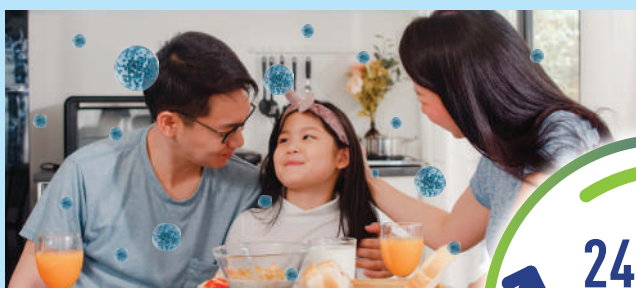


## RESIDENTIAL AIR CONDITIONERS 2021/2022

WAKE UP REFRESHED



MORNING



NOON

AWAY FROM HOME



PRECIOUS NIGHT SLEEP



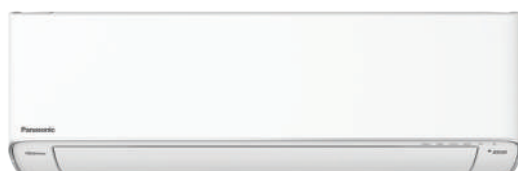
NIGHT



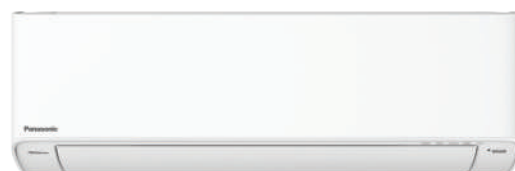
FAMILY EVENING MOMENTS



EVENING



X-PREMIUM INVERTER R32



PREMIUM INVERTER R32



QUALITY AIR FOR LIFE

A Better Life, A Better World

# 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 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.



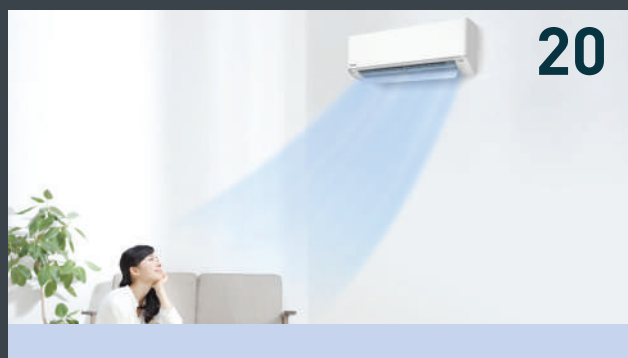
## AIR PURIFICATION

Purifies air and surfaces 24 hours a day



## AIR CONNECTIVITY

Stay connected and in control anywhere, anytime



## AIR CONDITIONING

Comfortable cool air for you and your family



## AIR EFFICIENCY

Eco-friendly and cost saving technologies for a sustainable living

EASY INSTALLATION AND SERVICING	30	SPECIFICATIONS OF X-PREMIUM INVERTER R32	32
SPECIFICATIONS OF PREMIUM INVERTER R32	34	SPECIFICATIONS OF PREMIUM INVERTER R410A	36
SPECIFICATIONS OF DELUXE INVERTER R32	38	SPECIFICATIONS OF STANDARD INVERTER R32	42
SPECIFICATIONS OF STANDARD NON-INVERTER R32	46	SPECIFICATIONS OF INVERTER FLOOR STANDING	48
SPECIFICATIONS OF FLOOR STANDING	49	nanoe™ WORLD	50
TECHNICAL EXPLANATION (nanoe™ X & nanoe-G)	52	FEATURES COMPARISON & EXPLANATION	62
MODEL LINE-UP	64		





# 24-HOUR PROTECTION

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.



Comfort Cloud App  
(Air Connectivity)

\*A router with Internet connection is required to connect your air conditioner with the Panasonic Comfort Cloud App.  
The CZ-TACG1 accessory is required for PREMIUM INVERTER R32, PREMIUM INVERTER R410A, DELUXE INVERTER R32 and STANDARD INVERTER R32. Built-in network adaptor is only available for X-PREMIUM INVERTER R32 model.





# Stay Safe Indoors with 24-Hour nanoe™ X Air Protection<sup>1</sup>

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 protection.



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

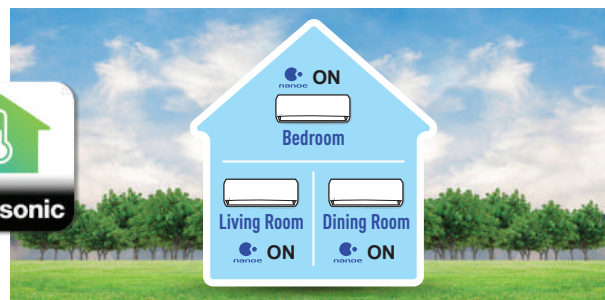
Take control of singular or multiple air conditioning units wherever you are. Purify your home with the Panasonic Comfort Cloud App on your mobile device on-the-move.

### Purify On-The-Go



Switch on nanoe™ X mode without cooling whilst away from home.

### Control Singular or Multiple Units



Convenience to monitor and manage the air conditioners with one mobile device.

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

# Activate nanoe™ X All Day Long

Making your home a safe place to be. nanoe™ X works at all hours of the day to bring you pleasant mornings and comfortable nights. Giving you a peace of mind, in the comfort of your own home.



MORNING

## WAKE UP REFRESHED



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



Odours



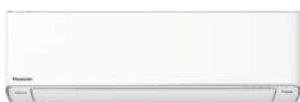
Allergens



Bacteria & Viruses



Cool + nanoe™ X



ON

ON



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

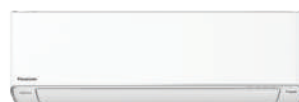


Hazardous Substances



Mould

nanoe™ X



ON

OFF



nanoe<sup>™</sup>X



EVENING

## FAMILY EVENING MOMENTS



Return home to cooling and refreshing air as the air conditioner cools your home and nanoe<sup>™</sup>X inhibits pollutants at the same time.



Odours



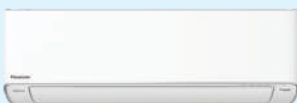
Pollen



Bacteria & Viruses



Cool + nanoe<sup>™</sup>X



ON



ON



NIGHT

## PRECIOUS NIGHT SLEEP



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



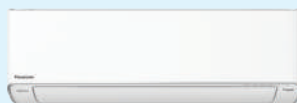
Moisturise Hair & Skin



Bacteria & Viruses



Cool + nanoe<sup>™</sup>X

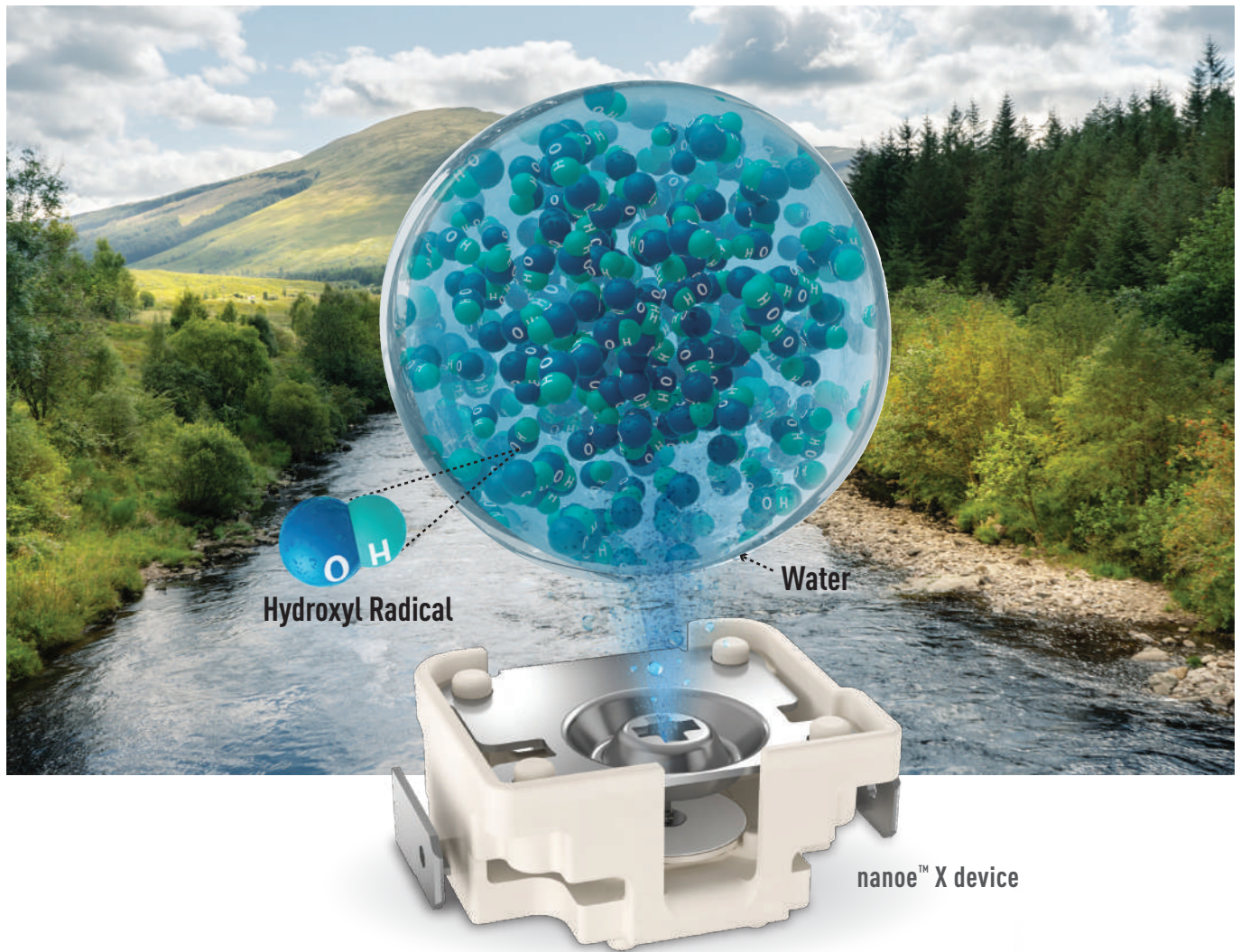


ON



ON





## 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.**

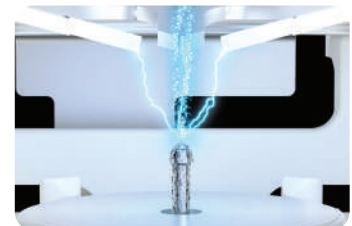
### How the nanoe™ X device generates hydroxyl radicals contained in water?



**1** Atomised electrode produces condensation.



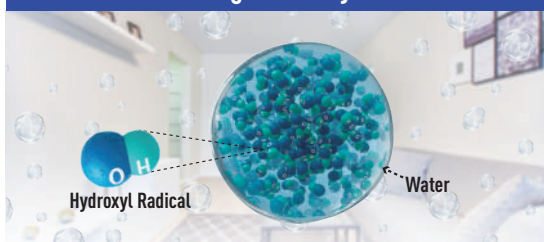
**2** Electrical discharge is applied to the water.



**3** Hydroxyl radicals contained in water are generated and released to the room.

# Uniqueness of nanoe™ X

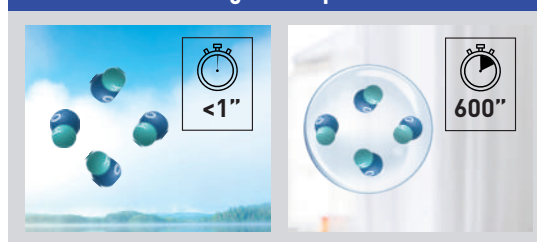
## Huge Quantity



nanoe™ X produces 9.6 trillion hydroxyl radicals per second\*. Large amounts of hydroxyl radicals contained in nanoe™ X lead to outstanding effects in inhibiting pollutants.

\*nanoe X Generator Mark 2 generates 9.6 trillion hydroxyl radicals per second.  
nanoe X Generator Mark 1 generates 4.8 trillion hydroxyl radicals per second.

## Longer Lifespan



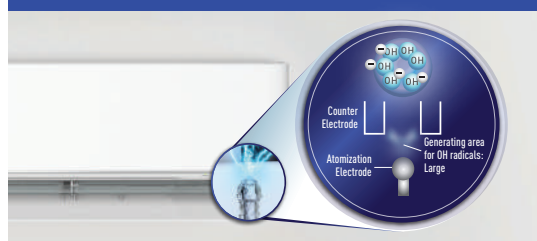
nanoe™ X technology creates hydroxyl radicals contained in water, enhancing their lifespan from less than a second to more than 600 seconds (10 mins) to spread across long distances.

## Fills Space Actively



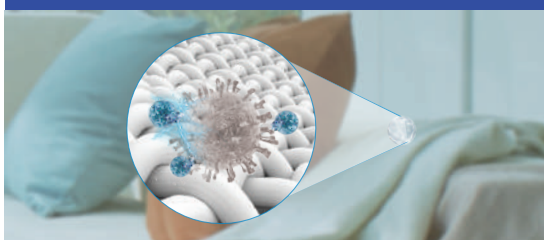
nanoe™ X actively fills the entire room and goes beyond the filter to inhibit adhered and airborne pollutants.

## 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](http://www.panasonic.com/global/consumer/clean/hydroxyl/technology.html)



## Asthma and Allergy Friendly

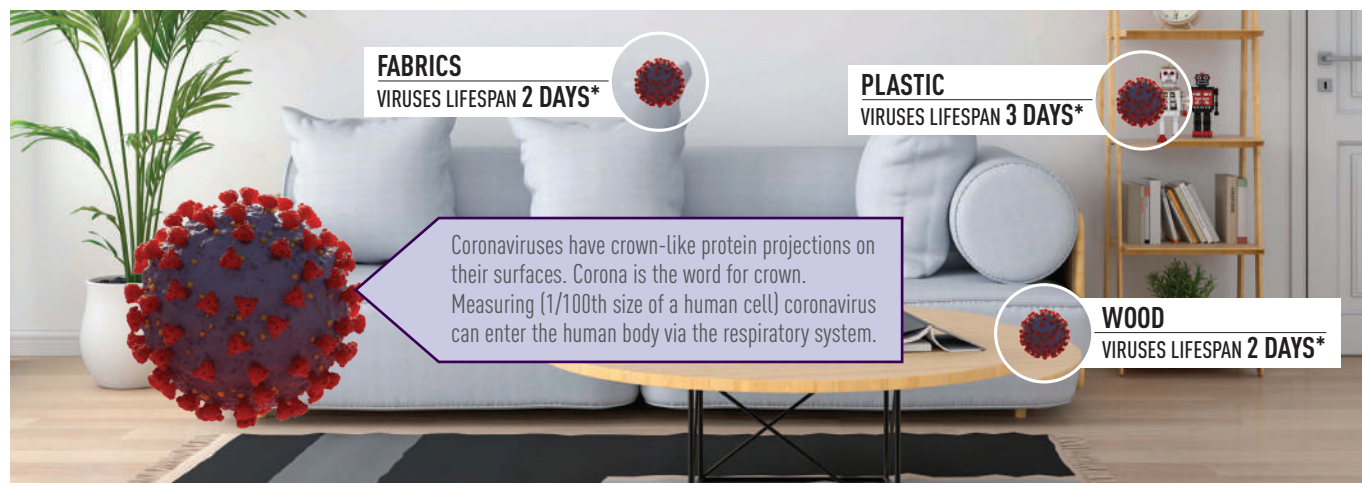


nanoe™ X is approved by Sensitive Choice, which helps consumers worldwide live better with asthma and allergies.

Sensitive Choice is a community service program that aims to educate people about the importance of managing their asthma and allergies. Developed by the National Asthma Council Australia in 2006, the program also encourages companies to produce products and services that are more asthma and allergy aware.

Panasonic and Sensitive Choice have partnered to introduce the nanoe™ X to the Asian market. Purifying your air 24 hours, the nanoe™ X feature can function independently or concurrently with your air conditioner. This market leading Air Sterilisation technology works towards the inhibition of bacteria, viruses, allergens, pollens and mould within your indoor environment, whilst deodorising, keeping your home or office fresh and clean. Panasonic & Sensitive Choice are committed to bring you Quality Air, for Life.





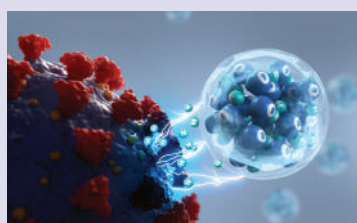
\*Virus Lifespan: <https://www.businessinsider.com/coronavirus-lifespan-on-surfaces-graphic-2020-3>

# Effective in Inhibiting Novel Coronavirus

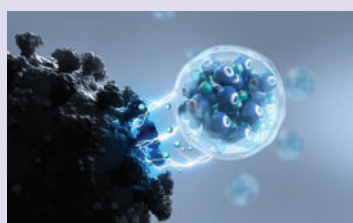
COVID-19 pandemic triggered by the Novel Coronavirus (SARS-CoV-2) has brought social distancing and constant sanitisation as the new normal in our daily lives. nanoe™ X enables you to engage in more proactive activities through active purification to inhibit coronavirus around the clock.

## Inhibiting SARS-CoV-2 with nanoe™ X

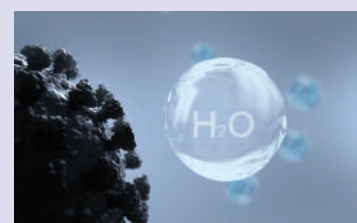
nanoe™ X with hydroxyl radicals contained in water denatures the envelope's lipids and protein of viruses and inhibits it.



1 nanoe™ X reaches SARS-CoV-2.



2 Hydroxyl radicals inside the nanoe™ X remove hydrogen from the virus protein in the envelope.



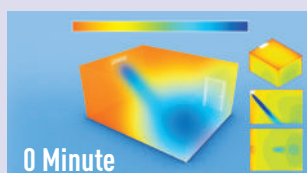
3 SARS-CoV-2 is inhibited, transforming the hydroxyl radicals into stable water molecules.

## The Power of nanoe™ X

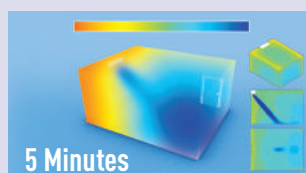
Featuring a long lasting lifespan and huge amounts of hydroxyl radicals contained in water, nanoe™ X has the ability to travel for widespread coverage, especially in large spaces of 54m³ to inhibit airborne and surface pollutants throughout the area.

### nanoe™ X Concentration Simulation

nanoe™ X concentration has been simulated in a 54m³ (4m x 5m x 2.7m) room to fill for a duration of 30 mins. The bluer the colour, the higher the nanoe™ X concentration.



0 Minute  
1/4 of the room is filled



5 Minutes  
1/2 of the room is filled



10 Minutes  
3/4 of the room is filled



30 Minutes  
Entire room is filled

\*Photograph is for illustrative purposes.



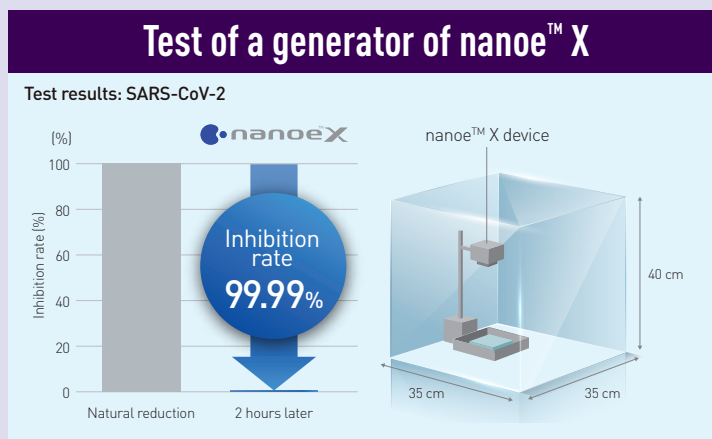
# Test Results: Novel Coronavirus Activity Inhibited

## Overview

The objective of this test was to determine if nanoe™ X inhibits the activity of the SARS-CoV-2 virus. Gauze saturated with SARS-CoV-2 virus solution was exposed to a generator of nanoe™ X from a distance of 15cm in a 45L box for 2 hours. Over 99.99% of the activity of the SARS-CoV-2 virus was inhibited.

