## **Panasonic**®

- 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 2020.
- Due to printing considerations, the actual colours may vary slightly
- All graphics are provided merely for the purpose of illustrating a point.



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

#### **Panasonic Customer Care Center**

Ortigas Avenue Extension, Taytay, Rizal, 1920 Philippines Tel. No. : (02) 706-7603

Email : pmpc\_csdcic@ph.panasonic.com

Text hotline : Panasonic<space>message send to 2327 (Globe user)

Panasonic<space>message send to 0917-8902327 (Non-Globe user)

Website: www.panasonic.com/ph





Authorised Dealer

#### Panasonic Global Air Conditioner

Global Site: aircon.panasonic.com PROClub : panasonicproclub.global



AC-PHP-C-20

## **Panasonic**













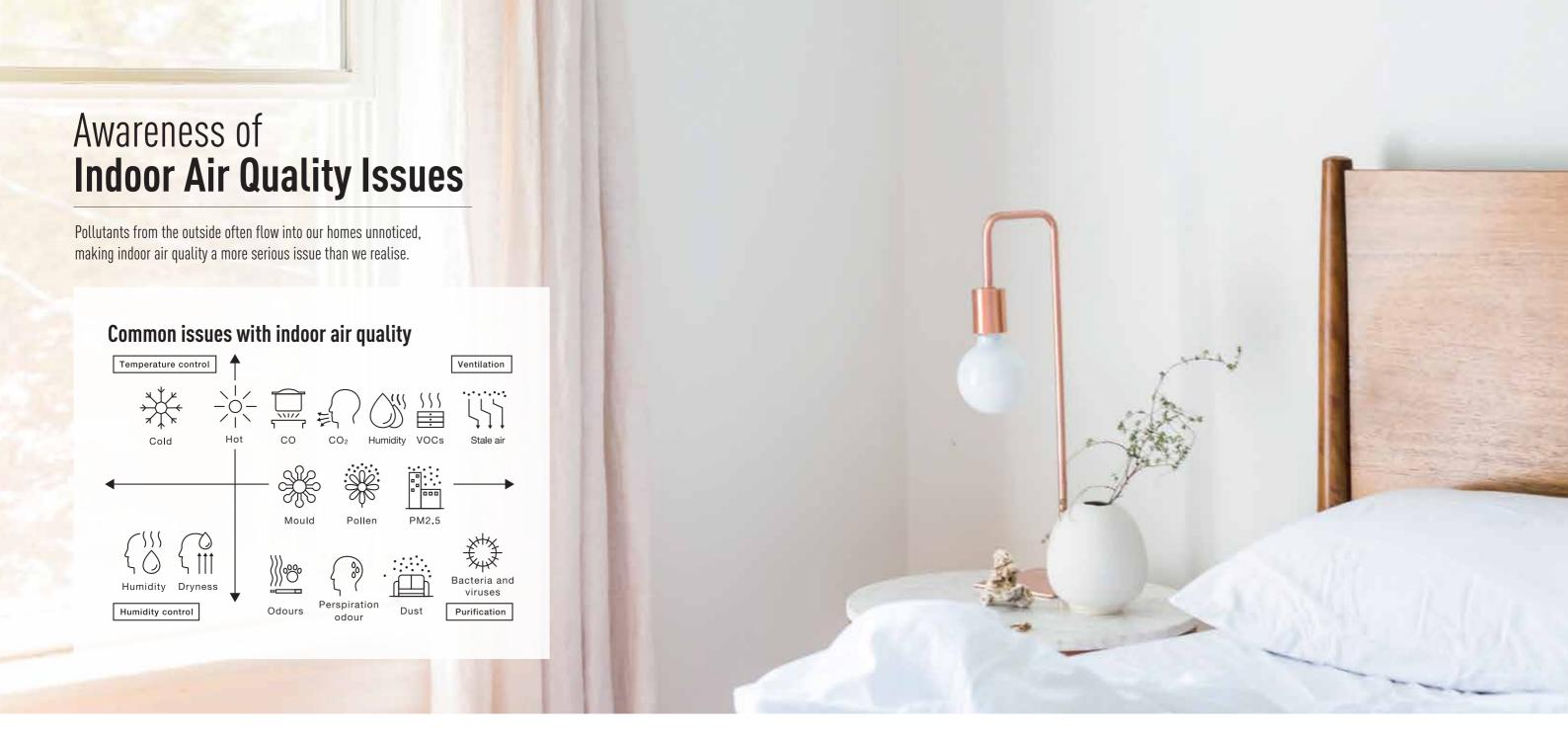
• nanoe | SKYWING | AEROWINGS | VINVERTER



A Better Life, A Better World

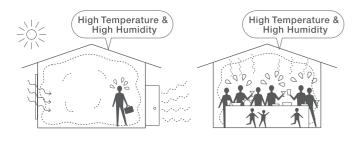
QUALITY AIR FOR LIFE





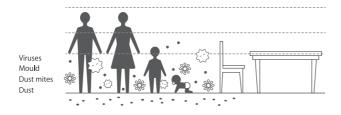
## **Living Room**

Do you experience hot stagnated air when you reach home? Do you feel uncomfortable in a living room full of people when you are having a party?



Hot air tends to stagnate in closed spaces. People contribute to the increase in temperature and humidity.

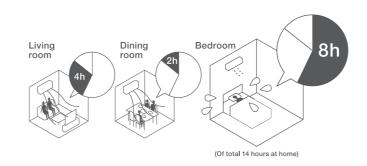
Does the difference in height between children and adults make a difference in their health?



All day long, children breathe closer to the floor and furniture.

## **Bedroom**

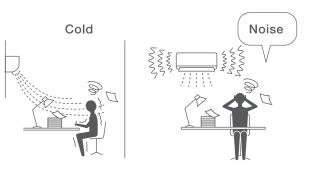
On average, which room do people spend the most time at home?



Most of us spend 8 hours a day sleeping in the bedroom to wake up refreshed the next day.

## **Study Room**

Do your children have trouble focusing on their studies in their room?



Concentration is disrupted by loud operating noises and they may feel colder in smaller rooms.



Panasonic Air Solutions are designed to provide quality air that helps people live more comfortably. We are introducing a full range of air solutions that is optimised for diverse lifestyles and various occasions.

Delivering comfort, health and better well-being through Quality Air for Life.







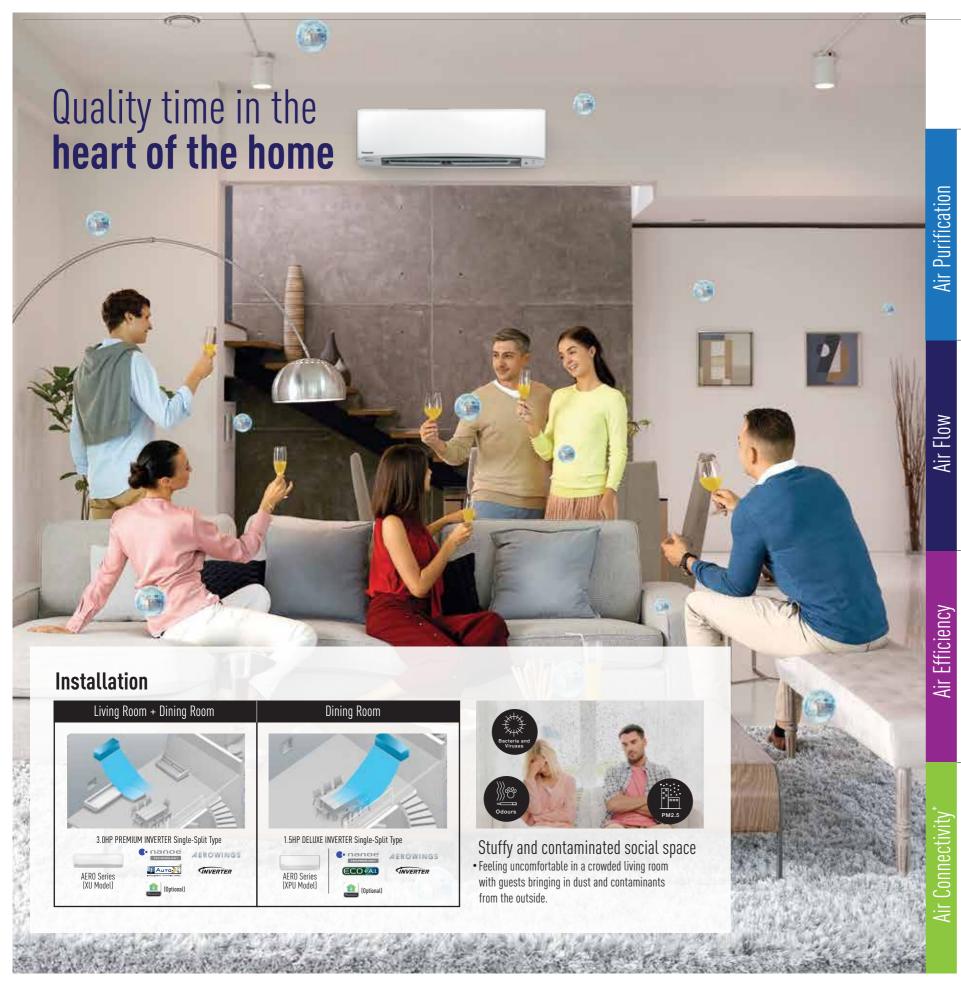


Living Room

Dining Room

Master Bedroom

Study Room



## Air Solutions for Living Room + Dining Room







• Inhibits bacteria and viruses that are commonly found in your home so that children can explore freely.



#### Fresh social space

• Reduces lingering food smells and other strong odours such as pet odour and tobacco.



Fast and direct cooling for social occasions

that are brought in by guests.

• Fast Cooling at start up to cool everyone instantly.



#### Gentle and even cooling when there are less occupants

GNVERTER

• AEROWINGS automatically switch to Shower Cooling when set temperature is reached to prevent overcooling.



Wide power output range to meet different room occupancy

 Enjoy a balanced comfort with a wide range of power output from 1.02kW to 4.20kW.



#### Automatically adjusts temperature with precise temperature control

Inverter varies the rotation speed of the compressor, providing a precise method of maintaining the set temperature.



Keep loved ones comfortable when you are away from home

• Comfort Cloud App lets you have full control of indoor air quality from your mobile device.



#### Easily pre-cool and monitor room temperature from anywhere

 Pre-cool your space and monitor real-time temperature when you are away.

\* Wireless LAN Remote Control for Internet Connection (optional network adaptor) applicable for ELITE INVERTER, PREMIUM INVERTER, DELUXE INVERTER and STANDARD INVERTER (1.0HP-2.0HP).



## Air Solutions for **Bedroom**





Fresh sheets and linens nanoe<sup>™</sup> X deeply penetrates into fabrics to deodorise and inhibit harmful pollutants.



Sleep with air that retains moisture nanoe™ X moisturises skin and

contribute to straighter, sleeker hair.

A healthier way to enjoy cooling comfort · Healthy airflow in the bedroom where you spend most of

your time resting.



Deep rejuvenating sleep

• Radiant Cooling provides all-round cooling with stable temperature, preventing overcooling for better sleep quality.



Comfortable sleep with stable temperature • Inverter minimises temperature fluctuations for consistent



Uninterupted sleep with quiet operation

• Inverter operates quietly with precise temperature control. cooling throughout the room.



24 hours of purified air in your bedroom • Switch ON nanoe™ mode to continuously purify your bedroom without cooling function to keep bedroom clean and fresh at all times.



Switch ON/OFF all air conditioners at once

• Remotely switch ON/OFF your air conditioning units in different rooms simultaneously before you go to bed.

\* Wireless LAN Remote Control for Internet Connection (optional network adaptor) applicable for ELITE INVERTER, PREMIUM INVERTER, DELUXE INVERTER and STANDARD INVERTER (1.0HP-2.0HP).



## Air Solutions for **Study Room**

# e nance-g

## Clean study room with minimal dust (PM2.5)

 Removes dust particles (PM2.5) by capturing and trapping them at the filter.

\*Applicable to DELUXE INVERTER only.



## Maintaining a healthier study environment

 Study and focus better in a room that is safe from bacteria and allergens, keeping illnesses at bay.



## Fresh air for an ideal study space

 Reduces strong odours that linger such as pet odour and sweat odour.



#### Comfortable environment for learning

• Cool air showers down gently and evenly across the room prevents overcooling for better concentration.



#### Book storage stays pleasantly dry

• Switch on 'Dry Mode' to control humidity.



## Optimal comfort in your study space with more energy savings

 ECO Mode with A.I. learns and adapts to your environment based on heat load conditions and air conditioning capacity to maximise energy savings.



#### Minimal distractions to stay focused

• Quiet Mode ensures low noise levels for a cool and peaceful study room atmosphere.



#### Fresh and purified air at all times

 Monitor air quality with ease and activate the nanoe™ mode using Panasonic Comfort Cloud App.



