

# SINGLE-SPLIT AIR CONDITIONERS

## 2018 / 2019

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 2018.
- Due to printing considerations, the actual colours may vary slightly from those shown.
- All graphics are provided merely for the purpose of illustrating a point.



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

Authorised Dealer

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AC-M-C-18



ELITE INVERTER  
SKY SERIES

PREMIUM INVERTER  
AERO SERIES



SKYWING | AEROWINGS | INVERTER

QUALITY AIR FOR LIFE



At Panasonic Air Conditioners,  
we want to deliver more than just cooling or heating  
solutions. We want to create Total Air Solutions  
that let you enjoy Quality Indoor Air.

We improve the Quality of Air,  
so you can improve the Quality of Life.



## QUALITY AIR FOR LIFE

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## The nanoe™ Technology



nanoe™ Technology is Panasonic's unique technology which involves its special expertise at the nanometer level. It deodorises, inhibits the growth of bacteria and viruses; and is effective in dust removal for a fresh and cleaner indoor environment.

## QUALITY AIR FOR LIFE



**Air Is Life**  
Clean Air for Fresher & Cleaner Living Space



### Deodorises

nanoe™ X freshen up your living space by deodorising stench and odours, for a pleasant environment for you and your loved ones.



### Inhibits Bacteria & Viruses

nanoe™ X controls the proliferation of bacteria, viruses and allergens, so you and your family can enjoy quality time with peace of mind in a cleaner environment.



### Dust Removal

Wake up feeling fresh with nanoe-G working round-the-clock to remove dust particles as small as PM 2.5 from your room.



### Purifies Even When Cooling is Off

nanoe™ Technology is able to operate even when the cooling is off, so it can continue to purify and deodorise your home while you're away.



**Air Is Comfort**  
Healthy Airflow for Better Comfort

FAST COOLING  
RADIANT COOLING  
SHOWER COOLING



**Air Is Energy**  
Energy Saving For Greater Efficiency





## Unchanging principles for a rapidly changing world

Panasonic was founded in 1918 by Konosuke Matsushita. Taking to heart people's desires to live life ever more comfortably, he worked day and night to develop a wide variety of innovative new products. That year, Panasonic introduced an improved attachment plug, which allowed people to power an electrical appliance from a light socket. Next was a double cluster socket that made it possible to power lights and appliances from a single source. The ideas were small, but the quality and value of the products were excellent, and their reputation spread. By offering better products at reasonable prices, the company began making its contribution to society. Since then, the world has greatly changed, but Panasonic's principles have not. Today, we express those principles with the words, "A Better Life, A Better World."

Panasonic began exporting its products in 1931 and was proactive in establishing a presence overseas. Today, Panasonic consumer electronics are offered through 172 locations in 37 countries and territories.\* Listening to the voice of the customer in each market, we have worked constantly to create products that make life better for all people, no matter where they live.

And now, Panasonic's 100th anniversary is upon us. To address the changing times, we continue to develop the products of the future worldwide. And we will always cherish the principles our founder defined for us, one century ago.

\* As of September 1, 2017.



Founder  
Konosuke Matsushita



# 1918

Panasonic founded,  
introduces the improved attachment plug.

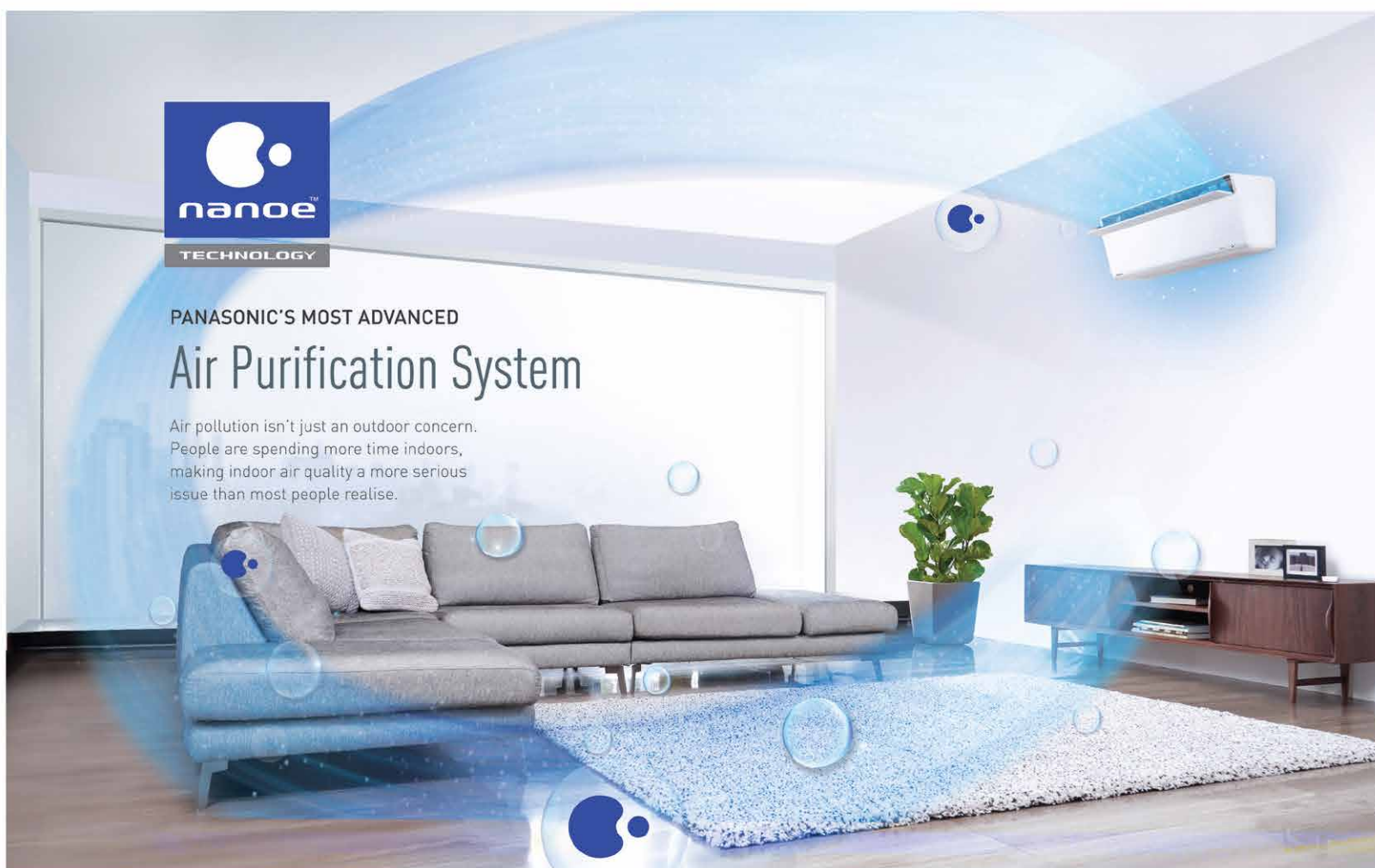
**100** A CENTURY OF  
RELIABILITY



PANASONIC'S MOST ADVANCED

## Air Purification System

Air pollution isn't just an outdoor concern. People are spending more time indoors, making indoor air quality a more serious issue than most people realise.



