or condition.



### Stay Comfortable Throughout the Day

A wide power output range for inverter air conditioner models provides a balanced comfort regardless of temperature fluctuations caused by the occupancy level or heat-generating appliances.



### Cut Down on Waiting Time

With powerful and quick start-up, you no longer have to wait to experience refreshing comfort.




# An Environmentally-Friendly Refrigerant

R32 refrigerant is an excellent heat transfer medium which leads to greater energy and cost-effectiveness. It also has low global warming potential, hence it's friendlier to the environment.

HIGHER COOLING CAPACITY

R32 has **higher heating/cooling capacity** thereby increases heat transfer efficiency.

REDUCE ENERGY COSTS

It consumes **less energy**, helping you to save on electricity costs.

ECO FRIENDLY

R32 has **zero impact** on the ozone layer, therefore it's environment friendly.

## Refrigerant Properties of R32, R410A and R22

| | R32 | R410A | R22 |
|---|---|---|---|
| Composition | Single Component | 2 Components | Single Component |
| Chemical Formula | $CH_2F_2$ | $CH_2F_2$ / $CHF_2CF_3$ | $CHCLF_2$ |
| Boiling Point (°C) | -51.7 | -51.5 | -40.8 |
| Ozone Depletion Potential (ODP) | 0 | 0 | 0.055 |
| Global Warming Potential (GWP) | 675 | 2090 | 1810 |
| Pressure | 1.6 x | 1.6 x | 1x |
| Refrigerant Oil | Synthetic Oil (FW50S) | Synthetic Oil (FV50S) | Mineral Oil |
| Toxicity | None | None | None |
| Flammability | A2L Mildly flammable | A1 Non-flammable | A1 Non-flammable |




# Intelligently Balances Energy Savings and Comfort

As each room in your home is different, ECO Mode with Artificial Intelligence (A.I.) Control efficiently cools your room based on the amount of heat load and air conditioning capacity. It finds the perfect ECO balance between power consumption and time taken to reach the desired temperature to maintain your comfort with minimal energy waste.

ECO Mode with A.I. Control will automatically learn and judge what is the optimal ECO level based on:

**1 Room condition**

**2 Heat Source can be due to:**
(A) Sunlight and lighting in the room
(B) Computers and appliances
(C) Body heat

## When Your Air Conditioner is Switched On




- Requires Fast Cooling

**ECO Mode with A.I. prioritises on maximising cooling comfort while saving energy through ECO Mode.**




- Does not require Fast Cooling

**ECO Mode with A.I. prioritises on maximising energy savings over cooling comfort.**

## After Reaching Set Temperature



- Consistent comfort day or night
- Saves energy after reaching set temperature

**ECO Mode with A.I. continues to save energy and automatically adjusts room temperature for consistent cooling comfort**

## How to switch on ECO Mode with A.I. Control

- Press POWERFUL/ECO to switch ON POWERFUL mode.
- **Press POWERFUL/ECO second time to switch ON ECO mode.**
- Press POWERFUL/ECO third time to cancel/switch OFF ECO mode.







***Comparison of ECO Mode & normal mode by using 3.5kW Inverter Model**

**ECO Mode:**
ECO Mode, Outside temperature : 35°C/24°C
Remote setting temperature : 25°C, with Fan Speed: High.
Horizontal Airflow direction : Middle
Vertical Airflow direction : Straight

**Normal Mode:**
Normal Mode, Outside temperature : 35°C/24°C
Remote setting temperature : 25°C, with Fan Speed: High.
Horizontal Airflow direction : Middle
Vertical Airflow direction : Straight

Total power consumption amount is measured for 1 hour under stable operation.
At Panasonic Amenity Room (size : 13.3m²)
The effect differs according to conditions in installation and usage

*ECO+A.I. function applicable to AERO Z SERIES (Single-Split) and DEVELOPER RZ SERIES (Single-Split) only.










# Fits Perfectly Anywhere

Panasonic air conditioners are designed to be compact in size, minimalist with matt finishing, enabling them to be easily fitted and seamlessly harmonized with any interior. Its uniquely designed structure enhances durability, yet conveniently eases installation and maintenance routines.

The Good Design Award 2020 has recognised its achievement of balancing product design and function for the benefit of the global community[1].

GOOD DESIGN AWARD 2020

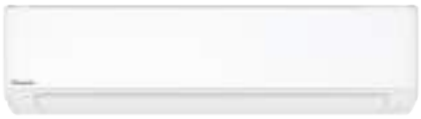
[1] Good Design Award 2020 applicable to AERO Z SERIES [(2.5kW-4.2kW), (5.0kW for CS-Z50AKRW)] and DEVELOPER RZ SERIES (2.5kW-5.0kW).

# WALL-MOUNTED

## AERO Z SERIES Single -Split Type



CS-Z20AKRW | CS-Z25AKRW-1 | CS-Z35AKRW | CS-Z42AKRW | CS-Z50AKRW



CS-Z50AKRW-1 | CS-Z60AKRW-1 | CS-Z71AKRW | CS-Z80YKR



CS-Z95AKR

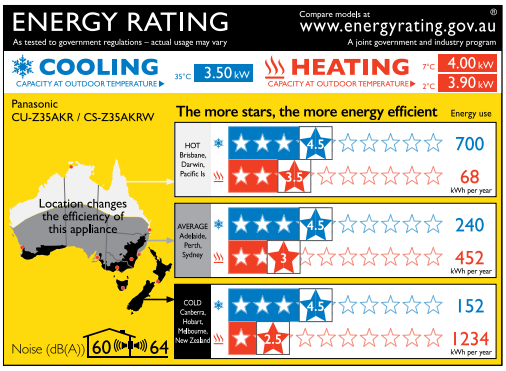


Standard



Wired

CZ-RD517C (Optional)




nanoeX Generator Mark1 | BUILT-IN | Auto-X INTELLIGENT . DYNAMIC . COOL. | AEROWINGS | AI ECO | INVERTER

NEW

| MODEL | | | CS-Z20AKRW | CS-Z25AKRW-1 | CS-Z35AKRW | CS-Z42AKRW | CS-Z50AKRW | CS-Z50AKRW-1 | CS-Z60AKRW-1 | CS-Z71AKRW | CS-Z80YKR | CS-Z95AKR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDOOR UNIT (230V / 1 Phase / 50Hz) | | | CU-Z20AKR | CU-Z25AKR-1 | CU-Z35AKR | CU-Z42AKR | CU-Z50AKR | CU-Z50AKR-1 | CU-Z60AKR-1 | CU-Z71AKR | CU-Z80YKR | CU-Z95AKR |
| OUTDOOR UNIT | | | | | | | | | | | | |
| Cooling / Heating Capacity | (min-max) | kW | 2.05 (0.95-2.80)<br>2.80 (0.90-4.10) | 2.50 (0.95-3.70)<br>3.20 (0.90-4.40) | 3.50 (1.00-4.20)<br>4.00 (0.90-5.70) | 4.20 (1.15-5.10)<br>5.00 (0.90-6.80) | 5.00 (1.15-6.10)<br>6.00 (0.98-7.70) | 5.00 (1.25-6.70)<br>6.00 (1.10-8.00) | 6.00 (1.70-7.50)<br>7.20 (1.70-9.80) | 7.10 (1.70-8.50)<br>8.00 (1.70-10.60) | 8.00 (2.30-9.00)<br>9.00 (2.20-11.60) | 9.50 (2.80-11.20)<br>10.30 (2.40-12.30) |
| | (min-max) | Btu/h | 6,990 (3,240-9,550)<br>9,550 (3,070-14,000) | 8,530 (3,240-12,600)<br>10,900 (3,070-15,000) | 11,900 (3,410-14,300)<br>13,600 (3,070-19,400) | 14,300 (3,920-17,400)<br>17,100 (3,070-23,200) | 17,100 (3,920-20,800)<br>20,500 (3,340-26,300) | 17,100 (4,260-22,800)<br>20,500 (3,750-27,300) | 20,500 (5,800-25,600)<br>24,600 (5,800-33,400) | 24,200 (5,800-29,000)<br>27,300 (5,800-36,100) | 27,300 (7,840-30,700)<br>30,700 (7,500-39,600) | 32,400 (9,550-38,200)<br>35,100 (8,180-41,900) |
| Air Flow | Indoor | L/s | 178/195 | 188/200 | 193/202 | 193/202 | 208/228 | 328/328 | 337/359 | 352/367 | 367/377 | 407/420 |
| Dehumid | | L/h | 1.3 | 1.5 | 2.0 | 2.4 | 2.8 | 2.8 | 3.3 | 4.1 | 4.7 | 5.0 |
| Electrical Data | Running Current | A | 2.00/2.70 | 2.55/3.20 | 3.60/3.85 | 5.00/5.45 | 6.50/7.30 | 5.60/6.10 | 7.10/7.80 | 8.80/8.90 | 10.10/9.80 | 12.00/11.70 |
| | Max Current | A | 4.8 | 6.3 | 7.2 | 8.9 | 11.0 | 10.8 | 13.2 | 14.8 | 15.0 | 16.6 |
| | Power Input (min-max) | kW | 0.45 (0.20-0.80)<br>0.60 (0.19-1.10) | 0.58 (0.20-1.20)<br>0.73 (0.19-1.29) | 0.82 (0.21-1.29)<br>0.87 (0.19-1.65) | 1.18 (0.22-1.64)<br>1.30 (0.20-2.04) | 1.51 (0.24-2.10)<br>1.72 (0.26-2.50) | 1.31 (0.23-2.00)<br>1.42 (0.22-2.25) | 1.67 (0.44-2.40)<br>1.83 (0.40-3.00) | 2.06 (0.45-2.90)<br>2.09 (0.40-3.30) | 2.39 (0.46-3.03)<br>2.34 (0.43-3.42) | 2.84 (0.50-3.50)<br>2.78 (0.44-3.50) |
| AEER / EER ACOP / COP | | W/W | 4.47/4.56 4.60/4.67 | 4.28/4.31 4.33/4.38 | 4.22/4.27 4.55/4.60 | 3.53/3.56 3.82/3.85 | 3.29/3.31 3.47/3.49 | 3.79/3.82 4.20/4.23 | 3.57/3.59 3.92/3.93 | 3.43/3.45 3.81/3.83 | 3.34/3.35 3.83/3.85 | 3.33/3.35 3.69/3.71 |
| Star Rating Residential / Commercial | Hot Climate | TCSPF HSPF | 4.5/5.5 3.5/3.5 | 4.5/5.5 3.5/3.5 | 4.5/5.5 3.5/3.5 | 3.5/4.5 3.5/3.5 | 3.5/4.5 3.0/3.0 | 4.5/5.5 3.5/3.5 | 3.5/4.0 3.5/3.5 | 3.5/4.5 3.5/3.5 | 3.5/4.5 3.5/3.5 | 3.5/4.0 3.0/3.5 |
| | Average Climate | TCSPF HSPF | 3.5/5.5 3.0/3.0 | 4.0/6.0 3.0/3.0 | 4.5/6.5 3.0/3.5 | 3.5/5.0 2.5/3.0 | 3.5/6.0 2.5/2.5 | 4.0/6.5 3.0/3.0 | 3.5/5.0 2.5/3.0 | 3.5/5.0 2.5/3.0 | 3.5/5.0 2.5/3.0 | 3.0/4.5 2.5/3.0 |
| | Cold Climate | TCSPF HSPF | 3.5/6.5 2.5/2.5 | 4.0/7.0 2.5/2.5 | 4.5/8.0 2.5/3.0 | 3.5/6.0 2.0/2.5 | 3.5/8.0 2.0/2.0 | 4.5/8.0 2.5/2.5 | 3.5/6.0 2.0/2.5 | 3.5/6.0 2.0/2.5 | 3.5/6.0 2.0/2.5 | 3.5/5.5 2.0/2.5 |
| Noise Level | Sound Pressure Level* dB(A) | Indoor (H / L / Q-Lo) | 38/24/19 39/25/21 | 40/25/19 40/27/21 | 44/26/19 44/29/22 | 44/31/28 44/32/28 | 44/34/28 44/33/29 | 47/34/31 47/33/29 | 48/36/33 48/35/32 | 49/37/34 49/37/34 | 51/38/35 50/38/35 | 53/40/38 52/40/35 |
| | | Outdoor (H / Q-Lo) | 46/41 47/42 | 48/43 49/44 | 49/44 50/45 | 49/44 51/46 | 48/43 49/44 | 48/43 49/44 | 53/48 53/48 | 54/49 54/49 | 55/50 55/50 | 55/50 55/50 |
| | Sound Power Level dB(A) | Indoor (H / L / Q-Lo) | 54/40/35 55/41/37 | 56/41/35 56/43/37 | 60/42/35 60/45/38 | 60/47/44 60/48/44 | 60/50/44 60/49/45 | 63/50/47 63/49/45 | 64/52/49 64/51/48 | 65/53/50 65/53/50 | 67/54/51 66/54/51 | 69/56/54 68/56/51 |
| | | Outdoor (H / Q-Lo) | 61/56 62/57 | 63/58 64/59 | 64/59 65/60 | 64/59 66/61 | 63/58 64/59 | 63/58 64/59 | 67/62 67/62 | 68/63 68/63 | 69/64 69/64 | 69/64 69/64 |
| Net Weight | Indoor (Outdoor) | kg | 8 (25) | 8 (25) | 8 (31) | 8 (31) | 8 (35) | 12 (35) | 13 (45) | 13 (45) | 13 (51) | 17 (55) |
| Dimensions | Indoor (H x W x D) | mm | 290 x 779 x 209 | 290 x 779 x 209 | 290 x 779 x 209 | 290 x 779 x 209 | 290 x 779 x 209 | 295 x 1,040 x 244 | 295 x 1,040 x 244 | 295 x 1,040 x 244 | 295 x 1,040 x 244 | 309 x 1,212 x 269 |
| | Outdoor (H x W x D) | mm | 542 x 780 x 289 | 542 x 780 x 289 | 542 x 780 x 289 | 542 x 780 x 289 | 619 x 824 x 299 | 619 x 824 x 299 | 695 x 875 x 320 | 695 x 875 x 320 | 795 x 875 x 320 | 795 x 875 x 320 |
| Refrigerant Pipe Diameter | Liquid Side | mm/(inch) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) |
| | Gas Side | mm/(inch) | ø 9.52 (3/8) | ø 9.52 (3/8) | ø 9.52 (3/8) | ø 12.70 (1/2) | ø 12.70 (1/2) | ø 12.70 (1/2) | ø 12.70 (1/2) | ø 15.88 (5/8) | ø 15.88 (5/8) | ø 15.88 (5/8) |
| Pipe Extension Length | | Min ~ Max (m) | 3~20 | 3~20 | 3~20 | 3~20 | 3~30 | 3~30 | 3~30 | 3~30 | 3~30 | 3~30 |
| Maximum Elevation Length | | m | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 20 | 20 | 20 |
| Pipe Length For Additional Gas | | m | 7.5 | 7.5 | 7.5 | 7.5 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Additional Gas Amount | | g/m | 10 | 10 | 10 | 10 | 15 | 15 | 15 | 25 | 25 | 25 |
| Power Supply | | | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor |
| Operating Range (Outdoor) | Cooling Heating | Degree °C | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 |
| Refrigerant Type | | | R32 | R32 | R32 | R32 | R32 | R32 | R32 | R32 | R32 | R32 |