### Easily adjust temperature via mobile device

• Remotely control temperature even when you are away from home.

\* Wireless LAN Remote Control for Internet Connection (optional network adaptor) applicable for ELITE INVERTER, PREMIUM INVERTER, DELUXE INVERTER and STANDARD INVERTER [1.0HP-2.0HP].



# 24hrs Quality Air Purifies with Cooling ON/OFF

Hazardous Substances

The new Panasonic Air Conditioner with nanoe™ Technology features an independent air purification function that can address various types of pollutants in the air as well as on surfaces especially fabrics.

The water-based nanoe™ X particles can effectively reduce strong odours and inhibit harmful pollutants like bacteria and viruses, mould, allergens, pollen and hazardous substances. The nanoe™ X particles can even moisturise skin and hair.

nanoe-G with negative ions can effectively remove dust particles as small as PM2.5.

Thus, ensuring your loved ones enjoy better indoor air quality at all times.





nano-technology + electric =



nanoe™ is nano-sized electrostatic atomised water particles that are rich in OH radicals.

▶ Water-based particles for lasting effectiveness

nanoe™ X has lasting effectiveness as it is enveloped in water.



← Approx. 5-20nm —

► Huge quantity of OH radicals throughout the room

nanoe™ X device generates 4.8 trillion OH radicals per second that spread out extensively to every corner of your home.

► Tiny, nano-sized particles penetrate into fabrics easily

Much smaller than a steam particle, nanoe™ X particles sized 5-20nm can deeply penetrate into fabrics to inhibit pollutants and deodorise.







# eodorises

**C**•nanoe X

# nhibits Types of Pollutants — ••••••×





### **Discomfort caused** by various types of odours















The latest  $nanoe^{TM}$  X device uses a "multi-leader discharge" system that discharges through 4 needle-shaped electrodes for better performance.











pollutants (bacteria &



Harmful pollutants affect your health









## **Reduces frequently** encountered odours

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

## Inhibits airborne and adhered pollutants

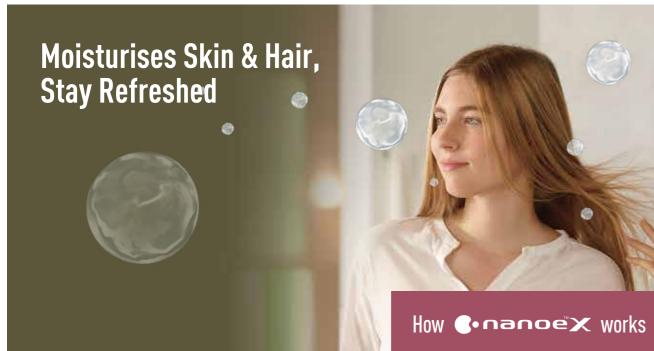
nanoe™ X inhibits harmful pollutants, keeping your loved ones away from allergies or diseases.

# oisturises



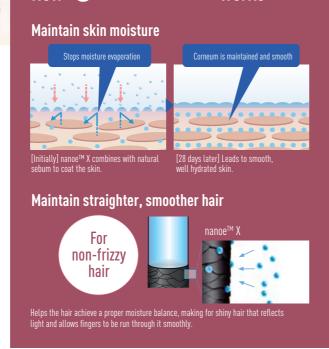
## **Dust Removal (PM2.5)**





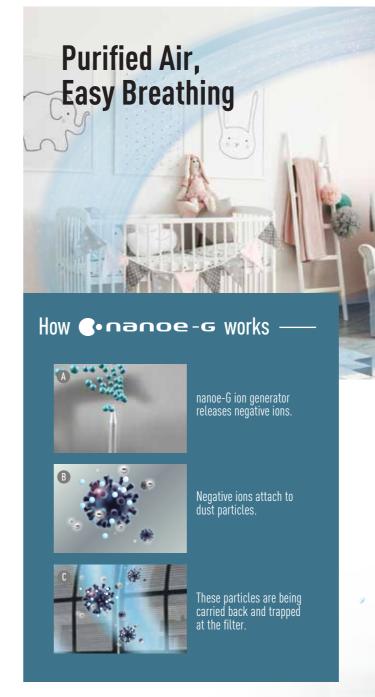
## Insufficient moisture in skin and hair





## Moisture retained in skin and hair

nanoe $^{\text{TM}}$  X water particles helps to achieve proper moisture balance, resulting in smooth, hydrated skin and hair.



## Removes dust particles as small as PM2.5

Negative ions are released to capture dust particles (PM2.5). These particles are carried back and trapped at the filter.



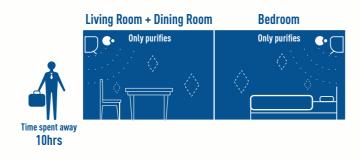


## Actively purifies your air and inhibits pollutants all day long



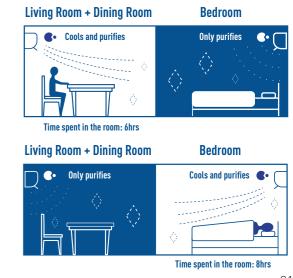
## Purify independently when you are away





## Cool and purify when you are at home







## Why nanoe™ Technology?



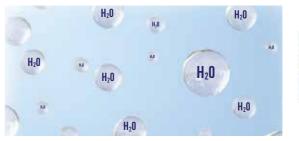
#### Purifies your air all day

 nanoe<sup>™</sup> Technology is able to function independently to continue purifying and deodorising your living space.



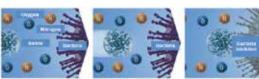
#### Asthma and allergy friendly

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



#### Natural H<sub>2</sub>O particles

• nanoe™ X is generated from moisture in the air that contains highly reactive components known as hydroxyl (OH) radicals.



Lasts more than 600 secs in the air

#### Longer life span of nanoe™ X particles

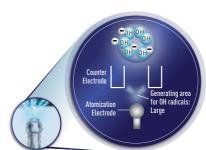
• 6-fold\* longer lifespan enables OH radicals to reach a greater area.

\*The lifespan of general air ions (negative ions) ranges from the tens of seconds



#### Effective on fabrics and surfaces

• nanoe™ X particles deodorise and inhibit pollutants on surfaces and even penetrate deeply into fabrics.



• nanoe™ X generator device requires no maintenance as nanoe $^{\text{TM}}$  X is generated from water in the air.



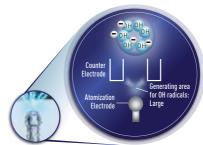
#### Inside Cleaning

 nanoe™ X inhibits bacteria and viruses at the filter. heat exchange fin and air outlet during inside cleaning process.

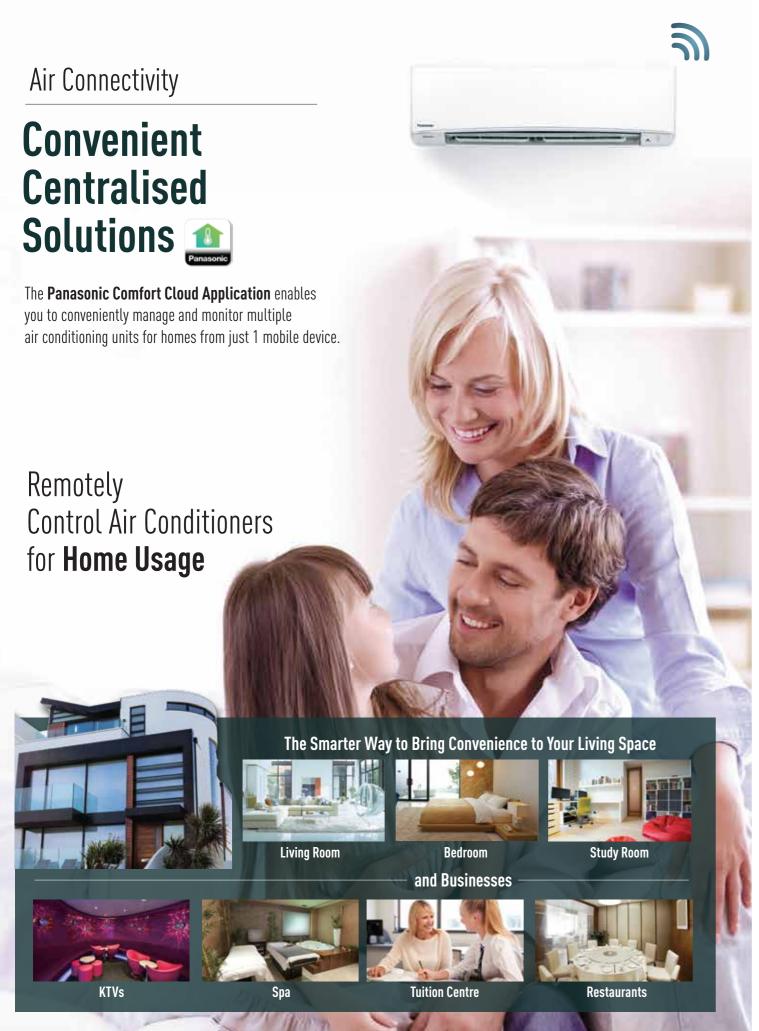


#### Safe and non-chemical particles

• Safety of nanoe™ X has been tested and proven by institutes and laboratories. Visit our website for a list of safety test data. https://www.panasonic.com/global/corporate/technology-design/technology/nanoe.html



#### Maintenance-free





Applicable for Residential Properties and Premises

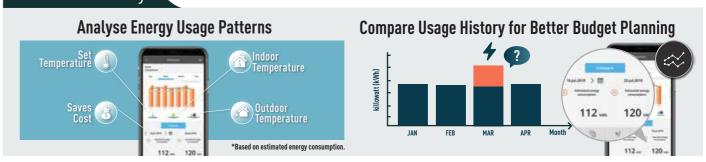
### **Smart** Control



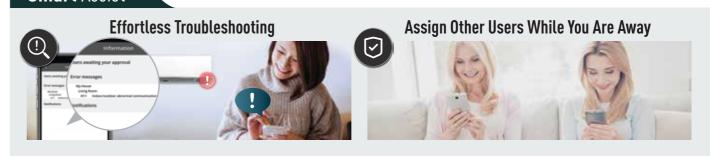
### **Smart** Comfort



### Smart Efficiency



### **Smart** Assist



#### **Compatible Device and Browsers**

1. iOS 9.0 or above 2. Android 4.4 or above





Video for setting up Panasonic Comfort Cloud Application for network adaptor:



Please note: This is not a definitive list of all compatible devices, other similiar devices which use supported Operating Systems should also work either via dedicated Apps. Please note that user experience may vary slightly depending on hardware and software combination

\* Wireless LAN Remote Control for Internet Connection (optional network adaptor) applicable for ELITE INVERTER, PREMIUM INVERTER, DELUXE INVERTER and STANDARD INVERTER (1.0HP-2.0HP).

## Air Flow

## Healthier cooling with faster, further airflow

Panasonic's air solutions deliver cooling comfort that adapts to you and your family's lifestyle in a healthier way.



## NEW POWERFUL Mode for Instant Cooling Comfort

#### **Enjoy faster cooling with** just a push of a button

• POWERFUL Mode will run both the compressor and indoor fan at super high speed, so you get to enjoy powerful cooling.



#### **POWERFUL** cooling at startup

- POWERFUL Mode cools your room faster by 18%\* the moment you switch on your air conditioner.
- Enjoy cooling comfort instantly, even on a hot day.





Total time needed to cool down the room from 35°C to 29°C is measured

tt Panasonic Amenity Room (size : 16.6m²)
he effect differs according to conditions in installation and usage.

\* Applicable to DELUXE INVERTER and STANDARD INVERTER (1.0HP-2.0HP).

#### SKYWING

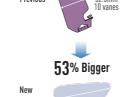
#### Wider Cooling Coverage

Ensuring every corner of the room is cooled.









· Bigger vanes for evenly distributed cooling sensation



#### **Radiant Cooling**

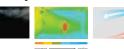
 Wider top airflow cools the ceiling and walls for an all-round cooling.



#### Fast Cooling

· Instant cooling with high-powered Inverter Compressor Technology, iAUTO-X.

#### Radiant Cooling Airflow Assessment



all-round cooling

the ceiling and

Temperature Distribution Test SKYWING directs the airflow from the ceiling unwards to cool and walls with an

from the bottom and cool air is discharged from

#### Fast Cooling Airflow Assessment





for instant cooling.

Shower Cooling Airflow Assessment



Slow cooling will result in uneven cools room evenly

Powerful airflow

#### **AEROWINGS**

#### Concentrated Airflow, Further

Further and faster airflow across the room.



#### Concentrated Airflow, Further, Faster



• Further, faster, concentrated airflow with 2 independent flaps and motors.