## Details

- (1) Testing organisation: TEXCELL (France)
- (2) Test subject: novel coronavirus (SARS-CoV-2)
- (3) Test volume: 45L enclosed box (400 mm × 350 mm × 350 mm)
- (4) Exposure time: 2 hours
- (5) Exposure distance: 15cm



Notes: [1] The virus infectious titer was measured and used to calculate the inhibition rate. [2] This verification was designed to generate basic research data on the effects of nanoe™ X on the novel coronavirus in laboratory conditions. It was not designed to evaluate product performance.

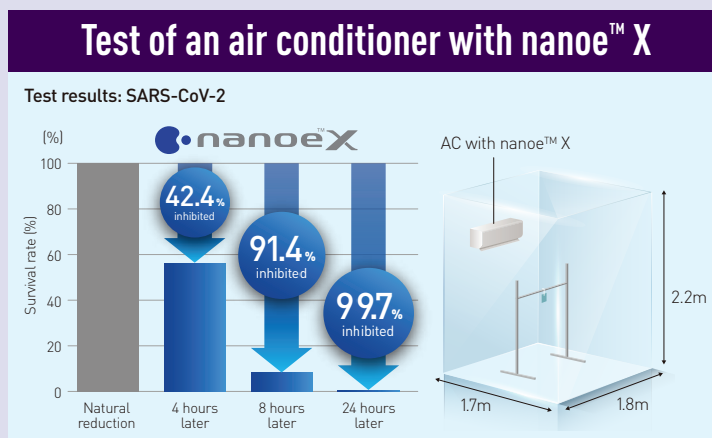


## Overview

The objective of this test was to determine if nanoe™ X inhibits the activity of the SARS-CoV-2 virus. Gauze saturated with SARS-CoV-2 virus solution was exposed to an air conditioner with nanoe™ X from a distance of 0.7 m in a 6.7 m³ room for 8 hours. Over 91% of the activity of the SARS-CoV-2 virus was inhibited.

## Details

- (1) Testing organisation: Texcell (France)
- (2) Test subject: novel coronavirus (SARS-CoV-2)
- (3) Test volume: 6.7 m³ room (1.7 m x 1.8 m x 2.2 m)
- (4) Exposure time: 8 hours

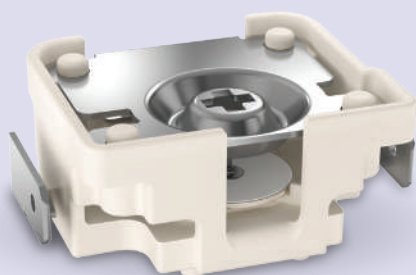


Notes: [1] The virus infectious titer was measured and used to calculate the inhibition rate. [2] This verification was designed to generate basic research data on the effects of nanoe™ X on the novel coronavirus in laboratory conditions. Actual effects will vary depending on the environment and usage of the product.



## The Development of nanoe™ X Generators

Enhancing the effectiveness of hydroxyl radicals contained in water through every new and improved nanoe™ X generator.



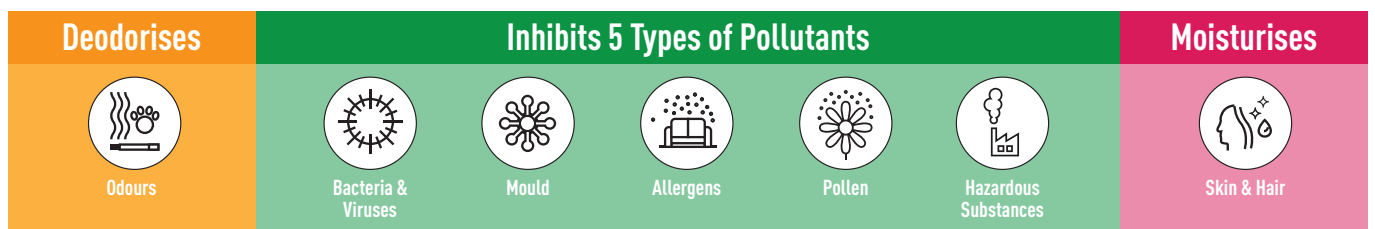
nanoe™ X

Generator	Mark 1	Mark 2 <b>NEW</b>
	4.8 trillion hydroxyl radicals/sec	9.6 trillion hydroxyl radicals/sec
Ion particle structure		



## 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.



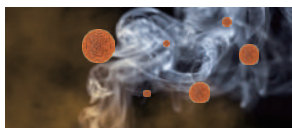
### Deodorises Various Types of Odours



BBQ Odour



Sweat Odour



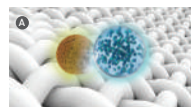
Cigarette Smoke Odour



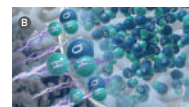
Durian Odour

nanoe™ X reduces strong, adhesive odours<sup>1</sup> by deeply penetrating into fabrics, resulting in lasting freshness in your living space.

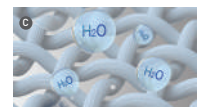
#### How nanoe™ X Reduces Odour



nanoe™ X reaches odour in fabric



Hydroxyl radicals break down odour-causing substances



Odour is eliminated

### Inhibits 5 Types of Pollutants



Bacteria &amp; Viruses



Mould



Allergens



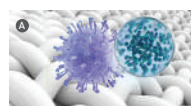
Hazardous Substances



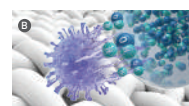
Pollen

nanoe™ X inhibits airborne and adhered pollutants<sup>2</sup>, providing better air quality for your loved ones.

#### How nanoe™ X Inhibits Pollutants



nanoe™ X reaches pollutants in fabrics

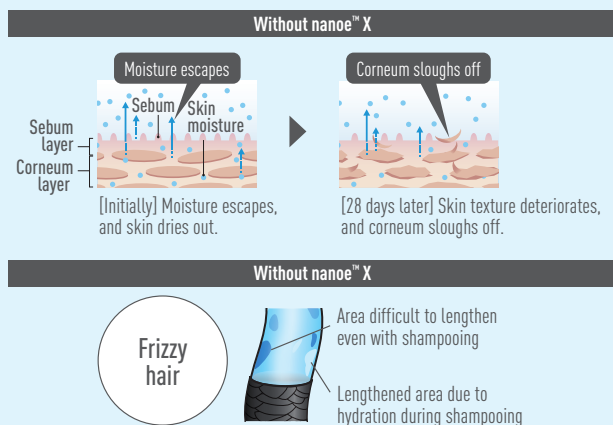


Hydroxyl radicals take hydrogen away from pollutants

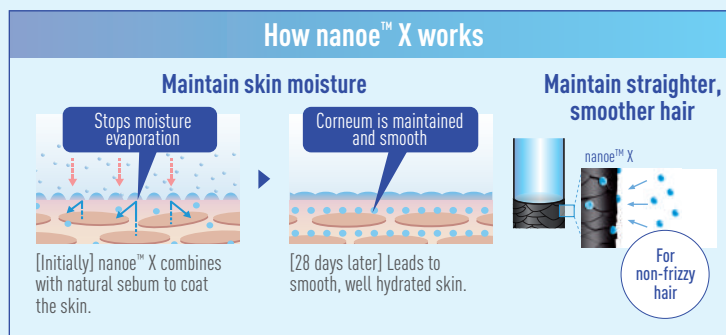


Hydroxyl radicals transform hydrogen to inhibit the activity of pollutants

## Moisturises Skin and Hair



nanoe™ X water particles help to achieve proper moisture balance, resulting in smooth, hydrated skin and hair<sup>3</sup>.



Effective in removing 99% of dust particles<sup>4</sup>, nanoe-G releases negative ions to capture dust particles sized as small as PM2.5, carrying them back to the filter to provide a clean and pristine living space.

## Dust Removal (PM2.5)

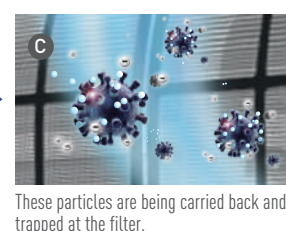
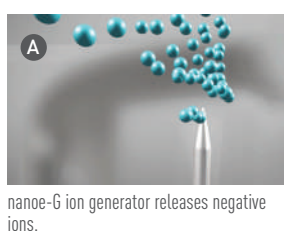
**What is PM2.5?**

PM or "particulate matter" comprises of tiny particles and liquid droplets. Measuring less than 2.5 micrometers (PM2.5), these particles pose health risks as they can enter our lungs easily. PM2.5 can be found airborne, including dust, dirt, smog and water droplets.

POLLEN	BACTERIA / MOULD	FINE PARTICLES
>10µm	<10µm	<2.5µm

DIAMETER

### How nanoe-G works



<sup>1</sup>Please refer to page 53   <sup>2</sup>Please refer to page 54   <sup>3</sup>Please refer to page 59   <sup>4</sup>Please refer to page 61





# 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.

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.

## XU SERIES WITH BUILT-IN NETWORK ADAPTOR



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

## AIR CONDITIONER WITH OPTIONAL NETWORK ADAPTOR



Optional network adaptor is required

# Smartify Your Air

Applicable for Residential Properties and Premises

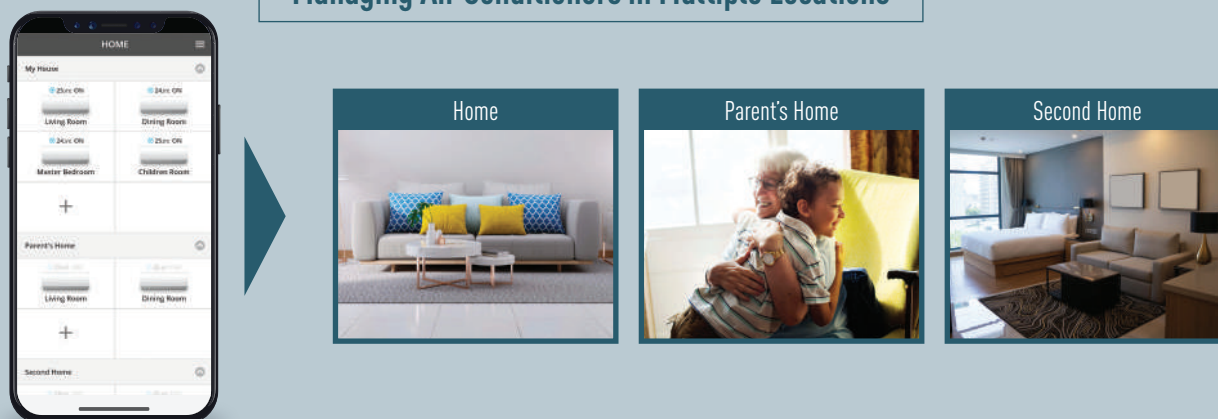
## SMART CONTROL

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

#### Managing Air Conditioners in Single Location



#### Managing Air Conditioners in Multiple Locations

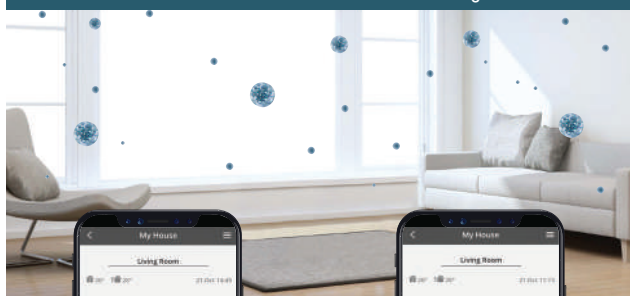


Monitor and control single and multiple air conditioners at one or more locations simultaneously anytime, anywhere with the Panasonic Comfort Cloud App. Switch ON or OFF all air conditioners at a single location also available at your convenience.

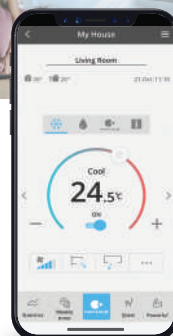
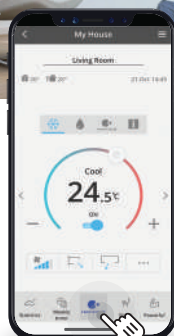
# SMART COMFORT

## Turn ON nanoe™ X Mode

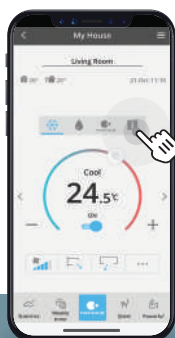
Switch on nanoe™ X mode with cooling OFF



Switch on nanoe™ X mode with cooling ON

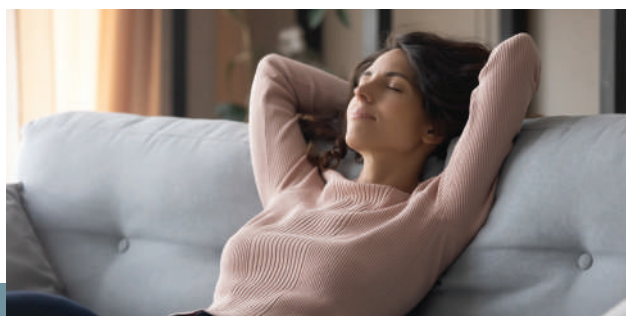
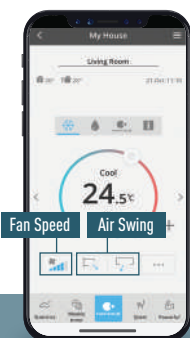


## Switching Air Conditioner Mode



Activate iAUTO-X to enjoy rapid cooling on a hot day.

## Adjust Fan Speed And Air Swing



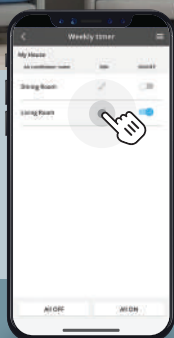
Enjoy comfortable cooling by adjusting the fan speed, air swing (up & down) or (left & right).

\*Functions availability may vary depending on models.



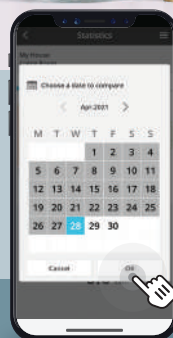
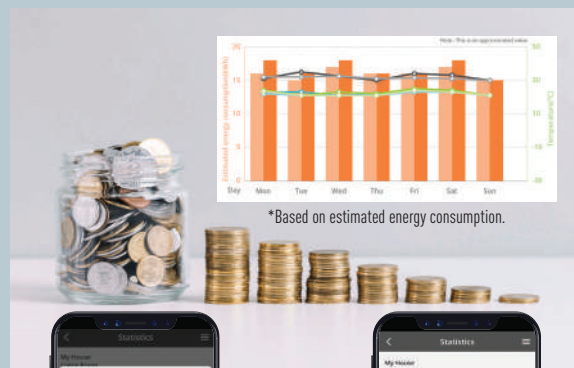
## SMART EFFICIENCY

### Set Timer



Schedule nanoe™ X with cooling ON or OFF and pre-cool your house for you to enjoy clean air and comfortable cooling.

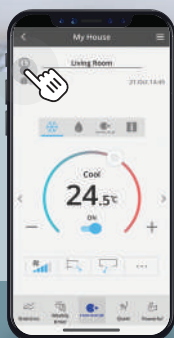
### Track Energy Consumption



View energy consumption of individual units by comparing the usage patterns daily/weekly/monthly/yearly.

## SMART ASSIST

### Error Notifications



Identify errors by checking error notifications to inform your technician to repair your air conditioner quickly.

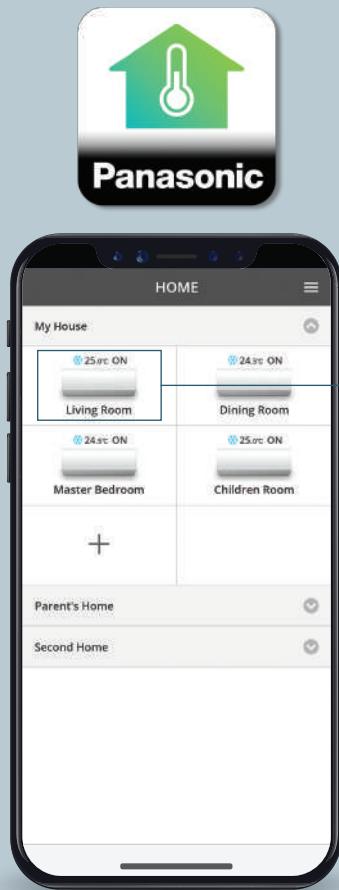
### User Assignment & Management



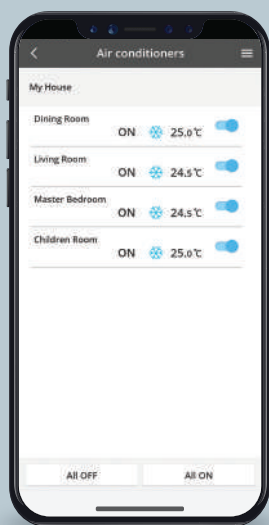
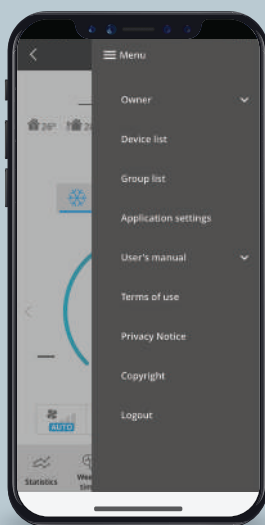
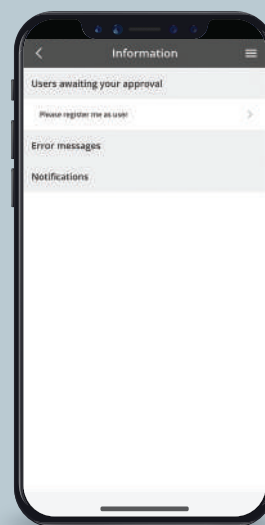
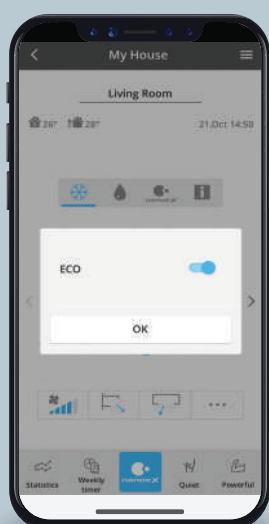
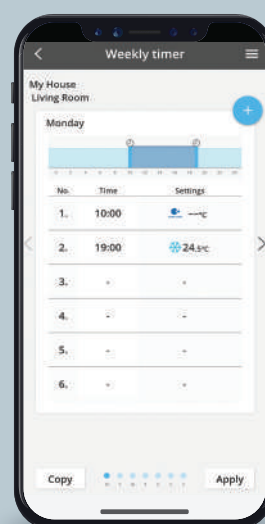
Assign user profiles to control or view selected air conditioning units.

# Panasonic Comfort Cloud App

## Main Function Overview



## Requirements for Connecting with Panasonic Comfort Cloud App

**1 Group Status****2 Main Menu****3 Notification****4 ON/OFF ECO mode****5 Statistics****6 Weekly Timer****Indoor Unit-Network**

Air Conditioner equipped with built-in network adaptor/CZ-TACG1 optional network adaptor connected to port CN-CNT<sup>1</sup>

**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**

Download on the App Store



GET IT ON Google Play

<sup>1</sup>For AC models (PREMIUM INVERTER R32, PREMIUM INVERTER R410A, DELUXE INVERTER R32 and STANDARD INVERTER R32), you need accessory CZ-TACG1 connected to port CN-CNT. Built-in network adaptor is only available for X-PREMIUM INVERTER R32 model.

\*User Interface is based on Panasonic Comfort Cloud App version 1.14.0 and may vary depending on the model's functionality.





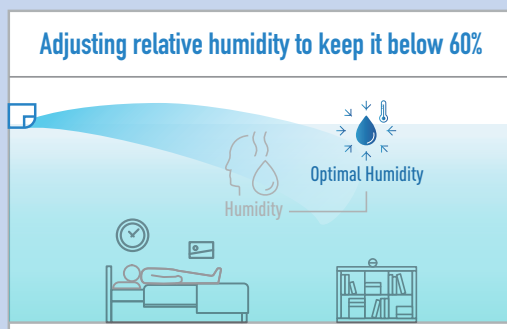
### Problems Caused by High Humidity

A high relative humidity even with a low temperature may increase the risk of heat stroke. Causing discomfort and irregular sleep cycles.