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

Cooling ( ): Outdoor Unit
Heating

EER: Cooling Efficiency
COP: Heating Efficiency

## SPECIFICATIONS & FEATURES

- Products in this brochure contain R32 refrigerant. Please refer to Panasonic's installation instructions and service manuals before installation and servicing this product.
- Only persons and/or companies qualified and experienced in the installation, service and repair of refrigerant products should be permitted to do so.
- The purchaser must ensure that the person and/or company who is to install, service or repair this air conditioner has qualifications and experience in refrigerant products.
- Suitable access for warranty and service is required.
- Future improvement, specifications, designs of product and availability are subject to change without notice. Please check with your dealer.
- All the specifications except star rating are based on average climate.

## ALL CAPACITY AND ENERGY EFFICIENCY RATINGS ARE BASED ON AS/NZS3823.1.1

| | | |
|---|---|---|
| COOLING | Indoor temperature<br>Outdoor temperature | 27°C DB/19°C WB<br>35°C DB |
| HEATING | Indoor temperature<br>Outdoor temperature | 20°C DB<br>7°C DB / 6°C WB |

Running current is at rated conditions (AS3823) and does not include compressor start-up or variations in power supply and load conditions.

# FEATURES EXPLANATION

## ENERGY SAVINGS

**INVERTER CONTROL**
Varies the rotation speed of the compressor for higher energy savings.

**ECO MODE WITH A.I.**
Auto-adjusts to the optimal ECO level based on heat load conditions and air conditioning cooling capacity.

## COMFORT

**iAUTO-X**
Come home to ultra-fast cooling, and then enjoy continuous comfort Shower Cooling that evenly distributes cool air. Reactivate faster cooling with a second press of the iAUTO-X button.

**QUIET MODE**
Enjoy the comfort of running your air conditioner at night for a relaxing sleep.

**MANUAL HORIZONTAL AIRFLOW DIRECTION CONTROL**
Horizontal airflow patterns can be manually adjusted.
*Applicable to CS-Z20AKRW, CS-Z25AKRW-1, CS-Z35AKRW, CS-Z42AKRW & CS-Z50AKRW

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

**AIRFLOW DIRECTION CONTROL (UP & DOWN)**
Vertical airflow patterns can be controlled with operation by remote, even from a distance.
*Applicable to CS-Z20AKRW, CS-Z25AKRW-1, CS-Z35AKRW, CS-Z42AKRW & CS-Z50AKRW

**FAN MODE**
Allows you to run the fan without any cooling or heating, thus giving just ventilation.

**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.

**AUTO CHANGEOVER (INVERTER)**
In Auto Mode the unit will select if heating or cooling is required.

**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.
*Applicable to CS-Z50AKRW-1, CS-Z60AKRW-1, CS-Z71AKRW & CS-RZ80YKR

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

## CLEANER AIR

**nanoe™ X**
nanoe™ X effectively deodorises and inhibits various pollutants for a fresher and cleaner living space.

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

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

**REMOVABLE, WASHABLE PANEL**
Gives you easy access to the filter as well as making the unit easy to clean.

## 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.

**DEMAND RESPONSE ENABLING DEVICE (DRED)**
Allows Electrical Utility Companies to regulate the power supply to the units if connected.

**3RD PARTY CONNECTIVITY**
Allows limited control from an external source when wired to do so.

**LCD WIRELESS REMOTE CONTROL**
Easy control of the unit from anywhere in the room.

**WIRED REMOTE CONTROL**
Control at the unit from fixed location where wired remote controller is installed.

**Wireless LAN REMOTE CONTROL FOR INTERNET CONNECTION (BUILT-IN)**
Control air conditioners remotely by turning your mobile device into a remote controller using internet connection.

## RELIABILITY

**RANDOM AUTO RESTART**
When multiple units are connected and there is a power outage, they will turn on at different times in order to not spike the power supply.

**LONG PIPING**
Long piping offers more flexible installation options.
20m: CS-Z20AKRW, CS-Z25AKRW-1, CS-Z35AKRW & CS-Z42AKRW
30m: CS-Z50AKRW, CS-Z50AKRW-1, CS-Z60AKRW-1, CS-Z71AKRW & CS-RZ80YKR.

**BLUE FIN CONDENSER**
Extra protection from the elements with a longer lasting coil.

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

**TOP-PANEL MAINTENANCE ACCESS**
Easy access for maintenance.

# OUTDOOR UNIT



CU-Z20AKR
CU-Z25AKR-1
CU-Z35AKR
CU-Z42AKR



CU-Z50AKR
CU-Z50AKR-1



CU-Z60AKR-1
CU-Z71AKR



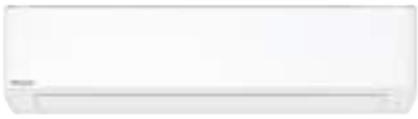
CU-Z80YKR
CU-Z95AKR

# WALL-MOUNTED

## DEVELOPER RZ SERIES Single -Split Type



CS-RZ25AKRW | CS-RZ35AKRW |
CS-RZ42AKRW | CS-RZ50AKRW



CS-RZ60AKRW | CS-RZ71AKRW |
CS-RZ80YKR



CS-RZ95AKR



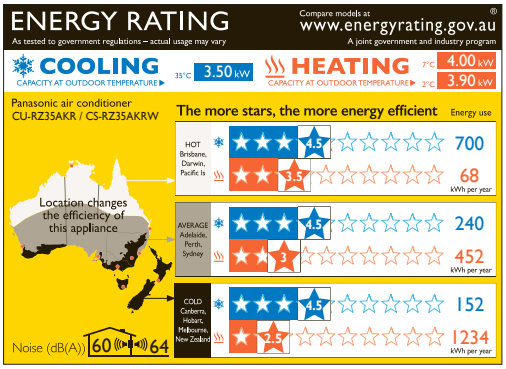
Standard



Wired
CZ-RD517C
(Optional)



Network
Adaptor
CZ-TACG1
(Optional)