## Quality Air, Better Life For You and Your Family

Panasonic's nanoe™ Technology is a revolutionary air purification system that deodorises, inhibits the growth of bacteria and viruses; and is effective in dust removal to create a fresher and cleaner living environment.

\*Actual effect differs according to room condition and the way of use. nanoe™ and nanoe™ X have a function to inhibit actively or growth of viruses, etc. but do not assure infection prevention.

### PURIFIES WHEN COOLING IS OFF

nanoe™ Technology is able to function even when the cooling is off to continue purifying and deodorising your living space.

You don't have to worry about the hefty electricity bills as it only consumes a minimum amount of energy.

### Switch on nanoe™ mode



Operates with Fan Mode  
- **Low Power consumption** at only 25w = LED Light Bulb

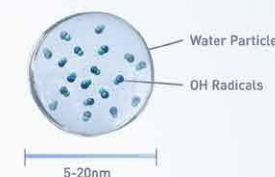
## What is nanoe™? nano-technology + electric =



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

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

480 billion  
OH Radicals / per second



Its effectiveness on bacteria, viruses and odour compounds inhibition depends on the number of OH radical, which is generated at the rate of 480 billion per second.

## nanoe™X

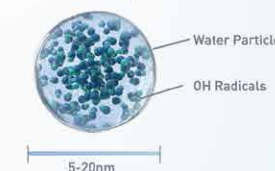
Deodorises

Inhibits Bacteria & Viruses

nanoe™X contains 10X times<sup>\*\*</sup> more OH radicals.

The newly developed nanoe™X device produces 10x times more OH radicals (4.8 trillion) than regular nanoe™ device.

4.8 trillion  
OH Radicals / per second



Greater amounts of OH radicals contained in nanoe™X lead to outstanding effects in bacteria, viruses and allergens inhibition as well as deodorisation, a fresher and cleaner home awaits you.

## nanoe™-G

Dust Removal

nanoe™-G releases negative ions to capture airborne particles in the air.

nanoe™-G, Panasonic's original air-purifying and filtering system releases 3 trillion negative ions to remove airborne dust particles as small as PM2.5 and adhesive bacteria and viruses. It then deactivates these trapped particles in the positively-charged filter.

3 trillion  
Negative Ions



\*\* For more detail about nanoe™ Technology Efficiency, please log on to our website at [www.panasonic.com.my](http://www.panasonic.com.my)





## Deodorises Inhibits Bacteria & Viruses

Clean air is essential to healthy living,  
it's important to take care of the air we breathe.

### 1 DEODORISATION

### 2 INHIBITS GROWTH OF BACTERIA & VIRUSES

## Turn Your Living Space Into A Fresher & Cleaner Space

Panasonic's latest innovation nanoe™X helps you deodorise, inhibit the growth of bacteria and viruses that are harmful to you and your family's general well-being.

### 1. Deodorises\*\*

nanoe™X deodorises strong and unpleasant odours that cause uneasiness so you can enjoy a more pleasant living space for greater well-being.



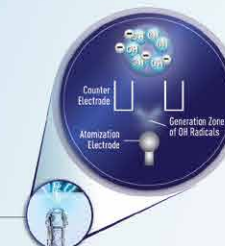
### 2. Inhibits Bacteria & Viruses\*\*

nanoe™X inhibits the growth of allergens, bacteria and viruses in your home, maintaining a cleaner home for your children.



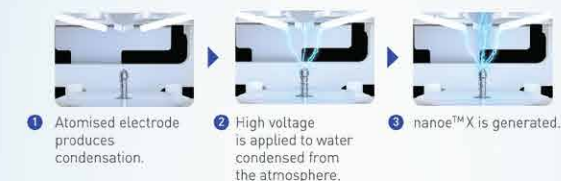
\*\*Actual effect differs according to room condition and the way of use. nanoe™ and nanoe™X have a function to inhibit activity or growth of viruses, etc. but do not assure infection prevention.  
\*\*Applicable to R32 ELITE INVERTER and R32 PREMIUM INVERTER.

\*\*1 For more detail about nanoe™ Technology Efficiency please log on to our website at [www.panasonic.com.my](http://www.panasonic.com.my)



The latest nanoe™X device uses a "multi-leader discharge" system that focuses the discharge to 4 needle-shaped electrodes, greatly expanding the OH radicals generating area to produce 10x times more OH radicals, and thus significantly enhances its performance.

### How nanoe™X Is Generated



### How nanoe™X Keeps Your Home Fresh & Clean



nanoe™X reaches bacteria.

OH radicals take away hydrogen from bacteria.

OH radicals transform hydrogen in bacteria to water and inhibit bacterial activity.

### Microscopic Scale

One-billionth of the volume size of a steam particle - nanoe™X is much smaller than a steam particle so it can deeply penetrate into cloth fabrics to inhibit allergens, bacteria and viruses.



\*Footnote: OH radicals are the highly reactive components that play an important role in attack and react with various harmful substances. The larger amount of OH radicals lead to higher efficiency in air purification and deodorisation.





### Dust Removal

Airborne pollutants sized at less than 2.5 micrometers (PM2.5) can easily enter into our lungs, posing potential health risks.

## Live in A Breath of Clean Air

nanoe-G air purification system removes microorganisms and dust particles as small as PM2.5 from the air by trapping them in the filter for deactivation. Purify your living environment for better breathing.

nanoe-G catches airborne particles.



### 1 AIRBORNE



### 3 IN-FILTER DEACTIVATION

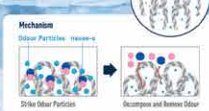


3 trillion\* nanoe-G negative ions released from the generator.

Remark:  
\* 3 trillion is the simulated number of nanoe-G negative ions under the mentioned conditions. Actual measured nanoe-G negative ions at the centre of the room (13m<sup>3</sup>): 100k/cc calculated number of nanoe-G negative ions in the entire room assuming they are evenly distributed.

Natural Ion Wind spreads nanoe-G negative ions that are released from the nanoe-G generator.

### 2 ADHESIVE



## 1 Removes Airborne Particles (Up To 99%\*)

Removes airborne particles down to PM2.5. These particles include bacteria, viruses and mould.