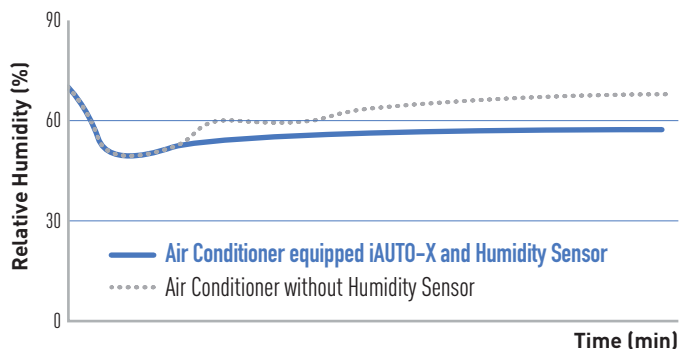
## Humidity Sensor Optimises An Ideal Sleeping Environment<sup>1</sup>

Panasonic's new iAUTO-X with the Humidity Sensor constantly monitors and adjusts relative humidity levels to below 60% for an optimal sleeping environment, so you can enjoy better sleep with comfortable cooling.



# How Humidity Control Works

The new iAUTO-X with the Humidity Sensor constantly monitors and adjusts relative humidity to below 60% according to different environments with the set temperature that ensures a balanced cooling sensation throughout by reducing heat for optimal cooling.



## \* Comparison of iAUTO-X Mode & normal COOL mode by using 1.5HP X-PREMIUM INVERTER Model

### 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 Cool 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

Average Room RH is measured every 1 hour up to 4th hour (under stable condition).

At Panasonic Amenity Room [size:16.6m<sup>2</sup>]

The effect differs according to conditions in installation and usage.



Without the humidity sensor, relative humidity increases in the room during stable operation causing uncomfortable sleeping environments.

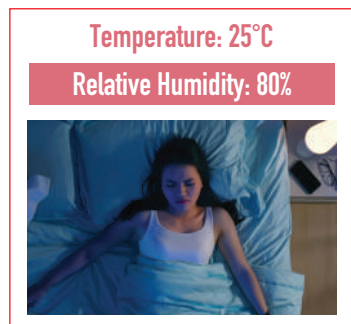


The humidity sensor automatically controls relative humidity below 60% to remain stable and comfortable during bedtime.

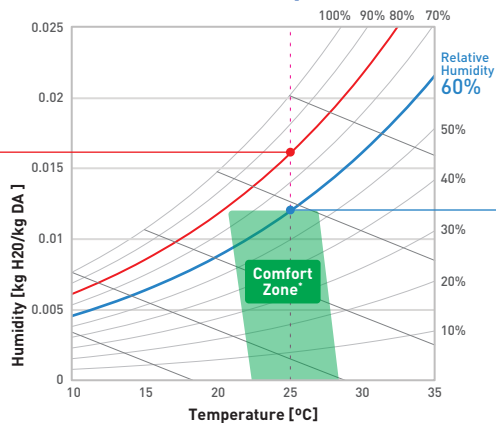
# Balancing Temperature and Humidity for Comfort

With lower humidity at the same temperature, the room will feel more comfortable and cooler compared to higher humidity.

## Comfort Zone Based on Temperature vs Humidity

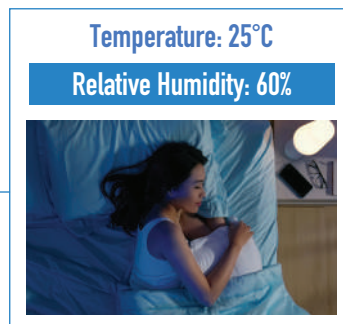


At set temperature of 25°C, the room feels uncomfortable in high humidity.



Comfort zone defined by ASHRAE STANDARD.

\*ANSI/ASHRAE Standard 55-2010

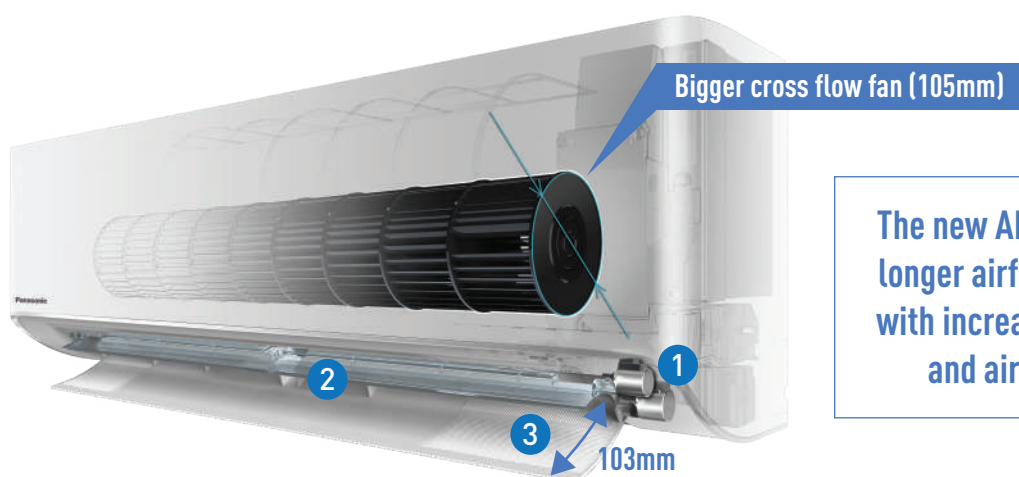


At set temperature of 25°C, the room feels more comfortable when the relative humidity is below 60%.



# 15 Meter Long Air Distance with The Improved New AEROWINGS<sup>1</sup>

Evolving to provide fast and cooling comfort, the New AEROWINGS incorporates two independently controlled flaps to cool the room in the shortest time possible with a bigger cross flow fan (105mm) and flap (103mm), improving the ability to lift air speed efficiently.



The new AEROWINGS provides longer airflow up to 15 meters with increased airflow by 10% and air speed by 20%<sup>2</sup>.

- 1 2 Independent Motors**  
Control the Sub-Flap and Bigger Outer Flap separately.

- 2 Sub-Flap**  
Compresses and concentrates cool air.

- 3 Bigger Outer Flap (103mm)**  
Helps to deliver airflow further.

<sup>1</sup> Applicable to X-PREMIUM INVERTER R32 and PREMIUM INVERTER R32. <sup>2</sup> Compared to previous PREMIUM model (1.5HP)



# NEW AEROWINGS



## Shower Cooling

Shower airflow spreads fast, cool and concentrated air across room and to the wall, then showers down gently.

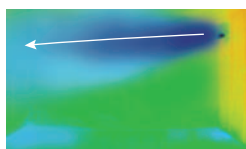


## Fast Cooling

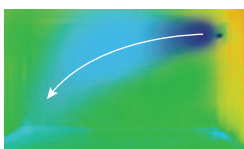
AEROWINGS twin flaps direct concentrated airflow downwards to cool you rapidly.

### Shower Cooling Airflow Assessment

#### New AEROWINGS



#### Previous AEROWINGS

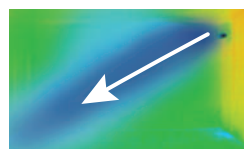


cooler ← warmer

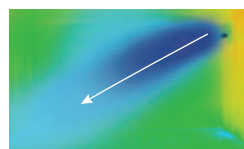
The New AEROWINGS provides stronger and cooler air further up to 15 meters and directs airflow more upwards towards the ceiling to avoid direct and over cooling.

### Fast Cooling Airflow Assessment

#### New AEROWINGS



#### Previous AEROWINGS



cooler ← warmer

The New AEROWINGS directs concentrated airflow downwards for instant cooling. The room is cooled faster with stronger and cooler air.

## Efficient Airflow with Location Information Setting

Store and set the location of your installed air conditioner unit using the remote controller. Based on location information, airflow will be automatically optimised, sending airflow to the centre of the room. This gives more flexible installation options and efficient cooling enjoyment to its full potential with location information setting.

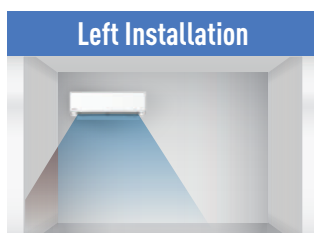
### With location information

Air flows at the centre to cool evenly.



### Without location information

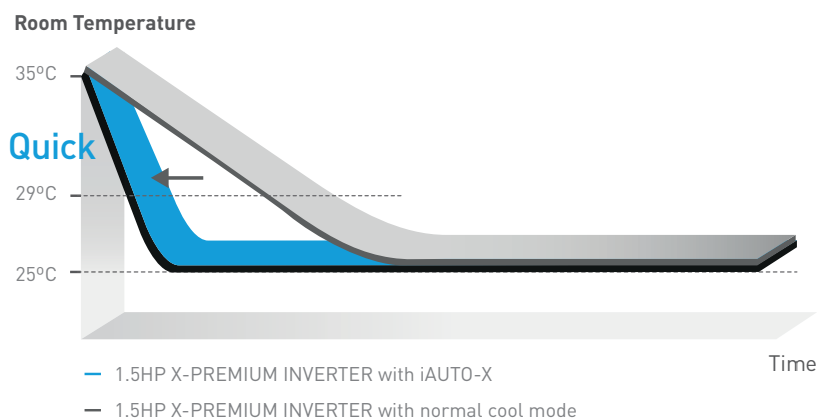
Air flows unevenly, reducing cooling efficiency.





## Faster Cooling with iAUTO-X<sup>1</sup>

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.



**25%\***  
**COOLER  
FASTER**

**\* Comparison of iAUTO-X Mode & normal COOL mode by using 1.5HP X-PREMIUM INVERTER Model**

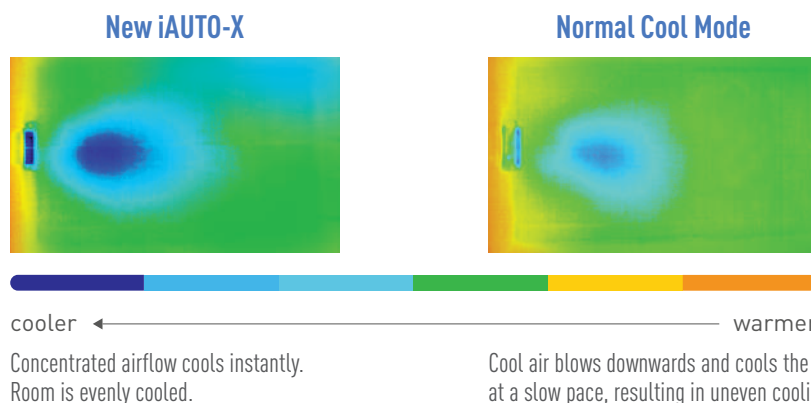
**iAUTO-X Mode:**

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:16.6m<sup>2</sup>]  
The effect differs according to conditions in installation and usage.



# Uniqueness of iAUTO-X

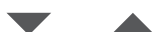
## Automatic Fan Speed

iAUTO-X automatically switches fan speed to medium fan speed, high fan speed and super high fan speed depending on the temperature difference between the room and set temperature.

MEDIUM FAN SPEED



HIGH FAN SPEED



SUPER HIGH FAN SPEED

## Flap Movement

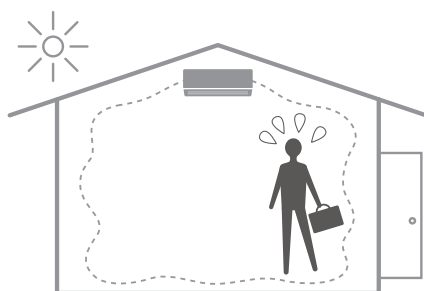
After reaching the set temperature, the flap moves upwards automatically to perform shower cooling for an even cooling sensation at the set temperature avoiding direct cooling towards the body.



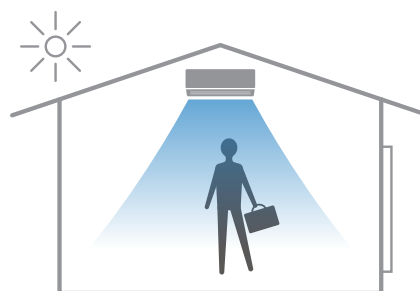
## Reactivate iAUTO-X



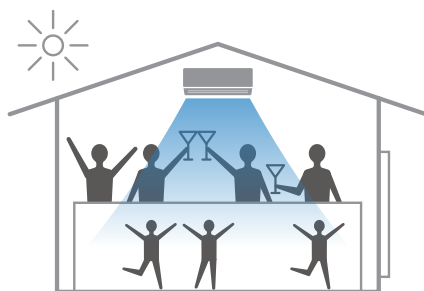
Reactivate faster cooling with a second press of the iAUTO-X button!



Arriving home from a hot day outside



Turn on iAUTO-X on start-up for instant cooling



Reactivate iAUTO-X for you and your family to enjoy instant cooling again!



The room becomes hot with more people during stable temperature





## Better Living, Together with Eco-Friendly Technologies

Panasonic's Air Efficiency provides a sustainable living environment with technologies that reduces carbon emissions into the Earth's atmosphere whilst saving costs to reduce the use of electricity for a cost and eco-friendly solution for you and the environment.

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

**INVERTER**

**R32**  
REFRIGERANT

**ECO+ A.I.**

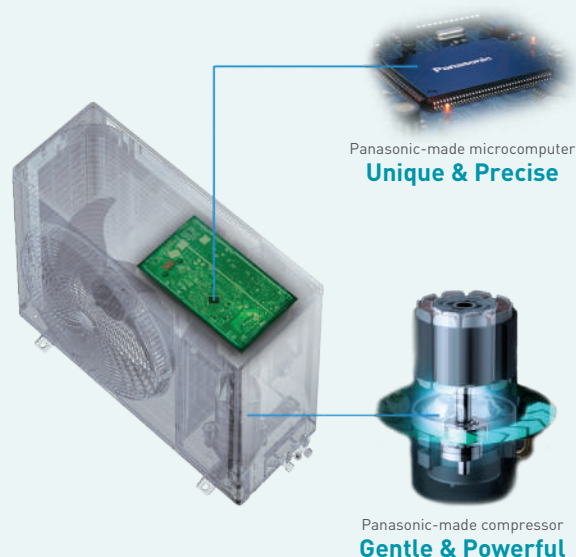
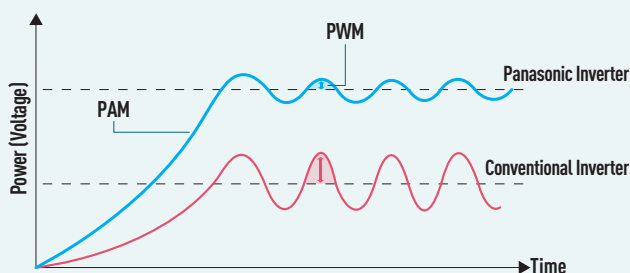


# Powerful Performance with Efficiency

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 comfort.

## Quick Cooling and Constant Comfort

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



## Benefits of Inverter Technology

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



Fast cooling at start-up



Maintain a stable set temperature

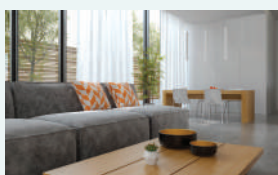


Wide output range



Quiet operation

## Reasons to Choose Panasonic Inverter Air-Conditioner



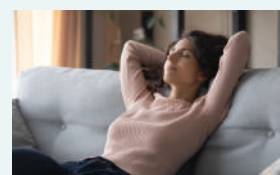
### Save on Your Electricity Bill

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



### Stay Cool 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 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 <sub>2</sub> F <sub>2</sub>	CH <sub>2</sub> F <sub>2</sub> / CHF <sub>2</sub> CF <sub>3</sub>	CHClF <sub>2</sub>
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:

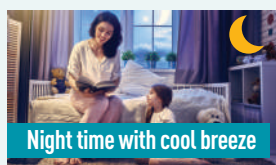
- 1 Room condition**
- 2 Heat Source can be due to:**
  - (A) Sunlight and lighting in the room
  - (B) Computers and appliances
  - (C) Body heat

## When Your Air Conditioner is Switched On



Daytime with sunlight

- Requires Fast Cooling  
ECO Mode with A.I. prioritises on maximising cooling comfort while saving energy through ECO Mode.



Night time with cool breeze

- Does not require Fast Cooling  
ECO Mode with A.I. prioritises on maximising energy savings over cooling comfort.

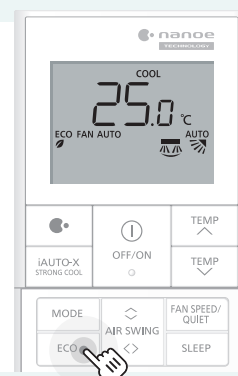
## After Reaching Set Temperature



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



\*Comparison of ECO Mode & normal mode by using 1.5HP 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 : 13.3m<sup>2</sup>)  
The effect differs according to conditions in installation and usage

\* Applicable for models with ECO+A.I. function only.

## CLOSE TO CEILING



CLOSE TO WALL



ABOVE DOOR

## 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<sup>1</sup>.



**GOOD DESIGN  
AWARD 2020**

<sup>1</sup> Good Design Award 2020 applicable to STANDARD INVERTER R32 (1.0HP-2.0HP) and STANDARD NON-INVERTER R32 (1.0HP-2.0HP).

## Easy Breezy Installation & Servicing

### EASY REMOVAL

#### User-friendly slider locks



Easy to lock & unlock the front grille.

#### One-piece front grille

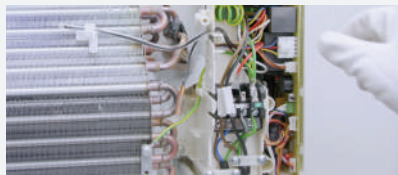


Makes installation & servicing easier when dismantling or assembling.

### Simple steps for circuit board (PCB) removal



Remove control board cover.



Disconnect all the connectors.



Pull out main PCB, screw-free design makes it easy to remove PCB.

### EASY ACCESS

#### Built-in support holders



Built-in support holder makes it easy to securely hold the indoor unit against the wall.

#### Piping storage



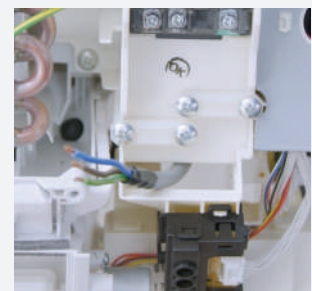
180mm bigger piping space improves work efficiency during installation and servicing.

#### Easy access to drain hose and piping



More open working spaces provide easy view and unobstructed access to setup drain hose and piping.

#### Easy wire insertion and connection



Single wire insert tunnel with wider opening provides front visibility plus easy wire insertion and connection.

### NEAT INSTALLATION

#### Stronger installation plate



Stronger & more solid installation plate which provides more stability to better support indoor units.

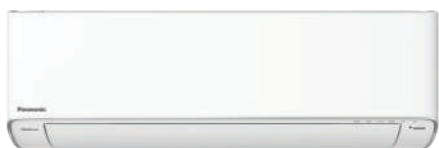
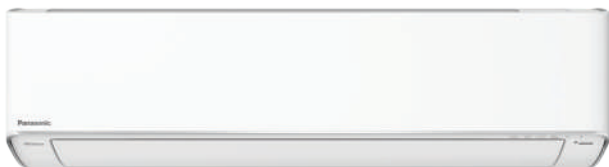
#### Screw holders for uneven surfaces



Screw Holders for Uneven Surface

Ensures indoor units fit well on the wall without any gaps.