ANTI-BACTERIAL FILTER | AEROWINGS | POWERFUL | AI ECO | INVERTER

| MODEL | | | | CS-RZ25AKRW | CS-RZ35AKRW | CS-RZ42AKRW | CS-RZ50AKRW | CS-RZ60AKRW | CS-RZ71AKRW | CS-RZ80YKR | NEW CS-RZ95AKR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | INDOOR UNIT (230V / 1 Phase / 50Hz) | | | | | | | | | | |
| | OUTDOOR UNIT | | | CU-RZ25AKR | CU-RZ35AKR | CU-RZ42AKR | CU-RZ50AKR | CU-RZ60AKR | CU-RZ71AKR | CU-RZ80YKR | CU-RZ95AKR |
| Cooling / Heating Capacity | (min-max) | | kW | 2.50 (0.95-3.70)<br>3.00 (0.90-4.40) | 3.50 (1.00-4.20)<br>4.00 (0.90-5.70) | 4.20 (1.15-5.10)<br>5.00 (0.90-6.80) | 5.00 (1.15-6.10)<br>6.00 (0.98-7.70) | 6.00 (1.25-6.90)<br>6.50 (0.98-8.20) | 7.10 (1.70-8.50)<br>8.00 (1.70-10.60) | 8.00 (2.30-9.00)<br>9.00 (2.20-11.60) | 9.50 (2.80-11.20)<br>10.30 (2.40-12.30) |
| | (min-max) | | Btu/h | 8,530 (3,240-12,600)<br>10,200 (3,070-15,000) | 11,900 (3,410-14,300)<br>13,600 (3,070-19,400) | 14,300 (3,920-17,400)<br>17,100 (3,070-23,200) | 17,100 (3,920-20,800)<br>20,500 (3,340-26,300) | 20,500 (4,260-23,500)<br>22,200 (3,340-28,000) | 24,200 (5,800-29,000)<br>27,300 (5,800-36,100) | 27,300 (7,840-30,700)<br>30,700 (7,500-39,600) | 32,400 (9,550-38,200)<br>35,100 (8,180-41,900) |
| Air Flow | Indoor | | L/s | 188/200 | 193/202 | 193/202 | 208/228 | 328/339 | 352/367 | 367/377 | 407/420 |
| Dehumid | | | L/h | 1.5 | 2.0 | 2.4 | 2.8 | 3.3 | 4.1 | 4.7 | 5.0 |
| Electrical Data | Running Current | | A | 2.55/2.90 | 3.60/3.85 | 5.00/5.45 | 6.50/7.30 | 7.90/8.00 | 8.80/8.90 | 10.10/9.80 | 12.00/11.70 |
| | Max Current | | A | 6.3 | 7.2 | 8.9 | 11.0 | 11.6 | 14.8 | 15.0 | 16.6 |
| | Power Input (min-max) | | kW | 0.58 (0.20-1.20)<br>0.65 (0.19-1.29) | 0.82 (0.21-1.29)<br>0.87 (0.19-1.65) | 1.18 (0.22-1.64)<br>1.30 (0.20-2.04) | 1.51 (0.24-2.10)<br>1.72 (0.26-2.50) | 1.85 (0.35-2.20)<br>1.89 (0.26-2.64) | 2.06 (0.45-2.90)<br>2.09 (0.40-3.30) | 2.39 (0.46-3.03)<br>2.34 (0.43-3.42) | 2.84 (0.50-3.50)<br>2.78 (0.44-3.50) |
| AEER / EER ACOP / COP | | | W/W | 4.28/4.31 4.57/4.62 | 4.22/4.27 4.55/4.60 | 3.53/3.56 3.82/3.85 | 3.29/3.31 3.47/3.49 | 3.23/3.24 3.42/3.44 | 3.43/3.45 3.81/3.83 | 3.34/3.35 3.83/3.85 | 3.33/3.35 3.69/3.71 |
| Star Rating Residential / Commercial | Hot Climate | TCSPF HSPF | | 4.5/5.5 3.5/3.5 | 4.5/5.5 3.5/3.5 | 3.5/4.5 3.5/3.5 | 3.5/4.5 3.0/3.0 | 3.5/4.5 3.5/3.5 | 3.5/4.5 3.5/3.5 | 3.5/4.5 3.5/3.5 | 3.5/4.0 3.0/3.5 |
| | Average Climate | TCSPF HSPF | | 4.0/6.0 3.0/3.0 | 4.5/6.5 3.0/3.5 | 3.5/5.0 2.5/3.0 | 3.5/6.0 2.5/2.5 | 3.5/5.5 3.0/3.0 | 3.5/5.0 2.5/3.0 | 3.5/5.0 2.5/3.0 | 3.0/4.5 2.5/3.0 |
| | Cold Climate | TCSPF HSPF | | 4.0/7.0 2.5/2.5 | 4.5/8.0 2.5/3.0 | 3.5/6.0 2.0/2.5 | 3.5/8.0 2.0/2.0 | 3.5/7.0 2.0/2.5 | 3.5/6.0 2.0/2.5 | 3.5/6.0 2.0/2.5 | 3.5/5.5 2.0/2.5 |
| Noise Level | Sound Pressure Level* dB(A) | Indoor (H / L / Q-Lo) | | 40/25/19 40/27/21 | 44/26/19 44/29/22 | 44/31/28 44/32/28 | 44/34/28 44/33/29 | 47/36/33 48/36/33 | 49/37/34 49/37/34 | 51/38/35 50/38/35 | 53/40/38 52/40/35 |
| | | Outdoor (H / Q-Lo) | | 48/43 49/44 | 49/44 50/45 | 49/44 51/46 | 48/43 49/44 | 49/44 51/46 | 54/49 54/49 | 55/50 55/50 | 55/50 55/50 |
| | Sound Power Level dB(A) | Indoor (H / L / Q-Lo) | | 56/41/35 56/43/37 | 60/42/35 60/45/38 | 60/47/44 60/48/44 | 60/50/44 60/49/45 | 63/52/49 64/52/49 | 65/53/50 65/53/50 | 67/54/51 66/54/51 | 69/56/54 68/56/51 |
| | | Outdoor (H / Q-Lo) | | 63/58 64/59 | 64/59 65/60 | 64/59 66/61 | 63/58 64/59 | 64/59 66/61 | 68/63 68/63 | 69/64 69/64 | 69/64 69/64 |
| Net Weight | Indoor (Outdoor) | | kg | 8 (25) | 8 (31) | 8 (31) | 8 (35) | 12 (35) | 13 (45) | 13 (51) | 17 (55) |
| Dimensions | Indoor (H x W x D) | | mm | 290 x 779 x 209 | 290 x 779 x 209 | 290 x 779 x 209 | 290 x 779 x 209 | 295 x 1,040 x 244 | 295 x 1,040 x 244 | 295 x 1,040 x 244 | 309 x 1,212 x 269 |
| | Outdoor (H x W x D) | | mm | 542 x 780 x 289 | 542 x 780 x 289 | 542 x 780 x 289 | 619 x 824 x 299 | 619 x 824 x 299 | 695 x 875 x 320 | 795 x 875 x 320 | 795 x 875 x 320 |
| Refrigerant Pipe Diameter | Liquid Side | | mm/(inch) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) | ø 6.35 (1/4) |
| | Gas Side | | mm/(inch) | ø 9.52 (3/8) | ø 9.52 (3/8) | ø 12.70 (1/2) | ø 12.70 (1/2) | ø 12.70 (1/2) | ø 15.88 (5/8) | ø 15.88 (5/8) | ø 15.88 (5/8) |
| Pipe Extension Length | | | Min ~ Max (m) | 3~20 | 3~20 | 3~20 | 3~30 | 3~30 | 3~30 | 3~30 | 3~30 |
| Maximum Elevation Length | | | m | 15 | 15 | 15 | 15 | 15 | 20 | 20 | 20 |
| Pipe Length For Additional Gas | | | m | 7.5 | 7.5 | 7.5 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Additional Gas Amount | | | g/m | 10 | 10 | 10 | 15 | 15 | 25 | 25 | 25 |
| Power Supply | | | | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor |
| Operating Range (Outdoor) | Cooling Heating | | Degree °C | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 | -10 ~ +46 -15 ~ +24 |
| Refrigerant Type | | | | R32 | R32 | R32 | R32 | R32 | R32 | R32 | R32 |

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

Cooling ( ): Outdoor Unit Heating

EER: Cooling Efficiency
COP: Heating Efficiency

## SPECIFICATIONS & FEATURES

- Products in this brochure contain R32 refrigerant. Please refer to Panasonic's installation instructions and service manuals before installation and servicing this product.
- Only persons and/or companies qualified and experienced in the installation, service and repair of refrigerant products should be permitted to do so.
- The purchaser must ensure that the person and/or company who is to install, service or repair this air conditioner has qualifications and experience in refrigerant products.
- Suitable access for warranty and service is required.
- Future improvement, specifications, designs of product and availability are subject to change without notice. Please check with your dealer.
- All the specifications except star rating are based on average climate.

## ALL CAPACITY AND ENERGY EFFICIENCY RATINGS ARE BASED ON AS/NZS3823.1.1

| | | |
|---|---|---|
| COOLING | Indoor temperature<br>Outdoor temperature | 27°C DB/19°C WB<br>35°C DB |
| HEATING | Indoor temperature<br>Outdoor temperature | 20°C DB<br>7°C DB / 6°C WB |

Running current is at rated conditions (AS3823) and does not include compressor start-up or variations in power supply and load conditions.

# FEATURES EXPLANATION

## ENERGY SAVINGS

**INVERTER CONTROL**
Varies the rotation speed of the compressor for higher energy savings.

**ECO MODE WITH A.I.**
Auto-adjusts to the optimal ECO level based on heat load conditions and air conditioning cooling capacity.

## COMFORT

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

**SLEEP MODE**
Delays off timer with temperature control for better sleep.

**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.

**MANUAL HORIZONTAL AIRFLOW DIRECTION CONTROL**
Horizontal airflow patterns can be manually adjusted.

* Applicable to CS-RZ25AKRW, CS-RZ35AKRW, CS-RZ42AKRW & CS-RZ50AKRW

**QUIET MODE**
Enjoy the comfort of running your air conditioner at night for a relaxing sleep.

**FAN MODE**
Allows you to run the fan without any cooling or heating, thus giving just ventilation.

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

**PERSONAL AIRFLOW CREATION**
Vertical and horizontal airflow patterns can be combined as desired to achieve optimum comfort, with operation possible by remote even from a distance.

* Applicable to CS-RZ60AKRW, CS-RZ71AKRW & CS-RZ80YKR.

**AUTO CHANGEOVER (INVERTER)**
In Auto Mode the unit will select if heating or cooling is required.

**AIRFLOW DIRECTION CONTROL (UP & DOWN)**
Vertical airflow patterns can be controlled with operation by remote, even from a distance.

* Applicable to CS-RZ25AKRW, CS-RZ35AKRW, CS-RZ42AKRW & CS-RZ50AKRW

## CLEANER AIR

**ANTI-BACTERIAL FILTER**
The Anti-Bacterial Filter combines three effects in one: anti-allergen, anti-virus and anti-bacterial protection to provide clean air.

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

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

**REMOVABLE, WASHABLE PANEL**
Gives you easy access to the filter as well as making the unit easy to clean.

## 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.

**DEMAND RESPONSE ENABLING DEVICE (DRED)**
Allows Electrical Utility Companies to regulate the power supply to the units if connected.

**3RD PARTY CONNECTIVITY**
Allows limited control from an external source when wired to do so.

**LCD WIRELESS REMOTE CONTROL**
Easy control of the unit from anywhere in the room.

**WIRED REMOTE CONTROL**
Control at the unit from fixed location where wired remote controller is installed.

**Wireless LAN REMOTE CONTROL FOR INTERNET CONNECTION (OPTIONAL)**
Control air conditioners remotely by turning your mobile device into a remote controller using internet connection.

* Network adaptor (CZ-TACG1) is required

## RELIABILITY

**RANDOM AUTO RESTART**
When multiple units are connected and there is a power outage, they will turn on at different times in order to not spike the power supply.