2 Independent Motors\* Control the Sub-Flap and Bigger Outer Flap

Sub-Flap Compresses and concentrates cool air. Bigger Outer Flap

Helps to deliver airflow further



#### **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.

#### Smoke Test

showers down gently and evenly

Distribution Test AEROWINGS directs AEROWINGS directs Hot air is drawn in from airflow upwards over cool air further and the top and cool air is a wider area then higher towards the discharged from the ceiling to avoid

## bottom to facilitate cool air showering down over

#### **Fast Cooling Airflow Assessmen**







AEROWINGS directs Slow cooling will airflow downwards result in uneven and towards you for cooling. instant cooling

cools instantly. A room is evenly

\*Design may vary according to models

### BIG FLAP

#### **Long Airflow**

Big bottom flap directs cool air across the room.





#### **Shower Cooling**

 Cool air is directed upwards to spread across room and showers down gently.



#### **Fast Cooling**

• BIG FLAP directs airflow downwards and straight to room occupants for a fast cooling effect.

## **Air Efficiency**

## **Eco-friendly Technologies**

saving technologies for sustainable living





#### Automatically adapts to your home and maximises energy savings

As each room in your home is different, ECO Mode with A.I. Control efficiently cools your room based on the amount of heat load contained. 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:

Room condition

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

ON POWERFUL mode.



#### When Your Air Conditioner is Switched On



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





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

#### \*Comparison of ECO Mode & normal mode by using 1.5HP Inverter Model

ECO Mode. Outside temperature : 35°C/24°C : 25°C, with Fan Speed: High. Horizontal Airflow direction

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

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

• Press POWERFUL/ once to switch

 Press POWERFUL/ 2nd time to switch ON ECO mode.

• Press POWERFUL/ 3rd time to cancel/ switch OFF ECO mode.



#### **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

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

\* Applicable to DELUXE INVERTER and STANDARD INVERTER (1.0HP-2.0HP)

#### **Inverter Technology**

## **Energy Saving and Precise Temperature Control**

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.



#### The "BRAIN" of the Inverter -The Micro Computer

Determines the most suitable operation mode as time passes and automatically adjusts power output for maximum comfort.

#### PAM (Pulse Amplitude Modulation)

Increases compressor voltage rapidly to provide powerful cooling to reach the set temperature fast at start up.

#### PWM (Pulse Width Modulated Wave)

Stabilises the compressor rotation speed when maintaining the set temperature.

#### **Quick Cooling and Constant Comfort**

PAM increases the power output to accelerate compressor speed at start up for quick cooling and stabilises the set temperature without wasting energy, offering constant comfort.

## **Recover Price Gap 16 Months Onwards**

P-TECh\* - The Power

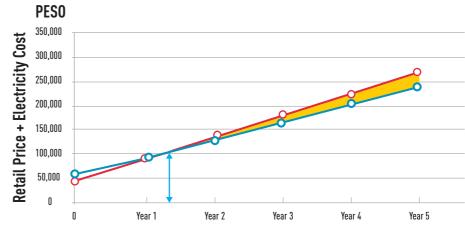
Behind Fast Cooling

Compressor achieves maximum

frequency in the shortest time

\*P-Tech is only applicable for models with iAUTO-X function.

from start up.



#### → 2HP Premium Inverter

#### -O 2HP Standard Non-Inverter

#### Cost Savings

\*Comparison of 2HP Premium Inverter and 2HP Standard Non- Inverter.

\*Calculation is based on [(Retail Price difference) / [Electricity cost difference]] X 12 Months= Recovery month. Annual energy consumption based on internal test result with estimated usage of 8 hours/day, Electricity cost= Peso 9.83 (rate selected based on 2014-2016 average rate for all Meralco Residential customers) and retail price value based on Dec 2018. \*Recovery months may vary depending on models selected, annual energy consumption, retail price and

Sustainable Refrigerant

## An Environmentally-friendly Refrigerant



The commonly used refrigerants in air conditioning system contribute greatly to greenhouse gas emissions and ozone depletion, consequently putting our environment at stake.

At Panasonic, we are committed to healthier lifestyles and to reducing our environmental footprint. That's why our air conditioners have been increasingly adopting the more eco-friendly R32 refrigerant.

R32 refrigerant represents innovation in every way. It is an excellent heat transfer medium which leads to greater energy efficiency and cost effectiveness. R32 refrigerant 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

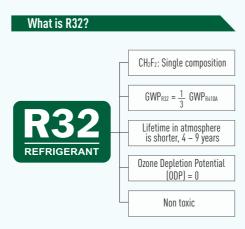
It consumes less energy, helping you to save on electricity costs.

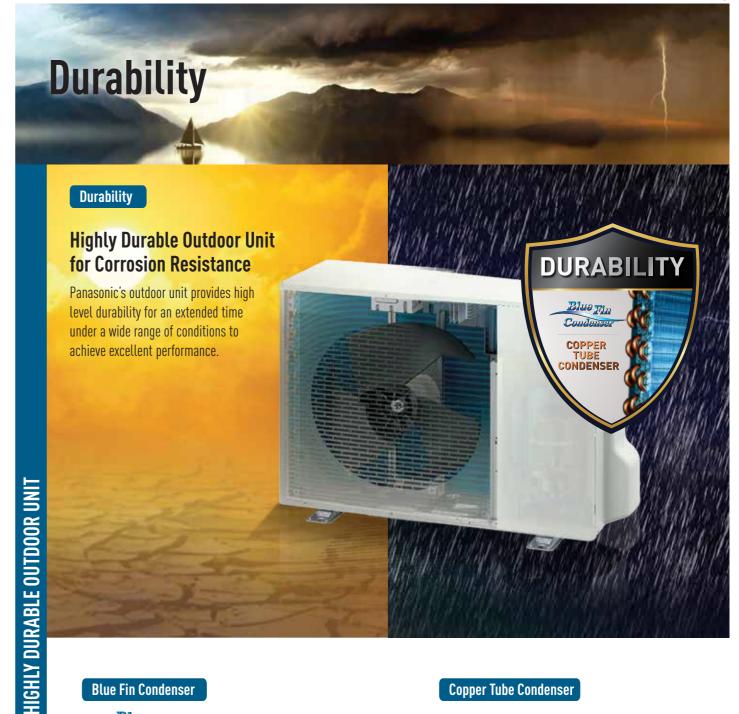


R32 has zero impact on the ozone layer, therefore it's environment friendly.

#### REFRIGERANT PROPERTIES OF R22, R32, and R410A

	R-32	R410A	R-22
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





#### Blue Fin Condenser



- Improves durability
- Protects condenser against corrosion from air, water and other corrosive
- Anti-rust



#### **Corrosion Resistant Outdoor Coating**

- Outdoor unit layered with multiple type of protection coatings
- Withstand salty air and rain exposure
- Resist corrosion



#### Copper Tube Condenser

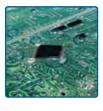
#### **COPPER TUBE** CONDENSER

- Better heat transfer
- Higher cooling capacity
- Easy to clean and maintain



#### Water Resistant PCB

- Contact sections on Printed Circuit Board (PCB) are resin-potted
- Prevent adverse effects by unlikely contact with droplets of water



30

R32







Wired

(Optional)



CS-VU9UKQ | CS-VU12UKQ | CS-VU18UKQ

Wireless

Network Adaptor (Optional)

SPECIFICATIONS Cooling ( ): Outdoor Unit

MODEL		(60Hz)	CS-VU9UKQ [cu-vu9ukQ]	CS-VU12UKQ [CU-VU12UKQ]	CS-VU18UKQ [CU-VU18UKQ]
0 1: 0 ::	(min-max)	kW	2.50 (0.84-3.60)	3.40 (1.02-4.50)	5.20 (1.10-5.80)
Cooling Capacity	(min-max)	kJ/h	9,000 (3,020-12,960)	12,240 (3,670-16,200)	18,720 (3,960-20,880)
EER	(min-max)	kJ/hW	18.37 (14.05-14.40)	14.93 (14.98-13.50)	12.91 (13.66-12.50)
	Voltage	V	230	230	230
Electrical Data	Current	А	2.3	3.8	6.7
	Power Input (min-	-max) W	490 (215-900)	820 (245-1,200)	1,450 (290-1,670)
Moisture Removal		L/h	1.5	2.0	2.9
Moisture Removat		Pt/h	3.2	4.2	6.1
Air Circulation	Indoor	m³/min (ft³/min)	11.5 (405)	12.8 (450)	14.8 (520)
MII CITCULALIUII	Outdoor	m³/min (ft³/min)	31.3 (1,110)	31.3 (1,110)	34.9 (1,230)
Noise Level	Indoor (H / L / Q-I	Lo) dB (A)	42/26/18	43/28/19	46/36/33
Noise Level	Outdoor (H)	dB (A)	47	48	49
	Height ———	mm	306 [542]	306 [542]	306 [619]
	Height ——	inch	12-1/16 [21-11/32]	12-1/16 [21-11/32]	12-1/16 [24-3/8]
Dimensions	Width -	mm	950 [780]	950 [780]	950 [824]
Indoor (Outdoor)		inch	37-13/32 [30-23/32]	37-13/32 [30-23/32]	37-13/32 [32-15/32]
	Deeth	mm	280 [289]	280 [289]	280 [299]
	Depth ——	inch	11-1/32 [11-13/32]	11-1/32 [11-13/32]	11-1/32 [11-25/32]
Net Weight	Indoor	kg (lb)	12 [26]	12 [26]	12 [26]
ivet weight	Outdoor	kg (lb)	30 [66]	30 [66]	33 [73]
	Liquid Side ——	mm	ø 6.35	ø 6.35	ø 6.35
Refrigerant Pipe	Liquid Side	inch	1/4	1/4	1/4
Diameter	Gas Side ——	mm	ø 9.52	ø 12.70	ø 12.70
	ods side ——	inch	3/8	1/2	1/2
	Chargeless Pipe I	Length m	7.5	7.5	10.0
Pipe Extension	Maximum Pipe Le	ength m	20	20	30
Tipe Exterision	Maximum Elevati	on Length m	15	15	20
	Additional Refrige	erant Gas* g/m	10	10	25
Power Supply			Outdoor	Outdoor	Outdoor

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

#### **BACKLIT SKY CONTROLLER**

Enjoy innovative design at your fingertips with the new stylish and sleek Backlit Sky Controller.

With fast access to key operations and a smooth gliding cover revealing more options, controlling your settings has become simple and intuitive.

With a width of 58.9mm and a length of 164.7mm, the Sky Controller fits comfortably into your hand.



- Backlit LED screen lets you view operations status in the dark.
- 2 Power Button.
- 3 Switch on nanoe™ Technology function to activate nanoe™ X and nanoe-G for air purification and deodorisation even when the air conditioner is switched off.
- Toggles between RADIANT COOLING and Fast Cooling (DIRECT).
- 5 Press up or down to set the temperature.
- (3) iAuto-X lets you come home with FAST COOLING. Then enjoy continuous comfort with RADIANT COOLING which avoids direct cooling.
- Set the airflow direction.
- 8 Adjusts the fan speed.
- Toggles between iAUTO-X, COOL and DRY setting mode.
- 10 Delays off timer with temperature control for better sleep.
- 11 Set 24-hour Dual ON & OFF Timer.
- 2 Set the actual time [hour and minute].