**WALL-MOUNTED****X-PREMIUM *INVERTER* R32 Single-Split Type****CS-XU10XKH | CS-XU13XKH****Wireless**  
(Standard)**Wired**  
CZ-RD514C  
(Optional)**CS-XU18XKH | CS-XU24XKH****Wireless**  
(Standard)**Wired**  
CZ-RD514C  
(Optional)

MODEL	INDOOR UNIT [50Hz]		CS-XU10XKH	CS-XU13XKH	CS-XU18XKH	CS-XU24XKH
	OUTDOOR UNIT		CU-XU10XKH	CU-XU13XKH	CU-XU18XKH	CU-XU24XKH
Cooling Capacity	(min-max)	kW	2.85 [0.92-3.40]	3.67 [1.02-4.20]	5.30 [1.10-6.21]	6.25 [1.12-7.18]
	(min-max)	Btu/h	9,720 [3,140-11,600]	12,500 [3,480-14,300]	18,100 [3,750-21,200]	21,300 [3,820-24,500]
EER	(min-max)	W/W	3.90 [4.09-3.30]	3.67 [3.92-3.50]	4.02 [4.07-3.65]	3.72 [4.48-3.50]
	(min-max)	Btu/hW	13.32 [13.96-11.26]	12.50 [13.38-11.92]	13.71 [13.89-12.47]	12.68 [15.28-11.95]
Electrical Data	Voltage	V	220-240	220-240	220-240	220-240
	Current	A	3.6-3.3	4.6-4.3	6.2-5.7	7.8-7.2
	Power Input (min-max)	W	730 [225-1,030]	1,000 [260-1,200]	1,320 [270-1,700]	1,680 [250-2,050]
Moisture Removal		L/h	1.7	2.1	2.9	3.5
		Pt/h	3.6	4.4	6.1	7.4
Air Circulation	Indoor	m³/min [ft³/min]	11.1 [390]	12.0 [425]	18.7 [660]	19.2 [680]
	Outdoor	m³/min [ft³/min]	26.5 [940]-27.6 [970]	30.9 [1,090]-30.9 [1,090]	34.9 [1,230]-34.9 [1,230]	34.9 [1,230]-34.9 [1,230]
Noise Level	Indoor (H / L / Q-Lo)	dB(A)	36/26/19	38/28/19	44/32/27	45/34/28
	Outdoor (H)	dB(A)	46-47	47-48	50-50	51-51
Dimensions Indoor (Outdoor)	Height	mm	295 [511]	295 [542]	295 [619]	295 [619]
		inch	11-5/8 [20-1/8]	11-5/8 [21-11/32]	11-5/8 [24-3/8]	11-5/8 [24-3/8]
	Width	mm	870 [650]	870 [780]	1,040 [824]	1,040 [824]
		inch	34-9/32 [25-19/32]	34-9/32 [30-23/32]	40-31/32 [32-15/32]	40-31/32 [32-15/32]
	Depth	mm	229 [230]	229 [289]	244 [299]	244 [299]
		inch	9-1/32 [9-1/16]	9-1/32 [11-13/32]	9-5/8 [11-25/32]	9-5/8 [11-25/32]
Net Weight	Indoor	kg (lb)	10 [22]	10 [22]	12 [26]	12 [26]
	Outdoor	kg (lb)	18 [40]	23 [51]	30 [66]	31 [68]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70	ø 12.70
		inch	3/8	3/8	1/2	1/2
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10.0	10.0
	Maximum Pipe Length	m	20	20	30	30
	Maximum Elevation Length	m	15	15	20	20
	Additional Refrigerant Gas*	g/m	10	10	15	15
Power Supply			Indoor	Indoor	Indoor	Indoor

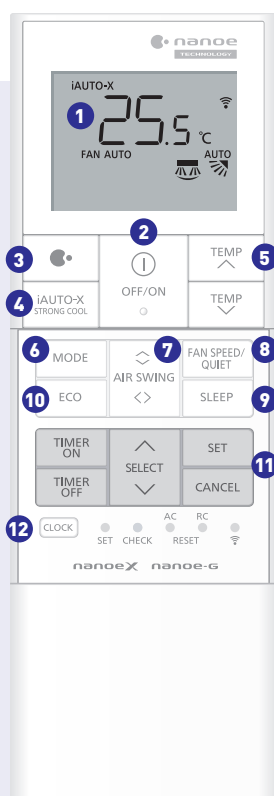
\*When pipes are not extended from the chargeless pipe length, the required amount of refrigerant is already in the unit.

## FEATURES



## EASY-TO-USE REMOTE CONTROLLER

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



## Wireless

Applicable to X-PREMIUM  
INVERTER R32

- ❶ LCD display for an easy overview of the operation status.
- ❷ Power button.
- ❸ Switch on nanoe™ mode to activate nanoe™ X and nanoe-G for air purification and deodorisation even when the air conditioner is switched off.
- ❹ iAUTO-X cools your home with fast cooling together with Shower Cooling which avoids direct cooling while providing continuous comfort. Reactivate faster cooling during stable temperature with a second press of the iAUTO-X button.
- ❺ Press up or down to set the temperature.
- ❻ Toggles between iAUTO-X, COOL and DRY setting mode.
- ❼ Set the airflow direction.
- ❽ Adjusts the FAN SPEED or QUIET mode so you can sleep comfortably at night.
- ❾ Delays off timer with temperature control for better sleep.
- ❿ Switch on the ECO + A.I. mode to let you enjoy the comfort cooling with minimal energy waste.
- ⓫ Set the 24-hour Dual ON & OFF Timer.
- ⓬ Set the actual time [hour and minute].



## DUAL TIMER FOR 2 ON AND OFF TIMES PER DAY

Set the actual time (hour and minute).

- ❶ Select ON or OFF Timer.



- ❷ Set the time.



## OUTDOOR UNIT



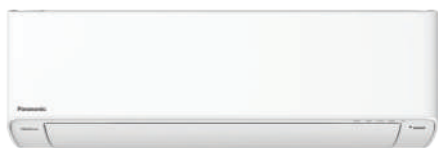
CU-XU10XKH



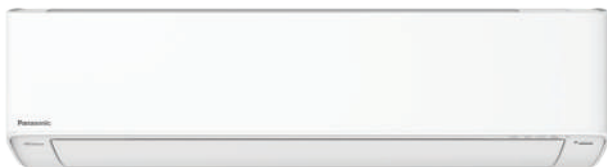
CU-XU13XKH

CU-XU18XKH  
CU-XU24XKH

## WALL-MOUNTED

PREMIUM **INVERTER** R32 Single-Split Type

CS-U10XKH | CS-U13XKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)

CS-U18XKH | CS-U24XKH | CS-U28XKH

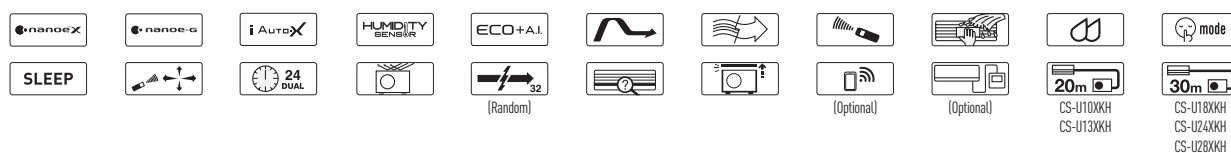
Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)

MODEL	INDOOR UNIT (50Hz)		CS-U10XKH	CS-U13XKH	CS-U18XKH	CS-U24XKH	CS-U28XKH
	OUTDOOR UNIT		CU-U10XKH	CU-U13XKH	CU-U18XKH	CU-U24XKH	CU-U28XKH
Cooling Capacity	(min-max)	kW	2.85 [0.92-3.40]	3.67 [1.02-4.20]	5.30 [1.10-6.21]	6.25 [1.12-7.18]	7.10 [1.25-8.50]
	(min-max)	Btu/h	9,720 [3,140-11,600]	12,500 [3,480-14,300]	18,100 [3,750-21,200]	21,300 [3,820-24,500]	24,200 [4,260-29,000]
EER	(min-max)	W/W	3.90 [4.09-3.30]	3.67 [3.92-3.50]	4.02 [4.07-3.65]	3.72 [4.48-3.50]	3.55 [3.57-3.15]
	(min-max)	Btu/hW	13.32 [13.96-11.26]	12.50 [13.38-11.92]	13.71 [13.89-12.47]	12.68 [15.28-11.95]	12.10 [12.17-10.74]
Electrical Data	Voltage	V	220-240	220-240	220-240	220-240	220-240
	Current	A	3.6-3.3	4.6-4.3	6.2-5.7	7.8-7.2	9.3-8.5
	Power Input (min-max)	W	730 [225-1,030]	1,000 [260-1,200]	1,320 [270-1,700]	1,680 [250-2,050]	2,000 [350-2,700]
Moisture Removal		L/h	1.7	2.1	2.9	3.5	4.1
		Pt/h	3.6	4.4	6.1	7.4	8.7
Air Circulation	Indoor	m³/min [ft³/min]	11.1 [390]	12.0 [425]	18.7 [660]	19.2 [680]	20.8 [735]
	Outdoor	m³/min [ft³/min]	26.5 [940]-27.6 [970]	30.9 [1,090]-30.9 [1,090]	34.9 [1,230]-34.9 [1,230]	34.9 [1,230]-34.9 [1,230]	45.9 [1,620]-45.9 [1,620]
Noise Level	Indoor (H / L / Q-Lo)	dB(A)	36/26/19	38/28/19	44/32/27	45/34/28	47/37/34
	Outdoor (H)	dB(A)	46-47	47-48	50-50	51-51	53-53
Dimensions Indoor (Outdoor)	Height	mm	295 [511]	295 [542]	295 [619]	295 [619]	295 [695]
		inch	11-5/8 [20-1/8]	11-5/8 [21-11/32]	11-5/8 [24-3/8]	11-5/8 [24-3/8]	11-5/8 [27-3/8]
	Width	mm	870 [650]	870 [780]	1,040 [824]	1,040 [824]	1,040 [875]
		inch	34-9/32 [25-19/32]	34-9/32 [30-23/32]	40-31/32 [32-15/32]	40-31/32 [32-15/32]	40-31/32 [34-15/32]
	Depth	mm	229 [230]	229 [289]	244 [299]	244 [299]	244 [320]
		inch	9-1/32 [9-1/16]	9-1/32 [11-13/32]	9-5/8 [11-25/32]	9-5/8 [11-25/32]	9-5/8 [12-5/8]
Net Weight	Indoor	kg (lb)	10 [22]	10 [22]	12 [26]	12 [26]	14 [31]
	Outdoor	kg (lb)	18 [40]	23 [51]	30 [66]	31 [68]	48 [106]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70	ø 12.70	ø 15.88
		inch	3/8	3/8	1/2	1/2	5/8
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10.0	10.0	10.0
	Maximum Pipe Length	m	20	20	30	30	30
	Maximum Elevation Length	m	15	15	20	20	20
	Additional Refrigerant Gas*	g/m	10	10	15	15	25
Power Supply			Indoor	Indoor	Indoor	Indoor	Outdoor

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



## FEATURES



## EASY-TO-USE REMOTE CONTROLLER

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



**Wireless**  
Applicable to  
PREMIUM INVERTER R32

- 1 LCD display for an easy overview of the operation status.
- 2 Power button.
- 3 Switch on nanoe™ mode to activate nanoe™ X and nanoe-G for air purification and deodorisation even when the air conditioner is switched off.
- 4 iAUTO-X cools your home with fast cooling together with Shower Cooling which avoids direct cooling while providing continuous comfort. Reactivate faster cooling during stable temperature with a second press of the iAUTO-X button.
- 5 Press up or down to set the temperature.
- 6 Toggles between iAUTO-X, COOL and DRY setting mode.
- 7 Set the airflow direction.
- 8 Adjusts the FAN SPEED or QUIET mode so you can sleep comfortably at night.
- 9 Delays off timer with temperature control for better sleep.
- 10 Switch on the ECO + A.I. mode to let you enjoy the comfort cooling with minimal energy waste.
- 11 Set the 24-hour Dual ON & OFF Timer.
- 12 Set the actual time [hour and minute].



## DUAL TIMER FOR 2 ON AND OFF TIMES PER DAY

Set the actual time (hour and minute).

- 1 Select ON or OFF Timer.



- 2 Set the time.



## OUTDOOR UNIT



CU-U10XKH



CU-U13XKH

CU-U18XKH  
CU-U24XKH

CU-U28XKH

## WALL-MOUNTED

PREMIUM **INVERTER** R410A Single-Split Type

CS-S10TKH | CS-S13TKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)

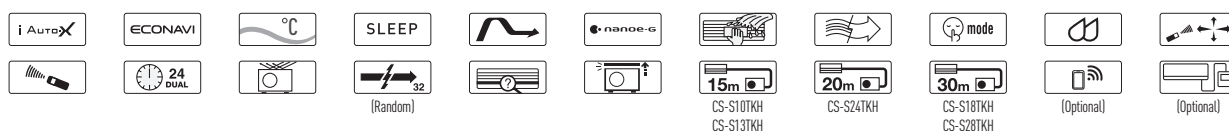
CS-S18TKH | CS-S24TKH | CS-S28TKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)

MODEL	INDOOR UNIT (50Hz)		CS-S10TKH	CS-S13TKH	CS-S18TKH	CS-S24TKH	CS-S28TKH
	OUTDOOR UNIT		CU-S10TKH	CU-S13TKH	CU-S18TKH	CU-S24TKH	CU-S28TKH
Cooling Capacity	(min-max)	kW	2.85 [0.84-3.28]	3.67 [0.92-4.20]	5.30 [1.10-6.00]	6.25 [1.12-7.10]	7.10 [1.15-8.50]
	(min-max)	Btu/h	9,720 [2,860-11,200]	12,500 [3,140-14,300]	18,100 [3,750-20,500]	21,300 [3,820-24,200]	24,200 [3,920-29,000]
EER	(min-max)	W/W	3.90 [3.73-3.57]	3.63 [3.54-3.50]	3.68 [3.79-3.53]	3.32 [3.50-3.23]	3.50 [3.29-3.15]
	(min-max)	Btu/hW	13.32 [12.71-12.17]	12.38 [12.08-11.92]	12.57 [12.93-12.06]	11.33 [11.94-11.00]	11.92 [11.20-10.74]
Electrical Data	Voltage	V	220-240	220-240	220-240	220-240	220-240
	Current	A	3.6-3.3	5.1-4.6	7.0-6.4	8.8-8.2	9.6-9.0
	Power Input (min-max)	W	730 [225-920]	1,010 [260-1,200]	1,440 [290-1,700]	1,880 [320-2,200]	2,030 [350-2,700]
Moisture Removal		L/h	1.7	2.1	2.9	3.5	4.1
		Pt/h	3.6	4.4	6.1	7.4	8.7
Air Circulation	Indoor	m <sup>3</sup> /min [ft <sup>3</sup> /min]	10.5 [370]	11.1 [390]	19.6 [690]	20.2 [715]	21.7 [765]
	Outdoor	m <sup>3</sup> /min [ft <sup>3</sup> /min]	26.5 [940]-28.1 [990]	30.6 [1,080]-31.2 [1,100]	35.0 [1,235]-36.2 [1,280]	47.0 [1,660]-47.0 [1,660]	48.6 [1,715]-51.9 [1,830]
Noise Level	Indoor (H / L / Q-Lo)	dB(A)	36/26/23	38/28/25	44/32/29	45/34/31	47/37/34
	Outdoor (H)	dB(A)	46-47	47-48	49-50	51-52	52-53
Dimensions Indoor (Outdoor)	Height	mm	295 [511]	295 [542]	302 [619]	302 [695]	302 [795]
		inch	11-5/8 [20-1/8]	11-5/8 [21-11/32]	11-29/32 [24-3/8]	11-29/32 [27-3/8]	11-29/32 [31-5/16]
	Width	mm	919 [650]	919 [780]	1,120 [824]	1,120 [875]	1,120 [875]
		inch	36-3/16 [25-19/32]	36-3/16 [30-23/32]	44-1/8 [32-15/32]	44-1/8 [34-15/32]	44-1/8 [34-15/32]
	Depth	mm	199 [230]	199 [289]	241 [299]	241 [320]	241 [320]
		inch	7-27/32 [9-1/16]	7-27/32 [11-13/32]	9-1/2 [11-25/32]	9-1/2 [12-5/8]	9-1/2 [12-5/8]
Net Weight	Indoor	kg (lb)	9 [20]	9 [20]	12 [26]	12 [26]	12 [26]
	Outdoor	kg (lb)	20 [44]	27 [60]	34 [75]	40 [88]	57 [126]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 12.70	ø 12.70	ø 15.88	ø 15.88
		inch	3/8	1/2	1/2	5/8	5/8
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10.0	10.0	10.0
	Maximum Pipe Length	m	15	15	30	20	30
	Maximum Elevation Length	m	5	5	20	15	20
	Additional Refrigerant Gas*	g/m	15	15	15	20	30
Power Supply			Indoor	Indoor	Indoor	Indoor	Outdoor

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

## FEATURES



## EASY-TO-USE REMOTE CONTROLLER

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



## Wireless

Applicable to PREMIUM  
INVERTER R410A

- 1 LCD display for an easy overview of the operation status.
- 2 iAUTO-X lets you come home with fast cooling. Then enjoy continuous comfort with Shower Cooling which avoids direct cooling.
- 3 ECONAVI monitors sunlight intensity, human movement, activity levels and human absence to detect and reduce energy waste.
- 4 Activates the nanoe-G function even when the air conditioner is switched off.
- 5 Press up or down to set the temperature.
- 6 Toggles between iAUTO-X, COOL and DRY setting mode.
- 7 Delays off timer with temperature control for better sleep.
- 8 Set the airflow direction.
- 9 Adjusts the fan speed.
- 10 Quiet function allows you to sleep comfortably at night.
- 11 Set 24-hour Dual ON & OFF Timer.
- 12 Set the actual time (hour and minute).



## DUAL TIMER FOR 2 ON AND OFF TIMES PER DAY

Set the actual time (hour and minute).

- 1 Select ON or OFF Timer.



- 2 Set the time.



## OUTDOOR UNIT



CU-S10TKH



CU-S13TKH



CU-S18TKH



CU-S24TKH



CU-S28TKH



## WALL-MOUNTED

DELUXE **INVERTER** R32 Single-Split Type **NEW**

CS-RU9YKH | CS-RU12YKH | CS-RU18YKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)

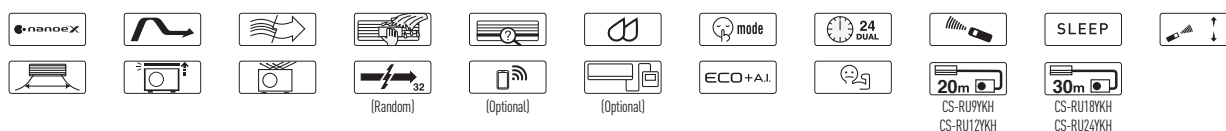
CS-RU24YKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)**BIG FLAP**  
(CS-RU9/12/18YKH)**AEROWINGS**  
(CS-RU24YKH)**POWERFUL****INVERTER****ECO+AI**

MODEL	INDOOR UNIT (50Hz)		CS-RU9YKH	CS-RU12YKH	CS-RU18YKH	CS-RU24YKH
	OUTDOOR UNIT		CU-RU9YKH	CU-RU12YKH	CU-RU18YKH	CU-RU24YKH
Cooling Capacity	(min-max)	kW	2.70 [0.84-2.90]	3.60 [1.02-4.00]	5.30 [1.10-5.40]	6.25 [1.12-7.18]
	(min-max)	Btu/h	9,210 [2,860-9,890]	12,300 [3,480-13,600]	18,100 [3,750-18,400]	21,300 [3,820-24,500]
EER	(min-max)	W/W	3.46 [3.73-3.22]	3.50 [3.71-3.25]	3.21 [3.79-3.00]	3.72 [4.48-3.50]
	(min-max)	Btu/hW	11.81 [12.71-10.99]	11.94 [12.65-11.06]	10.97 [12.93-10.22]	12.68 [15.28-11.95]
Electrical Data	Voltage	V	220-240	220-240	220-240	220-240
	Current	A	3.9-3.6	5.0-4.6	7.7-7.1	7.8-7.2
	Power Input (min-max)	W	780 [225-900]	1,030 [275-1,230]	1,650 [290-1,800]	1,680 [250-2,050]
Moisture Removal		L/h	1.6	2.1	2.9	3.5
		Pt/h	3.4	4.4	6.1	7.4
Air Circulation	Indoor	m³/min [ft³/min]	10.3 [365]	10.8 [380]	12.6 [445]	19.2 [680]
	Outdoor	m³/min [ft³/min]	26.7 [940]-28.3 [1,000]	30.2 [1,065]-30.8 [1,085]	39.3 [1,390]-39.3 [1,390]	34.9 [1,230]-34.9 [1,230]
Noise Level	Indoor (H / L / Q-Lo)	dB (A)	36/26/21	38/28/21	44/34/28	45/34/29
	Outdoor (H)	dB (A)	47-48	48-49	51-51	51-51
Dimensions Indoor (Outdoor)	Height	mm	290 [511]	290 [542]	290 [619]	295 [619]
		inch	11-7/16 [20-1/8]	11-7/16 [21-11/32]	11-7/16 [24-3/8]	11-5/8 [24-3/8]
	Width	mm	779 [650]	779 [780]	779 [824]	1,040 [824]
		inch	30-11/16 [25-19/32]	30-11/16 [30-23/32]	30-11/16 [32-15/32]	40-31/32 [32-15/32]
	Depth	mm	209 [230]	209 [289]	209 [299]	244 [299]
		inch	8-1/4 [9-1/16]	8-1/4 [11-13/32]	8-1/4 [11-25/32]	9-5/8 [11-25/32]
Net Weight	Indoor	kg (lb)	8 [18]	8 [18]	9 [20]	12 [26]
	Outdoor	kg (lb)	17 [37]	22 [49]	28 [62]	31 [68]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70	ø 12.70
		inch	3/8	3/8	1/2	1/2
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10.0	10.0
	Maximum Pipe Length	m	20	20	30	30
	Maximum Elevation Length	m	15	15	20	20
	Additional Refrigerant Gas*	g/m	10	10	15	15
Power Supply			Indoor	Indoor	Indoor	Indoor

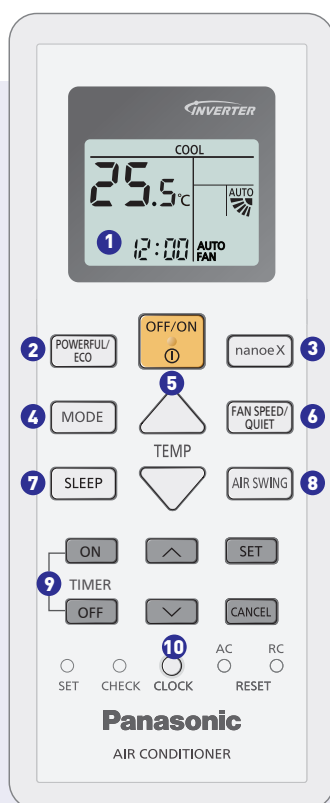
\*When pipes are not extended from the chargeless pipe length, the required amount of refrigerant is already in the unit.