**LONG PIPING**
Long piping offers more flexible installation options.

20m: CS-RZ25AKRW, CS-RZ35AKRW & CS-RZ42AKRW
30m: CS-RZ50AKRW, CS-RZ60AKRW, CS-RZ71AKRW & CS-RZ80YKR

**BLUE FIN CONDENSER**
Extra protection from the elements with a longer lasting coil.

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

**TOP-PANEL MAINTENANCE ACCESS**
Easy access for maintenance.

# OUTDOOR UNIT



CU-RZ25AKR
CU-RZ35AKR
CU-RZ42AKR



CU-RZ50AKR
CU-RZ60AKR



CU-RZ71AKR



CU-RZ80YKR
CU-RZ95AKR

# FLOOR CONSOLE

## PREMIER FLOOR CONSOLE Single- Split Type



CS-Z25UFRAW | CS-Z35UFRAW | CS-Z50UFRAW



Wireless
(Standard)



Wired
CZ-RD517C
(Optional)



Network Adaptor
CZ-TACG1 (Optional)




*Star rating : CS-Z50UFRAW (Residential)




*Star rating : CS-Z50UFRAW (Commercial)

nanoe™X | INVERTER

| MODEL | INDOOR UNIT (230V / 1 Phase / 50Hz) OUTDOOR UNIT | | CS-Z25UFRAW CU-Z25UBRA | CS-Z35UFRAW CU-Z35UBRA | CS-Z50UFRAW CU-Z50UBRA |
|---|---|---|---|---|---|
| Cooling / Heating Capacity | (min-max) | kW | 2.50 (0.85-3.40)<br>3.40 (0.85-5.00) | 3.50 (0.85-3.80)<br>4.30 (0.85-6.00) | 5.00 (0.90-5.70)<br>5.60 (0.90-8.10) |
| | (min-max) | Btu/h | 8,530 (2,900-11,600)<br>11,600 (2,900-17,100) | 11,900 (2,900-13,000)<br>14,700 (2,900-20,500) | 17,100 (3,070-19,400)<br>19,100 (3,070-27,600) |
| Air Flow | Indoor | L/s | 163/173 | 170/182 | 198/227 |
| Dehumid | | L/h | 1.5 | 2.0 | 2.8 |
| Electrical Data | Running Current | A | 2.30/3.25 | 3.70/4.60 | 6.00/6.40 |
| | Max Current | A | 5.9 | 8.0 | 11.4 |
| | Power Input (min-max) | kW | 0.50 (0.24-0.90)<br>0.74 (0.24-1.35) | 0.86 (0.24-1.02)<br>1.06 (0.24-1.75) | 1.37 (0.26-1.81)<br>1.47 (0.26-2.60) |
| EER<br>COP | | W/W<br>W/W | 5.00<br>4.59 | 4.07<br>4.06 | 3.65<br>3.81 |
| Star Rating Residential / Commercial | Hot Climate | TCSPF<br>HSPF | 4.0/4.5<br>2.5/2.0 | 3.5/4.5<br>2.5/2.5 | 4.0/4.5<br>2.5/2.5 |
| | Average Climate | TCSPF<br>HSPF | 3.5/4.5<br>2.5/2.0 | 3.5/5.0<br>2.5/2.5 | 3.5/5.5<br>2.5/2.0 |
| | Cold Climate | TCSPF<br>HSPF | 3.0/5.0<br>2.0/2.0 | 3.5/5.5<br>2.0/2.0 | 3.5/6.5<br>2.0/2.0 |
| Noise Level: Sound Pressure Level*2 dB(A) | Indoor (H / L / Q-Lo) | | 38/25/20<br>38/25/19 | 39/26/20<br>39/25/19 | 44/31/27<br>46/33/29 |
| | Outdoor (H / Q-Lo) | | 46/-<br>47/- | 48/-<br>50/- | 48/43<br>49/44 |
| Noise Level: Sound Power Level dB(A) | Indoor (H / L / Q-Lo) | | 54/41/36<br>54/41/35 | 55/42/36<br>55/41/35 | 60/47/43<br>62/49/45 |
| | Outdoor (H / Q-Lo) | | 61/-<br>62/- | 63/-<br>65/- | 63/58<br>64/59 |
| Net Weight | Indoor (Outdoor) | kg | 13 (33) | 13 (35) | 13 (42) |
| Dimensions | Indoor (H x W x D)<br>Outdoor (H x W x D) | mm<br>mm | 600 x 750 x 207<br>542 x 780 x 289 | 600 x 750 x 207<br>619 x 824 x 299 | 600 x 750 x 207<br>695 x 875 x 320 |
| Refrigerator Pipe Diameter | Liquid Side | mm/(inch) | ø 6.35<br>(1/4) | ø 6.35<br>(1/4) | ø 6.35<br>(1/4) |
| | Gas Side | mm/(inch) | ø 9.52<br>(3/8) | ø 9.52<br>(3/8) | ø 12.70<br>(1/2) |
| Pipe Extension Length | | Min ~ Max (m) | 3~20 | 3~20 | 3~30 |
| Maximum Elevation Length | | m | 15 | 15 | 20 |
| Pipe Length For Additional Gas | | m | 7.5 | 7.5 | 7.5 |
| Additional Gas Amount | | g/m | 10 | 10 | 15 |
| Power Supply | | | Outdoor | Outdoor | Outdoor |
| Operating Range (Outdoor) | Cooling<br>Heating | Degree °C | -10 ~ +46<br>-15 ~ +24 | -10 ~ +46<br>-15 ~ +24 | -10 ~ +46<br>-15 ~ +24 |
| Refrigerant Type | | | R32 | R32 | R32 |

*1 Indoor temperature display and some special function are not available through the App for all models.

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

Cooling ( ): Outdoor Unit EER : Cooling Efficiency
Heating COP: Heating Efficiency

## SPECIFICATIONS & FEATURES

- Products in this brochure contain R32 refrigerant. Please refer to Panasonic's installation instructions and service manuals before installation and servicing this product.
- Only persons and/or companies qualified and experienced in the installation, service and repair of refrigerant products should be permitted to do so.
- The purchaser must ensure that the person and/or company who is to install, service or repair this air conditioner has qualifications and experience in refrigerant products.
- Suitable access for warranty and service is required.
- Future improvement, specifications, designs of product and availability are subject to change without notice. Please check with your dealer.
- All the specifications except star rating are based on average climate.

## ALL CAPACITY AND ENERGY EFFICIENCY RATINGS ARE BASED ON AS/NZS3823.1.1

| | | |
|---|---|---|
| COOLING | Indoor temperature<br>Outdoor temperature | 27°C DB/19°C WB<br>35°C DB |
| HEATING | Indoor temperature<br>Outdoor temperature | 20°C DB<br>7°C DB / 6°C WB |

Running current is at rated conditions (AS3823) and does not include compressor start-up or variations in power supply and load conditions.

# FEATURES EXPLANATION

## ENERGY SAVINGS

**INVERTER CONTROL**
Varies the rotation speed of the compressor for higher energy savings.

## COMFORT

**QUIET MODE**
Enjoy the comfort of running your air conditioner at night for a relaxing sleep.

**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.

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

**AUTO CHANGEOVER (INVERTER)**
In Auto Mode the unit will select if heating or cooling is required.

**MANUAL HORIZONTAL AIRFLOW DIRECTION CONTROL**
Horizontal airflow patterns can be manually adjusted.

**AIRFLOW DIRECTION CONTROL (UP & DOWN)**
Vertical airflow patterns can be controlled with operation by remote, even from a distance.

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

## CLEANER AIR

**nanoe™ X**
nanoe™ X effectively deodorises and inhibits various pollutants for a fresher and cleaner living space.

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

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

**REMOVABLE, WASHABLE PANEL**
Gives you easy access to the filter as well as making the unit easy to clean.

## 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.

**DEMAND RESPONSE ENABLING DEVICE (DRED)**
Allows Electrical Utility Companies to regulate the power supply to the units if connected.

**3RD PARTY CONNECTIVITY**
Allows limited control from an external source when wired to do so.

**LCD WIRELESS REMOTE CONTROL**
Easy control of the unit from anywhere in the room.

**WIRED REMOTE CONTROL**
Control at the unit from fixed location where wired remote controller is installed.

**Wireless LAN REMOTE CONTROL FOR INTERNET CONNECTION (OPTIONAL)**
Control air conditioners remotely by turning your mobile device into a remote controller using internet connection.

* Network adaptor (CZ-TACG1) is required

## RELIABILITY

**RANDOM AUTO RESTART**
When multiple units are connected and there is a power outage, they will turn on at different times in order to not spike the power supply.

**LONG PIPING**
Long piping offers more flexible installation options.

20m: CS-Z25UFRAW & CS-Z35UFRAW
30m: CS-Z50UFRAW

**BLUE FIN CONDENSER**
Extra protection from the elements with a longer lasting coil.

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

**TOP-PANEL MAINTENANCE ACCESS**
Easy access for maintenance.

# OUTDOOR UNIT


CU-Z25UBRA


CU-Z35UBRA


CU-Z50UBRA



## Compact and lightweight design to fit every building type

• The multi-split system offers greater installation versatility and space-saving choices for condominium with limited free space.

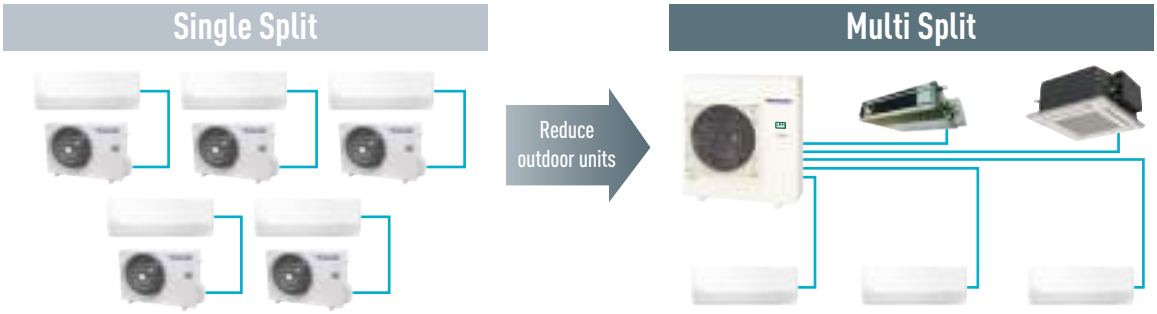


# Multi-Split Air Conditioning System

Panasonic's multi-split air conditioning systems are designed to provide more space saving installation for outdoor units. A neater alternative to preserve the exterior appearance of buildings such as condominiums, single and multi-storey residences.

## Space Saving

Space-saving installation with less outdoor units required




1 outdoor unit connect to 1 indoor unit

1 outdoor unit connect up to 5 indoor units

• As 1 outdoor unit is able to connect up to 5 indoor units, this provide flexible customisation according to the layout of your house.

## Independent Operation Control

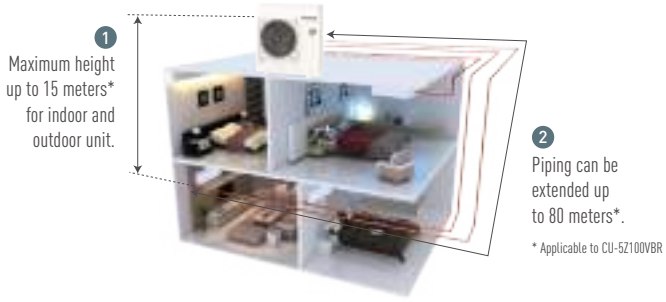
Outdoor unit connects to each indoor unit independently



• Able to adjust the operation settings for each indoor unit separately. If one indoor unit is malfunctions, other indoor units can continue to operate by provide cooling comfort to the rooms.

## Flexible Installation

The multi-split system accommodates long pipelines up to 80 meters




• Flexible arrangement and installation of indoor and outdoor units based on the room condition, location and installation convenience of the site.