#### **COOLING MODELS**













#### **OUTDOOR**









#### WALL-MOUNTED : PREMIUM **(INVERTER** Single-Split Type



CS-XU9VKQ | CS-XU12VKQ

**SPECIFICATIONS** 



CS-XU18VKQ | CS-XU24VKQ | CS-XU30VKQ



Wireless



Wired (Optional)



Network Adaptor (Optional)



Wireless



Wired (Optional)

Network Adaptor (Optional)

#### ( ): Outdoor Unit

MODEL		(60Hz)	CS-XU9VKQ [CU-XU9VKQ]	CS-XU12VKQ [CU-XU12VKQ]	CS-XU18VKQ [CU-XU18VKQ]	CS-XU24VKQ [CU-XU24VKQ]	CS-XU30VKQ [CU-XU30VKQ]
Carlina Caraciba	(min-max)	kW	2.55 (0.84-3.20)	3.30 (1.02-4.20)	5.20 (1.10-6.00)	6.00 (1.12-7.10)	8.20 (1.15-10.00)
Cooling Capacity	(min-max)	kJ/h	9,180 (3,020-11,520)	11,880 (3,670-15,120)	18,720 (3,960-21,600)	21,600 (4,030-25,560)	29,520 (4,140-36,000)
EER	(min-max)	kJ/hW	14.34 [13.42-13.09]	14.14 [14.12-12.81]	14.86 [13.66-12.86]	13.94 (12.59-12.78)	12.83 (11.83-11.25)
	Voltage	V	230	230	230	230	230
Electrical Data	Current	А	3.1	3.9	5.7	7.1	11.0
	Power Input (min-max)	W	640 (225-880)	840 (260-1,180)	1,260 (290-1,680)	1,550 (320-2,000)	2,300 (350-3,200)
Moisture Removal		L/h	1.6	1.9	2.9	3.3	4.8
Moisture Removat		Pt/h	3.4	4.0	6.1	7.0	10.1
Air Circulation	Indoor n	n³/min (ft³/min)	10.8 (380)	11.3 (400)	20.4 (720)	21.2 (745)	21.3 (750)
All Circutation	Outdoor n	n³/min (ft³/min)	25.4 (895)	31.6 (1,120)	34.9 [1,230]	46.3 (1,635)	50.2 (1,770)
Noise Level	Indoor (H / L / Q-Lo)	dB (A)	38/26/23	40/28/25	45/36/33	46/37/34	47/37/34
Noise Levet	Outdoor (H)	dB (A)	47	48	50	50	53
	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)
Dimensions	Width	mm	919 (650)	919 (780)	1,120 (824)	1,120 (875)	1,120 (875)
Indoor (Outdoor)	Width	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)
	Бериі	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)	13 (29)
	Outdoor	kg (lb)	20 [44]	27 (60)	32 (71)	41 (90)	55 (121)
	Liquid Side —————		ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35
Refrigerant Pipe		inch	1/4	1/4	1/4	1/4	1/4
Diameter	Gas Side ————	mm	ø 9.52	ø 12.70	ø 12.70	ø 15.88	ø 15.88
	oas side	inch	3/8	1/2	1/2	5/8	5/8
	Chargeless Pipe Length	n m	7.5	7.5	10.0	10.0	10.0
Pipe Extension	Maximum Pipe Length	m	20	20	30	30	30
i ibe Extension	Maximum Elevation Ler	ngth m	15	15	20	20	20
	Additional Refrigerant (	Gas* g/m	10	10	15	25	25
Power Supply	·		Outdoor	Outdoor	Outdoor	Outdoor	Outdoor

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

#### **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.

- 1 LCD display for an easy overview of the operation status.
- 2 iAUTO-X lets you come home to fast cooling. Then enjoy continuous comfort with Shower Cooling which avoids direct cooling.
- 3 Switch on nanoe™ Technology function to activate nanoe $^{\text{TM}}$  X and nanoe-G for air purification and deodorisation even when the air conditioner is switched off.
- 4 Press up or down to set the temperature.
- 5 Toggles between iAUTO-X, COOL and DRY setting mode.
- 6 Delays off timer with temperature control for better sleep.
- 7 Set the airflow direction.
- 8 Adjusts the fan speed.
- Quiet function allows you to sleep comfortably at night.
- 10 Set 24-hour Dual ON & OFF Timer.
- 11 Set the actual time (hour and minutel



Wireless Applicable to PREMIUM INVERTER

#### **DUAL TIMER**



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

For convenience, the dual timer repeats everyday until you cancel it.

1 Select ON or OFF Timer





2 Set the time.



#### **C**• nanoe TECHNOLOGY C• nanoe'X C• nanoe-G

#### **AEROWINGS**





#### **COOLING MODELS**



#### **OUTDOOR**

















#### WALL-MOUNTED : DELUXE **(INVERTER** Single-Split Type

CS-XPU9WKQ | CS-XPU12WKQ | CS-XPU18WKQ





Wireless





Wired (Optional)

Network Adaptor (Optional)

**SPECIFICATIONS** Cooling ( ): Outdoor Unit

MODEL		(60Hz)	CS-XPU9WKQ [CU-XPU9WKQ]	CS-XPU12WKQ [CU-XPU12WKQ]	CS-XPU18WKQ [CU-XPU18WKQ]
	(min-max)	kW	2.54 (0.84-3.10)	3.06 (1.02-3.80)	5.00 (1.10-5.40)
Cooling Capacity	(min-max)	kJ/h	9,140 (3,020-11,160)	11,020 (3,670-13,680)	18,000 (3,960-19,440)
EER	(min-max)	kJ/hW	13.64 (13.73-12.61)	14.69 (14.98-11.69)	11.61 (13.66-10.80)
Electrical Data	Voltage	V	230	230	230
	Current	А	3.2	3.4	7.0
	Power Input (min-	-max) W	670 (220-885)	750 (245-1,170)	1,550 (290-1,800)
		L/h	1.6	1.7	2.8
Moisture Removal		Pt/h	3.4	3.6	5.9
A: 0: 1 I:	Indoor	m³/min (ft³/min)	10.3 (365)	10.8 (380)	12.6 (445)
Air Circulation	Outdoor	m³/min (ft³/min)	27.3 (960)	31.6 (1,120)	39.3 (1,390)
Noise Level	Indoor (H / L / Q-l	Lo) dB (A)	36/26/21	38/28/21	44/34/28
Noise Level	Outdoor (H)	dB (A)	47	48	51
	Height ———	mm	290 (511)	290 (542)	290 (619)
	neight ——	inch	11-7/16 (20-1/8)	11-7/16 (21-11/32)	11-7/16 (24-3/8)
Dimensions	Width ————————————————————————————————————	mm	779 (650)	779 (780)	779 (824)
Indoor (Outdoor)		inch	30-11/16 (25-19/32)	30-11/16 (30-23/32)	30-11/16 (32-15/32)
		mm	209 (230)	209 (289)	209 (299)
	Бериі ——	inch	8-1/4 (9-1/16)	8-1/4 (11-13/32)	8-1/4 (11-25/32)
Net Weight	Indoor	kg (lb)	8 (18)	8 (18)	9 (20)
ivet weight	Outdoor	kg (lb)	18 (40)	23 (51)	29 (64)
	Liquid Side ———	mm	ø 6.35	ø 6.35	ø 6.35
Refrigerant Pipe	Liquiu Side	inch	1/4	1/4	1/4
Diameter	Gas Side ———	mm	ø 9.52	ø 9.52	ø 12.70
	oas side —	inch	3/8	3/8	1/2
	Chargeless Pipe I	Length m	7.5	7.5	10.0
Pipe Extension	Maximum Pipe Le	ength m	20	20	30
Tipe Exterision	Maximum Elevation	on Length m	15	15	20
	Additional Refrige	erant Gas* g/m	10	10	15
Power Supply			Outdoor	Outdoor	Outdoor

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

#### **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.

- 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.
- Switch on nanoe<sup>™</sup> Technology function to activate nanoe $^{TM}$  X and nanoe-G for air purification and deodorisation even when the air conditioner is switched off.
- 4 Adjust the FAN SPEED or QUIET function allows you to sleep comfortably at night.
- 5 Press up or down to set the temperature.
- 6 Toggles between AUTO, COOL and DRY setting mode.
- **7** Set the airflow direction.
- 8 Delays off timer with temperature control for better sleep.
- Set 24-hour Dual ON & OFF Timer.
- 10 Set the actual time (hour and minute).



Wireless Applicable to DELUXE INVERTER

#### **DUAL TIMER**



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

For convenience, the dual timer repeats everyday until you cancel it.

1 Select ON or OFF Timer





2 Set the time.



#### **C**• nanoe TECHNOLOGY C• nanoe'X C• nanoe-G

#### AEROWINGS





#### COOLING MODELS

NG MU	DELS		
<b>/</b>	<u> </u>	(G) mode	<b>W</b>
	ECO+AJ.	<b></b> €-nanosX	<b>@</b> +nanoe-a
	24 DUAL	M. C.	(Optional)
[Random]	Ö	20m © CS-XPU9WKQ CS-XPU12WKQ	30 <sub>m</sub> © CS-XPU18WKQ
		©g CCO+AI	ECO+AI • • • • • • • • • • • • • • • • • • •

#### **OUTDOOR**











CU-XPU18WKQ

#### WALL-MOUNTED : STANDARD **(INVERTER** Single-Split Type

## NEW



CS-PU9WKQ | CS-PU12WKQ | CS-PU18WKQ



CS-PU24VKQ



Wireless



Wired (Optional)



Wireless Wired (Optional)

**SPECIFICATIONS** Cooling ( ): Outdoor Unit

MODEL		(60Hz)	CS-PU9WKQ [CU-PU9WKQ]	CS-PU12WKQ [CU-PU12WKQ]	CS-PU18WKQ [CU-PU18WKQ]	CS-PU24VKQ [CU-PU24VKQ]
0 11 0 11	(min-max)	kW	2.54 (0.84-3.10)	3.06 (1.02-3.80)	5.00 (1.10-5.40)	6.00 (1.12-6.70)
Cooling Capacity	(min-max)	kJ/h	9,140 (3,020-11,160)	11,020 (3,670-13,680)	18,000 (3,960-19,440)	21,600 (4,030-24,120
EER	(min-max)	kJ/hW	13.64 [13.73-12.61]	14.69 [14.98-11.69]	11.61 (13.66-10.80)	12.13 (12.59-12.06)
	Voltage	V	230	230	230	230
Electrical Data	Current	А	3.2	3.4	7.0	8.2
	Power Input (min	-max) W	670 (220-885)	750 (245-1,170)	1,550 (290-1,800)	1,780 (320-2,000)
4		L/h	1.6	1.7	2.8	3.3
Moisture Removal		Pt/h	3.4	3.6	5.9	7.0
A: 0: 1 I:	Indoor	m³/min (ft³/min)	10.3 (365)	10.8 (380)	12.6 (445)	20.3 (715)
Air Circulation	Outdoor	m³/min (ft³/min)	27.3 (960)	31.6 (1,120)	39.3 (1,390)	36.0 (1,270)
Noise Level	Indoor (H / L / Q-	Lo) dB (A)	36/26/21	38/28/21	44/34/28	46/37/34
	Outdoor (H)	dB (A)	47	48	51	50
	11.5.14	mm	290 (511)	290 (542)	290 (619)	302 (619)
	Height ———	inch	11-7/16 (20-1/8)	11-7/16 (21-11/32)	11-7/16 (24-3/8)	11-29/32 (24-3/8)
Dimensions	Width	mm	779 (650)	779 (780)	779 [824]	1,102 (824)
Indoor (Outdoor)		inch	30-11/16 (25-19/32)	30-11/16 (30-23/32)	30-11/16 (32-15/32)	43-13/32 (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)
vet weight	Outdoor	kg (lb)	18 (40)	23 (51)	29 (64)	35 (77)
	Liquid Side ——	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
Refrigerant Pipe	Liquid Side ——	inch	1/4	1/4	1/4	1/4
Diameter	Gas Side ——	mm	ø 9.52	ø 9.52	ø 12.70	ø 15.88
	Gas Side ——	inch	3/8	3/8	1/2	5/8
	Chargeless Pipe	Length m	7.5	7.5	10.0	10.0
Dina Extansian	Maximum Pipe Le	ength m	20	20	30	30
Pipe Extension	Maximum Elevati	on Length m	15	15	20	20
	Additional Refrigo	erant Gas* g/m	10	10	15	25
Power Supply			Outdoor	Outdoor	Outdoor	Outdoor

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

#### **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.

- 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 Adjust the FAN SPEED or QUIET function allows you to sleep comfortably at night.
- 4 Press up or down to set the temperature.
- 5 Toggles between AUTO, COOL and DRY setting mode.
- 6 Set the airflow direction.
- Delays off timer with temperature control for better sleep.
- 8 Set 24-hour Dual ON & OFF Timer.
- 9 Set the actual time (hour and minute).



Wireless Applicable to CS-PU9/12/18WKQ

#### **DUAL TIMER**



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

For convenience, the dual timer repeats everyday until you cancel it.