### 2 DEACTIVATES ADHESIVE PARTICLES & DEODORISES ADHESIVE ODOURS (Up to 99%\*)

Deactivates adhesive micro-organisms and deodorises adhesive odours. Inhibits mould growth that settles on surfaces around you.

### 3 IN-FILTER DEACTIVATION (Up to 99%\*)

Deactivates bacteria and viruses trapped in the filter.

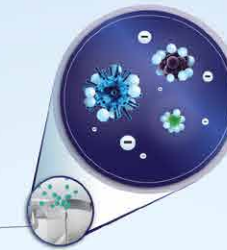
### Dust Removal

We breathe in large amounts of unseen bacteria, viruses, mites and mould circulating in the air or adhere to surfaces every day.



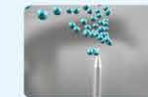
\* Actual effect differs according to room condition and the way of use. nanoe™ and nanoe™ X have a function to inhibit activity or growth of viruses, etc. but do not assure infection prevention.

\* For more detail about nanoe™ Technology Efficiency, please log on to our website at [www.panasonic.com.my](http://www.panasonic.com.my)



nanoe-G generators produces 3 trillion negative ions from the atomised electrode. Then, natural ion wind spreads the negative ions that are released from the nanoe-G generator to attach to airborne dust particles.

### How nanoe-G Is Generated

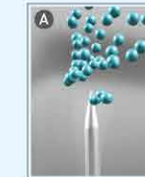


1 nanoe-G generator releases 3 trillion nanoe-G negative ions.



2 nanoe-G negative ions spread to the filter using natural ion wind.

### How nanoe-G Removes Dust Particles



nanoe-G ion generator releases negative ions.



Negative ions attach to dust particles.



These particles are being carried back to the air filter.



Deactivates 99%\* bacteria and viruses trapped in the filter.

\* For more detail about nanoe™ Technology Efficiency, please log on to our website at [www.panasonic.com.my](http://www.panasonic.com.my)



### featuring DUST SENSOR

\*Only applicable to SKY Series.

SKY Series also features an additional DUST SENSOR, which constantly monitors air quality and automatically activates nanoe™ Technology when a high level of dust particle concentration is detected.



LED	ACTIVITY
DUST SENSOR RED	AIR IS DIRTY
WHITE	nanoe™ Technology SWITCH ON TO PURIFY THE AIR



LED	ACTIVITY
DUST SENSOR WHITE	AIR IS CLEAN
LED OFF	nanoe™ Technology SWITCH OFF

# Healthy Airflow

## ELITE INVERTER SKY SERIES AIR CONDITIONER

### Unique Top Flap Design - SKYWING

SKYWING featuring an innovative top flap design which maximizes airflow for consistent cooling. Equipped with a Multidirectional Arm that can adjust the angle of the airflow towards the ceiling and walls to remove trapped heat, resulting in an even cooling effect throughout the room - Radiant Cooling.

Controlled By A Multidirectional Arm, SKYWING can cool you in two ways :



#### FAST COOLING

SKYWING angles downwards to deliver powerful airflow at start up.



#### RADIANT COOLING

After reaching the set temperature, SKYWING angles upwards to direct cool air towards the ceiling and walls, spreading cool air evenly throughout the room.



#### MODERN & MINIMALIST DESIGN

- The fully smooth and seamless surface with a touch of thin chrome line, a perfect blend of elegance and luxury.



#### LUSTROUS PEARL FINISHING

- The structural curve is enhanced and refined.
- Indicators are simplified with a seamless surface.



## PREMIUM INVERTER AERO SERIES AIR CONDITIONER

### 2 Independent Flaps & Motors - AEROWINGS

AEROWINGS is equipped with two independent motors that control the two independent flaps to direct concentrated airflow to cool an area effectively. The two flaps are able to channel and concentrate cool air upwards, which showers down gently over the room for even coolness- Shower Cooling.

#### AEROWINGS With Flexible Twin Flaps



#### FAST COOLING

AEROWINGS twin flaps angle downwards to deliver concentrated airflow to cool you instantly at start up.



#### SHOWER COOLING

AEROWINGS angles upwards to spread cool air over a wider area, then showers down gently and evenly across the room after reaching the set temperature.



#### SLIM & SLEEK OUTLINE

- 37mm slimmer than previous models.



#### LUSTROUS PEARL FINISHING

- Classy tone with a soft, pearly glow.
- Chrome escutcheon with a sense of luxury.



## Wider Top Airflow

### - RADIANT COOLING

Panasonic's latest indirect cooling technology promises a healthier way to enjoy cooling comfort.



**FURTHER AIRFLOW**  
53% bigger vane size

**WIDER AIRFLOW**  
increased to 12 vanes

## For Improved All-Around Cooling

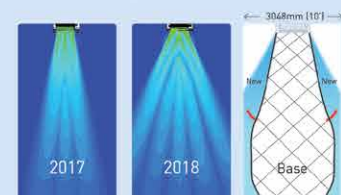
SKY Series equipped with NEW SKYWING, now improved with bigger and more vanes to deliver wider airflow, cooling greater area more evenly.

Radiant Cooling cools the ceiling and walls for an all-embracing cooling experience.



Wider Top Airflow cools every corner of the room, so everyone can feel the even coolness.

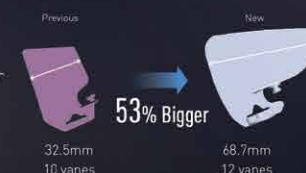
### AIRFLOW COVERAGE IMPROVEMENT



Area with air flow > 0.25m/s at room sized 3 x 5.5m:  
Original: 62.3% => New: 83.3%. Improved 21%

## Wider Cooling Coverage

With more and bigger vanes, cool air is distributed to a broader area. So no matter where you are in the room, you can feel the even cooling sensation.



### RADIANT COOLING AIRFLOW ASSESSMENT

#### AIRFLOW SMOKE TEST



Instead of blowing cold air directly onto people, SKYWING directs the airflow upwards to cool the ceiling and walls.

#### TEMPERATURE DISTRIBUTION TEST



SKYWING directs cool air upwards, removing heat from ceiling and walls for an all-round cooling effect.

#### BOTTOM AIR INTAKE



Hot air is drawn in from the bottom, and cool air is discharged from the top to facilitate the even distribution of cool air.

### FAST COOLING



At start up, SKYWING tilts down to bring you a blast of direct cool air for instant heat relief. Together with the high-powered Inverter compressor technology, P-TECH, SKY Series can reach a healthy set temperature faster.