## WALL-MOUNTED – AERO Z SERIES





Wireless Remote Controller Included



CZ-RD517C Wired Remote Controller (Optional)

| Model No | CS-Z20AKRW | CS-Z25AKRW-1 | CS-Z35AKRW | CS-Z42AKRW |
|---|---|---|---|---|
| Capacity | 2.0kW | 2.5kW | 3.5kW | 4.2kW*1 |

| Model No | CS-Z50AKRW | CS-Z50AKRW-1 | CS-Z60AKRW-1 | CS-Z71AKRW |
|---|---|---|---|---|
| Capacity | 5.0kW*1 | 5.0kW*1 | 6.0kW*2 | 7.1kW*2*3 |

## WALL-MOUNTED – DEVELOPER RZ SERIES





Wireless Remote Controller Included



CZ-RD517C Wired Remote Controller (Optional)



CZ-TACG1 Network Adaptor*5 (Optional)

| Model No | CS-MRZ16WKR | CS-MRZ20WKR | CS-RZ25AKRW | CS-RZ35AKRW |
|---|---|---|---|---|
| Capacity | 1.6kW | 2.0kW | 2.5kW | 3.5kW |

| Model No | CS-RZ42AKRW | CS-RZ50AKRW | CS-RZ60AKRW | CS-RZ71AKRW |
|---|---|---|---|---|
| Capacity | 4.2kW*1 | 5.0kW*1 | 6.0kW*2 | 7.1kW*2*3 |

## ULTRA SLIM DUCTED





CZ-RD514C Wired Remote Controller Included



CZ-TACG1 Network Adaptor*5 (Optional)

| Model No | CS-Z25UD3RAW | CS-Z35UD3RAW | CS-Z50UD3RAW | CS-Z60UD3RAW |
|---|---|---|---|---|
| Capacity | 2.5kW | 3.5kW | 5.0kW*1 | 6.0kW*2 |

## MINI CASSETTE WITH nanoe™ X





Panel CZ-KPY4



CZ-RWS3 + CZ-RWRY3 Wireless Remote Controller (Optional)



CZ-RTC5B Wired Remote Controller (Optional)



CZ-RTC4 Wired Remote Controller (Optional)




CZ-RTC6BL/ CZ-RTC6BLW CONEX Wired Remote Controller (Optional)



CZ-CAPWFC1 Network Adaptor*5 (Optional)



CZ-CENSC1 ECONAVI Sensor Ready (Optional)

| Model No | S-25PY3E | S-36PY3E | S-50PY3E | S-60PY3E |
|---|---|---|---|---|
| Capacity | 2.5kW*1 | 3.5kW*1 | 5.0kW*1 | 6.0kW*2 |

## PREMIER SERIES FLOOR CONSOLE





Wireless Remote Controller Included



CZ-RD517C Wired Remote Controller (Optional)



CZ-TACG1 Network Adaptor*5 (Optional)

| Model No | CS-Z25UFRAW | CS-Z35UFRAW | CS-Z50UFRAW |
|---|---|---|---|
| Capacity | 2.5kW | 3.5kW | 5.0kW*1 |

*1 CZ-MA1PA is to be used to reduce the connection size on the indoor unit from 1/2" to 3/8". *2 CZ-MA2PA is to be used to increase the connection size on the outdoor unit from 3/8" to 1/2".
*3 CZ-MA3PA is to be used to reduce the connection size on the indoor unit from 5/8" to 1/2". *4 To enable demand response management, an optional accessory needs to be installed (CZ-CAP2).
*5 To connect Panasonic Comfort Cloud App, the CZ-TACG1 accessory is required for DEVELOPER RZ SERIES, FLOOR CONSOLE, SLIM DUCTED and MINI CASSETTE, and CZ-RTC6BLW or CZ-CAPWFC1 is required for MINI CASSETTE WITH nanoe™ X. Built-in Wi-Fi is only available for AERO Z SERIES model. Function availability may vary depending on models.

| MODEL | | Indoor Units Combination Range | Refrigerant Pipe Diameter | | | Pipe Extension | | | | | Indoor Unit Combinations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Indoor Unit | Liquid Side (mm) | Gas Side (mm) | Maximum Pipe Length (1 room) | Maximum Pipe Length (Total) | Maximum Chargeless Length | Additional Gas | Maximum Height | Type / Capacity [kW class] | Wall-Mounted | Cassette | Ultra Slim Ducted | Floor Console |
| Up to 2 rooms | **CU-2Z52VBR**<br>INDOOR UNITS: Possible Combination Patterns<br>Must be within capacity range<br>PORT A: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 * Either unit<br>PORT B: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 * Either unit<br>5.2kW *4<br>Dimensions (HxWxD): 619 x 824(+70) x 299 mm<br>Weight: 39 kg<br>* At least two indoor units must be connected. | 3.2 to 7.7 kW<br>Make sure to keep combinations within this range. | Room A | ø 6.35 | ø 9.52 | 20 m | 30 m | 20 m | 15 g/m | 10 m | 1.6 | ● | | | |
| | | | | | | | | | | | 2.0 | ● | | | |
| | | | | | | | | | | | 2.5 | ● | ● | ● | ● |
| | | | Room B | ø 6.35 | ø 9.52 | | | | | | 3.5 | ● | ● | ● | ● |
| | | | | | | | | | | | 4.2 | ● | | | |
| | | | | | | | | | | | 5.0 | ● | ● | ● | ● |
| Up to 3 rooms | **CU-3Z54VBR**<br>INDOOR UNITS: Possible Combination Patterns<br>Must be within capacity range<br>PORT A: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 * Either unit<br>PORT B: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 * Either unit<br>PORT C: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 * Either unit<br>5.4kW *4<br>Dimensions (HxWxD): 795 x 875(+95) x 320 mm<br>Weight: 71 kg<br>* At least two indoor units must be connected. | 4.5 to 9.5 kW<br>Make sure to keep combinations within this range. | Room A | ø 6.35 | ø 9.52 | 25 m | 50 m | 30 m | 20 g/m | 15 m | 1.6 | ● | | | |
| | | | | | | | | | | | 2.0 | ● | | | |
| | | | Room B | ø 6.35 | ø 9.52 | | | | | | 2.5 | ● | ● | ● | ●* |
| | | | | | | | | | | | 3.5 | ● | ● | ● | ●* |
| | | | Room C | ø 6.35 | ø 9.52 | | | | | | 4.2 | ● | | | |
| | | | | | | | | | | | 5.0 | ● | ● | ● | ●* |
| Up to 4 rooms | **CU-4Z71VBR**<br>INDOOR UNITS: Possible Combination Patterns<br>Must be within capacity range<br>PORT A: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 / 6.0 * Either unit<br>PORT B: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 / 6.0 * Either unit<br>PORT C: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 / 6.0 * Either unit<br>PORT D: 1.6 / 2.0 / 2.5 / 3.5 / 4.2 / 5.0 / 6.0 * Either unit<br>7.1kW *4<br>Dimensions (HxWxD): 795 x 875(+95) x 320 mm<br>Weight: 72 kg<br>* At least two indoor units must be connected. | 4.5 to 11.5 kW<br>Make sure to keep combinations within this range. | Room A | ø 6.35 | ø 9.52 | 25 m | 60 m | 30 m | 20 g/m | 15 m | 1.6 | ● | | | |
| | | | | | | | | | | | 2.0 | ● | | | |
| | | | Room B | ø 6.35 | ø 9.52 | | | | | | 2.5 | ● | ● | ● | ●* |
| | | | | | | | | | | | 3.5 | ● | ● | ● | ●* |
| | | | Room C | ø 6.35 | ø 9.52 | | | | | | 4.2 | ● | | | |
| | | | | | | | | | | | 5.0 | ● | ● | ● | ●* |
| | | | Room D | ø 6.35 | ø 9.52 | | | | | | 6.0 | ● | ● | ● | |

* Floor consoles require R32 LFL load considerations. Please refer to Table A on installation manual.
*4 To enable demand response management, an optional accessory needs to be installed (CZ-CAP2)

## OUTDOOR UNIT

Blue Fin Condenser

R32 REFRIGERANT

### Up to 2 rooms



CU-2Z52VBR

### Up to 3 rooms

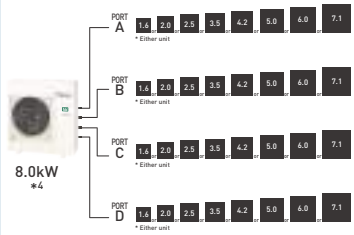
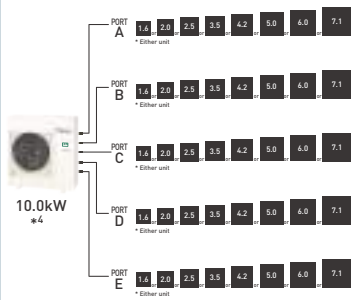


CU-3Z54VBR

### Up to 4 rooms



CU-4Z71VBR

| MODEL | | Indoor Units Combination Range | Refrigerant Pipe Diameter | | | Pipe Extension | | | | | Indoor Unit Combinations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Indoor Unit | Liquid Side (mm) | Gas Side (mm) | Maximum Pipe Length (1 room) | Maximum Pipe Length (Total) | Maximum Chargeless Length | Additional Gas | Maximum Height | Capacity (kW class) \ Type | Wall-Mounted | Cassette | Ultra Slim Ducted | Floor Console |
| Up to 4 rooms | **CU-4Z80VBR**<br>**INDOOR UNITS: Possible Combination Patterns**<br>Must be within capacity range<br><br>8.0kW *4<br>Dimensions (HxWxD): 999 x 940 x 340 mm<br>Weight: 80 kg<br>At least two indoor units must be connected. | 4.5 to 14.7 kW<br>Make sure to keep combinations within this range. | Room A | ø 6.35 | ø 9.52 | 25 m | 70 m | 45 m | 20 g/m | 15 m | 1.6 | ● | | | |
| | | | | | | | | | | | 2.0 | ● | | | |
| | | | Room B | ø 6.35 | ø 9.52 | | | | | | 2.5 | ● | ● | ● | ●* |
| | | | | | | | | | | | 3.5 | ● | ● | ● | ●* |
| | | | Room C | ø 6.35 | ø 9.52 | | | | | | 4.2 | ● | | | |
| | | | | | | | | | | | 5.0 | ● | ● | ● | ●* |
| | | | Room D | ø 6.35 | ø 9.52 | | | | | | 6.0 | ● | ● | ● | |
| | | | | | | | | | | | 7.1 | ● | | | |
| Up to 5 rooms | **CU-5Z100VBR**<br>**INDOOR UNITS: Possible Combination Patterns**<br>Must be within capacity range<br><br>10.0kW *4<br>Dimensions (HxWxD): 999 x 940 x 340 mm<br>Weight: 81 kg<br>At least two indoor units must be connected. | 4.5 to 18.3 kW<br>Make sure to keep combinations within this range. | Room A | ø 6.35 | ø 9.52 | 25 m | 80 m | 45 m | 20 g/m | 15 m | 1.6 | ● | | | |
| | | | | | | | | | | | 2.0 | ● | | | |
| | | | Room B | ø 6.35 | ø 9.52 | | | | | | 2.5 | ● | ● | ● | ●* |
| | | | | | | | | | | | 3.5 | ● | ● | ● | ●* |
| | | | Room C | ø 6.35 | ø 9.52 | | | | | | 4.2 | ● | | | |
| | | | | | | | | | | | 5.0 | ● | ● | ● | ●* |
| | | | Room D | ø 6.35 | ø 9.52 | | | | | | 6.0 | ● | ● | ● | |
| | | | | | | | | | | | 7.1 | ● | | | |
| | | | Room E | ø 6.35 | ø 9.52 | | | | | | | | | | |

* Floor consoles require R32 LFL load considerations. Please refer to Table A on installation manual.
*4 To enable demand response management, an optional accessory needs to be installed (CZ-CAP2)

## ACCESSORIES



CZ-MA1PA

*1 CZ-MA1PA is to be used to reduce the connection size on the indoor unit from 1/2" to 3/8".