## FEATURES



## EASY-TO-USE REMOTE CONTROLLER

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



## Wireless

Applicable to DELUXE  
INVERTER R32

- 1 LCD display for an easy overview of the operation status.
- 2 Toggles setting between POWERFUL mode and ECO with A.I. setting mode. POWERFUL mode provides fast cooling while ECO with A.I. mode provides energy saving.
- 3 Switch on nanoe™ X for air purification and deodorisation even when the air conditioner is switched off.
- 4 Toggles between AUTO, COOL and DRY setting mode.
- 5 Press up or down to set the temperature.
- 6 Adjusts the FAN SPEED or QUIET mode so you can sleep comfortably at night.
- 7 Delays off timer with temperature control for better sleep.
- 8 Set the airflow direction.
- 9 Set the 24-hour Dual ON & OFF Timer.
- 10 Set the actual time (hour and minute).

Long Airflow  
with Big Flap

Big bottom flap directs cooling and comforting air all across the room for an optimal cooling sensation.

Powerful Cooling  
at Start-up

POWERFUL Mode cools your room faster by 18%\* at the start to bring you cooling comfort instantly on a hot day.

\*Comparison of POWERFUL Cool Mode & normal cool mode by using 1.5HP Inverter Model.

## OUTDOOR UNIT

Blue Fin  
Condenser

R32  
REFRIGERANT



CU-RU9YKH



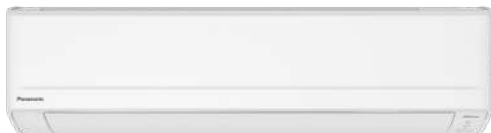
CU-RU12YKH

CU-RU18YKH  
CU-RU24YKH

## WALL-MOUNTED

DELUXE **INVERTER** R32 Single-Split Type **NEW**

CS-SU9YKH | CS-SU12YKH | CS-SU18YKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)

CS-SU24YKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)BIG FLAP  
(CS-SU9/12/18YKH)AEROWINGS  
(CS-SU24YKH)

POWERFUL

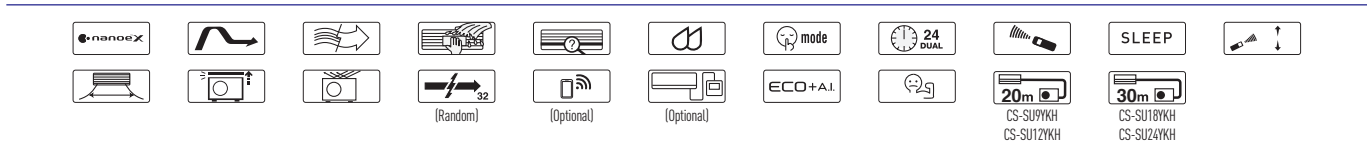
INVERTER

ECO+AI

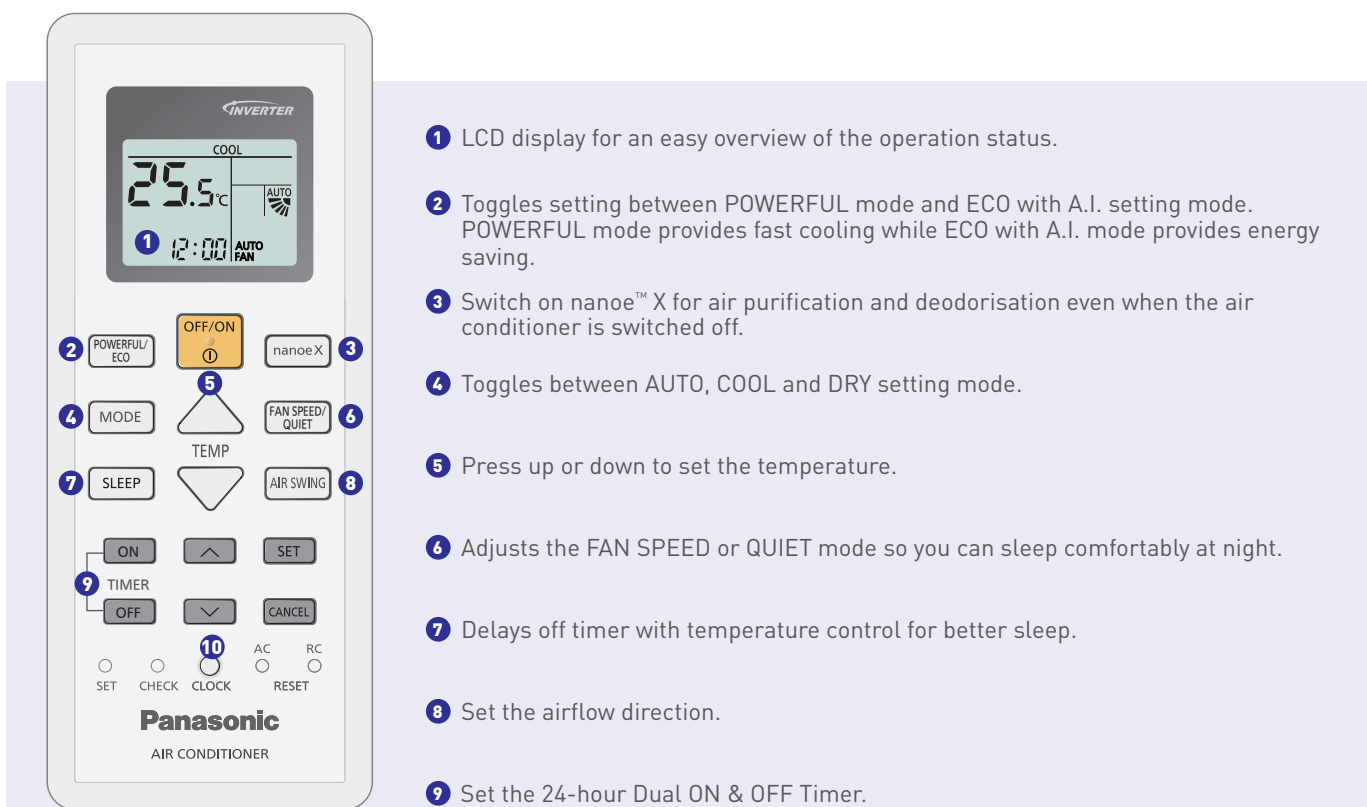
MODEL	INDOOR UNIT (50Hz)		CS-SU9YKH	CS-SU12YKH	CS-SU18YKH	CS-SU24YKH
	OUTDOOR UNIT		CU-SU9YKH	CU-SU12YKH	CU-SU18YKH	CU-SU24YKH
Cooling Capacity	(min-max)	kW	2.70 [0.84-2.90]	3.60 [1.02-4.00]	5.30 [1.10-5.40]	6.25 [1.12-7.18]
	(min-max)	Btu/h	9,210 [2,860-9,890]	12,300 [3,480-13,600]	18,100 [3,750-18,400]	21,300 [3,820-24,500]
EER	(min-max)	W/W	3.46 [3.73-3.22]	3.50 [3.71-3.25]	3.21 [3.79-3.00]	3.72 [4.48-3.50]
	(min-max)	Btu/hW	11.81 [12.71-10.99]	11.94 [12.65-11.06]	10.97 [12.93-10.22]	12.68 [15.28-11.95]
Electrical Data	Voltage	V	220-240	220-240	220-240	220-240
	Current	A	3.9-3.6	5.0-4.6	7.7-7.1	7.8-7.2
	Power Input (min-max)	W	780 [225-900]	1,030 [275-1,230]	1,650 [290-1,800]	1,680 [250-2,050]
Moisture Removal		L/h	1.6	2.1	2.9	3.5
		Pt/h	3.4	4.4	6.1	7.4
Air Circulation	Indoor	m³/min [ft³/min]	10.3 [365]	10.8 [380]	12.6 [445]	19.2 [680]
	Outdoor	m³/min [ft³/min]	26.7 [940]-28.3 [1,000]	30.2 [1,065]-30.8 [1,085]	39.3 [1,390]-39.3 [1,390]	34.9 [1,230]-34.9 [1,230]
Noise Level	Indoor (H / L / Q-Lo)	dB (A)	36/26/21	38/28/21	44/34/28	45/34/29
	Outdoor (H)	dB (A)	47-48	48-49	51-51	51-51
Dimensions Indoor (Outdoor)	Height	mm	290 [511]	290 [542]	290 [619]	295 [619]
		inch	11-7/16 [20-1/8]	11-7/16 [21-11/32]	11-7/16 [24-3/8]	11-5/8 [24-3/8]
	Width	mm	779 [650]	779 [780]	779 [824]	1,040 [824]
		inch	30-11/16 [25-19/32]	30-11/16 [30-23/32]	30-11/16 [32-15/32]	40-31/32 [32-15/32]
	Depth	mm	209 [230]	209 [289]	209 [299]	244 [299]
		inch	8-1/4 [9-1/16]	8-1/4 [11-13/32]	8-1/4 [11-25/32]	9-5/8 [11-25/32]
Net Weight	Indoor	kg (lb)	8 [18]	8 [18]	9 [20]	12 [26]
	Outdoor	kg (lb)	17 [37]	22 [49]	28 [62]	31 [68]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70	ø 12.70
		inch	3/8	3/8	1/2	1/2
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10.0	10.0
	Maximum Pipe Length	m	20	20	30	30
	Maximum Elevation Length	m	15	15	20	20
	Additional Refrigerant Gas*	g/m	10	10	15	15
Power Supply			Indoor	Indoor	Indoor	Indoor

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





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



## Wireless

Applicable to DELUXE  
INVERTER R32

10 Set the actual time (hour and minute).

- 
- 1** LCD display for an easy overview of the operation status.
- 2** Toggles setting between POWERFUL mode and ECO with A.I. setting mode. POWERFUL mode provides fast cooling while ECO with A.I. mode provides energy saving.
- 3** Switch on nanoe™ X for air purification and deodorisation even when the air conditioner is switched off.
- 4** Toggles between AUTO, COOL and DRY setting mode.
- 5** Press up or down to set the temperature.
- 6** Adjusts the FAN SPEED or QUIET mode so you can sleep comfortably at night.
- 7** Delays off timer with temperature control for better sleep.
- 8** Set the airflow direction.
- 9** Set the 24-hour Dual ON & OFF Timer.
- 10** Set the actual time (hour and minute).



**BIG FLAP**

Big bottom flap directs cooling and comforting air all across the room for an optimal cooling sensation.

**UP TO 18%**

**POWERFUL Mode** cools your room faster by 18%\* at the start to bring you cooling\* comfort instantly on a hot day.

\*Comparison of POWERFUL Cool Mode & normal cool



Big bottom flap directs cooling and comforting air all across the room for an optimal cooling

UP TO **10%\***

POWERFUL Mode cools your room faster by 18%\* at the start to bring you cooling comfort instantly on a hot day.

**BIG FLAP** sensation.

**10% FASTER COOLING**

\*Comparison of POWERFUL Cool Mode & normal cool mode by using 1.5HP Inverter Model.



CU-SU9YKH CU-SU12YKH CU-SU18YKH



CU-SU9YKH CU-SU12YKH CU-SU18YKH

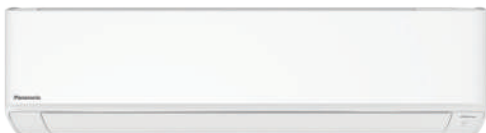


CU-SU9YKH CU-SU12YKH CU-SU18YKH  
CU-SU24YKH

## WALL-MOUNTED

STANDARD **INVERTER** R32 Single-Split Type

CS-PU9XKH | CS-PU12XKH | CS-PU18XKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)

CS-PU24XKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)BIG FLAP  
(CS-PU9/12/18XKH)AEROWINGS  
(CS-PU24XKH)

POWERFUL

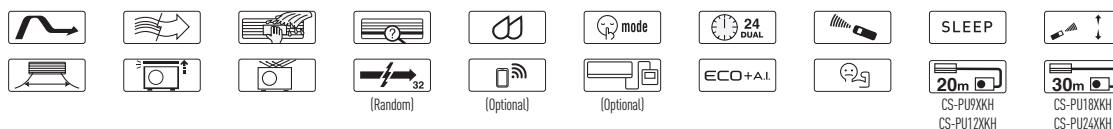
INVERTER

ECO+ A.I.

MODEL	INDOOR UNIT (50Hz)		CS-PU9XKH	CS-PU12XKH	CS-PU18XKH	CS-PU24XKH
	OUTDOOR UNIT		CU-PU9XKH	CU-PU12XKH	CU-PU18XKH	CU-PU24XKH
Cooling Capacity	(min-max)	kW	2.65 [0.84-2.90]	3.51 [1.02-4.00]	5.00 [1.10-5.40]	6.25 [1.12-7.18]
	(min-max)	Btu/h	9,040 [2,860-9,890]	12,000 [3,480-13,600]	17,100 [3,750-18,400]	21,300 [3,820-24,500]
EER	(min-max)	W/W	3.40 [3.73-3.22]	3.41 [3.71-3.25]	3.23 [3.79-3.00]	3.72 [4.48-3.50]
	(min-max)	Btu/hW	11.59 [12.71-10.99]	11.65 [12.65-11.06]	11.03 [12.93-10.22]	12.68 [15.28-11.95]
Electrical Data	Voltage	V	220-240	220-240	220-240	220-240
	Current	A	3.9-3.6	5.0-4.6	7.5-6.9	7.8-7.2
	Power Input (min-max)	W	780 [225-900]	1,030 [275-1,230]	1,550 [290-1,800]	1,680 [250-2,050]
Moisture Removal		L/h	1.6	2.0	2.8	3.5
		Pt/h	3.4	4.2	5.9	7.4
Air Circulation	Indoor	m³/min [ft³/min]	10.3 [365]	10.8 [380]	12.6 [445]	19.2 [680]
	Outdoor	m³/min [ft³/min]	26.7 [940]-28.3 [1,000]	30.2 [1,065]-30.8 [1,085]	39.3 [1,390]-39.3 [1,390]	34.9 [1,230]-34.9 [1,230]
Noise Level	Indoor (H / L / Q-Lo)	dB (A)	36/26/21	38/28/21	44/34/28	45/34/29
	Outdoor (H)	dB (A)	47-48	48-49	51-51	51-51
Dimensions Indoor (Outdoor)	Height	mm	290 [511]	290 [542]	290 [619]	295 [619]
		inch	11-7/16 [20-1/8]	11-7/16 [21-11/32]	11-7/16 [24-3/8]	11-5/8 [24-3/8]
	Width	mm	779 [650]	779 [780]	779 [824]	1,040 [824]
		inch	30-11/16 [25-19/32]	30-11/16 [30-23/32]	30-11/16 [32-15/32]	40-31/32 [32-15/32]
	Depth	mm	209 [230]	209 [289]	209 [299]	244 [299]
		inch	8-1/4 [9-1/16]	8-1/4 [11-13/32]	8-1/4 [11-25/32]	9-5/8 [11-25/32]
Net Weight	Indoor	kg (lb)	8 [18]	8 [18]	9 [20]	12 [26]
	Outdoor	kg (lb)	17 [37]	22 [49]	28 [62]	31 [68]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70	ø 12.70
		inch	3/8	3/8	1/2	1/2
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10.0	10.0
	Maximum Pipe Length	m	20	20	30	30
	Maximum Elevation Length	m	15	15	20	20
	Additional Refrigerant Gas*	g/m	10	10	15	15
Power Supply			Indoor	Indoor	Indoor	Indoor

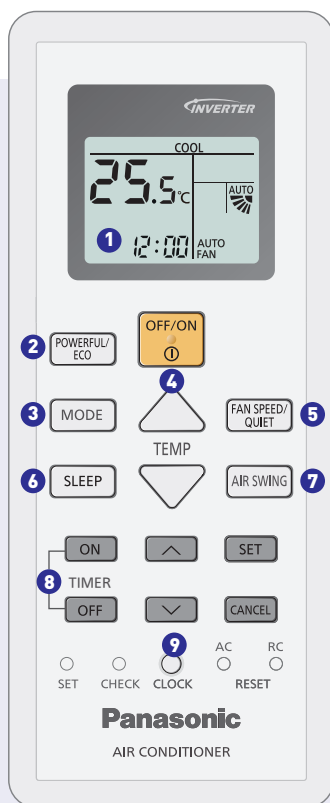
\*When pipes are not extended from the chargeless pipe length, the required amount of refrigerant is already in the unit.

## FEATURES



## EASY-TO-USE REMOTE CONTROLLER

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



## Wireless

Applicable to STANDARD  
INVERTER R32

- ❶ LCD display for an easy overview of the operation status.
- ❷ Toggles setting between POWERFUL mode and ECO with A.I. setting mode. POWERFUL mode provides fast cooling while ECO with A.I. mode provides energy saving.
- ❸ Toggles between AUTO, COOL and DRY setting mode.
- ❹ Press up or down to set the temperature.
- ❺ Adjusts the FAN SPEED or QUIET mode so you can sleep comfortably at night.
- ❻ Delays off timer with temperature control for better sleep.
- ❼ Set the airflow direction.
- ❽ Set the 24-hour Dual ON & OFF Timer.
- ❾ Set the actual time (hour and minute).

Long Airflow  
with Big Flap

Big bottom flap directs cooling and comforting air all across the room for an optimal cooling sensation.

Powerful Cooling  
at Start-up

POWERFUL Mode cools your room faster by 18%\* at the start to bring you cooling comfort instantly on a hot day.

\*Comparison of POWERFUL Cool Mode & normal cool mode by using 1.5HP Inverter Model.