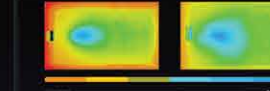
### FAST COOLING AIRFLOW ASSESSMENT

#### AIRFLOW SMOKE TEST



SKYWING directs airflow downwards and straight to room occupants for a fast cooling effect.

#### TEMPERATURE DISTRIBUTION TEST



#### CONVENTIONAL COOLING

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

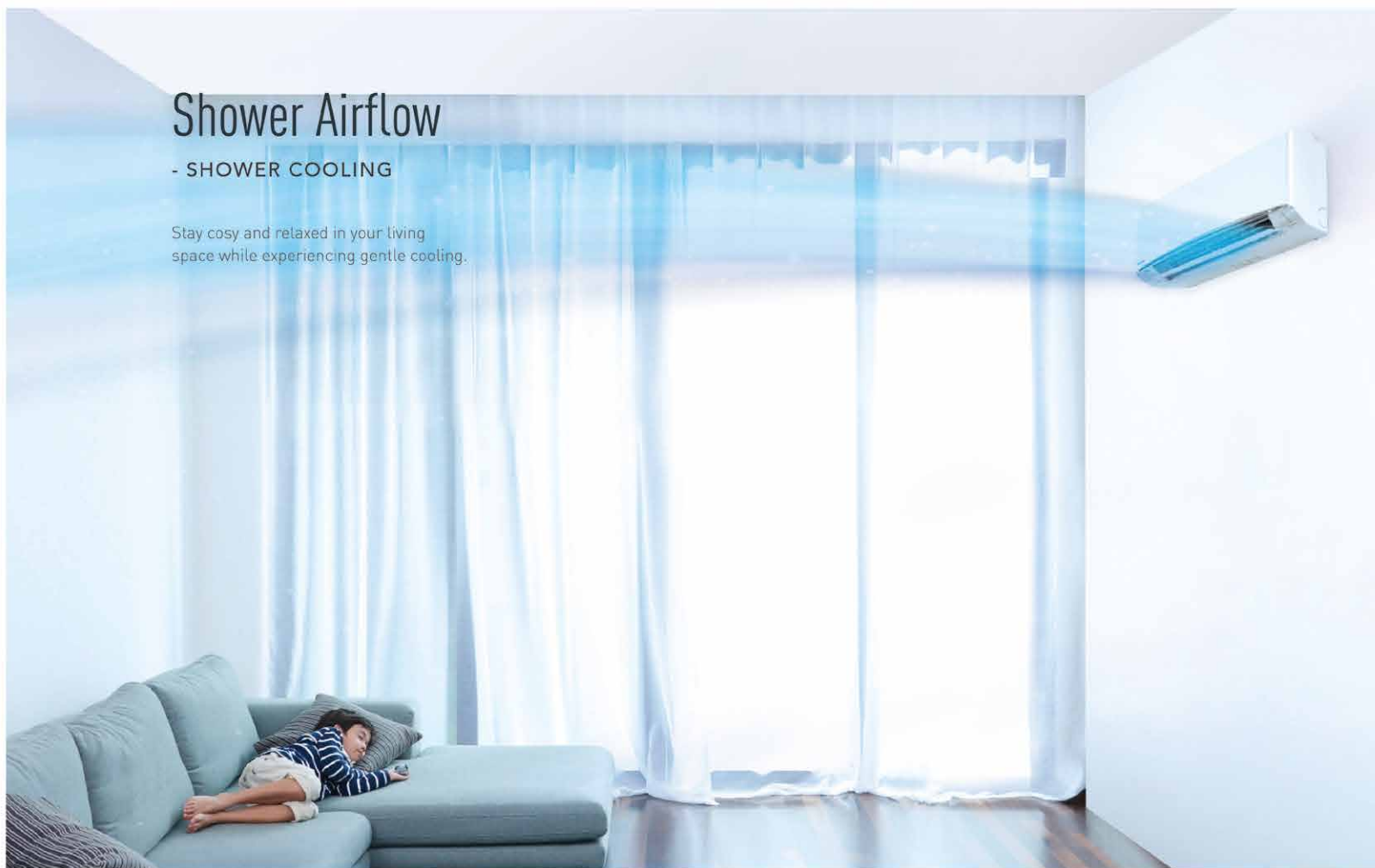
#### FAST COOLING

Powerful airflow cools rapidly. Room is evenly cooled.

## Shower Airflow

### - SHOWER COOLING

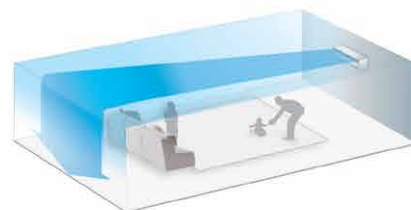
Stay cosy and relaxed in your living space while experiencing gentle cooling.



## Cool Comfort From Above

Aero Series uses AEROWINGS to send concentrated airflow across the room, cooling you gently from above

Stay cosy and relaxed in your living space without the constant cold blast to your skin and body. Say goodbye to excessive cooling.



Shower Airflow delivers cool air across the room which then showers down and cools everyone in the room gently.

## Concentrated Airflow, Further, Faster

The AEROWINGS is controlled by 2 independent motors and dual independent flaps. Airflow is delivered at a faster pace, spreading further at a concentrated level.



- 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** helps to deliver airflow further.

### SHOWER COOLING AIRFLOW ASSESSMENT

#### AIRFLOW SMOKE TEST



Instead of blowing cold air directly onto people, AEROWINGS directs airflow upwards over a wider area, then showers down gently and evenly across the room.

#### TEMPERATURE DISTRIBUTION TEST



**SHOWER COOLING**  
AEROWINGS directs cool air further and higher towards the ceiling, to avoid direct cooling.

#### TOP AIR INTAKE



Hot air is drawn in from the top, and cool air is discharged from the bottom to facilitate cool air showering down over the entire area.

### FAST COOLING



AEROWINGS twin flaps direct concentrated airflow downwards, delivering powerful cool air to cool you in the shortest time possible.

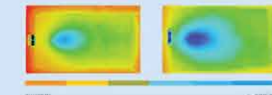
### FAST COOLING AIRFLOW ASSESSMENT

#### AIRFLOW SMOKE TEST



AEROWINGS directs airflow downwards and straight to room occupants for a fast cooling effect.

#### TEMPERATURE DISTRIBUTION TEST



#### CONVENTIONAL COOLING

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

#### FAST COOLING

Concentrated airflow cools instantly. Room is evenly cooled.