CZ-MA2PA

*2 CZ-MA2PA is to be used to increase the connection size on the outdoor unit from 3/8" to 1/2".



CZ-MA3PA

*3 CZ-MA3PA is to be used to reduce the connection size on the indoor unit from 5/8" to 1/2".



CZ-CAP2

*4 Demand response module CZ-CAP2.

## OUTDOOR UNIT

Blue Fin Condenser

R32 REFRIGERANT

### Up to 4 rooms



CU-4Z80VBR

### Up to 5 rooms



CU-5Z100VBR

## INDOOR UNIT

| MODEL | | | WALL-MOUNTED (AERO Z SERIES) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | CS-Z20AKRW | CS-Z25AKRW-1 | CS-Z35AKRW | CS-Z42AKRW | CS-Z50AKRW | CS-Z50AKRW-1 | CS-Z60AKRW-1 | CS-Z71AKRW |
| Capacity | | kW | 2.0 | 2.5 | 3.5 | 4.2 | 5.0 | 5.0 | 6.0 | 7.1 |
| Power Source | | | Single Phase 230V, 50Hz | | | | | | | |
| Sound Pressure Level (H/L/Q-Lo) | Cooling | dB(A) | 40/26/21 | 42/27/21 | 46/28/21 | 46/33/30 | 46/36/30 | 49/36/33 | 50/38/35 | 51/39/36 |
| | Heating | | 41/27/23 | 42/29/23 | 46/31/24 | 46/34/30 | 46/36/30* | 49/35/31 | 50/37/34 | 51/39/36 |
| Sound Power Level (H/L/Q-Lo) | Cooling | dB(A) | 56/42/37 | 58/43/37 | 62/44/37 | 62/49/46 | 62/52/46 | 65/52/49 | 66/54/51 | 67/55/52 |
| | Heating | | 57/43/39 | 58/45/39 | 62/47/40 | 62/50/46 | 62/52/46* | 65/51/47 | 66/53/50 | 67/55/52 |
| Airflow | Cooling/Heating | L/s | 178/195 | 188/200 | 193/202 | 193/202 | 208/228 | 328/328 | 337/358 | 352/367 |
| Dimensions | Height | mm | 290 | 290 | 290 | 290 | 290 | 295 | 295 | 295 |
| | Width | mm | 779 | 779 | 779 | 779 | 779 | 1,040 | 1,040 | 1,040 |
| | Depth | mm | 209 | 209 | 209 | 209 | 209 | 244 | 244 | 244 |
| Net Weight | | kg | 8 | 8 | 8 | 8 | 8 | 12 | 13 | 13 |
| Refrigerant Pipe Diameter | Liquid Side | mm | ø 6.35 | ø 6.35 | ø 6.35 | 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*1 | ø 9.52*1 | ø 9.52*1 | ø 12.70*2 | ø 12.70*2*3 |

*For connection to CU-2Z52VBR, indoor Sound Pressure Level (Heating) is 46/35/31 and Sound Power Level (Heating) is 62/51/47.

| MODEL | | | WALL-MOUNTED (DEVELOPER RZ SERIES) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | CS-MRZ16WKR | CS-MRZ20WKR | CS-RZ25AKRW | CS-RZ35AKRW | CS-RZ42AKRW | CS-RZ50AKRW | CS-RZ60AKRW | CS-RZ71AKRW |
| Capacity | | kW | 1.6 | 2.0 | 2.5 | 3.5 | 4.2 | 5.0 | 6.0 | 7.1 |
| Power Source | | | Single Phase 230V, 50Hz | | | | | | | |
| Sound Pressure Level (H/L/Q-Lo) | Cooling | dB(A) | 41/27/24 | 42/27/24 | 42/27/21 | 46/28/21 | 46/33/30 | 46/36/30 | 49/38/35 | 51/39/36 |
| | Heating | | 41/29/26 | 42/29/26 | 42/29/23 | 46/31/24 | 46/34/30 | 46/36/30* | 50/38/35 | 51/39/36 |
| Sound Power Level (H/L/Q-Lo) | Cooling | dB(A) | 57/43/40 | 58/43/40 | 58/43/37 | 62/44/37 | 62/49/46 | 62/52/46 | 65/54/51 | 67/55/52 |
| | Heating | | 57/45/42 | 58/45/42 | 58/45/39 | 62/47/40 | 62/50/46 | 62/52/46* | 66/54/51 | 67/55/52 |
| Airflow | Cooling/Heating | L/s | 183/193 | 188/198 | 188/200 | 193/202 | 193/202 | 208/228 | 328/338 | 352/367 |
| Dimensions | Height | mm | 290 | 290 | 290 | 290 | 290 | 290 | 295 | 295 |
| | Width | mm | 779 | 779 | 779 | 779 | 779 | 779 | 1,040 | 1,040 |
| | Depth | mm | 209 | 209 | 209 | 209 | 209 | 209 | 244 | 244 |
| Net Weight | | kg | 8 | 8 | 8 | 8 | 8 | 8 | 12 | 13 |
| Refrigerant Pipe Diameter | Liquid Side | mm | ø 6.35 | ø 6.35 | ø 6.35 | 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 9.52*1 | ø 9.52*1 | ø 12.70*2 | ø 12.70*2*3 |

*For connection to CU-2Z52VBR, indoor Sound Pressure Level (Heating) is 46/35/31 and Sound Power Level (Heating) is 62/51/47.

| MODEL | | | MINI CASSETTE WITH nanoe™ X | | | |
|---|---|---|---|---|---|---|
| | | | S-25PY3E | S-36PY3E | S-50PY3E | S-60PY3E |
| Capacity | | kW | 2.5 | 3.5 | 5.0 | 6.0 |
| Power Source | | | Single Phase 230V, 50Hz | | | |
| Sound Pressure Level (H/L) | Cooling | dB(A) | 33/27 | 36/27 | 41/29 | 45/33 |
| | Heating | | 33/27 | 36/27 | 41/29 | 45/33 |
| Sound Power Level (H) | Cooling | dB(A) | 48 | 51 | 56 | 60 |
| | Heating | | 48 | 51 | 56 | 60 |
| Airflow | Cooling/Heating | L/s | 142/142 | 158/158 | 200/200 | 233/233 |
| Dimensions | Height | mm | 243 | 243 | 243 | 243 |
| | Width | mm | 575 | 575 | 575 | 575 |
| | Depth | mm | 575 | 575 | 575 | 575 |
| Net Weight | | kg | 15 | 15 | 15 | 15 |
| Refrigerant Pipe Diameter | Liquid Side | mm | ø 6.35 | ø 6.35 | ø 6.35 | ø 6.35 |
| | Gas Side | mm | ø 9.52*1 | ø 9.52*1 | ø 9.52*1 | ø 12.70*2 |

*1 CZ-MA1PA is to be used to reduce the connection size on the indoor unit from 1/2'' to 3/8''.
*2 CZ-MA2PA is to be used to increase the connection size on the outdoor unit from 3/8'' to 1/2''.
*3 CZ-MA3PA is to be used to reduce the connection size on the indoor unit from 5/8'' to 1/2''.

## INDOOR UNIT

| MODEL | | | ULTRA SLIM DUCTED | | | | FLOOR CONSOLE | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | CS-Z25UD3RAW | CS-Z35UD3RAW | CS-Z50UD3RAW | CS-Z60UD3RAW | CS-Z25UFRAW | CS-Z35UFRAW | CS-Z50UFRAW |
| Capacity | | kW | 2.5 | 3.5 | 5.0 | 6.0 | 2.5 | 3.5 | 5.0 |
| Static pressure | | Pa | 15-43 | 15-44 | 15-49 | 15-51 | 15-43 | 15-44 | 15-49 |
| Power Source | | | Single Phase 230V, 50Hz | | | | | | |
| Sound Pressure Level (H/L) | Cooling | dB(A) | 35/29 | 35/28 | 41/31 | 43/32 | 40/27 | 41/28 | 46/33 |
| | Heating | | 36/29 | 37/29 | 41/32 | 43/34 | 40/27 | 41/27 | 48/35 |
| Sound Power Level (H) | Cooling | dB(A) | 51 | 51 | 57 | 59 | 56 | 57 | 62 |
| | Heating | | 52 | 53 | 57 | 59 | 56 | 57 | 64 |
| Airflow | Cooling/Heating | L/s | 175/175 | 187/187 | 255/255 | 262/262 | 163/173 | 170/182 | 198/227 |
| Dimensions | Height | mm | 200 | 200 | 200 | 200 | 600 | 600 | 600 |
| | Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| | Depth | mm | 640 | 640 | 640 | 640 | 207 | 207 | 207 |
| Net Weight | | kg | 19 | 19 | 19 | 19 | 13 | 13 | 13 |
| Refrigerant Pipe Diameter | Liquid Side | mm | ø 6.35 | ø 6.35 | 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*1 | ø 12.70*2 | ø 9.52 | ø 9.52 | ø 9.52*1 |

## OUTDOOR UNIT

| MODEL | | (50Hz) | CU-2Z52VBR | CU-3Z54VBR | CU-4Z71VBR | CU-4Z80VBR | CU-5Z100VBR |
|---|---|---|---|---|---|---|---|
| Power Source | | | Single Phase 230V, 50Hz | | | | |
| Cooling Operation | Capacity (min-max) | kW | 5.20 (1.50-6.00) | 5.40 (1.80-7.30) | 7.10 (1.90-8.80) | 8.00 (2.30-9.20) | 10.00 (2.30-11.50) |
| Maximum Connectable Capacity | | kW | 7.7 | 9.5 | 11.5 | 14.7 | 18.3 |
| Maximum Connectable Indoors | | Units | 2 | 3 | 4 | 4 | 5 |
| Electrical Data | Running Current | A | 5.9 | 5.1 | 7.4 | 8.9 | 11.8 |
| | Power Input (min-max) | kW | 1.35 (0.25-1.62) | 1.12 (0.36-2.18) | 1.66 (0.34-2.47) | 1.98 (0.42-2.87) | 2.60 (0.43-3.59) |
| | AEER/EER | W/W | 3.79 / 3.85 | 4.74 / 4.82 | 4.23 / 4.28 | 4.00 / 4.04 | 3.81 / 3.85 |
| Noise (H) | Sound Pressure Level | dB(A) | 51 | 48 | 49 | 51 | 53 |
| | Sound Power Level | dB(A) | 66 | 62 | 63 | 67 | 69 |
| Heating Operation | Capacity | kW | 6.10 (1.10-7.20) | 7.00 (1.60-9.00) | 8.50 (3.00-10.70) | 9.40 (3.00-11.60) | 12.00 (3.40-14.50) |
| Electrical Data | Running Current | A | 6.2 | 6.8 | 8.6 | 9.3 | 12.1 |
| | Power Input (min-max) | kW | 1.43 (0.21-1.90) | 1.54 (0.32-2.63) | 1.95 (0.50-2.72) | 2.03 (0.50-3.42) | 2.76 (0.58-4.02) |
| | ACOP/COP | W/W | 4.21 / 4.27 | 4.49 / 4.55 | 4.32 / 4.36 | 4.58 / 4.63 | 4.31 / 4.35 |
| Noise (H) | Sound Pressure Level | dB(A) | 53 | 49 | 51 | 52 | 56 |
| | Sound Power Level | dB(A) | 68 | 63 | 65 | 68 | 72 |
| Maximum Current | | A | 11.5 | 15.2 | 15.6 | 19.0 | 21.3 |
| Starting Current | | A | 6.4 | 7.0 | 8.8 | 9.7 | 12.5 |
| Compressor Output | | W | 900 | 1300 | 1300 | 1700 | 1700 |
| | Height | mm | 619 | 795 | 795 | 999 | 999 |
| Dimensions | Width | mm | 824 (+70) | 875 (+95) | 875 (+95) | 940 | 940 |
| | Depth | mm | 299 | 320 | 320 | 340 | 340 |
| Net Weight | | kg | 39 | 71 | 72 | 80 | 81 |
| Power Supply | | | Outdoor | Outdoor | Outdoor | Outdoor | Outdoor |
| Pipe Length Range (1 room) | | m | 3~20 | 3~25 | 3~25 | 3~25 | 3~25 |
| Maximum Pipe Length (Total) ** | | m | 30 | 50 | 60 | 70 | 80 |
| 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 9.52 |
| Operating Range | Cooling | (°C) | -10~+46 | -10~+46 | -10~+46 | -10~+46 | -10~+46 |
| | Heating | (°C) | -15~+24** | -15~+24** | -15~+24** | -15~+24** | -15~+24** |

** Additional Gas might be required for some models. Refer to Page 32 for information on Additional Gas.

Rating Conditions

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

# Deodorises frequently encountered odours

Odour causing substances such as cigarette smoke and garbage are removed to a hardly noticeable level.