## OUTDOOR UNIT



CU-PU9XKH



CU-PU12XKH

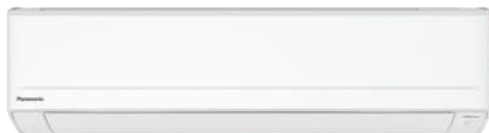
CU-PU18XKH  
CU-PU24XKH



## WALL-MOUNTED

STANDARD **INVERTER** R32 Single-Split Type

CS-QU9XKH | CS-QU12XKH | CS-QU18XKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)

CS-QU24XKH

Wireless  
(Standard)Wired  
CZ-RD514C  
(Optional)Network Adaptor  
CZ-TACG1  
(Optional)BIG FLAP  
(CS-QU9/12/18XKH)AEROWINGS  
(CS-QU24XKH)

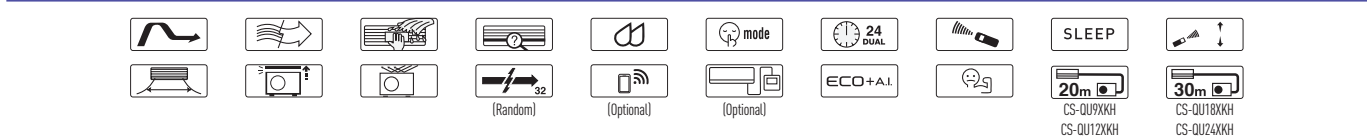
POWERFUL

INVERTER

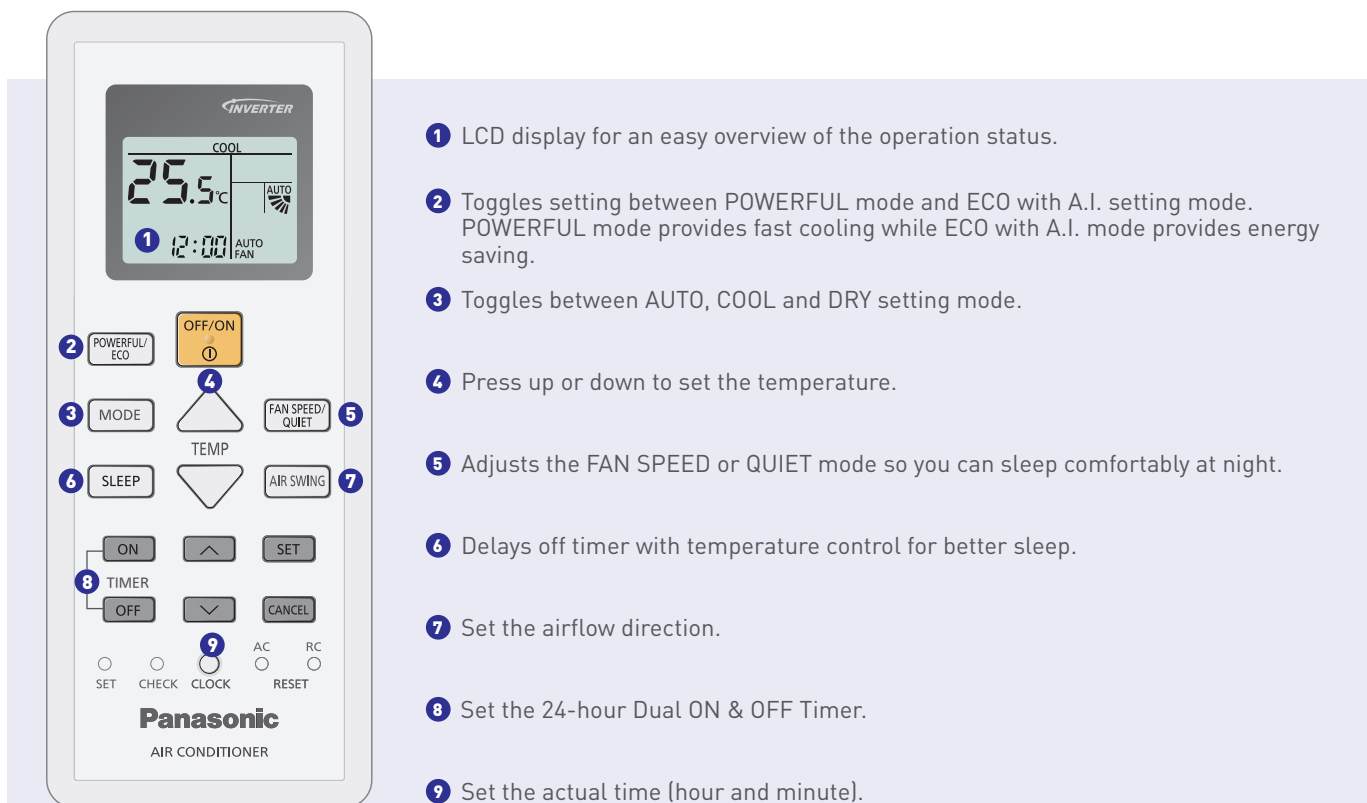
ECO+ A.I.

MODEL	INDOOR UNIT (50Hz)		CS-QU9XKH	CS-QU12XKH	CS-QU18XKH	CS-QU24XKH
	OUTDOOR UNIT		CU-QU9XKH	CU-QU12XKH	CU-QU18XKH	CU-QU24XKH
Cooling Capacity	(min-max)	kW	2.65 [0.84-2.90]	3.51 [1.02-4.00]	5.00 [1.10-5.40]	6.25 [1.12-7.18]
	(min-max)	Btu/h	9,040 [2,860-9,890]	12,000 [3,480-13,600]	17,100 [3,750-18,400]	21,300 [3,820-24,500]
EER	(min-max)	W/W	3.40 [3.73-3.22]	3.41 [3.71-3.25]	3.23 [3.79-3.00]	3.72 [4.48-3.50]
	(min-max)	Btu/hW	11.59 [12.71-10.99]	11.65 [12.65-11.06]	11.03 [12.93-10.22]	12.68 [15.28-11.95]
Electrical Data	Voltage	V	220-240	220-240	220-240	220-240
	Current	A	3.9-3.6	5.0-4.6	7.5-6.9	7.8-7.2
	Power Input (min-max)	W	780 [225-900]	1,030 [275-1,230]	1,550 [290-1,800]	1,680 [250-2,050]
Moisture Removal		L/h	1.6	2.0	2.8	3.5
		Pt/h	3.4	4.2	5.9	7.4
Air Circulation	Indoor	m³/min [ft³/min]	10.3 [365]	10.8 [380]	12.6 [445]	19.2 [680]
	Outdoor	m³/min [ft³/min]	26.7 [940]-28.3 [1,000]	30.2 [1,065]-30.8 [1,085]	39.3 [1,390]-39.3 [1,390]	34.9 [1,230]-34.9 [1,230]
Noise Level	Indoor (H / L / Q-Lo)	dB (A)	36/26/21	38/28/21	44/34/28	45/34/29
	Outdoor (H)	dB (A)	47-48	48-49	51-51	51-51
Dimensions Indoor (Outdoor)	Height	mm	290 [511]	290 [542]	290 [619]	295 [619]
		inch	11-7/16 [20-1/8]	11-7/16 [21-11/32]	11-7/16 [24-3/8]	11-5/8 [24-3/8]
	Width	mm	779 [650]	779 [780]	779 [824]	1,040 [824]
		inch	30-11/16 [25-19/32]	30-11/16 [30-23/32]	30-11/16 [32-15/32]	40-31/32 [32-15/32]
	Depth	mm	209 [230]	209 [289]	209 [299]	244 [299]
		inch	8-1/4 [9-1/16]	8-1/4 [11-13/32]	8-1/4 [11-25/32]	9-5/8 [11-25/32]
Net Weight	Indoor	kg (lb)	8 [18]	8 [18]	9 [20]	12 [26]
	Outdoor	kg (lb)	17 [37]	22 [49]	28 [62]	31 [68]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70	ø 12.70
		inch	3/8	3/8	1/2	1/2
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10.0	10.0
	Maximum Pipe Length	m	20	20	30	30
	Maximum Elevation Length	m	15	15	20	20
	Additional Refrigerant Gas*	g/m	10	10	15	15
Power Supply			Indoor	Indoor	Indoor	Indoor

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



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



## Wireless

Applicable to STANDARD  
INVERTER R32



**BIG FLAP**

Big bottom flap directs cooling and comforting air all across the room for an optimal cooling sensation.

**UP TO 18%**

**POWERFUL Mode** cools your room faster by 18%\* at the start to bring you cooling comfort instantly on a hot day.

\*Comparison of POWERFUL Cool Mode & normal cool



Big bottom flap directs cooling and comforting air all across the room for an optimal cooling

UP TO **10%\***

POWERFUL Mode cools your room faster by 18%\* at the start to bring you cooling comfort instantly on a hot day.

**BIG FLAP** sensation.

**10% FASTER COOLING**

\*Comparison of POWERFUL Cool Mode & normal cool mode by using 1.5HP Inverter Model.



CU-QU9XKH CU-QU12XKH CU-QU18XKH



CU-QU9XKH CU-QU12XKH CU-QU18XKH



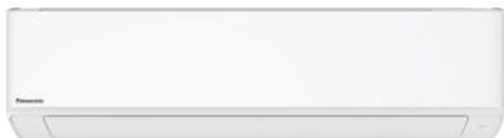
CU-QU9XKH	CU-QU12XKH	CU-QU18XKH CU-QU24XKH
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## WALL-MOUNTED

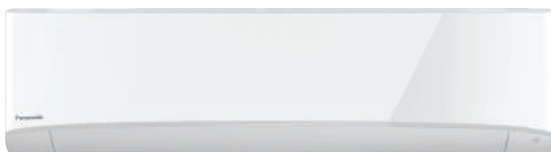
## STANDARD NON-INVERTER R32 Single-Split Type



CS-PN9WKH | CS-PN12WKH | CS-PN18WKH

Wireless  
(Standard)

CS-PN24XKH

Wireless  
(Standard)

CS-PN28WKH

Wireless  
(Standard)

## BIG FLAP | AEROWINGS | POWERFUL

(CS-PN9/12/18WKH  
CS-PN28WKH)

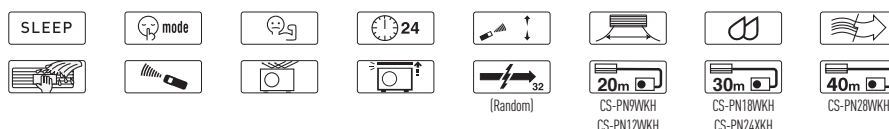
(CS-PN24XKH)

MODEL	INDOOR UNIT (50Hz)		CS-PN9WKH	CS-PN12WKH	CS-PN18WKH	CS-PN24XKH	CS-PN28WKH
	OUTDOOR UNIT		CU-PN9WKH	CU-PN12WKH	CU-PN18WKH	CU-PN24XKH	CU-PN28WKH
Cooling Capacity	(min-max)	kW	2.65-2.70	3.49-3.54	5.15-5.15	6.83-6.87	8.50-8.50
	(min-max)	Btu/h	9,040-9,210	11,900-12,100	17,600-17,600	23,300-23,400	29,000-29,000
EER	(min-max)	W/W	3.19-3.14	3.17-3.16	3.16-3.10	3.15-3.11	3.10-2.96
	(min-max)	Btu/hW	10.89-10.71	10.82-10.80	10.80-10.60	10.74-10.59	10.58-10.10
Electrical Data	Voltage	V	220-240	220-240	220-240	220-240	220-240
	Current	A	3.8-3.7	5.1-4.9	7.6-7.3	10.0-9.4	13.4-13.7
	Power Input	W	830-860	1,100-1,120	1,630 - 1,660	2,170-2,210	2,740-2,870
Moisture Removal		L/h	1.6	2.0	2.9	3.9	5.0
		Pt/h	3.4	4.2	6.1	8.2	10.6
Air Circulation	Indoor	m³/min [ft³/min]	10.9 [385]	11.5 [406]	12.7 [448]	20.5 [724]	21.5 [759]
	Outdoor	m³/min [ft³/min]	28.8 [1,020]-29.6 [1,040]	29.0 [1,020]-29.9 [1,060]	34.5 [1,220]-35.7 [1,260]	38.8 [1,370]-41.4 [1,460]	53.5 [1,890]-55.5 [1,960]
Noise Level	Indoor (H / L)	dB (A)	37/26	40/29	44/39	47/42	50/46
	Outdoor (H)	dB (A)	48-49	50-51	53-54	54-55	56-57
Dimensions Indoor (Outdoor)	Height	mm	290 [511]	290 [542]	290 [619]	295 [619]	302 [695]
		inch	11-7/16 [20-1/8]	11-7/16 [21-11/32]	11-7/16 [24-3/8]	11-5/8 [24-3/8]	11-29/32 [27-3/8]
	Width	mm	779 [650]	779 [780]	779 [824]	1,040 [824]	1,102 [875]
		inch	30-11/16 [25-19/32]	30-11/16 [30-23/32]	30-11/16 [32-15/32]	40-31/32 [32-15/32]	43-13/32 [34-15/32]
	Depth	mm	209 [230]	209 [289]	209 [299]	244 [299]	244 [320]
		inch	8-1/4 [9-1/16]	8-1/4 [11-13/32]	8-1/4 [11-25/32]	9-5/8 [11-25/32]	9-5/8 [12-5/8]
Net Weight	Indoor	kg (lb)	8 [18]	8 [18]	9 [20]	12 [26]	13 [29]
	Outdoor	kg (lb)	21 [46]	26 [57]	36 [79]	41 [90]	55 [121]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70	ø 15.88	ø 15.88
		inch	3/8	3/8	1/2	5/8	5/8
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	7.5	7.5	7.5
	Maximum Pipe Length	m	20	20	30	30	40
	Maximum Elevation Length	m	15	15	20	20	30
	Additional Refrigerant Gas*	g/m	10	10	15	25	25
Power Supply			Indoor	Indoor	Indoor	Indoor	Outdoor

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

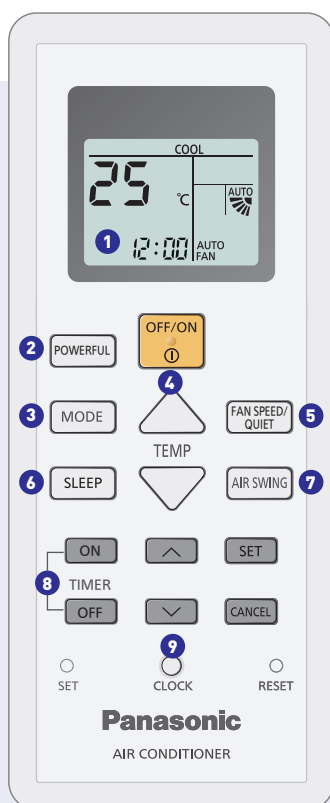


## FEATURES



## EASY-TO-USE REMOTE CONTROLLER

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



## Wireless

Applicable to STANDARD  
NON-INVERTER R32

- 1 LCD display for an easy overview of the operation status.
- 2 Pressing the POWERFUL button cools the room quickly. It provides fast comfort with full power and a strong airflow. This is perfect use immediately after coming home or when unexpected guests arrive.
- 3 Toggles between AUTO, COOL and DRY setting mode.
- 4 Press up or down to set the temperature.
- 5 Adjusts the FAN SPEED or QUIET function allows you to sleep comfortably at night.
- 6 Delays off timer with temperature control for better sleep.
- 7 Set the airflow direction.
- 8 Set the 24-hour ON & OFF Timer.
- 9 Set the actual time (hour and minute).

Long Airflow  
with Big Flap

Big bottom flap directs cooling and comforting air across the room for an optimal cooling sensation.

Powerful Cooling  
at Start-up

POWERFUL Mode cools your room faster by 18%\* at the start to bring you cooling comfort instantly on a hot day.

\*Comparison of POWERFUL Cool Mode & normal cool mode by using 1.5HP Inverter Model.

## OUTDOOR UNIT

Blue Fin  
Condenser

R32  
REFRIGERANT



CU-PN9WKH



CU-PN12WKH

CU-PN18WKH  
CU-PN24XKH

CU-PN28WKH

## FLOOR STANDING

INVERTER Floor Standing Type

Wireless  
(Standard)

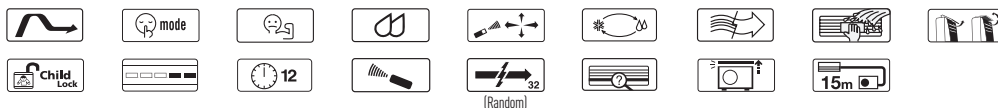
CS-E28NFQ



MODEL	INDOOR UNIT (50Hz)		CS-E28NFQ
	OUTDOOR UNIT		CU-E28NFQ
Cooling Capacity	(min-max)	kW	7.20
	(min-max)	Btu/h	24,600
EER	(min-max)	W/W	2.82
	(min-max)	Btu/hW	9.64
Electrical Data	Voltage	V	230
	Current	A	12.2
	Power Input (min-max)	W	2,550
Moisture Removal		L/h	4.2
		Pt/h	7.39
Air Circulation	Indoor	m³/min (ft³/min)	16.0 [565]
	Outdoor	m³/min (ft³/min)	59.5 [2,100]
Noise Level	Indoor (H / L / Q-Lo)	dB (A)	43/36/33
	Outdoor (H)	dB (A)	51
Dimensions Indoor (Outdoor)	Height	mm	1,880 [700]
		inch	74-1/64 [27-9/16]
	Width	mm	540 [998]
		inch	21-16/24 [39/19/64]
	Depth	mm	357 [320]
		inch	14-1/16 [12-19/32]
Net Weight	Indoor	kg (lb)	37 [82]
	Outdoor	kg (lb)	46 [101]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35
		inch	1/4
	Gas Side	mm	ø 12.70
		inch	1/2
Pipe Extension	Chargeless Pipe Length	m	7.0
	Maximum Pipe Length	m	15
	Maximum Elevation Length	m	10
	Additional Refrigerant Gas*	g/m	20
Power Supply			Indoor

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

## COOLING MODELS



## OUTDOOR UNIT



CU-E28NFQ

## FLOOR STANDING

## Floor Standing Type



Wireless  
(Standard)

CS-C18FFH-E  
CS-C28FFH-E  
CS-C28FFH8-E



Wireless  
(Standard)

CS-C45FFH-E

MODEL	INDOOR UNIT [50Hz]		CS-C18FFH-E	CS-C28FFH-E	CS-C28FFH8-E	CS-C45FFH-E
	OUTDOOR UNIT		CU-C18FFH-E	CU-C28FFH-E	CU-C28FFH8-E	CU-C45FFH-E
Cooling Capacity	(min-max)	kW	5.10-5.15	7.20-7.30	7.20	12.00-12.50
	(min-max)	Btu/h	17,400-17,600	24,600-25,000	24,600	41,000-42,700
EER	(min-max)	W/W	2.68 - 2.64	2.76-2.75	2.88	2.54-2.60
	(min-max)	Btu/hW	9.15 - 9.02	9.46-9.43	9.84	8.70-8.89
Electrical Data	Voltage	V	220-240	220-240	380	380-415
	Current	A	8.7-8.8	11.9-12.0	4.5	8.4
	Power Input (min-max)	W	1,900-1,950	2,600-2,650	2,500	4,710-4,800
Moisture Removal		L/h	2.8	4.2	4.2	7.5
		Pt/h	5.9	8.9	8.9	15.8
Air Circulation	Indoor	m³/min (ft³/min)	14.5 (512)-15.5 (547)	15.0 (530)-16.2 (572)	15.0 (530)	27.0 (953)
	Outdoor	m³/min (ft³/min)	31.0 (1,094)-32.0 (1,130)	56.0 (1,978)-60.0 (2,120)	56.0 (1,978)	92.0 (3,249)
Noise Level	Indoor (H / L / Q-Lo)	dB (A)	46/40-47/41	48/42-49/43	48/43	53/47
	Outdoor (H)	dB (A)	53-54	53-54	53	57
Dimensions Indoor (Outdoor)	Height	mm	1,680 (540)	1,680 (795)	1,680 (795)	1,880 (1,175)
		inch	66-1/8 (21-5/16)	66-1/8 (31-19/64)	66-1/8 (31-19/64)	74 (64-17/64)
	Width	mm	500 (780)	500 (900)	500 (900)	600 (900)
		inch	19-11/16 (30-23/32)	19-11/16 (35-7/16)	19-11/16 (35-7/16)	23-5/8 (35-7/16)
	Depth	mm	298 (289)	298 (320)	298 (320)	350 (320)
		inch	11-23/32 (11-3/8)	11-23/32 (12-19/32)	11-23/32 (12-19/32)	13-25/32 (12-19/32)
Net Weight	Indoor	kg (lb)	34 (75)	35 (77)	35 (77)	52 (115)
	Outdoor	kg (lb)	40 (88)	55 (121)	55 (121)	88 (194)
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 9.52	ø 9.52	ø 9.52
		inch	1/4	3/8	3/8	3/8
	Gas Side	mm	ø 12.70	ø 15.88	ø 15.88	ø 19.05
		inch	1/2	5/8	5/8	3/4
Pipe Extension	Chargeless Pipe Length	m	7.0	7.0	7.0	15.0
	Maximum Pipe Length	m	10	15	15	30
	Maximum Elevation Length	m	7	10	10	20
	Additional Refrigerant Gas*	g/m	25	30	30	50
Power Supply			Indoor	Indoor	Outdoor	Outdoor