## PANASONIC TECHNOLOGY

### Energy Saving & Precise Temperature Control

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



#### THE "BRAIN" OF THE INVERTER

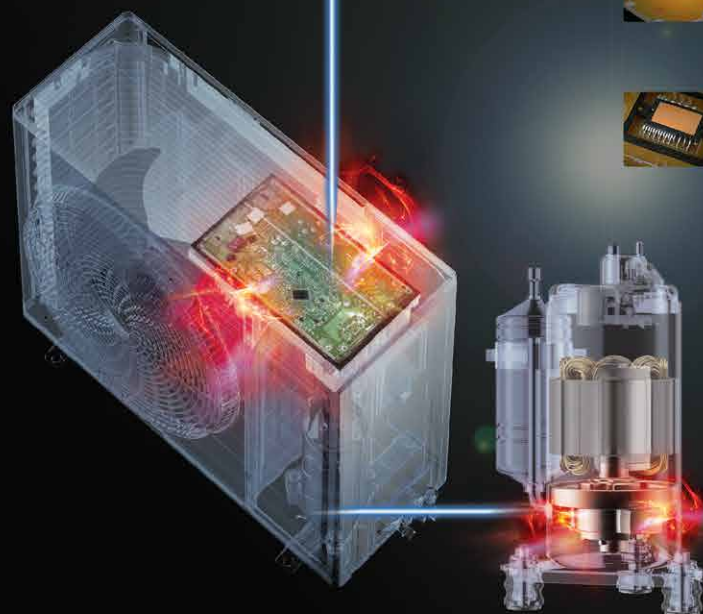
Micro computer determines the most suitable operation mode as time passes and automatically adjusts output power for maximum comfort always.

#### PAM (Pulse Amplitude Modulation)

Increases compressor voltage rapidly, to provide powerful cooling to reach the set temperature fast at start up, just like turbo charging a car.

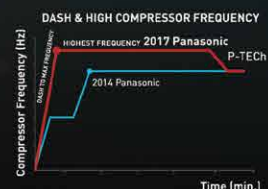
#### PWM (Pulse Width Modulated Wave)

Stabilises the compressor rotation speed when maintaining the set temperature, like putting a car on cruise control.



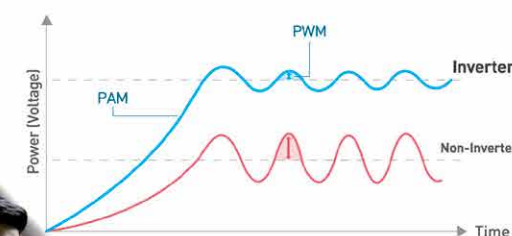
#### P-TECH - THE POWER BEHIND FAST COOLING

P-TECH enables the compressor to achieve maximum frequency in the shortest time from start up, giving you powerful cooling the moment the air conditioner is switched on.



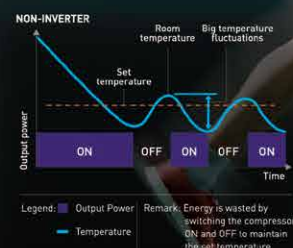
### Quick Cooling & Constant Comfort

PAM increases the power output to accelerate compressor speed at start up to deliver powerful cool air. Once the set temperature is reached, PWM controls the compressor speed to maintain the set temperature for comfortable ambience without wasting energy.

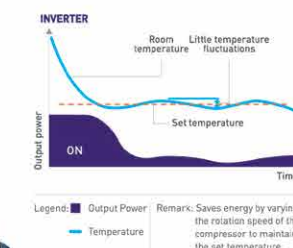


#### NON INVERTER

A conventional non-INVERTER air conditioner can only operate at a constant speed which is too powerful to maintain the set temperature. Thus, it switches the compressor on and off repeatedly. This results in wider temperature fluctuations leading to wasteful consumption of energy.



The Panasonic INVERTER air conditioner varies the rotation speed of the compressor, providing a precise method of maintaining the set temperature. Thus, Panasonic INVERTER air conditioners give you exceptional energy saving performance while ensuring you stay comfortable at all times.







ECONAVI is a high-precision sensor technology that detects where energy is usually wasted and adjusts cooling power according to room conditions and activity levels.

ECONAVI has two sensors – Human Activity Sensor and Sunlight Sensor. Together, they monitor human location, movement, absence, and sunlight intensity to use energy more efficiently.



Where you are.



When you leave the room.



When you are less active.



Whether it's a sunny day or at night.



Adapts to rhythmic temperature control after detecting low activity level.



Adapts cooling power to changes in sunlight intensity.

Detects human absence in the room; changes in human movements and changes in activity levels and adjust cooling power accordingly to prevent energy wastage.

## Long Term Endurance & Solid Performance

Panasonic's Air Conditioners are designed to resist tough conditions such as rain, direct sunlight and strong winds.

They undergo a variety of stringent tests for durability, waterproofing and shock resistance to ensure their effectiveness and long term reliability.



- Improve durability
- Protect 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

- 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.



\* Applicable to R32 ELITE INVERTER, R32 PREMIUM INVERTER, PREMIUM INVERTER & DELUXE Non-INVERTER.



WALL-MOUNTED : R32 **ELITE INVERTER** Single-Split Type

CS-VU10UKH-1 | CS-VU13UKH-1 | CS-VU18UKH-1



## Wireless



Wired (Optional)

## SPECIFICATIONS

SPECIFICATIONS			Cooling		Heating	
MODEL		(50Hz)	CS-VU10UKH-1 [CU-VU10UKH-1]	CS-VU13UKH-1 [CU-VU13UKH-1]	CS-VU18UKH-1 [CU-VU18UKH-1]	CS-VU24UKH-1 [CU-VU24UKH-1]
Cooling Capacity	[min-max]	kW	2.80 [0.84-3.28]	3.66 [0.92-4.20]	5.20 [1.10-5.80]	7.00 [1.55-7.85]
	[min-max]	Btu/h	9,550 [2,860-11,200]	12,500 [3,160-14,300]	17,700 [3,750-19,800]	23,900 [5,200-26,200]
EER	[min-max]	Btu/hW	13.64 [12.71-12.44]	13.59 [12.08-12.43]	12.21 [12.93-11.86]	11.03 [11.85-11.00]
Electrical Data	Voltage	V	230	230	230	230
	Current	A	3.1	4.1	6.7	9.1
	Power Input [min-max]	W	700 [225-900]	920 [260-1,150]	1,450 [290-1,670]	2,000 [400-2,250]
Moisture Removal		L/h	1.6	2.1	2.9	3.9
		Pt/h	3.4	4.4	6.1	8.1
Air Circulation	Indoor	m³/min (ft³/min)	10.2 [360]	12.3 [435]	14.8 [520]	19.8 [690]
	Outdoor	m³/min (ft³/min)	30.9 [1,090]	29.3 [1,030]	34.9 [1,230]	46.8 [1,640]
Noise Level	Indoor [H / L / Q-Le]	dB-A	36/25/18	41/27/19	44/36/31	49/38/34
	Outdoor [H]	dB-A	47	48	49	50
Dimensions	Height	mm	306 [542]	306 [542]	306 [619]	306 [619]
		inch	12-1/16 [21-11/32]	12-1/16 [21-11/32]	12-1/16 [24-3/8]	12-1/16 [24-3/8]
	Width	mm	950 [780]	950 [780]	950 [824]	950 [824]
		inch	37-13/32 [30-23/32]	37-13/32 [30-23/32]	37-13/32 [32-15/32]	37-13/32 [32-15/32]
	Depth	mm	280 [289]	280 [289]	280 [299]	280 [299]
Net Weight	Indoor	kg (lb)	12 [26]	12 [26]	12 [26]	12 [26]
	Outdoor	kg (lb)	24 [53]	29 [64]	33 [73]	33 [73]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 12.70	ø 12.70	ø 12.70
Pipe Extension		inch	3/8	1/2	1/2	1/2
	Chargeless Pipe Length	m	7.5	7.5	10	10
	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.