## Acts on odour causing substances & deodorises them

nanoe™ X particles, which are smaller than steam particles, penetrate into deepest parts of fibres allowing for highly effective deodorisation.

### How nanoe™ X Reduces Odour



nanoe™ X reliably reaches odours embedded in fibres.

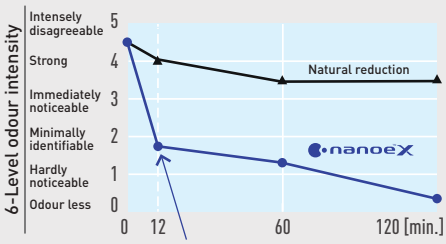


Hydroxyl radicals break down odour causing substances.



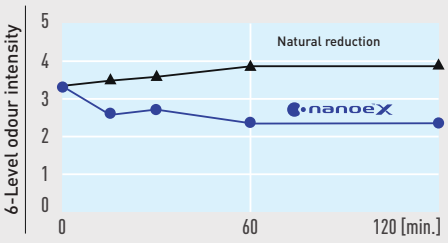
Odour is eliminated.

### Cigarette Smoke Odour



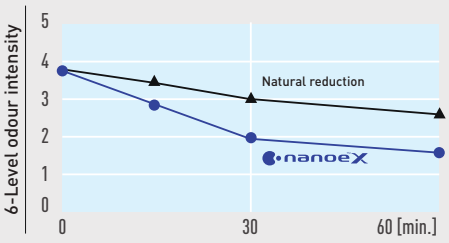

nanoe™ X can reduced cigarette smoke odour intensity by 2.4 levels in 12 minutes.

### Pet Odour



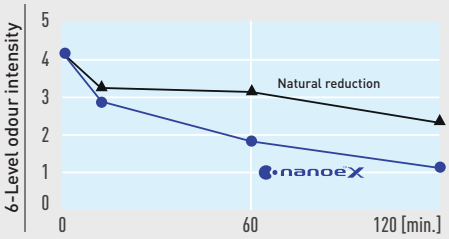

nanoe™ X reduced pet odour intensity by 1.5 levels in 1 hour

### Durian Odour



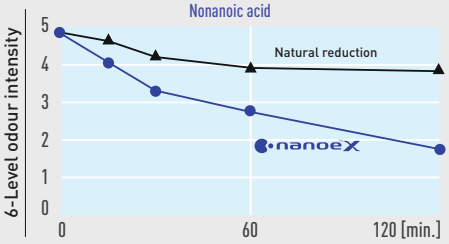

nanoe™ X reduced durian odour intensity faster than natural reduction.

### BBQ Odour



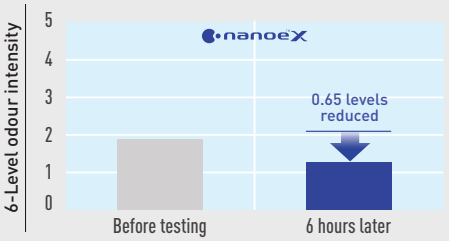

nanoe™ X reduced BBQ odour intensity faster than natural reduction.

### Sweat Odour



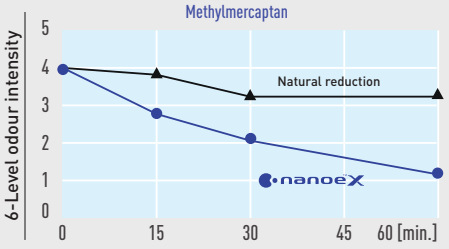

nanoe™ X reduced sweat odour intensity massively in 1 hour.

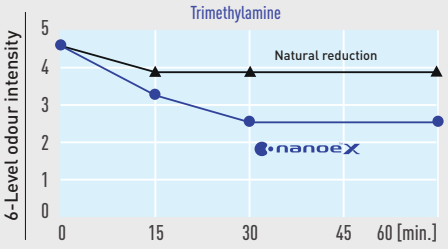
### Scalp Odour




nanoe™ X reduced scalp odour massively in 6 hours.

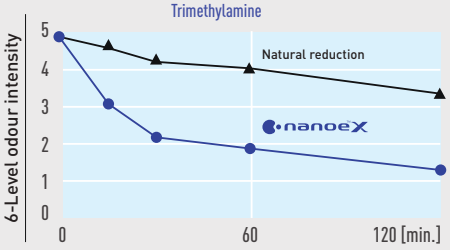
### Garbage Odour




nanoe™ X reduced garbage odour intensity in 0.5 hours.

### Damp Odour




nanoe™ X reduced damp odour intensity to a hardly noticeable level in 1 hour.

[ Representative evidence ]

** : Units based on Panasonic standards

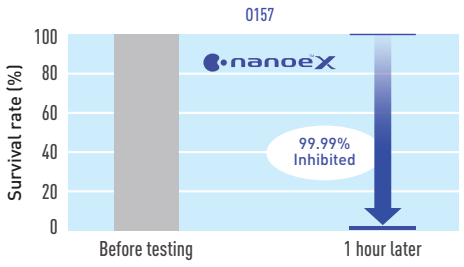
| | Odours | Result** | Capacity | Time (Hr.) | Testing organisation | Report No. |
|---|---|---|---|---|---|---|
| Adhered | **Cigarette smoke odour** | Odour intensity reduced by 2.4 levels | Approx. 23m³ | 0.2 | Panasonic Product Analysis Center | 4AA33-160615-N04 |
| | **Pet odour** | Odour intensity reduced by 1.5 levels | Approx. 23m³ | 1 | Panasonic Product Analysis Center | 4AA33-160315-A34 |
| | **Durian odour** | Odour intensity reduced by 1.0 levels | Approx. 23m³ | 0.5 | Panasonic Product Analysis Center | 1V332-180402-K01 |
| | **BBQ odour** | Odour intensity reduced by 1.2 levels | Approx. 23m³ | 2 | Panasonic Product Analysis Center | 4AA33-151221-N01 |
| | **Sweat odour (Nonanoic acid)** | Odour intensity reduced by 1.1 levels | Approx. 23m³ | 1 | Panasonic Product Analysis Center | Y16HM016 |
| | **Sweat odour (Hexanoic acid)** | Odour intensity reduced by 2.6 levels | Approx. 23m³ | 1 | Panasonic Product Analysis Center | 4AA33-160315-A35 |
| | **Scalp odour (Pillow cover)** | Odour intensity reduced by 0.65 levels | Approx. 23m³ | 6 | [Supervision] Odour and Aroma Design Course, Department of Integrated Informatics, Faculty of Informatics, Daido University | |
| | **Garbage odour (Methylmercaptan)** | Odour intensity reduced by 1.2 levels | Approx. 23m³ | 0.5 | Panasonic Product Analysis Center | 1V332-18220-K11 |
| | **Garbage odour (Trimethylamine)** | Odour intensity reduced by 1.4 levels | Approx. 23m³ | 0.5 | Panasonic Product Analysis Center | 1V332-180220-K12 |
| | **Damp odour (Triethylamine)** | Odour intensity reduced by 1.7 levels | Approx. 23m³ | 0.5 | Panasonic Product Analysis Center | Y16RA002 |

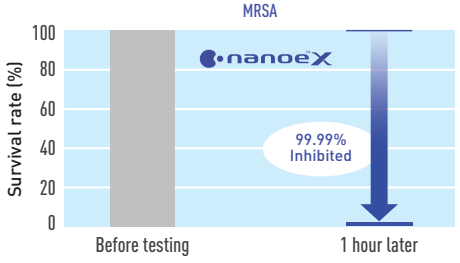
Results may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection. Deodorisation effect varies according to the enivironment (temperature and humidity), operation time, odour, and fabric types.

# Inhibits activity of airborne, adhered bacteria and viruses

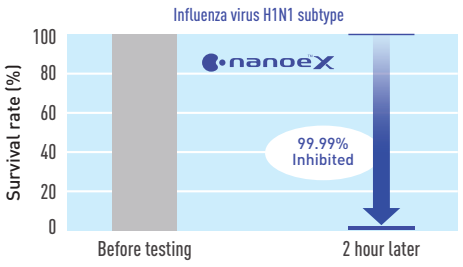
nanoe™ X inhibits the activity of airborne and adhered bacteria and viruses.