1 Select ON or OFF Timer





2 Set the time.

SET

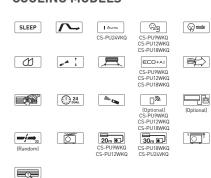
#### BIG FLAP







#### **COOLING MODELS**



#### **OUTDOOR**

**R32** 









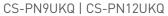
CU-PU12WKQ



CU-PU18WKQ

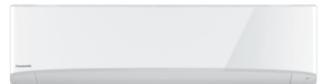
#### WALL-MOUNTED : STANDARD NON-INVERTER Single-Split Type







Wireless



CS-PN18UKQ | CS-PN24UKQ



Wireless

MODEL		[60Hz]	CS-PN9UKQ	CS-PN12UKQ	CS-PN18UKQ	CS-PN24UKQ
MODEL		(00112)	[CU-PN9UKQ]	[CU-PN12UKQ]	[CU-PN18UKQ]	[CU-PN24UKQ]
Cooling Consoity		kW	2.50	3.35	5.05	6.70
Cooling Capacity ————————————————————————————————————		kJ/h	9,000	12,060	18,180	24,120
EER		kJ/hW	10.7	11.2	10.5	11.0
	Voltage	V	230	230	230	230
Electrical Data	Current	А	3.7	4.8	7.6	9.6
	Power Input	W	840	1,080	1,730	2,190
Moisture Removal		L/h	1.5	1.9	2.8	3.8
Moisture Removat		Pt/h	3.2	4.0	5.9	8.0
Air Circulation	Indoor	m³/min (ft³/min)	9.6 (339)	11.0 (388)	18.4 (650)	20.8 (734)
	Outdoor	m³/min (ft³/min)	29.2 (1,030)	33.6 (1,190)	36.9 [1,300]	52.5 (1,850)
Noise Level	Indoor (H / L)	dB (A)	36/26	40/29	43/39	47/42
Noise Level	Outdoor (H)	dB (A)	49	50	55	60
	Height ——	mm	290 (511)	290 (542)	302 (619)	302 (695)
	Height ——	inch	11-7/16 (20-1/8)	11-7/16 (21-11/32)	11-29/32 (24-3/8)	11-29/32 (27-3/8)
Dimensions	Width	mm	799 (650)	799 (780)	1,102 [824]	1,102 (875)
Indoor (Outdoor)	widin	inch	31-15/32 (25-19/32)	31-15/32 (30-23/32)	43-13/32 (32-15/32)	43-13/32 (34-15/32)
	D45	mm	197 (230)	197 (289)	244 (299)	244 [320]
	Depth ——	inch	7-3/4 [9-1/16]	7-3/4 [11-13/32]	9-5/8 (11-25/32)	9-5/8 (12-5/8)
Net Weight	Indoor	kg (lb)	8 (18)	8 (18)	12 (26)	12 [26]
iver weight	Outdoor	kg (lb)	21 (46)	29 [64]	35 (77)	54 (119)
	Liquid Side ——	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
Refrigerant Pipe	Liquia Siae ——	inch	1/4	1/4	1/4	1/4
Diameter	Gas Side ——	mm	ø 9.52	ø 12.70	ø 12.70	ø 15.88
	Gas Side ———	inch	3/8	1/2	1/2	5/8

7.5

20

15

10

Outdoor

7.5

20

15

10

Outdoor

7.5

30

20

15

Outdoor

7.5

30

20

25 Outdoor

Chargeless Pipe Length

Maximum Pipe Length

Maximum Elevation Length

Additional Refrigerant Gas\*

#### **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.

- 1 LCD display for an easy overview of the operation status.
- 2 Automatic Intelligence switches fan speed for faster cooling with just one touch of a button.
- 3 Quiet function allows you to sleep comfortably at night.
- 4 Adjust the fan speed.
- 5 Press up or down to set the temperature.
- 6 Toggles between AUTO, COOL and DRY setting mode.
- Set the airflow direction.
- 8 Delays off timer with temperature control for better sleep.
- 9 Set 24-hour ON & OFF Timer.
- 10 Set the actual time (hour and minute).



Wireless Applicable to STANDARD NON-INVERTER

#### BIG FLAP



#### **COOLING MODELS**









#### **OUTDOOR**



**R32** 











40

Pipe Extension

Power Supply

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

## Multi-Split Air Conditioning System

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



#### OUTDOOR

MODELS	CU-2S18PKZ	Indoor Units: Possible Combination Patterns ( Must be
2 Rooms	Blue Fin	Port A 2.8 or 3.2  Either unit  Port B 2.8 or 3.2
		Either unit

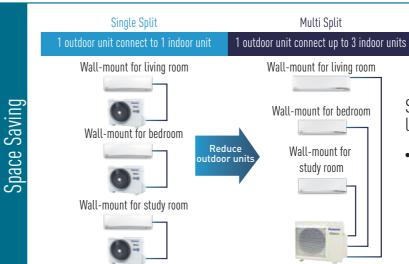
- It is possible to have a combination of wall-mounted models (CS-S9, S12TKZW) for the (CU-2S18PKZ) Outdoor Unit Ports.
- A minimum of 2 indoor units must be connected.

#### **OUTDOOR**

MODELS	CU-3S27KKZ	Indoor Units: Possible Combination Patterns ( Must be within capacity range )
2		Port A 2.8 or 3.2 or 4.0 or 5.0 or 6.0
Rooms	Blue <sub>Fin</sub>	Port B 2.8 or 3.2 or 4.0 or 5.0 or 6.0
	Condenser	Port C 2.8 or 3.2 or 4.0 or 5.0 or 6.0

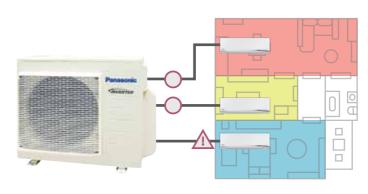
- It is possible to have a combination of wall-mounted models (CS-S9, S12, S18, S24TKZW, CS-MS15TKZ) for the (CU-3S27KKZ) Outdoor Unit Ports.
- A minimum of 2 indoor units must be connected.

## Advantages Of Multi-Split Air Conditioning System



Space-saving installation with less outdoor units required

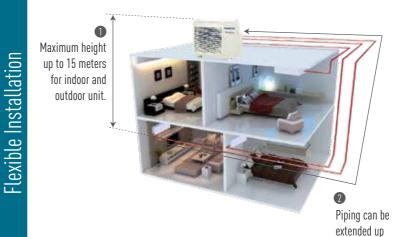
 As 1 outdoor unit is able to connect up to 3 indoor units, this provide flexible customization according to the layout of your house.



ndependent Operation Control

Outdoor unit connects to each indoor unit independently

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



The multi-split system accommodates long pipelines up to 60 meters

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

to 60 meters.

42

vithin capacity range )

### **INDOOR**



CS-S9TKZW | CS-S12TKZW | CS-MS15TKZ



Wireless (Optional)







INTELLIGENT ECO SENSORS ECONAVI

#### **COOLING MODELS**



	[6,23]
CS-S18TK7W   CS-S24TK7W	

MODEL		(60Hz)	CS-S9TKZW	CS-S12TKZW	CS-MS15TKZ	CS-S18TKZW	CS-S24TKZW
Operation			1 unit	1 unit	1 unit	1 unit	1 unit
Cooling Conneity		kJ/h	10,080	11,520	14,400	18,000	21,600
Cooling Capacity		kW	2.80	3.20	4.00	5.00	6.00
Electrical Data	Voltage	V	230	230	230	230	230
Sound Pressure Level	Indoor (Hi/Lo)	dB (A)	40/29	44/32	45/32	47/38	48/39
Moisture Removal		L/h	1.6	1.8	2.3	2.7	3.3
Fan Output		W	40	40	40	30	30
Air Circulation		m³/min	9.8	11.0	12.8	19.3	20.3
All Circutation		ft³/min	345	390	450	680	715
	Height	mm	295	295	295	302	302
Dimensions	Width	mm	919	919	919	1,120	1,120
	Depth	mm	199	199	199	241	241
Net Weight Indoor		kg	9	9	9	12	12
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35
	Gas Side	mm	ø 9.52	ø 9.52	ø 9.52	ø 9.52	ø 12.70
Power Supply			Outdoor	Outdoor	Outdoor	Outdoor	Outdoor

01	JT[	000	)R

אוטטעוטט			DUAL-SPLIT MODEL	TRIPLE-SPLIT MODEL
MODEL		(60Hz)	CU-2S18PKZ	CU-3S27KKZ
Carlina Caraciba	(min-max)	kW	5.00 (1.50~6.00)	7.50 (2.80~9.00)
Cooling Capacity	(min-max)	kJ/h	18,000 (5,400-21,600)	27,000 (10,080~32,400)
EER		kJ/hW	12.86	13.11
	Voltage	V	230	230
Electrical Data	Current	А	6.4	9.6
	Power Input (min-max)	W	1,400 (250~1,750)	2,060 (520-2,830)
Sound Pressure Level	Outdoor	dB (A)	49	49
Maximum Current		А	12	15.2
Starting Current		А	6.6	10.1
Compressor Output		W	900	1,300
Fan Output		W	40	60
	Height	mm	619	795
Dimensions	Width	mm	824 (+70)	875 (+95)
Dimensions	Depth	mm	299	320
Net Weight	Outdoor	kg	37	68
	Chargeless Pipe Length	m	20	30
Pipe Extension	Maximum Pipe Length	1 Room	20	25
ripe Extension	Maximum Pipe Length	Total	30	60
	Maximum Elevation Lengt	n m	10	15
	Additional Refrigerant Gas	*2 g/m	15	20

#### **INVERTER DUAL-SPLIT MODEL (CU-2S18PKZ)**

Indoor I Init	Combination	Total	Cooling Capacity (kJ/h)					r Input (W)	Current (A)	Moisture Removal
ndoor Unit	Combination	TOTAL	Room A	Room B	Total	min ~ max	Rated	min ~ max	230V / 60Hz	L/h
1 Daam	2.8	2.8	10,080	_	10,080	3,960 ~ 12,600	750	220 ~ 1,000	3.6	1.6
1 Room	3.2	3.2	11,520	_	11,520	3,960 ~ 14,400	920	220 ~ 1,220	4.4	1.8
	2.8 + 2.8	5.6	8,640	8,640	17,280	5,400 ~ 20,880	1,310	250 ~ 1,690	6.2	1.5 + 1.5
2 Room	2.8 + 3.2	6.0	8,280	9,720	18,000	5,400 ~ 21,240	1,490	250 ~ 1,710	7.0	1.5 + 1.6
	3.2 + 3.2	6.4	9,000	9,000	18,000	5,400 ~ 21,600	1,400	250 ~ 1,750	6.4	1.5 + 1.5