## 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.



Wireless  
Applicable to R32 ELITE INVERTER

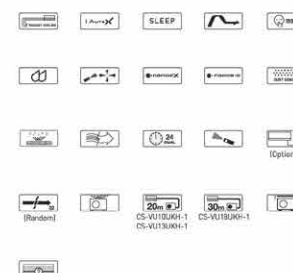


SKYWING



**XTRA  
QUIET<sup>18dB</sup>**  
(CS-VU10UKH-1)

## COOLING MODELS



OUTDOOR



CU-VU18UKH-1

WALL-MOUNTED : R32 PREMIUM **INVERTER** Single-Split Type

CS-XU10UKH-1 | CS-XU13UKH-1



Wireless



Wired (Optional)



CS-XU18UKH-1 | CS-XU24UKH-1



Wireless



Wired (Optional)

## SPECIFICATIONS

MODEL		(50Hz)	CS-XU10UKH-1 [CU-XU10UKH-1]	CS-XU13UKH-1 [CU-XU13UKH-1]	CS-XU18UKH-1 [CU-XU18UKH-1]	CS-XU24UKH-1 [CU-XU24UKH-1]
Cooling Capacity	[min-max]	kW	2.80 [0.84-3.28]	3.66 [0.92-4.20]	5.30 [1.10-6.00]	6.25 [1.12-7.10]
	[min-max]	Btu/h	9,550 [2,860-11,200]	12,500 [3,140-14,300]	18,100 [3,750-20,500]	21,300 [3,820-24,200]
EER	[min-max]	Btu/hW	13.08 [12.71-12.17]	12.38 [12.08-11.92]	13.12 [12.93-12.20]	12.38 [11.58-12.10]
Electrical Data	Voltage	V	230	230	230	230
	Current	A	3.5	4.6	6.1	7.6
	Power Input [min-max]	W	730 [225-920]	1,010 [260-1,200]	1,380 [290-1,680]	1,720 [330-2,000]
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	m <sup>3</sup> /min [ft <sup>3</sup> /min]	10.1 [355]	11.1 [390]	19.2 [680]	20.0 [705]
	Outdoor	m <sup>3</sup> /min [ft <sup>3</sup> /min]	27.6 [975]	30.9 [1,090]	36.0 [1,270]	46.3 [1,635]
Noise Level	Indoor [H / L / Q-Lo]	dB-A	36/26/22	38/28/25	44/32/29	45/34/31
	Outdoor [H]	dB-A	47	48	50	52
Dimensions	Height	mm	295 [511]	295 [542]	302 [619]	302 [695]
		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]
	Width	mm	919 [650]	919 [780]	1,120 [824]	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]
	Depth	mm	199 [230]	199 [289]	241 [299]	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]
Net Weight	Indoor	kg [lb]	9 [20]	9 [20]	12 [26]	12 [26]
	Outdoor	kg [lb]	19 [42]	28 [62]	34 [75]	41 [90]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 12.70	ø 12.70	ø 15.88
		inch	3/8	1/2	1/2	5/8
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	10	10
	Maximum Pipe Length	m	20	20	30	30
	Maximum Elevation Length	m	15	15	20	20
	Additional Refrigerant Gas*	g/m	10	10	15	25
Power Supply			Indoor	Indoor	Indoor	Indoor

Caution For CS-XU10/XU13/XU18/XU24UKH-1 (Important) Please do not use copper pipes that are less than 0.6mm in thickness.  
 \*When pipes are not extended from the chargeless pipe length, the required amount of refrigerant is already in the unit.



## BRING FRESH CLEAN AIR TO YOUR HOMES

nanoe™ Technology helps reduce indoor air pollution. So, you and your loved one can enjoy fresh clean air at home all the time.



\*For more detail about nanoe™ Technology Efficiency, please refer to page 08-13

## 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  
R32 PREMIUM INVERTER

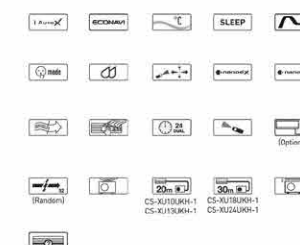
- 1 LCD display for an easy overview of the operation status.
- 2 Come home to fast cooling. Then enjoy continuous comfort with Shower Cooling which avoids direct cooling.
- 3 ECONAVI monitors sunlight intensity, human movement, activity levels and human absence to detect and reduce energy waste.
- 4 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.
- 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.
- 9 Adjusts the fan speed.
- 10 Quiet function allows you to sleep comfortably at night.
- 11 Set the 24-hour Dual ON & OFF Timer.
- 12 Set the actual time [hour and minute].