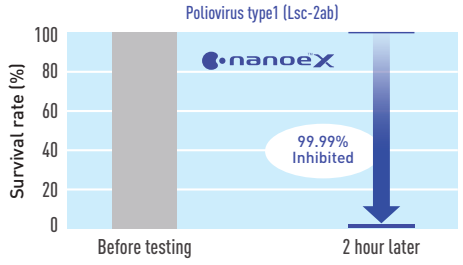
## Adhered Bacteria




## Adhered Viruses



[ Representative evidence ] ** : Units based on Panasonic standards

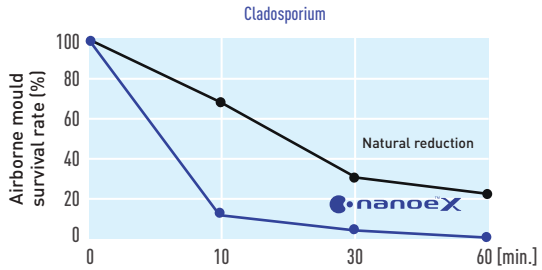
| | Bacteria & viruses | Result** | Capacity | Time (Hr.) | Testing organisation | Report No. |
|---|---|---|---|---|---|---|
| Airborne | Virus Bacteriophage ΦX174 | 99.7% inhibited | Approx. 25m³ | 6 | Kitasato Research Center for Environmental Science | 24_0300_1 |
| | Bacteria Staphylococcus aureus | 99.9% inhibited | Approx. 25m³ | 4 | Kitasato Research Center for Environmental Science | 2016_0279 |
| Adhered | Virus Bacteriophage ΦX174 | 99.8% inhibited | Approx. 25m³ | 8 | Japan Food Research Laboratories | 13001265005-01 |
| | Bacteria Staphylococcus aureus | 99.1% inhibited | Approx. 25m³ | 8 | Japan Food Research Laboratories | 13044083003-01 |
| Adhered Novel Coronavirus | SARS-CoV-2 | 99.9% inhibited | 45L | 2 | Texcell France | 1140-01 A1 |
| | SARS-CoV-2 | 91.4% inhibited | 6.7m³ | 8 | Texcell France | 1140-01 C3 |
| | SARS-CoV-2 | 99.7% inhibited | 6.7m³ | 24 | Texcell France | 1140-01 C3 |
| Adhered virus | Influenza virus (H1N1 subtype) | 99.9% inhibited | 1m³ | 2 | Kitasato Research Center for Environmental Science | 21_0084_1 |
| | Feline calicivirus (Related form of norovirus) | 99.9% inhibited | 25L | 2 | Japan Food Research Laboratories | 207031493-001 |
| | Coxackievirus (B6) | 99.1% inhibited | 45L | 2 | Kitasato Research Center for Environmental Science | 22_0085 |
| | Poliovirus type 1 (Lsc-2ab) | 99.7% inhibited | 45L | 2 | Kitasato Research Center for Environmental Science | 22_0096 |
| Adhered bacteria | Bacterium enterohemorrhagic escherichia coli (0157) | 99.99% inhibited | 45L | 1 | Japan Food Research Laboratories | 208120880-001 |
| | Methicillin-resistant staphylococcus aureus (MRSA) | 99.99% inhibited | 45L | 1 | Japan Food Research Laboratories | 208120880-002 |
| | Staphylococcus aureus | 99.99% inhibited | 1m³ | 24 | Kitasato Research Center for Environmental Science | 20_0154_2 |
| | Bacillus | 99.6% inhibited | 45L | 0.5 | Japan Food Research Laboratories | 11000924001-01 |
| | Micrococcus | 99.9% inhibited | 45L | 2 | Japan Food Research Laboratories | 11000924001-02 |
| | Serratia | 99.9% inhibited | 45L | 2 | Japan Food Research Laboratories | 11000924001-03 |
| | Kocuria | 99.9% inhibited | 45L | 1 | Japan Food Research Laboratories | 11000922001-01 |

Results may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.

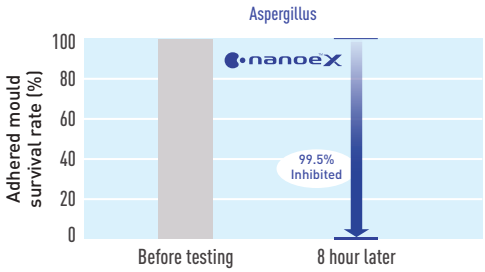
# Inhibits activity of airborne mould and adhered mould

nanoe™ X is effective in removing various airborne mould within a room as well as inhibiting the growth of adhered mould.

## Airborne Mould




## Adhered Mould



[ Representative evidence ] ** : Units based on Panasonic standards

| | Mould | Result** | Capacity | Time (Hr.) | Testing organisation | Report No. |
|---|---|---|---|---|---|---|
| Airborne | **Cladosporium** | 99% inhibited | Approx. 23m³ | 1 | Japan Food Research Laboratories | 205061541-001 |
| Adhered | **Alternaria** | Inhibited | Approx. 23m³ | 8 | Japan Food Research Laboratories | 18077411001-0201 |
| | **Aspergillus** | Inhibited | Approx. 23m³ | 8 | Japan Food Research Laboratories | 17145307001-0801 |
| | **Cladosporium** | Inhibited | Approx. 23m³ | 8 | Japan Food Research Laboratories | 17145307001-0901 |
| | **Eurotium** | Inhibited | Approx. 23m³ | 8 | Japan Food Research Laboratories | 17145307001-1001 |
| | **Fusarium** | Inhibited | Approx. 23m³ | 8 | Japan Food Research Laboratories | 17145307001-1101 |
| | **Mucor** | Inhibited | Approx. 23m³ | 8 | Japan Food Research Laboratories | 17145307001-1201 |
| | **Penicillium** | Inhibited | Approx. 23m³ | 8 | Japan Food Research Laboratories | 17145307001-1301 |
| | **Stachybotrys** | Inhibited | Approx. 23m³ | 8 | Japan Food Research Laboratories | 17145307001-1401 |
| | **Aspergillus** | 99.5% inhibited | 45L | 8 | Japan Food Research Laboratories | 11038081001-02 |
| | **Penicillium** | 99.5% inhibited | 45L | 4 | Japan Food Research Laboratories | 11028760001-01 |
| | **Fusarium** | 99.9% inhibited | 45L | 4 | Japan Food Research Laboratories | 11018692001-02 |
| | **Eurotium** | 99.9% inhibited | 45L | 8 | Kitasato Research Center for Environmental Science | 22_0455 |
| | **Mucor** | 99.9% inhibited | 45L | 8 | Japan Food Research Laboratories | 11038080001-01 |
| | **Stachybotrys** | 99.9% inhibited | 45L | 8 | Kitasato Research Center for Environmental Science | 22_0455 |
| | **Alternaria** | 99.9% inhibited | 45L | 16 | Japan Food Research Laboratories | 11038082001-01 |

Results may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.

## Inhibits pet-derived allergens and major allergens

[ Representative evidence ]

** : Units based on Panasonic standards

| | Allergens | Result** | Capacity | Time (Hr.) | Testing organisation | Report No. |
|---|---|---|---|---|---|---|
| Mites | **Dermatophagoides pteronyssinus** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-160615-F01 |
| | **Dermatophagoides farinae** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-170301-F15 |
| Mould | **Alternaria (Sooty moulds)** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-160615-F02 |
| | **Aspergillus (Aspergillus genus)** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | |
| | **Candida** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | |
| | **Malassezia** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | |
| Insect | **Cockroach** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-160615-F03 |
| | **Moth** | Inhibited | Approx. 23m³ | 24 | | |
| Animal | **Dog (dander)** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-160620-F01 |
| | **Cat (dander)** | Inhibited | Approx. 23m³ | 24 | | |

Results may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.

# Inhibits pollens globally all year round

nanoe™ X is effective in inhibiting a variety of pollens globally all year round. The inhibition effect has been confirmed for the 13 varieties of pollens, including those found in Europe and North America.

[ Representative evidence ]

** : Units based on Panasonic standards

| Pollen Allergens | Result** | Capacity | Time (Hr.) | Testing organisation | Report No. |
|---|---|---|---|---|---|
| **Cedar** | 97% inhibited | Approx. 23m³ | 8 | Panasonic Product Analysis Center | 4AA33-151001-F01 |
| **Cypress** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-151028-F01 |
| **Orchard grass** | Inhibited | Approx. 23m³ | 24 | | |
| **Ragweed** | Inhibited | Approx. 23m³ | 24 | | |
| **Alnus japonica** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-160601-F01 |
| **Japanese white birch** | Inhibited | Approx. 23m³ | 24 | | |
| **Artemisia** | Inhibited | Approx. 23m³ | 24 | | |
| **Olive** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-160601-F02 |
| **Juniper** | Inhibited | Approx. 23m³ | 24 | | |
| **Casuarina** | Inhibited | Approx. 23m³ | 24 | | |
| **Miscanthus** | Inhibited | Approx. 23m³ | 24 | | |
| **Timothy grass** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 4AA33-160701-F01 |
| **Humulus japonicus** | Inhibited | Approx. 23m³ | 24 | Panasonic Product Analysis Center | 1V332-180301-F01 |

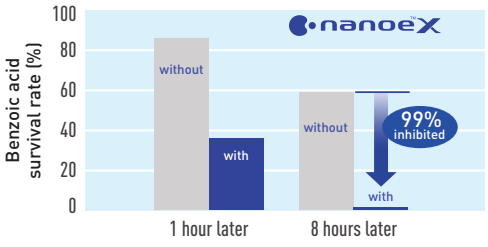
Results may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.

# Inhibition of hazardous substances known to be found in PM2.5

Breakdown effects of aromatic carboxylic acid (benzoic acid) and paraffin (hexadecane), harmful substances, have been verified.

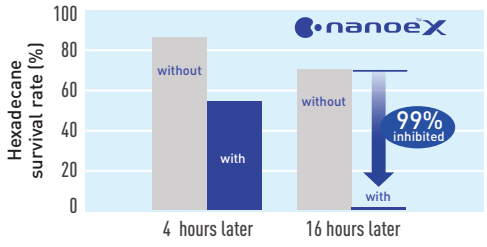
## Aromatic Carboxylic Acid

Benzoic acid




## Paraffin

Hexadecane



[ Representative evidence ]

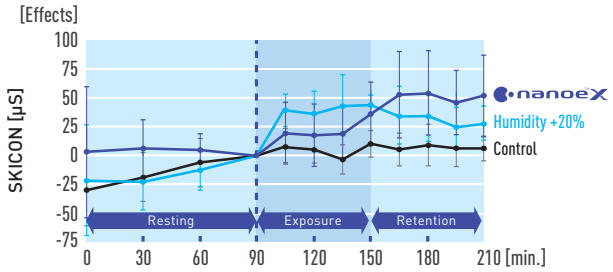
** : Units based on Panasonic standards

| | Hazardous substances | Result** | Capacity | Time (Hr.) | Testing organisation | Report No. |
|---|---|---|---|---|---|---|
| Pollutants | **Paraffin (Hexadecane)** | 99% inhibited | Approx. 23m³ | 16 | Panasonic Product Analysis Center | Y17NF089 |
| | **Aromatic carboxylic acid (Benzoic acid)** | 99% inhibited | Approx. 23m³ | 8 | Panasonic Product Analysis Center | Y17NF096 |
| Carcinogen | **Benz [a] anthracena (BaA)** | 78% inhibited | 36L | 8 | Panasonic Product Analysis Center | Y13NF141 |
| | **Benzo [b] fluoranthene (BbF)** | 79% inhibited | 36L | 8 | Panasonic Product Analysis Center | Y13NF142 |
| | **Benzo [a] pyrene (BaP)** | 97% inhibited | 36L | 8 | Panasonic Product Analysis Center | Y13NF143 |
| | **Indeno [1,2,3-cd] pyrene (IcP)** | 97% inhibited | 36L | 8 | Panasonic Product Analysis Center | Y13NF144 |
| | **Dibenzo [a,h] anthracene (Dha)** | 81% inhibited | 36L | 8 | Panasonic Product Analysis Center | Y13NF145 |

Results may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.

## Moisturised skin, straighter & sleeker hair

nanoe™ X combines with natural sebum to coat the skin, leading to smooth, well-hydrated skin. Furthermore, the abundant moisture found in nanoe™ X hydrates the hair, contributing to straighter, sleeker hair.




nanoe™ X achieved an improvement in skin moisture content equivalent to a 20 percentage point increase in environmental humidity.

[ Representative evidence ]

** : Units based on Panasonic standards

| Skin and hair | Result** | Capacity | Time (Hr.) | Testing organisation | Report No. |
|---|---|---|---|---|---|
| **Skin** | **Effective** | Approx. 34m³ | 1 | Panasonic Product Analysis Center | USG-KT-14K-012-TM |
| | **Effective** | Standard household | 28 days | FCG Research Institute, Inc. | 19104 |
| **Hair** | **Effective** | Approx. 46m³ | 8 Hr. × 15 days | Panasonic Product Analysis Center | USD-KS-15S-009-TM |

Results may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.

## Test reports of nanoe™ X

The effects of nanoe™ X have been proven through experiment tests conducted by institute and laboratory. It has also been verified by the relevant authority.

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# Notes

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