#### **INVERTER TRIPLE-SPLIT MODEL (CU-3S27KKZ)**

Indoor Unit Combinat		hination Total	Cooling Capacity (kJ/h)					Power Input (W)		Current (A)	Moisture
ndoor Unit	Combination	Total	Room A	Room B	Room C	Total	min ~ max	Rated	min ~ max	230V / 60Hz	Removal L/h
	2.8	2.8	10,080			10,080	6,120 ~ 12,240	700	380 ~ 890	3.6	1.6
	3.2	3.2	11,520			11,520	6,120 ~ 14,400	800	380 ~ 1,200	4.0	1.8
1 Room	4.0	4.0	14,400			14,400	6,120 ~ 17,280	1,180	380 ~ 1,480	5.8	2.3
	5.0	5.0	18,000			18,000	6,840 ~ 20,880	1,460	400 ~ 1,890	7.0	2.7
	6.0	6.0	21,600			21,600	6,840 ~ 22,320	1,920	400 ~ 2,070	8.9	3.3
	2.8 + 2.8	5.6	10,080	10,080		20,160	6,120 ~ 24,120	1,750	420 ~ 2,340	8.3	1.6 + 1.6
	2.8 + 3.2	6.0	10,080	11,520		21,600	6,120 ~ 24,120	2,010	420 ~ 2,340	9.4	1.6 + 1.8
	2.8 + 4.0	6.8	10,080	14,400		24,480	9,000 ~ 27,360	2,420	550 ~ 2,990	11.3	1.6 + 2.3
	2.8 + 5.0	7.8	9,680	17,320		27,000	9,720 ~ 28,800	2,810	530 ~ 2,980	13.1	1.6 + 2.6
	2.8 + 6.0	8.8	8,600	18,400		27,000	9,720 ~ 28,800	2,810	530 ~ 2,980	13.1	1.5 + 2.8
	3.2 + 3.2	6.4	11,520	11,520		23,040	8,280 ~ 26,640	2,290	570 ~ 3.010	10.7	1.8 + 1.8
	3.2 + 4.0	7.2	11,520	14,400		25,920	9,000 ~ 27,720	2,770	550 ~ 2,990	12.9	1.8 + 2.3
2 Room	3.2 + 5.0	8.2	10,550	16,450		27,000	10,080 ~ 28,800	2,760	530 ~ 2,970	12.9	1.7 + 2.5
	3.2 + 6.0	9.2	9,400	17,600		27,000	10,080 ~ 28,800	2,760	530 ~ 2,970	12.9	1.6 + 2.7
	4.0 + 4.0	8.0	13,500	13,500		27,000	9,720 ~ 28,440	2,870	540 ~ 2,980	13.4	2.2 + 2.2
	4.0 + 5.0	9.0	11,990	15,010		27,000	10,080 ~ 29,160	2,600	530 ~ 2,970	12.2	1.9 + 2.4
	4.0 + 6.0	10.0	10,800	16,200		27,000	10,080 ~ 29,160	2,600	530 ~ 2,970	12.2	1.7 + 2.5
	5.0 + 5.0	10.0	13,500	13,500		27,000	10,440 ~ 29,880	2,440	520 ~ 2,970	11.4	2.2 + 2.2
	5.0 + 6.0	11.0	12,280	14,720		27,000	10,440 ~ 29,880	2,440	520 ~ 2,970	11.4	2.0 + 2.3
	6.0 + 6.0	12.0	13,500	13,500		27,000	10,440 ~ 29,880	2,440	520 ~ 2,970	11.4	2.2 + 2.2
	2.8 + 2.8 + 2.8	8.4	9,000	9,000	9,000	27,000	8,640 ~ 28,440	2,740	580 ~ 2,840	12.8	1.5 + 1.5 + 1.5
	2.8 + 2.8 + 3.2	8.8	8,600	8,600	9,800	27,000	8,640 ~ 28,800	2,690	580 ~ 2,850	12.6	1.5 + 1.5 + 1.6
	2.8 + 2.8 + 4.0	9.6	7,880	7,880	11,240	27,000	9,360 ~ 30,240	2,490	600 ~ 2,930	11.6	1.4 + 1.4 + 1.8
	2.8 + 2.8 + 5.0	10.6	7,130	7,130	12,740	27,000	10,080 ~ 31,680	2,250	600 ~ 3,010	10.5	1.3 + 1.3 + 2.0
	2.8 + 2.8 + 6.0	11.6	6,520	6,520	13,960	27,000	10,080 ~ 31,680	2,250	600 ~ 3,010	10.5	1.2 + 1.2 + 2.3
	2.8 + 3.2 + 3.2	9.2	8,200	9,400	9,400	27,000	8,640 ~ 28,800	2,690	580 ~ 2,860	12.6	1.5 + 1.6 + 1.6
	2.8 + 3.2 + 4.0	10.0	7,560	8,640	10,800	27,000	9,360 ~ 30,240	2,450	600 ~ 2,930	11.5	1.4 + 1.5 + 1.7
	2.8 + 3.2 + 5.0	11.0	6,870	7,850	12,280	27,000	10,080 ~ 31,680	2,250	600 ~ 3,020	10.5	1.2 + 1.4 + 2.0
	2.8 + 3.2 + 6.0	12.0	6,300	7,200	13,500	27,000	10,080 ~ 31,680	2,250	600 ~ 3,020	10.5	1.1 + 1.3 + 2.2
	2.8 + 4.0 + 4.0	10.8	6,980	10,010	10,010	27,000	9,720 ~ 31,320	2,290	600 ~ 3,000	10.7	1.3 + 1.6 + 1.6
	2.8 + 4.0 + 5.0	11.8	6,410	9,140	11,450	27,000	10,080 ~ 32,400	2,170	580 ~ 3,050	10.1	1.1 + 1.6 + 1.8
3 Room	2.8 + 4.0 + 6.0	12.8	5,900	8,420	12,680	27,000	10,080 ~ 32,400	2,170	580 ~ 3,050	10.1	1.0 + 1.5 + 2.0
	2.8 + 5.0 + 5.0	12.8	5,900	10,550	10,550	27,000	10,080 ~ 32,400	2,070	520 ~ 2,830	9.7	1.0 + 1.7 + 1.7
	3.2 + 3.2 + 3.2	9.6	9,000	9,000	9,000	27,000	8,640 ~ 28,800	2,650	590 ~ 2,860	12.4	1.5 + 1.5 + 1.5
	3.2 + 3.2 + 4.0	10.4	8,320	8,320	10,360	27,000	9,360 ~ 30,240	2,450	600 ~ 2,940	11.5	1.5 + 1.5 + 1.7
	3.2 + 3.2 + 5.0	11.4	7,600	7,600	11,800	27,000	10,080 ~ 31,680	2,250	600 ~ 3,020	10.5	1.4 + 1.4 + 1.9
	3.2 + 3.2 + 6.0	12.4	6,980	6,980	13,040	27,000	10,080 ~ 31,680	2,250	600 ~ 3,020	10.5	1.3 + 1.3 + 2.1
	3.2 + 4.0 + 4.0	11.2	7,700	9,650	9,650	27,000	10,080 ~ 31,320	2,290	600 ~ 3,000	10.7	1.4 + 1.6 + 1.6
	3.2 + 4.0 + 5.0	12.2	7,090	8,860	11,050	27,000	10,080 ~ 32,400	2,170	580 ~ 3,060	10.1	1.3 + 1.5 + 1.7
	3.2 + 4.0 + 6.0	13.2	6,550	8,170	12,280	27,000	10,080 ~ 32,400	2,170	580 ~ 3,060	10.1	1.2 + 1.5 + 2.0
	3.2 + 5.0 + 5.0	13.2	6,560	10,220	10,220	27,000	10,080 ~ 32,400	2,060	520 ~ 2,830	9.6	1.2 + 1.7 + 1.7
	4.0 + 4.0 + 4.0	12.0	9,000	9,000	9,000	27,000	10,080 ~ 32,400	2,170	590 ~ 3,040	10.1	1.5 + 1.5 + 1.5
	4.0 + 4.0 + 5.0	13.0	8,320	8,320	10,360	27,000	10,080 ~ 32,400	2,070	540 ~ 2,830	9.7	1.5 + 1.5 + 1.7

<sup>\*1</sup> Functionality varies depending on models.
\*2 When pipes are not extended from the standard pipe length, the required amount of refrigerant is already in the unit.

Windows

## Expanding the nanoe™ world in Japan - 24/7, anytime, anywhere

Increasingly adopted in a wide range of industries, such as railway, automotive, hotel, and hospital industries



Panasonic is committed to the improvement of air quality with nanoe<sup>TM</sup> Technology.

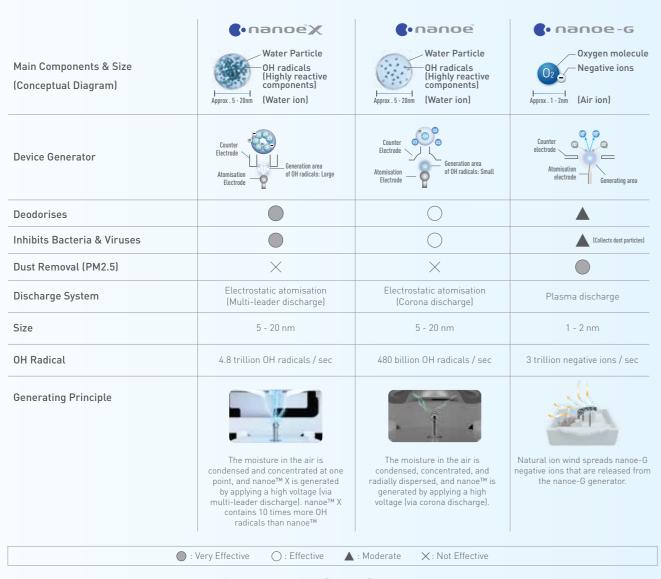
Trade names, trademarks and images of products/services are used in this materi under approval by the entities concerned in Japan. (As of January 31th, 201

7.5

## The development of nanoe™ Technology

nanoe<sup>™</sup> Technology development started with the aim of using water's natural tendency to dissolve odour-causing substances. Through repeated improvements on the nanoe<sup>™</sup> device over the years, it now generates 10 times more OH radicals to ensure the air is purified at all times.

## The difference between nanoe<sup>TM</sup> X, nanoe<sup>TM</sup> and nanoe-G



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

It does not eliminate toxic substances in cigarette (carbon monoxide, etc.). Odours that are continuously generated (e.g., building material odours and pet odours) are not completely eliminated.





## **C**•nanoe™X

## 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<sup>™</sup> X particles, which are smaller than steam particles, penetrate into deepest parts of fibres allowing for highly effective deodorisation.

#### 3 steps on how to deodorise odour



nanoe™ X reliably reaches

OH radicals break down

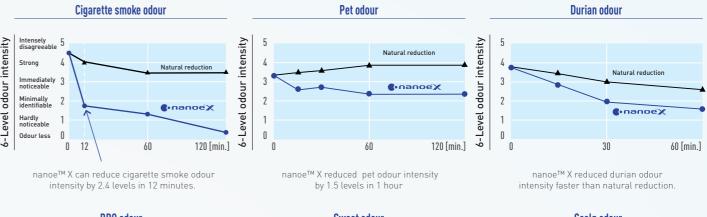
odours embedded in fibres.

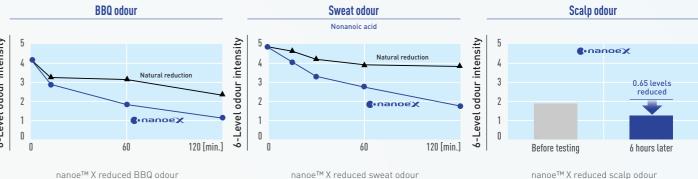
OH radicals break down

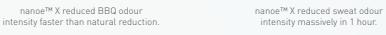
odour causing substances.

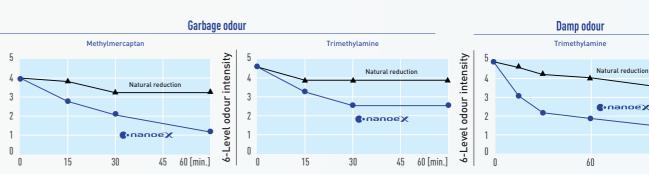


Odour is eliminated









nanoe™ X reduced garbage odour intensity in 0.5 hours.

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

120 [min.]

massively in 6 hours

#### [ Representative evidence ]

#### \*\*: Units based on Panasonic standards

	Odours	Result**	Capacity	Time (Hr.)	Testing organisation	Report No.	
	Cigarette smoke odour	Odour intensity reduced by 2.4 levels	Approx. 23m³	0.2	Panasonic Product Analysis Center	4AA33-160615-N04	
	Pet odour	Odour intensity reduced by 1.5 levels	Approx. 23m³	1	Panasonic Product Analysis Center	4AA33-160315-A34	
	Durian odour	Odour intensity reduced by 1.0 levels	Approx. 23m³	0.5	Panasonic Product Analysis Center	1V332-180402-K01	
	BBQ odour	Odour intensity reduced by 1.2 levels	Approx. 23m³	2	Panasonic Product Analysis Center	4AA33-151221-N01	
	Sweat odour (Nonanoic acid)	Odour intensity reduced by 1.1 levels	Approx. 23m³	1	Panasonic Product Analysis Center	Y16HM016	
	Sweat odour (Hexanoic acid)	Odour intensity reduced by 2.6 levels	Approx. 23m <sup>3</sup>	1	Panasonic Product Analysis Center	4AA33-160315-A35	
Adhered	Scalp odour (Pillow cover)	Odour intensity reduced by 0.65 levels	Approx. 23m³	6	[Supervision] Odour and Aroma Design Course, Department of Integrated Informatics, Faculty of Informatics, Daido University		
	Garbage odour (Methylmercaptan)	Odour intensity reduced by 1.2 levels	Approx. 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. 23m³	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

 $nanoe^{TM} X$  inhibits the activity of airborne and adhered bacteria and viruses.

#### 3 steps on how to inhibit bacteria & viruses



nanoe™ X reliably reaches virus.

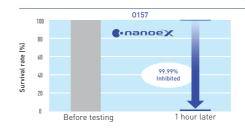


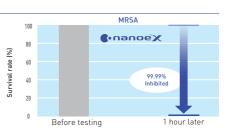
OH radicals transform virus proteins.



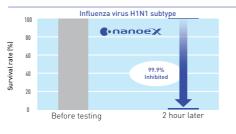
Virus activity is inhibited.

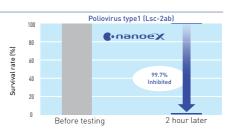
#### Adhered bacteria





#### **Adhered viruses**





#### [ Representative evidence ]

#### \*\*: Units based on Panasonic standards

	integreseritative evidence j : units based on Panasonic standard						
			Capacity	Time (Hr.)		Report No.	
Airborne	Virus Bacteriophage ΦX174	99.7% inhibited	Approx. 25m³	6	Kitasato Research Center for Environmental Science	24_0300_1	
Airb	Bacteria Staphylococcus aureus	99.9% inhibited	Approx. 25m³	4	Kitasato Research Center for Environmental Science	2016_0279	
Adhered	Virus Bacteriophage ΦX174	99.8% inhibited	Approx. 25m³	8	Japan Food Research Laboratories	13001265005-01	
Adh	Bacteria Staphylococcus aureus	99.1% inhibited	Approx. 25m³	8	Japan Food Research Laboratories	13044083003-01	
	Influenza virus (H1N1 subtype)	99.9% inhibited	1m³	2	Kitasato Research Center for Environmental Science	21_0084_1	
Adhered virus	Feline calicivirus (Related form of norovirus)	99.9% inhibited	25L	2	Japan Food Research Laboratories	207031493-001	
Adhere	Coxackievirus (B6)	99.1% inhibited	45L	2	Kitasato Research Center for Environmental Science	22_0085	
	Poliovirus type 1 (Lsc-2ab)	99.7% inhibited	45L	2	Kitasato Research Center for Environmental Science	22_0096	
	Bacterium enterohemorrhagic escherichia coli (0157)	99.99% inhibited	45L	1	Japan Food Research Laboratories	208120880-001	
	Methicillin-resistant staphylococcus aureus (MRSA)	99.99% inhibited	45L	1	Japan Food Research Laboratories	208120880-002	
teria	Staphylococcus aureus	99.99% inhibited	1m³	24	Kitasato Research Center for Environmental Science	20_0154_2	
Adhered bacteria	Bacillus	99.6% inhibited	45L	0.5	Japan Food Research Laboratories	11000924001-01	
Adh	Micrococcus	99.9% inhibited	45L	2	Japan Food Research Laboratories	11000924001-02	
	Serratia	99.9% inhibited	45L	2	Japan Food Research Laboratories	11000924001-03	
	Kocuria	99.9% inhibited	45L	1	Japan Food Research Laboratories	11000922001-01	

Results may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe M X and nanoe M 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.