AEROWINGS



## COOLING MODELS



## OUTDOOR



CU-XU10UKH-1



CU-XU13UKH-1



CU-XU18UKH-1



CU-XU24UKH-1



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

CS-S10TKH-1 | CS-S13TKH-1 | CS-S15TKH-1



Wireless



CS-S18TKH-1 | CS-S24TKH-1 | CS-S28TKH-1



Wireless

## SPECIFICATIONS

MODEL		(50Hz)	CS-S10TKH-1 [CU-S10TKH-1]	CS-S13TKH-1 [CU-S13TKH-1]	CS-S15TKH-1 [CU-S15TKH-1]	CS-S18TKH-1 [CU-S18TKH-1]	CS-S24TKH-1 [CU-S24TKH-1]	CS-S28TKH-1 [CU-S28TKH-1]
Cooling Capacity	[min-max]	kW	2.80 [0.84-3.28]	3.66 [0.92-4.20]	4.40 [1.07-5.00]	5.27 [1.10-6.00]	6.25 [1.12-7.10]	7.10 [1.15-8.50]
	[min-max]	Btu/h	9,550 [2,860-11,200]	12,500 [3,140-14,300]	15,000 [3,650-17,100]	18,000 [3,750-20,500]	21,300 [3,820-24,200]	24,200 [3,920-29,000]
EER	[min-max]	Btu/hW	12.57 [12.71-12.17]	12.02 [12.08-11.92]	12.71 [12.81-12.57]	12.86 [12.93-12.06]	11.83 [11.58-11.00]	11.92 [11.20-10.74]
Electrical Data	Voltage	V	230	230	230	230	230	230
	Current	A	3.6	4.8	5.4	6.5	7.9	9.3
Power input [min-max]	W	W	760 [225-920]	1,040 [260-1,200]	1,180 [285-1,360]	1,400 [290-1,700]	1,800 [330-2,200]	2,030 [350-2,700]
	L/h	L/h	1.6	2.1	2.4	2.9	3.5	4.1
Moisture Removal	Pt/h	Pt/h	3.4	4.4	5.1	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]	12.2 [430]	19.6 [690]	20.2 [715]	21.7 [765]
	Outdoor	m <sup>3</sup> /min [ft <sup>3</sup> /min]	27.6 [975]	30.9 [1,090]	29.3 [1,030]	35.3 [1,245]	46.3 [1,635]	50.3 [1,775]
Noise Level	Indoor [H / L / Q-Lo]	dB-A	36/26/22	38/28/25	43/30/27	44/32/29	45/34/31	47/37/34
	Outdoor [H]	dB-A	47	48	50	50	52	53
Dimensions	Height	mm	295 [511]	295 [542]	295 [542]	302 [619]	302 [695]	302 [795]
		inch	11-5/8 [20-1/8]	11-5/8 [21-1/32]	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]	919 [780]	1,120 [824]	1,120 [875]	1,120 [875]
		inch	36-3/16 [25-19/32]	36-3/16 [30-23/32]	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	mm	199 [230]	199 [289]	199 [289]	241 [299]	241 [320]	241 [320]
	inch	inch	7-27/32 [9-1/16]	7-27/32 [11-13/32]	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]	9 [20]	12 [26]	12 [26]	12 [26]
	Outdoor	kg [lb]	20 [44]	27 [60]	31 [68]	34 [75]	38 [84]	57 [126]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	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	1/4
Gas Side	mm	mm	ø 9.52	ø 12.70	ø 12.70	ø 12.70	ø 15.88	ø 15.88
		inch	3/8	1/2	1/2	1/2	5/8	5/8
Pipe Extension	Chargeless Pipe Length	m	7.5	7.5	7.5	10	10	10
	Maximum Pipe Length	m	15	15	15	30	20	30
	Maximum Elevation Length	m	5	5	5	20	15	20
	Additional Refrigerant Gas*	g/m	15	15	15	15	20	30
Power Supply			Indoor	Indoor	Indoor	Indoor	Indoor	Outdoor

Cauton For CS-S10/S13/S15/S18/S24/S28TKH-1 [Important] Please do not use copper pipes that are less than 0.6mm in thickness.  
 \*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 Come home to 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.
- 9 Adjusts the fan speed.
- 10 Quiet function allows you to sleep comfortably at night.
- 11 Set the 24-hour Dual ON & OFF Timer.
- 12 Set the actual time (hour and minute).

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.

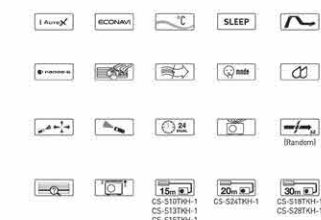
Select ON or OFF Timer



Set the time.



## COOLING MODELS



## OUTDOOR



CU-S10TKH-1

CU-S13TKH-1  
CU-S15TKH-1

CU-S18TKH-1



CU-S24TKH-1



CU-S28TKH-1

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

CS-PS9TKH-1 | CS-PS12TKH-1



Wireless



Wired (Optional)



CS-PS18TKH-1 | CS-PS24TKH-1



Wireless



Wired (Optional)

## SPECIFICATIONS

MODEL		(50Hz)	CS-PS9TKH-1 [CU-PS9TKH-1]	CS-PS12TKH-1 [CU-PS12TKH-1]	CS-PS18TKH-1 [CU-PS18TKH-1]	CS-PS24TKH-1 [CU-PS24TKH-1]
Cooling Capacity	(min-max)	kW	2.80 [0.84-3.00]	3.55 [0.92-3.85]	5.13 [1.10-5.40]	6.25 [1.12-6.80]
	(min-max)	Btu/h	9,550 [2,860-10,200]	12,100 [3,140-13,100]	17,500 [3,750-19,100]	21,300 [3,820-23,200]
EER	(min-max)	Btu/hW	12.24 [12.71-10.63]	11.52 [12.08-10.92]	11.67 [12.93-11.58]	11.64 [11.58-10.79]
Electrical Data	Voltage	V	230	230	230	230
	Current	A	3.7	4.7	7.1	8.5
	Power Input (min-max)	W	780 [225-960]	1,050 [260-1,200]	1,500 [290-1,650]	1,830 [330-2,150]
Moisture Removal	L/h		1.6	2.1	2.8	3.5
	Pt/h		3.4	4.4	5.9	7.4
Air Circulation	Indoor	m <sup>3</sup> /min [ft <sup>3</sup> /min]	9.1 [320]	10.1 [355]	19.2 [680]	19.7 [695]
	Outdoor	m <sup>3</sup> /min [ft <sup>3</sup> /min]	27.6 [970]	30.9 [1,090]	35.6 [1,255]	47.0 [1,660]
Noise Level	Indoor [H / L / Q-Le]	dB-A	38/28/25	40/29/26	44/32/29	45/34/33
	Outdoor [H]	dB-A	47	48	50	52
Dimensions	Height	mm	290 [511]	290 [542]	302 [619]	302 [695]
		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]
	Width	mm	799 [650]	799 [780]	1,102 [824]	1,102 [875]
		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]
	Depth	mm	197 [230]	197 [289]	244 [299]	244 [320]
		inch	7-25/32 [9-1/16]	7-25/32 [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]
	Outdoor	kg [lb]	19 [42]	27 [60]	34 [75]	40 [88]
Refrigerant Pipe Diameter	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
		inch	1/4	1/4	1/4	1/4
	Gas Side	mm	ø 9.52	ø 12.70	ø 12.70	ø 15.88
Pipe Extension		inch	3/8	1/2	1/2	5/8
	Chargeless Pipe Length	m	7.5	7.5	7.5	10
	Maximum Pipe Length	m	15	15	15	20
	Maximum Elevation Length	m	5	5	5	15
Power Supply	Additional Refrigerant Gas*	g/m	15	15	15	20

Caution For CS-PS9/PS12/PS18/PS24TKH-1 (Important) Please do not use copper pipes that are less than 0.6mm in thickness.