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

## COOLING MODELS



CS-C18FFH-E



CS-C28FFH-E  
CS-C28FFH8-E



CS-C45FFH-E



CS-C18FFH-E  
CS-C28FFH-E  
CS-C28FFH8-E

## OUTDOOR UNIT



CU-C18FFH-E



CU-C28FFH-E  
CU-C28FFH8-E



CU-C45FFH-E

# Expanding the nanoe™ world in J

Increasingly adopted in a wide range of industries suc

## Public Transport



JR Kyushu



Keihan  
Railway



KEIO



JR East

## Home



● Humidifying air purifiers



● Humidifiers



● Clothes drying  
dehumidifiers



● Fans



● Air conditioners

## Public spaces



● Ceiling-embedded nanoe™ generators

### Hotels



Hiroshima Washington Hotel



Parkside Hotel

Panasonic is committed to the improvement



# Japan-24/7, Anywhere, Anytime.

such as railway, automotive, hotel and hospital industries

## Office



• 4-way cassette air conditioners

• Elevators



Hitachi

## Automotive

Toyota Lexus

Expanding adoption to **40** models



Suzuki

Mazda

Subaru

### Cafes

Cafe Doll



### Hospitals

Sakana Machi Hospital



### Nursery schools

Ayumi Nursery School



### Nursing homes

Samukawa Nursing Home

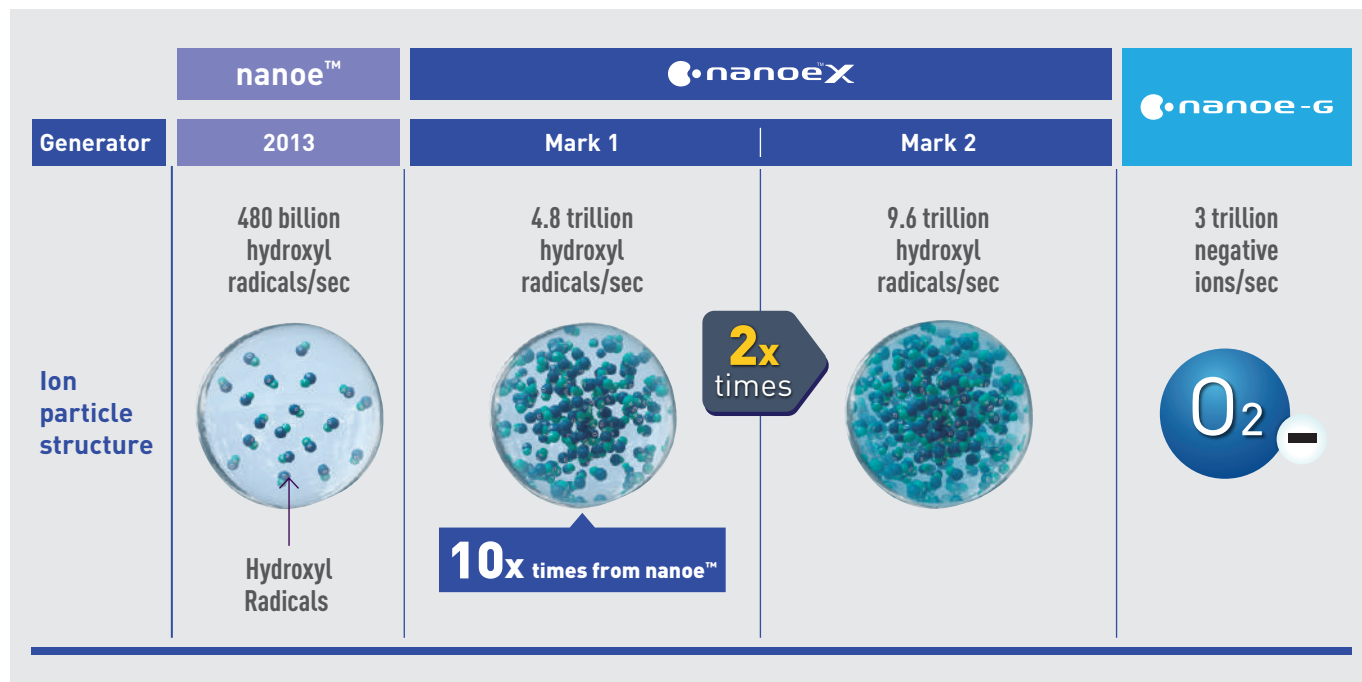


improvement of air quality with nanoe™ technology.

Trade names, trademarks and images of products/services are used in this material under approval by the entities concerned in Japan. [As of May 31<sup>st</sup>, 2020]

# The Development of nanoe™ technology

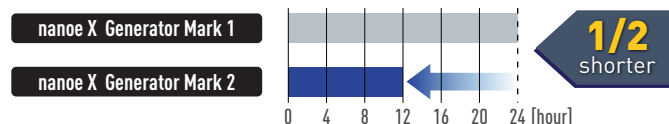
nanoe™ technology development started with the aim of using water's natural tendency to dissolve odour-causing substances. Through repeated improvements on the nanoe™ device over the years, it now generates 20 times more hydroxyl radicals to ensure the air is purified at all times.



## Effectiveness of nanoe X Generator Mark 2 vs nanoe X Generator Mark 1

### Pollen inhibition test\*

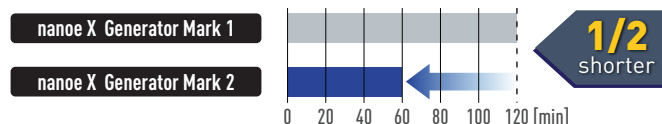
Required time to inhibit 99% of pollen



[Testing organisation] Panasonic Product Analysis Center [Testing method] Verified using electrophoresis method in an approximately 23m³ sized test room [Deodorisation method] nanoe™ released [Test substance] Cedar pollen[Test result] Inhibited 99% in 12 hours (L19YAD09)

### Deodorisation test\*

Required time to reduce aged-related body odour intensity by 1.7 level

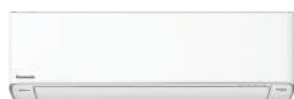


[Testing organisation] Panasonic Product Analysis Center [Testing method] Verified using the six-level odour intensity scale method in an approximately 23m³ sized test room [Deodorisation method] nanoe™ released [Test substance] Surface-attached aged related body odour [Test result] Odour intensity reduced by 1.7 levels in 1 hour (Y18HM059)

\*Lifespan of hydroxyl radicals contained in water is around 10 minutes, during this time they have the capacity to act against the pollutants. It may require longer to inhibit pollutants effectively, see the tests on effectiveness on nanoe™ X on airborne and adhesive pollutants.

nanoe™X

nanoe X Generator Mark 2



X-PREMIUM  
INVERTER R32



PREMIUM  
INVERTER R32

nanoe™X

nanoe X Generator Mark 1



DELUXE  
INVERTER R32 (RU)



DELUXE  
INVERTER R32 (SU)



## Deodorises frequently encountered odours

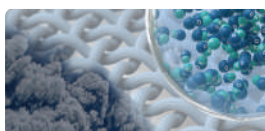
Odour causing substances such as cigarette smoke and garbage are removed to a hardly noticeable level.



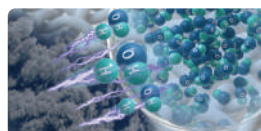
### Acts on odour causing substances & deodorises them

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

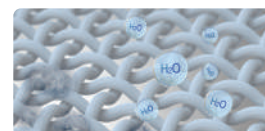
#### How nanoe™X Reduces Odour



nanoe™X reliably reaches odours embedded in fibres.

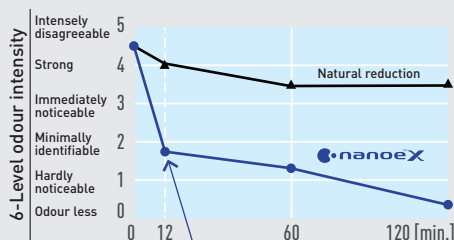


Hydroxyl radicals break down odour causing substances.



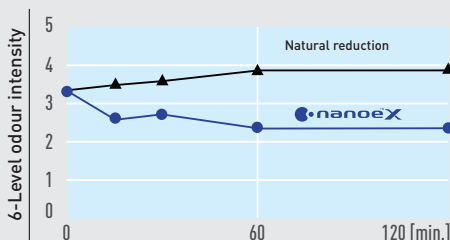
Odour is eliminated.

#### Cigarette Smoke Odour



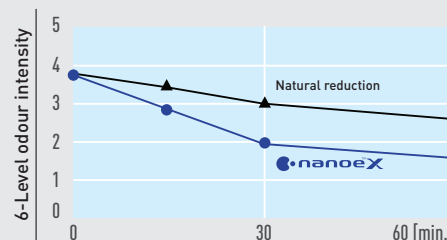
nanoe™X can reduced cigarette smoke odour intensity by 2.4 levels in 12 minutes.

#### Pet Odour



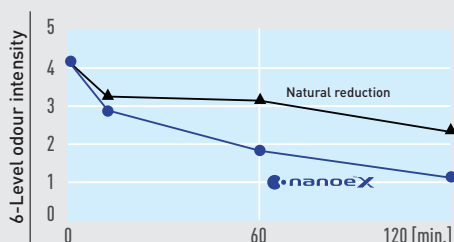
nanoe™X reduced pet odour intensity by 1.5 levels in 1 hour

#### Durian Odour



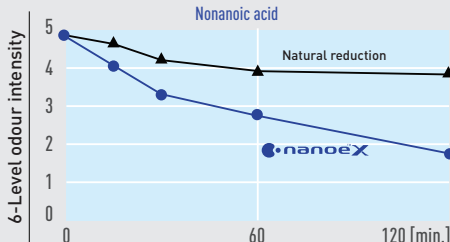
nanoe™X reduced durian odour intensity faster than natural reduction.

#### BBQ Odour



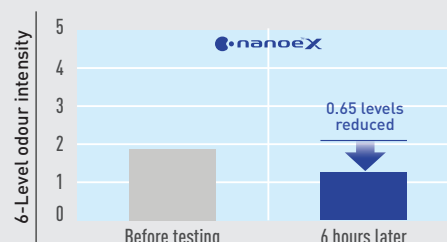
nanoe™X reduced BBQ odour intensity faster than natural reduction.

#### Sweat Odour



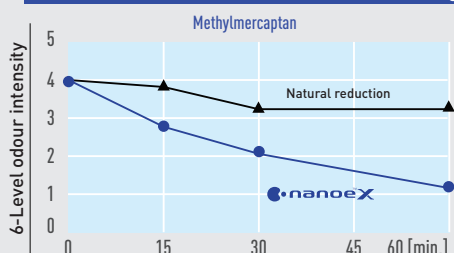
nanoe™X reduced sweat odour intensity massively in 1 hour.

#### Scalp Odour



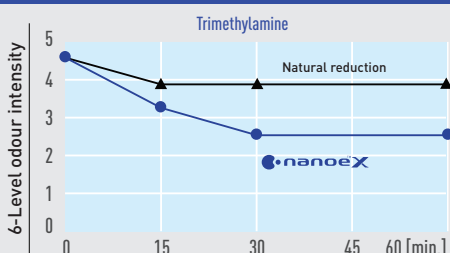
nanoe™X reduced scalp odour massively in 6 hours.

#### Garbage Odour

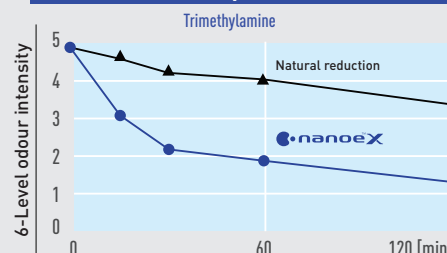


nanoe™X reduced garbage odour intensity in 0.5 hours.

#### Trimethylamine



#### 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. 23m <sup>3</sup>	0.2	Panasonic Product Analysis Center	4AA33-160615-N04
	Pet odour	Odour intensity reduced by 1.5 levels	Approx. 23m <sup>3</sup>	1	Panasonic Product Analysis Center	4AA33-160315-A34
	Durian odour	Odour intensity reduced by 1.0 levels	Approx. 23m <sup>3</sup>	0.5	Panasonic Product Analysis Center	1V332-180402-K01
	BBQ odour	Odour intensity reduced by 1.2 levels	Approx. 23m <sup>3</sup>	2	Panasonic Product Analysis Center	4AA33-151221-N01
	Sweat odour (Nonanoic acid)	Odour intensity reduced by 1.1 levels	Approx. 23m <sup>3</sup>	1	Panasonic Product Analysis Center	Y16HM016
	Sweat odour (Hexanoic acid)	Odour intensity reduced by 2.6 levels	Approx. 23m <sup>3</sup>	1	Panasonic Product Analysis Center	4AA33-160315-A35
	Scalp odour (Pillow cover)	Odour intensity reduced by 0.65 levels	Approx. 23m <sup>3</sup>	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. 23m <sup>3</sup>	0.5	Panasonic Product Analysis Center	1V332-18220-K11
	Garbage odour (Trimethylamine)	Odour intensity reduced by 1.4 levels	Approx. 23m <sup>3</sup>	0.5	Panasonic Product Analysis Center	1V332-180220-K12
	Damp odour (Triethylamine)	Odour intensity reduced by 1.7 levels	Approx. 23m <sup>3</sup>	0.5	Panasonic Product Analysis Center	Y16RA002

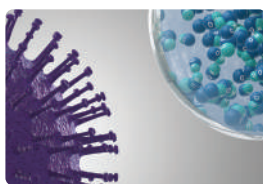
Results may vary based on usage, and seasonal and environment variables (temperature and humidity). nanoe<sup>TM</sup> X and nanoe<sup>TM</sup> inhibit activity or growth of viruses, but do not prevent infection. Deodorisation effect varies according to the environment (temperature and humidity), operation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



## Inhibits activity of airborne, adhered bacteria and viruses

nanoe<sup>TM</sup> X inhibits the activity of airborne and adhered bacteria and viruses.

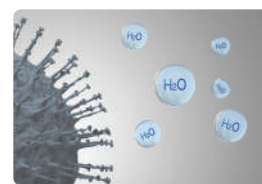
### How nanoe<sup>TM</sup> X Inhibits Bacteria & Viruses



nanoe<sup>TM</sup> X reliably reaches virus.



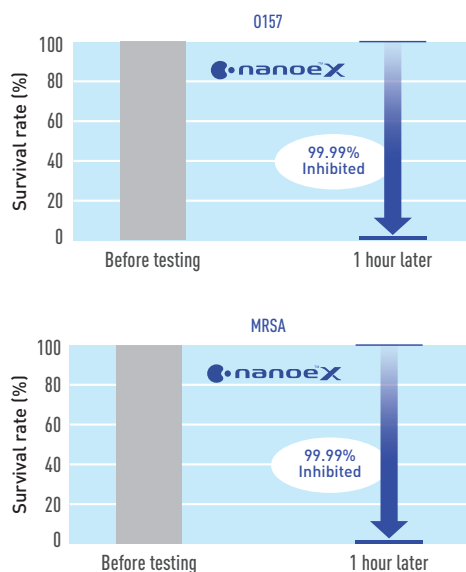
Hydroxyl radicals transform virus proteins.



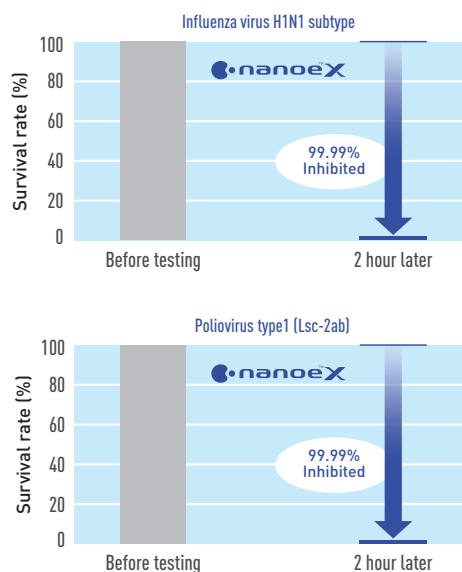
Virus activity is inhibited.



## 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. 25m <sup>3</sup>	6	Kitasato Research Center for Environmental Science	24_0300_1
	Bacteria Staphylococcus aureus	99.9% inhibited	Approx. 25m <sup>3</sup>	4	Kitasato Research Center for Environmental Science	2016_0279
Adhered	Virus Bacteriophage ΦX174	99.8% inhibited	Approx. 25m <sup>3</sup>	8	Japan Food Research Laboratories	13001265005-01
	Bacteria Staphylococcus aureus	99.1% inhibited	Approx. 25m <sup>3</sup>	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	6.7m <sup>3</sup>	8	Texcell France	1140-01 C3
	SARS-CoV-2	99.7% inhibited	6.7m <sup>3</sup>	24	Texcell France	1140-01 C3
Adhered virus	Influenza virus (H1N1 subtype)	99.9% inhibited	1m <sup>3</sup>	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
	Coxsackievirus (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 (O157)	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	1m <sup>3</sup>	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

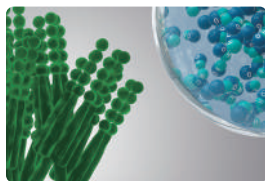
Results may vary based on usage, and seasonal and environment variables (temperature and humidity). nanoe<sup>TM</sup> X and nanoe<sup>TM</sup> inhibit activity or growth of viruses, but do not prevent infection.



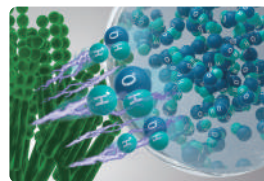
## Inhibits activity of airborne mould and adhered mould

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

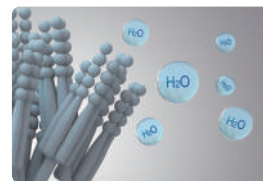
### How nanoe™ X Inhibits Growth of Mould



nanoe™ X reliably reaches mould.

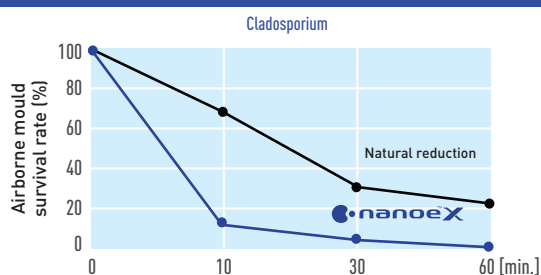


Hydroxyl radicals denature mould proteins.

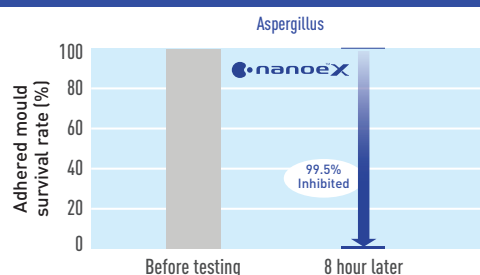


Mould activity is inhibited.

#### 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. 23m <sup>3</sup>	1	Japan Food Research Laboratories	205061541-001
	Aspergillus	99.5% inhibited	45L	8	Japan Food Research Laboratories	11038081001-02
Adhered	Alternaria	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	18077411001-0201
	Aspergillus	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	17145307001-0801
	Cladosporium	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	17145307001-0901
	Eurotium	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	17145307001-1001
	Fusarium	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	17145307001-1101
	Mucor	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	17145307001-1201
	Penicillium	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	17145307001-1301
	Stachybotrys	Inhibited	Approx. 23m <sup>3</sup>	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

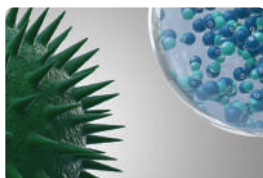
Results may vary based on usage, and seasonal and environment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.



## Inhibits pet-derived allergens and major allergens

In addition to allergens from sources such as dog / cat dander, mite faeces / carcasses, and airborne mould, other major allergens are also inhibited.

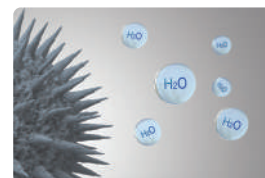
### How nanoe™ X Inhibits Allergens



nanoe™ X reliably reaches allergens.



Hydroxyl radicals denature allergen proteins.



Allergen is inhibited.

[ Representative evidence ]

\*\* : Units based on Panasonic standards

	Allergens	Result**	Capacity	Time (Hr.)	Testing organisation	Report No.
Mites	<b>Dermatophagoides pteronyssinus</b>	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160615-F01
	<b>Dermatophagoides farinae</b>	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-170301-F15
Mould	<b>Alternaria (Sooty moulds)</b>	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160615-F02
	<b>Aspergillus (Aspergillus genus)</b>	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	
	<b>Candida</b>	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	
	<b>Malassezia</b>	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	
Insect	<b>Cockroach</b>	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160615-F03
	<b>Moth</b>	Inhibited	Approx. 23m <sup>3</sup>	24		
Animal	<b>Dog (dander)</b>	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160620-F01
	<b>Cat (dander)</b>	Inhibited	Approx. 23m <sup>3</sup>	24		

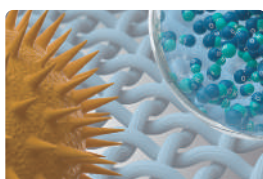
Results may vary based on usage, and seasonal and environment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.



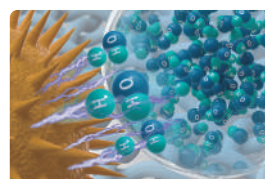
## Inhibits pollens globally all year round

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

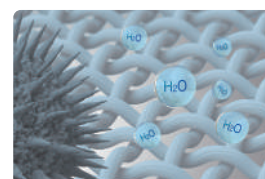
### How nanoe™ X Inhibits Pollen



nanoe™ X reliably reaches pollen.