#### 3 steps on how to inhibit growth of mould



Airborne mould **€**•nanoeX

Adhered mould

#### [ Representative evidence ]

\*\*: Units based on Panasonic standards

		Result**	Capacity		Testing organisation	Report No.
Airborne	Cladosporium	99% inhibited	Approx. 23m³	1	Japan Food Research Laboratories	205061541-001
	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
٦	Penicillium	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	17145307001-1301
Adhered	Stachybotrys	Inhibited	Approx. 23m <sup>3</sup>	8	Japan Food Research Laboratories	17145307001-1401
<b> </b>	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

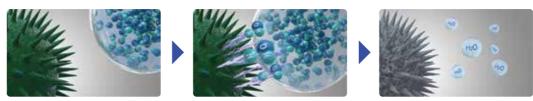
tesults may vary based on usage, and seasonal and enviroment variables (temperature and humidity). nanoe X and nanoe inhibit activity or growth of viruses, but do not prevent infection

## **C**•nanoe<sup>™</sup>X

## 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.

#### 3 steps on how to inhibit allergens



nanoe™ reliably reaches allergens.

OH radicals denature allergen proteins. Allergen is inhibited.

#### [ Representative evidence ]

\*\*: Units based on Panasonic standards

	Result**	Capacity	Time (Hr.)	Testing organisation	Report No.	
Dermatophagoides pteronyssinus	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160615-F01	
Dermatophagoides farinae	Inhibited	Approx. 23m³	24	Panasonic Product Analysis Center	4AA33-170301-F15	
Alternaria (Sooty moulds)	Inhibited	Approx. 23m³	24	Panasonic Product Analysis Center		
Aspergillus (Aspergillus genus)	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160615-F02	
Candida	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center		
Malassezia	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center		
Cockroach	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160615-F03	
Moth	Inhibited	Approx. 23m <sup>3</sup>	24	,	4AA33-100013-F03	
Dog (dander)	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonie Product Analysis Contor	44422 160620 501	
Cat (dander)	Inhibited	Approx. 23m <sup>3</sup>	24	r aliasoffic Product Alialysis Center	4AA33-160620-F01	
	Dermatophagoides pteronyssinus  Dermatophagoides farinae  Alternaria (Sooty moulds)  Aspergillus (Aspergillus genus)  Candida  Malassezia  Cockroach  Moth  Dog (dander)	Dermatophagoides pteronyssinus Inhibited  Dermatophagoides farinae Inhibited  Alternaria (Sooty moulds) Inhibited  Aspergillus (Aspergillus genus) Inhibited  Candida Inhibited  Malassezia Inhibited  Cockroach Inhibited  Moth Inhibited  Dog (dander) Inhibited	Dermatophagoides pteronyssinus     Inhibited     Approx. 23m³       Dermatophagoides farinae     Inhibited     Approx. 23m³       Alternaria (Sooty moulds)     Inhibited     Approx. 23m³       Aspergillus (Aspergillus genus)     Inhibited     Approx. 23m³       Candida     Inhibited     Approx. 23m³       Malassezia     Inhibited     Approx. 23m³       Cockroach     Inhibited     Approx. 23m³       Moth     Inhibited     Approx. 23m³       Dog (dander)     Inhibited     Approx. 23m³	Dermatophagoides pteronyssinus     Inhibited     Approx. 23m³     24       Dermatophagoides farinae     Inhibited     Approx. 23m³     24       Alternaria (Sooty moulds)     Inhibited     Approx. 23m³     24       Aspergillus (Aspergillus genus)     Inhibited     Approx. 23m³     24       Candida     Inhibited     Approx. 23m³     24       Malassezia     Inhibited     Approx. 23m³     24       Cockroach     Inhibited     Approx. 23m³     24       Moth     Inhibited     Approx. 23m³     24       Dog (dander)     Inhibited     Approx. 23m³     24	Dermatophagoides pteronyssinusInhibitedApprox. 23m³24Panasonic Product Analysis CenterDermatophagoides farinaeInhibitedApprox. 23m³24Panasonic Product Analysis CenterAlternaria (Sooty moulds)InhibitedApprox. 23m³24Panasonic Product Analysis CenterAspergillus (Aspergillus genus)InhibitedApprox. 23m³24Panasonic Product Analysis CenterCandidaInhibitedApprox. 23m³24Panasonic Product Analysis CenterMalasseziaInhibitedApprox. 23m³24Panasonic Product Analysis CenterCockroachInhibitedApprox. 23m³24Panasonic Product Analysis CenterMothInhibitedApprox. 23m³24Panasonic Product Analysis CenterDog (dander)InhibitedApprox. 23m³24Panasonic Product Analysis Center	



## Inhibits pollens globally all year around

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

#### 3 steps on how to inhibit pollen



nanoe™ X reliably reaches pollen.

OH radicals denature pollen proteins.

#### [ 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			
Orchard grass	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-151028-F01	
Ragweed	Inhibited	Approx. 23m <sup>3</sup>	24			
Alnus japonica	Inhibited	Approx. 23m <sup>3</sup>	24			
Japanese white birch	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160601-F01	
Artemisia	Inhibited	Approx. 23m <sup>3</sup>	24			
Olive	Inhibited	Approx. 23m <sup>3</sup>	24			
Juniper	Inhibited	Approx. 23m <sup>3</sup>	24	December December Application Control	4AA33-160601-F02	
Casuarina	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160601-F02	
Miscanthus	Inhibited	Approx. 23m <sup>3</sup>	24			
Timothy grass	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	4AA33-160701-F01	
Humulus japonicus	Inhibited	Approx. 23m <sup>3</sup>	24	Panasonic Product Analysis Center	1V332-180301-F01	

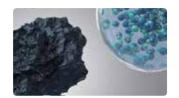
Results may vary based on usage, and seasonal and environment variables (temperature and humidity), nanoe<sup>TM</sup> X and nanoe<sup>TM</sup> inhibit activity or growth of viruses, but do not prevent infection.



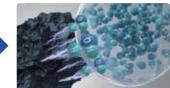
## Inhibition of hazardous substances known to be found in PM2.5

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

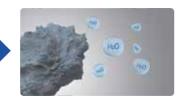
#### 3 steps on how to inhibit hazardous substances



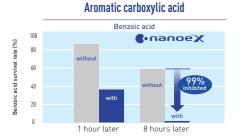
nanoe™ reliably reaches hazardous substance.

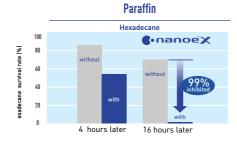


OH radicals denature hazardous substances proteins.



Hazardous substance is inhibited.





#### [ Representative evidence ]

#### \*\*: Units based on Panasonic standards

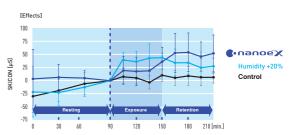
	Hazardous substances	Result**	Capacity	Time (Hr.)	Testing organisation	Report No.
Pollutants	Paraffin(Hexadecane)	99% inhibited	Approx. 23m <sup>3</sup>	16	Panasonic Product Analysis Center	Y17NF089
Pollu	Aromatic carboxylic acid (Benzoic acid)	99% inhibited	Approx. 23m <sup>3</sup>	8	Panasonic Product Analysis Center	Y17NF096
	Benz [a] anthracena (BaA)	78% inhibited	36L	8	Panasonic Product Analysis Center	Y13NF141
len	Benzo [b] fluoranthene (BbF)	79% inhibited	36L	8	Panasonic Product Analysis Center	Y13NF142
Carcinog	Benzo [a] pyrene (BaP)	97% inhibited	36L	8	Panasonic Product Analysis Center	Y13NF143
Ca	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<sup>TM</sup> X and nanoe<sup>TM</sup> inhibit activity or growth of viruses, but do not prevent infection



## Moisturised skin, straighter & sleeker hair

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



nanoe $^{TM}$  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		t** Capacity Time (Hr.) Testing organisation		Report No.	
Skin			Panasonic Product Analysis Center	USG-KT-14K-012-TM	
SKIN	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<sup>™</sup> X and nanoe<sup>™</sup> inhibit activity or growth of viruses, but do not prevent infection

## Test reports of nanoe $^{\mathsf{TM}}$ X

The effects of nanoe<sup>TM</sup> 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

## **C**•nanoe™X

## How Inside Cleaning work?







The air-conditioner first has to be turned off.

2. nanoe™ X runs on Fan Operation

nanoe $^{\text{TM}}$  X device applies high voltage to the moisture collected in the air to produce water particles that contain OH radicals.

The indoor unit will automatically run with fan operation for 2.5 hours during the inside cleaning process. The flap will open slightly, allowing airflow to circulate the OH radicals and perform inside cleaning within the air conditioning unit.

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

Fan Operation : 0N Flap : Flaps slightly open nanoe™ Technology LED : 0N



3. Effective inhibition with OH radicals from nanoe™ X Inside Cleaning\*

 $nanoe^{TM}$  X inhibits bacteria and viruses through the airflow route within 2.5 hours during the inside cleaning process.

#### **INSIDE CLEANING**

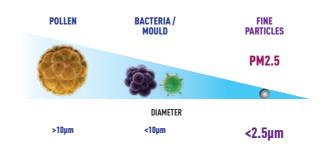
SUBSTANCE NAME	TARGET PARTS	RESULT	CAPACITY	TIME (Hr.)	TESTING ORGANISATION	REPORT NO.
	Filter	99% inhibited [compared to non-operation]	42.8m³	2.5	Protectea,Ltd	PR190803
<b>Bacteria</b> <i>Eschelichia coli</i> NBRC3301	Heat exchanger fin	99% inhibited [compared to non-operation]	42.8m³	2.5	Protectea,Ltd	PR190803
	Air outlet	99% inhibited [compared to non-operation]	42.8m³	2.5	Protectea,Ltd	PR191102
	Filter	99% inhibited [compared to non-operation]	42.8m³	2.5	Protectea,Ltd	PR190803
<b>Virus</b> Eschelichia coli Phage QB NBRC20012	Heat exchanger fin	99% inhibited [compared to non-operation]	42.8m³	2.5	Protectea,Ltd	PR190803
	Air outlet	99% inhibited [compared to non-operation]	42.8m³	2.5	Protectea,Ltd	PR191102

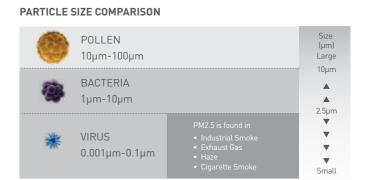
<sup>\*</sup> Applicable to DELUXE INVERTER only.

### **C**• nanoe - G

## 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.





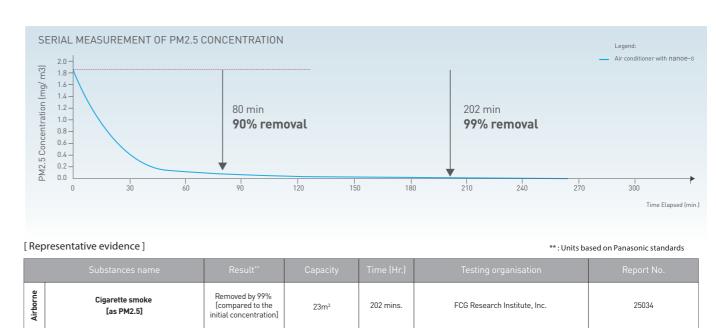
#### **SOURCES OF PM2.5**

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

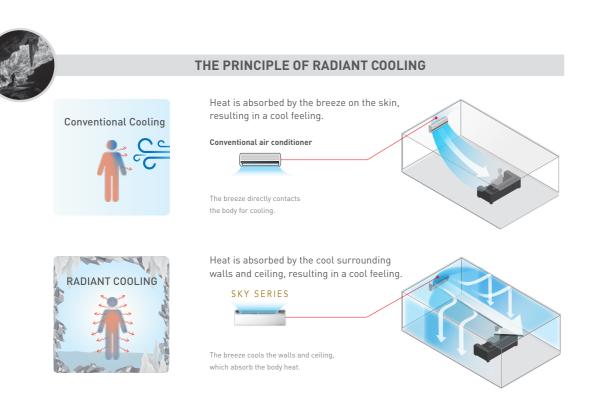


## Radiant Cooling For Users' Comfort Cooling

Conventional air conditioners are built to blow cold air downwards and directly at people to cool them instantly. However, when in direct contact with cold air for too long, some people experience discomfort and dry skin.

Inspired by the cooling effect of caves,
Doctor Naoshi Kakitsuba investigated the
benefits of RADIANT COOLING. He found that this
gentler and more even cooling method results in
a greater feeling of comfort and wellbeing.

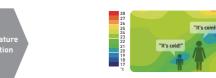




0

The SKY Series makes the room evenly cool, even though no airflow feeling. The cooling system of SKY Series gives comfort based on the principle of RADIANT COOLING.

**COOLS GENTLY AND EVENLY** 



Conventional air conditioner





SKY SERIES

The temperature in all areas of the room can be evenly set at a comfortable level.



Comfortable in living space with no wind (less than 0.2 m/s\*) \*Meter per second

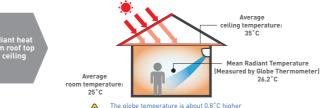


Test conditions: Measured in stable operation at 25°C cooling with fan speed set at "HI."



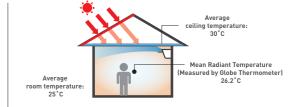
#### RADIANT COOLING REMOVES HEAT FROM CEILING AND WALLS

SKY Series makes people comfortable because the radiant heat from ceiling is less.

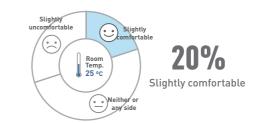


The globe temperature is about 0.8°C higher [-About 1.1°C higher in terms of how people feel comfortable]

The globe temperature is a composite temperature used to estimate the effect of temperature, humidity, and solar radiation on humans.











 $Measured in stable operation at 25 ^{\circ}C cooling with fan speed set at "MEDIUM." The actual average room temperature is the same.$ 



\*Applicable to ELITE INVERTER only.

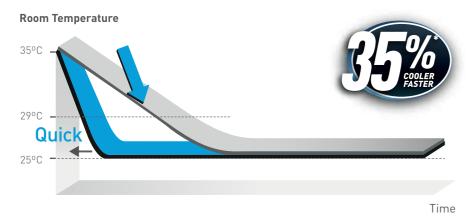
61

iAUTO-X Technical Explanation iAUTO Technical Explanation



## Faster Cooling

iAUTO-X cools you down 35% faster compared to Panasonic Standard non-Inverter model with high fan.

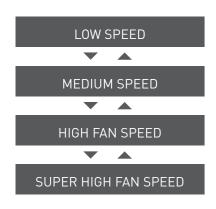


- PREMIUM Inverter with iAUTO-X
- Standard non-Inverter model with high fan

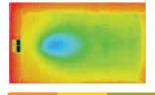
## **Faster Cooling** REMIUM Inverter: iAUTO-X Mode UTO-X Mode, Outside Temperature: 35°C setting temperature: 25°C with Fan ard non-Inverter: Cooling Mode with OOL Mode, Outside Temperature: 35°C setting temperature : 25°C with Fan Horizontal Airflow direction: Auto, Vertical Airflow direction: Straight The time to reach the setting temperature was measured. At Panasonic Amenity Room (size: 16.6m²) The effect differs according to conditions in installation and usage.

## Automatic Fan Speed

iAUTO-X will automatically switch fan speed to high fan speed and super high fan speed depending on the temperature difference between the room and the set temperature.



#### **CONVENTIONAL COOLING**



FAST COOLING

warmer

Cool air blows downwards and cools the room at a slow pace, resulting in uneven cooling. The edge of the room remains warm.

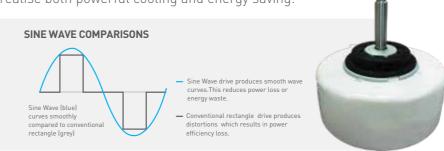
Concentrated airflow cools instantly. Room is evenly cooled.

## INTELLIGENT AUTO MODE

## True Comfort Is Just A Touch Away

#### SINE WAVE DRIVE

iAUTO utilises high efficient Sine Wave DC motor to realise both powerful cooling and energy saving.



#### **ADVANTAGES OF SINE WAVE**

#### 1. EFFICIENCY UP EVEN AT HIGH ROTATIONAL SPEED PER MINUTE (RPM)

Reduced current distortion enables fan motor to start faster, run cooler and perform more efficiently even while running at super high fan speed to help reduce power consumption.



#### 2. STABLE OPERATION

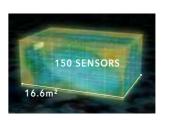
Sine Wave regulates power voltage that is identical to power supplied, ensuring consistent performance and stable operation.

#### 3. LOW VIBRATION

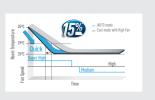
Motor loads run smoother with low vibrations resulting in quieter operation.

#### **QUALITY CONTROL THROUGH SIMULATED LABORATORY TEST**

Panasonic carried out testing at our own Environmental Testing Room which simulates a standard living room condition. This makes it possible to ensure the air conditioner operates at optimum performance level under varying conditions.



Testing is done in a large space of 16.6m<sup>2</sup> to simulate the size of an actual living room. Indoor temperature is measured using 150 sensors to get the average room temperature. This ensures the accuracy of indoor temperature data.



#### 1. FAST COOLING AT START UP

At start up, iAUTO will run at super high fan speed to cool the room faster, 15% faster for cooler comfort.

#### 2. MAINTAIN **COOLING COMFORT**

Once the room cools down, iAUTO provides constant cool airflow to maintain a comfortable level of relative humidity, to stay cool and comfortable all day long.

#### 3. AUTOMATIC FAN SPEED

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



\* Comparison of 1.5HP Non-INVERTER model with iAUTO Mode and Cooling Mode

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

Cooling Mode with High Fan 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 power consumption amount is measured for 2 hours under stable operation.

At Panasonic Amenity Room (size: 16.6m²)
The effect differs according to conditions

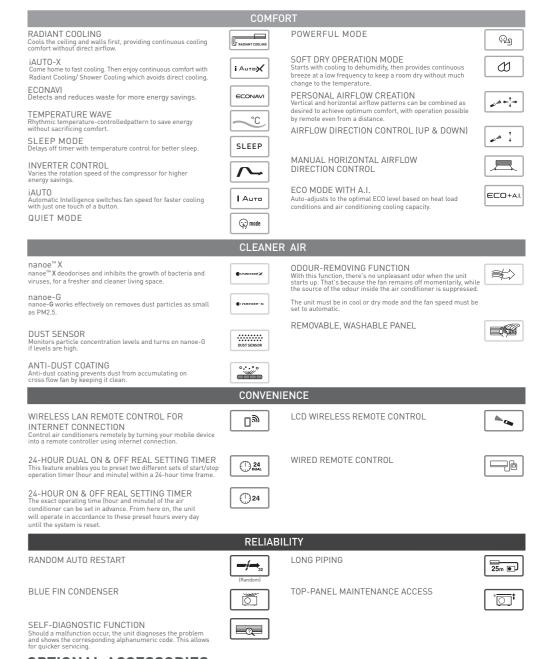
\*Applicable to STANDARD INVERTER (2.5HP) and STANDARD NON-INVERTER only.

\*Applicable to PREMIUM INVERTER only.

#### **FEATURES COMPARISON**

Split Type	ELITE PREMIUM INVERTER INVERTER		DELUXE STANDARD INVERTER		DINVERTER STANDARD N		ON-INVERTER	INVERTER MULTI-SPLIT			
Wall-Mounted											
	CS-VU9UKQ CS-VU12UKQ CS-VU18UKQ	CS-XU9VKQ CS-XU12VKQ	CS-XU18VKQ CS-XU24VKQ CS-XU30VKQ	CS-XPU9WKQ CS-XPU12WKQ CS-XPU18WKQ	CS-PU9WKQ CS-PU12WKQ CS-PU18WKQ	CS-PU24VKQ	CS-PN9UKQ CS-PN12UKQ	CS-PN18UKQ CS-PN24UKQ	CS-S9TKZW CS-S12TKZW CS-MS15TKZ CS-S18TKZW		
Cooling Models				2					CS-S24TKZW		
COMFORT											
Radiant Cooling	•										
I AuroX I AUTO-X	•	•	•								
ECONAVI ECONAVI									•		
Temperature Wave									•		
SLEEP SLEEP	•	•	•	•	•	•	•	•	•		
Inverter Control	•	•	•	•	•	•			•		
I Auto iAUTO						•	•	•			
😭 mode Quiet Mode	•	•	•	•	•	•	•	•	•		
Powerful Mode				•	•				•		
Soft Dry Operation Mode	•	•	•	•	•	•	•	•	•		
Personal Airflow Creation	•	•	•						•		
Airflow Direction Control (Up & Down)				•	•	•	•	•			
Manual Horizontal Airflow Direction Control				•	•	•	•	•			
ECO+AL ECO Mode with A.I.				•	•						
				CLEANER A	AIR						
•nanowx nanoe™ X	•	•	•	•							
•nence-G	•	•	•	•					•		
Anti-Dust Coating	•										
Dust Sensor	•										
Odour-Removing Function	•	•	•	•	•	•	•	•	•		
Removable, Washable Panel		•	•	•	•	•	•	•	•		
				CONVENIEN	ICE						
Wireless LAN Remote Control For Internet Connection	(Optional)	(Ontional)	(Optional)	(Ontional)	(Ontional)				(Optional)		
24-Hour Dual ON & OFF Real Setting Timer	(Optional)	(Optional)	(Optional)	(Optional)	(Optional)	•			(Uptional)		
24-Hour ON & OFF Real Setting Timer								•			
LCD Wireless Remote Control	•	•	•	•	•			•	•		
						_	•	•			
Wired Remote Control	(Optional)	(Optional)	(Optional)	(Optional)	(Optional)	(Optional)			(Optional)		
				RELIABILIT	ſΥ						
Random Auto Restart (32 Restart Patterns)	•	•	•	•	•	•	•	•	•		
Blue Fin Condenser	•	•	•	•	•	•	•	•	•		
Long Piping (Numbers indicate the maximum pipe length)	20m (VU9/12)	20m	30m	20m (XPU9/12)	20m (PU9/12)	30m	20m	30m	Refer page 44		
pipe length)  Top-Panel Maintenance Access	30m (VU18)			30m (XPU18)	30m (PU18)		•	•			
		•	•	•				•	•		
Self-Diagnostic Function	•	•	•	•	•	•			•		

#### **FEATURES EXPLANATION**



#### **OPTIONAL ACCESSORIES**



■ PIPE SIZE REDUCER	■ PIPE SIZE EXPANDER			
Use at the indoor unit's connection port		Use at the outdoor unit's connection po		
CZ-MA1P	CZ-MA3P	CZ-MA2P		
CS-S12TKZW, CS-MS15TKZ, CS-S18TKZW	CS-S24TKZW	CS-S24TKZW		

67

Capacity (Btu/h)	9,000	12,000	15,000	18,000	24,000	30,000	Features
Wall-Mounted ELITE INVERTER Page 32-33	CS-VU9UKQ (CU-VU9UKQ)	CS-VU12UKQ (CU-VU12UKQ)		CS-VU18UKQ (CU-VU18UKQ)			SKYWING  SKYWING
Wall-Mounted PREMIUM INVERTER Page 34-35	CS-XU9VKQ (CU-XU9VKQ)	CS-XU12VKQ (CU-XU12VKQ)		CS-XU18VKQ (CU-XU18VKQ)	CS-XU24VKQ (CU-XU24VKQ)	CS-XU30VKQ (CU-XU30VKQ)	CONVERTER AEROWINGS
Wall-Mounted DELUXE INVERTER Page 36-37	CS-XPU9WKQ [CU-XPU9WKQ]	CS-XPU12WKQ (CU-XPU12WKQ)		CS-XPU18WKQ (CU-XPU18WKQ)			Condition AEROWINGS
Wall-Mounted STANDARD INVERTER Page 38-39	CS-PU9WKQ (CU-PU9WKQ)	CS-PU12WKQ (CU-PU12WKQ)		CS-PU18WKQ  [CU-PU18WKQ]	CS-PU24VKQ (CU-PU24VKQ)		BIG FLAP INTELLEDIT AUTO MODE (CS-PU2AVKO)  (CS-PU9/12/18WKQ)
Wall-Mounted STANDARD NON-INVERTER Page 40-41	CS-PN9UKQ (CU-PN9UKQ)	CS-PN12UKQ (CU-PN12UKQ)		<b>СS-PN18UKQ</b> (си-РN18UKQ)	CS-PN24UKQ (CU-PN24UKQ)		BIG FLAP AUTO NICLESH AUTO HODE
Wall-Mounted INVERTER MULTI-SPLIT Page 42-45	CS-S9TKZW [CU-2S18PKZ] [CU-3S27KKZ]	CS-S12TKZW [CU-2518PKZ] [CU-3S27KKZ]	CS-MS15TKZ (CU-3S27KKZ)	CS-S18TKZW (CU-3S27KKZ)	CS-S24TKZW (CU-3S27KKZ)		AEROWINGS  MICLIONIC CO SONORS  MICLIONIC CO SONORS  ECONAVI
<b>WINDOWS</b> Page 46-47							

( ): Outdoor Unit Cooling Models