Hydroxyl radicals denature pollen proteins.



Pollen is inhibited.

[ Representative evidence ]

\*\* : Units based on Panasonic standards

Pollen Allergens	Result**	Capacity	Time (Hr.)	Testing organisation	Report No.
Cedar	97% inhibited	Approx. 23m <sup>3</sup>	8	Panasonic Product Analysis Center	4AA33-151001-F01
Cypress	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-151028-F01
Orchard grass	Inhibited	Approx. 23m <sup>3</sup>	24		
Ragweed	Inhibited	Approx. 23m <sup>3</sup>	24		
Alnus japonica	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160601-F01
Japanese white birch	Inhibited	Approx. 23m <sup>3</sup>	24		
Artemisia	Inhibited	Approx. 23m <sup>3</sup>	24		
Olive	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160601-F02
Juniper	Inhibited	Approx. 23m <sup>3</sup>	24		
Casuarina	Inhibited	Approx. 23m <sup>3</sup>	24		
Miscanthus	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160701-F01
Timothy grass	Inhibited	Approx. 23m <sup>3</sup>	24		
Humulus japonicus	Inhibited	Approx. 23m <sup>3</sup>	24		

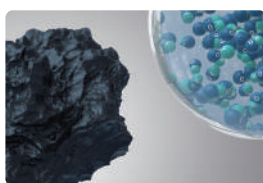
Results may vary based on usage, and seasonal and environment variables (temperature and humidity). nanoe<sup>TM</sup> X and nanoe<sup>TM</sup> inhibit activity or growth of viruses, but do not prevent infection.



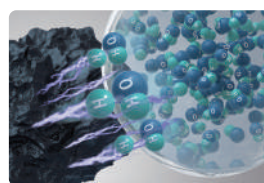
## Inhibition of hazardous substances known to be found in PM2.5

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

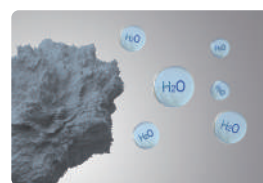
### How nanoe<sup>TM</sup> X Inhibits Hazardous Substances



nanoe<sup>TM</sup> X reliably reaches hazardous substance.



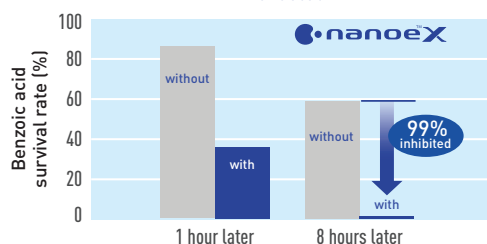
Hydroxyl radicals denature hazardous substances proteins.



Hazardous substance is inhibited.

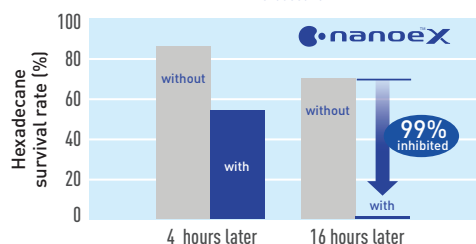
### Aromatic Carboxylic Acid

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. 23m <sup>3</sup>	16	Panasonic Product Analysis Center	Y17NF089
	Aromatic carboxylic acid (Benzoic acid)	99% inhibited	Approx. 23m <sup>3</sup>	8	Panasonic Product Analysis Center	Y17NF096
Carcinogen	Benzo [a] anthracene (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

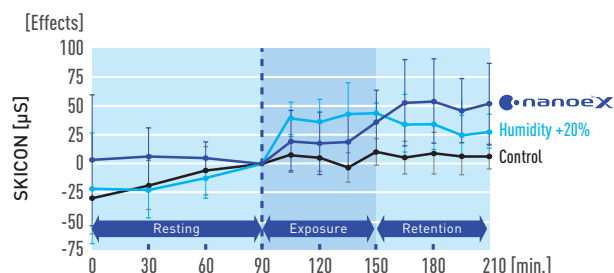
Results may vary based on usage, and seasonal and environment variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.



## 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. 34m <sup>3</sup>	1	Panasonic Product Analysis Center	USG-KT-14K-012-TM
	Effective	Standard household	28 days	FCG Research Institute, Inc.	19104
Hair	Effective	Approx. 46m <sup>3</sup>	8 Hr. × 15 days	Panasonic Product Analysis Center	USD-KS-15S-009-TM

Results may vary based on usage, and seasonal and environment 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.



Indonesia  
PT. Anugrah  
Analisis Sempurna



Singapore  
Temasek Polytechnic



Malaysia  
SIRIM Berhad



Vietnam  
Pasteur Institute



Thailand  
King Mongkut's University  
of Technology Thonburi



## Inside Cleaning

### How inside cleaning works

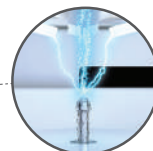
#### 1 Power "OFF"



First, the air conditioner has to be switched off.

Remark:  
Main power must be switched on for the entire duration.

#### 2 nanoe<sup>™</sup> X runs on Fan Operation



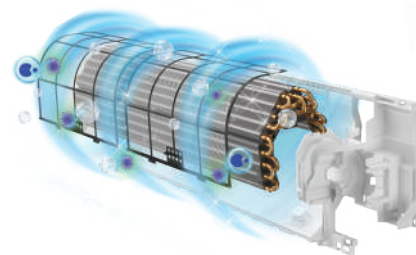
Fan Operation : ON  
Flap : Slightly open  
nanoe<sup>™</sup> Technology LED : ON

nanoe<sup>™</sup> X device applies high voltage to the moisture collected in the air to produce water particles that contain hydroxyl radicals.

The indoor unit will automatically run on Fan Operation for 2.5 hours during the inside cleaning process. The flap will open slightly, allowing airflow to circulate the hydroxyl radicals and perform inside cleaning within the air conditioning unit.

#### 3 Effective inhibition with hydroxyl radicals from nanoe<sup>™</sup> X Inside Cleaning\*

nanoe<sup>™</sup> X inhibits bacteria and viruses through the airflow route within 2.5 hours during the inside cleaning process.



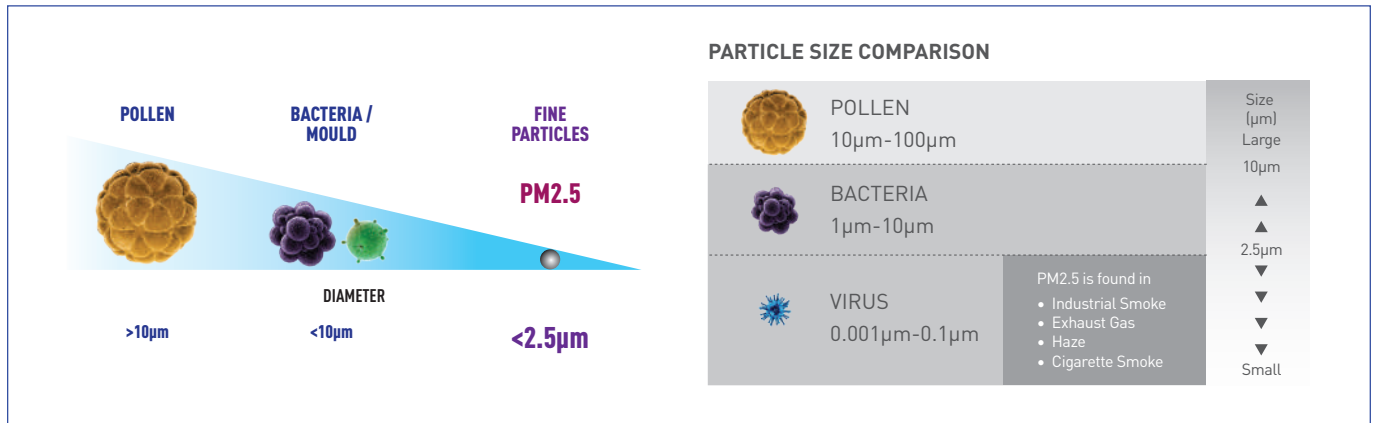
Substance Name	Target Parts	Result	Capacity	Time (Hr.)	Testing Organisation	Report No.
<b>Bacteria</b> <i>Escherichia coli</i> NBRC3301	Filter	99% inhibited [compared to non-operation]	42.8m <sup>3</sup>	2.5	Protectea,Ltd	PR190803
	Heat exchanger fin	99% inhibited [compared to non-operation]	42.8m <sup>3</sup>	2.5	Protectea,Ltd	PR190803
	Air outlet	99% inhibited [compared to non-operation]	42.8m <sup>3</sup>	2.5	Protectea,Ltd	PR191102
<b>Virus</b> <i>Escherichia coli</i> Phage QB NBRC20012	Filter	99% inhibited [compared to non-operation]	42.8m <sup>3</sup>	2.5	Protectea,Ltd	PR190803
	Heat exchanger fin	99% inhibited [compared to non-operation]	42.8m <sup>3</sup>	2.5	Protectea,Ltd	PR190803
	Air outlet	99% inhibited [compared to non-operation]	42.8m <sup>3</sup>	2.5	Protectea,Ltd	PR191102

\* Applicable to X-PREMIUM INVERTER R32, PREMIUM INVERTER R32 and DELUXE INVERTER R32.



## What is PM2.5?

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

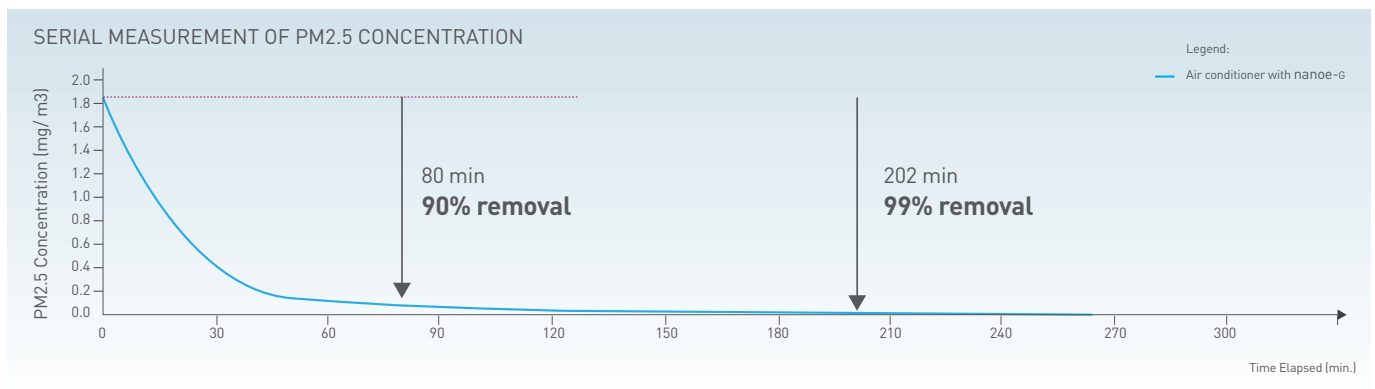


## Sources of PM2.5

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



## PM2.5 Removal Efficiency Based On Time



[ Representative evidence ]

\*\* : Units based on Panasonic standards

Substances name	Result**	Capacity	Time (Hr.)	Testing organisation	Report No.
Airborne Cigarette smoke [as PM2.5]	Removed by 99% [compared to the initial concentration]	23m <sup>3</sup>	202 mins.	FCG Research Institute, Inc.	25034

Split Type	WALL-MOUNTED						
	X-PREMIUM INVERTER R32	PREMIUM INVERTER R32	PREMIUM INVERTER R410A	DELUXE INVERTER R32	DELUXE INVERTER R32	STANDARD INVERTER R32	STANDARD INVERTER R32
Cooling Models	CS-XU10XKH CS-XU13XKH CS-XU18XKH CS-XU24XKH	CS-U10XKH CS-U13XKH CS-U18XKH CS-U24XKH CS-U28XKH	CS-S10TKH CS-S13TKH CS-S18TKH CS-S24TKH CS-S28TKH	CS-RU9YKH CS-RU12YKH CS-RU18YKH CS-RU24YKH	CS-SU9YKH CS-SU12YKH CS-SU18YKH CS-SU24YKH	CS-PU9XKH CS-PU12XKH CS-PU18XKH CS-PU24XKH	CS-QU9XKH CS-QU12XKH CS-QU18XKH CS-QU24XKH
							
COMFORT							
 iAUTO-X	●	●	●				
 Powerful Mode				●	●	●	●
 Humidity Sensor	●	●					
 ECO Mode with A.I.	●	●		●	●	●	●
 Inverter Control	●	●	●	●	●	●	●
 SLEEP	●	●	●	●	●	●	●
 Quiet Mode	●	●	●	●	●	●	●
 Soft Dry Operation Mode	●	●	●	●	●	●	●
 Personal Airflow Creation	●	●	●				
 Airflow Direction Control (Up & Down)				●	●	●	●
 Manual Horizontal Airflow Direction Control				●	●	●	●
 ECONAVI			●				
 Temperature Wave			●				
 Manual Airflow Direction Control (Left & Right)							
 Automatic Operation Mode (Cooling)							
CLEANER AIR							
 nanoe™X	●	●		●	●		
 nanoe-G	●	●	●				
 Odour-Removing Function	●	●	●	●	●	●	●
 Removable, Washable Panel	●	●	●	●	●	●	●
CONVENIENCE							
 24-Hour Dual ON & OFF Real Setting Timer	●	●	●	●	●	●	●
 24-Hour ON & OFF Real Setting Timer							
 12-Hour ON & OFF Setting Timer							
 LCD Wireless Remote Control	●	●	●	●	●	●	●
 Wireless Remote Control							
 Wireless LAN Remote Control For Internet Connection	● (Built-in)	● (Optional)	● (Optional)	● (Optional)	● (Optional)	● (Optional)	● (Optional)
 Wired Remote Control	● (Optional)	● (Optional)	● (Optional)	● (Optional)	● (Optional)	● (Optional)	● (Optional)
 Auto Movable Panel							
 Child Lock Function							
 Power Monitor Display							
RELIABILITY							
 Random Auto Restart (32 Restart Patterns)	●	●	●	●	●	●	●
 Auto Restart							
 Blue Fin Condenser	●	●	●	●	●	●	●
 Long Piping (Numbers indicate the maximum pipe length)	20m (XU10/13) 30m (XU18/24)	20m (U10/13) 30m (U18/24/28)	15m (S10/13), 20m (S24) 30m (S18/28)	20m (RU9/12) 30m (RU18/24)	20m (SU9/12) 30m (SU18/24)	20m (PU9/12) 30m (PU18/24)	20m (QU9/12) 30m (QU18/24)
 Top-Panel Maintenance Access	●	●	●	●	●	●	●
 Self-Diagnostic Function	●	●	●	●	●	●	●

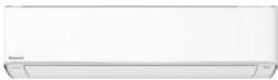








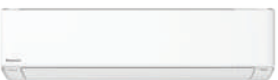
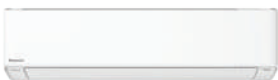














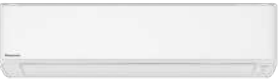






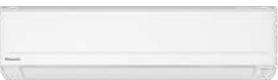






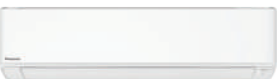





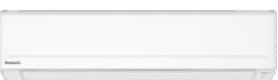





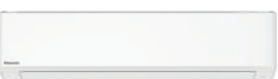
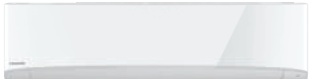











Horse Power (HP)	1.0HP	1.5HP	2.0HP
Capacity (Btu/h)	9,000/10,000	12,000/13,000	18,000
<b>WALL-MOUNTED</b> <b>X-PREMIUM INVERTER R32</b> Page 32-33	 <b>CS-XU10XKH</b> [CU-XU10XKH]	 <b>CS-XU13XKH</b> [CU-XU13XKH]	 <b>CS-XU18XKH</b> [CU-XU18XKH]
<b>WALL-MOUNTED</b> <b>PREMIUM INVERTER R32</b> Page 34-35	 <b>CS-U10XKH</b> [CU-U10XKH]	 <b>CS-U13XKH</b> [CU-U13XKH]	 <b>CS-U18XKH</b> [CU-U18XKH]
<b>WALL-MOUNTED</b> <b>PREMIUM INVERTER R410A</b> Page 36-37	 <b>CS-S10TKH</b> [CU-S10TKH]	 <b>CS-S13TKH</b> [CU-S13TKH]	 <b>CS-S18TKH</b> [CU-S18TKH]
<b>NEW</b> <b>WALL-MOUNTED</b> <b>DELUXE INVERTER R32</b> Page 38-39	 <b>CS-RU9YKH</b> [CU-RU9YKH]	 <b>CS-RU12YKH</b> [CU-RU12YKH]	 <b>CS-RU18YKH</b> [CU-RU18YKH]
<b>NEW</b> <b>WALL-MOUNTED</b> <b>DELUXE INVERTER R32</b> Page 40-41	 <b>CS-SU9YKH</b> [CU-SU9YKH]	 <b>CS-SU12YKH</b> [CU-SU12YKH]	 <b>CS-SU18YKH</b> [CU-SU18YKH]
<b>WALL-MOUNTED</b> <b>STANDARD INVERTER R32</b> Page 42-43	 <b>CS-PU9XKH</b> [CU-PU9XKH]	 <b>CS-PU12XKH</b> [CU-PU12XKH]	 <b>CS-PU18XKH</b> [CU-PU18XKH]
<b>WALL-MOUNTED</b> <b>STANDARD INVERTER R32</b> Page 44-45	 <b>CS-QU9XKH</b> [CU-QU9XKH]	 <b>CS-QU12XKH</b> [CU-QU12XKH]	 <b>CS-QU18XKH</b> [CU-QU18XKH]
<b>WALL-MOUNTED</b> <b>STANDARD NON-INVERTER R32</b> Page 46-47	 <b>CS-PN9WKH</b> [CU-PN9WKH]	 <b>CS-PN12WKH</b> [CU-PN12WKH]	 <b>CS-PN18WKH</b> [CU-PN18WKH]
<b>FLOOR STANDING</b> Page 48			
<b>FLOOR STANDING</b> Page 49			 <b>CS-C18FFH-E</b> [CU-C18FFH-E]

[ ]: Outdoor Unit

Cooling Models

2.5HP	3.0HP	5.0HP	
24,000	28,000	45,000	Features
 <p><b>CS-XU24XKH</b> [CU-XU24XKH]</p>			  
			  
			 
 <p><b>CS-U24XKH</b> [CU-U24XKH]</p>	 <p><b>CS-U28XKH</b> [CU-U28XKH]</p>		  
			  
			
 <p><b>CS-S24TKH</b> [CU-S24TKH]</p>	 <p><b>CS-S28TKH</b> [CU-S28TKH]</p>		  
			 
 <p><b>CS-RU24YKH</b> [CU-RU24YKH]</p>			  
			  
 <p><b>CS-SU24YKH</b> [CU-SU24YKH]</p>			  
			  
 <p><b>CS-PU24XKH</b> [CU-PU24XKH]</p>			  
			 
 <p><b>CS-QU24XKH</b> [CU-QU24XKH]</p>			  
			 
 <p><b>CS-PN24XKH</b> [CU-PN24XKH]</p>	 <p><b>CS-PN28WKH</b> [CU-PN28WKH]</p>		  
	 <p><b>CS-E28NFQ</b> [CU-E28NFQ]</p>		
	 <p><b>CS-C28FFH-E</b> [CU-C28FFH-E]</p> <p><b>CS-C28FFH8-E</b> [CU-C28FFH8-E]</p>	 <p><b>CS-C45FFH-E</b> [CU-C45FFH-E]</p>	

[illegible]



[illegible]



- Please read the Installation Instructions carefully before installing the unit, and the Operating Instructions before using it.
- Specifications are subject to change without prior notice.
- The contents of this catalogue are accurate as of January 2022.
- Due to printing considerations, actual colours may vary slightly from those shown.
- All graphics are provided solely for the purpose of illustrating a point.



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

Authorised Dealer

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Customer Care Center

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Khan 7 Makara, Phnom Penh, Cambodia

Tel: +855 2321 5503

Email : [service@kh.panasonic.com](mailto:service@kh.panasonic.com)



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Global site : [aircon.panasonic.com](http://aircon.panasonic.com)

PRO Club : [panasonicproclub.global](http://panasonicproclub.global)



[airconpanasonicglobal](https://www.youtube.com/channel/UCaRnpanasonicglobal)