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

## BIG FLAP



BIG FLAP with bigger bottom flap measuring 79mm\* in depth directs cool air further and longer. So, you can enjoy cool air even in larger living spaces.

\*79mm applicable to CS-PS9 & PS12TKH-1 and 104mm applicable to CS-PS18 & PS24TKH-1.

## 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 Adjusts the fan speed.
- 5 Press up or down to set the temperature.
- 6 Toggles between iAUTO, COOL and DRY setting mode.
- 7 Delays off timer with temperature control for better sleep.
- 8 Set the airflow.
- 9 Set the 24-hour ON & OFF Timer.
- 10 Set the actual time (hour and minute).



Wireless  
Applicable to STANDARD INVERTER

## BIG FLAP



## COOLING MODELS



## OUTDOOR



CU-PS9TKH-1



CU-PS12TKH-1



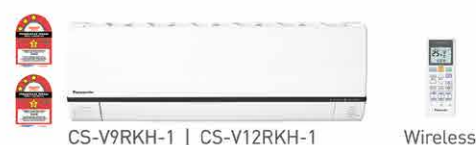
CU-PS18TKH-1



CU-PS24TKH-1



## WALL-MOUNTED : DELUXE Non-INVERTER Single-Split Type



## COOLING MODELS



## SPECIFICATIONS

MODEL		(50Hz)	CS-V9RKH-1 [CU-V9RKH-1]	CS-V12RKH-1 [CU-V12RKH-1]	CS-V18RKH-1 [CU-V18RKH-1]	CS-V24RKH-1 [CU-V24RKH-1]	CS-V28RKH-1 [CU-V28RKH-1]
Cooling Capacity		kW	2.70	3.52	5.33	6.85	7.92
		Btu/h	9,210	12,000	18,200	23,400	27,000
EER		Btu/h/W	11.10	11.11	9.73	9.75	9.89
Electrical Data	Voltage	V	230	230	230	230	230
	Current	A	3.7	5.0	8.3	10.5	12.8
	Power Input	W	830	1,080	1,870	2,400	2,730
Moisture Removal		L/h	1.6	2.0	2.9	3.9	4.6
		Pt/h	3.4	4.2	6.1	8.2	9.7
Air Circulation	Indoor	m <sup>3</sup> /min (ft <sup>3</sup> /min)	10.1 [357]	11.2 [395]	16.9 [597]	18.7 [660]	20.2 [713]
	Outdoor	m <sup>3</sup> /min (ft <sup>3</sup> /min)	22.8 [800]	30.8 [1,090]	35.2 [1,240]	48.6 [1,720]	54.4 [1,920]
Noise Level	Indoor [H / L]	dB-A	37/26	41/29	43/39	47/42	49/44
	Outdoor [H]	dB-A	48	50	55	57	56
Dimensions	Height	mm	296 [511]	296 [542]	296 [619]	296 [695]	296 [750]
		inch	11-21/32 [20-1/8]	11-21/32 [21-11/32]	11-21/32 [24-3/8]	11-21/32 [27-3/8]	11-21/32 [29-17/32]
	Width	mm	870 [650]	870 [780]	1,070 [824]	1,070 [875]	1,070 [875]
		inch	34-9/32 [25-19/32]	34-9/32 [30-23/32]	42-5/32 [32-15/32]	42-5/32 [34-15/32]	42-5/32 [34-15/32]
	Depth	mm	236 [230]	236 [289]	241 [299]	241 [320]	241 [345]
		inch	9-5/16 [9-1/16]	9-5/16 [11-13/32]	9-1/2 [11-25/32]	9-1/2 [12-5/8]	9-1/2 [13-19/32]
Net Weight	Indoor	kg [lb]	9 [20]	9 [20]	12 [26]	12 [26]	12 [26]
	Outdoor	kg [lb]	25 [55]	30 [66]	34 [75]	52 [115]	56 [123]
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
Pipe Extension		inch	3/8	1/2	1/2	5/8	5/8
	Chargeless Pipe Length	m	7.5	7.5	7.5	7.5	7.5
	Maximum Pipe Length	m	10	15	25	25	30
	Maximum Elevation Length	m	5	5	20	20	20
	Additional Refrigerant Gas*	g/m	10	10	20	30	30
Power Supply			Indoor	Indoor	Indoor	Indoor	Outdoor

Caution For CS-V9/V12/V18/V24/V28RKH-1 [Important] Please do not use copper pipes that are less than 0.6mm in thickness.  
\*When pipes are not extended from the chargeless pipe length, the required amount of refrigerant is already in the unit.

## OUTDOOR



CU-V9RKH-1



CU-V12RKH-1



CU-V18RKH-1



CU-V24RKH-1



CU-V28RKH-1

\*\*Net applicable for EER Label

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



## BIG FLAP



## COOLING MODELS



## SPECIFICATIONS

MODEL		(50Hz)	CS-PV9TKH-1 [CU-PV9TKH-1]	CS-PV12TKH-1 [CU-PV12TKH-1]	CS-PV18TKH-1 [CU-PV18TKH-1]	CS-PV24TKH-1 [CU-PV24TKH-1]	CS-PV28TKH-1 [CU-PV28TKH-1]
Cooling Capacity		kW	2.70	3.52	5.33	6.85	7.92
		Btu/h	9,210	12,000	18,200	23,400	27,000
EER		Btu/hW	10.96	11.01	9.73	9.79	9.64
Electrical Data	Voltage	V	230	230	230	230	230
	Current	A	3.7	5.0	8.3	10.5	13.0
	Power Input	W	840	1,090	1,870	2,390	2,800
Moisture Removal		L/h	1.6	2.0	2.9	3.9	4.6
		Pt/h	3.4	4.2	6.1	8.2	9.7
Air Circulation	Indoor	m³/min [ft³/min]	10.2 [360]	11.3 [399]	18.9 [667]	20.6 [727]	20.8 [734]
	Outdoor	m³/min [ft³/min]	28.8 [1,020]	33.3 [1,180]	35.2 [1,240]	40.3 [1,420]	54.4 [1,920]
Noise Level	Indoor (H / L)	dB-A	38/26	41/29	43/39	47/42	50/46
	Outdoor (H / L)	dB-A	48	52	54	56	57
Dimensions	Height	mm	290 [511]	290 [542]	302 [619]	302 [619]	302 [695]
		inch	11-7/16 [20-1/8]	11-7/16 [21-11/32]	11-29/32 [24-3/8]	11-29/32 [24-3/8]	11-29/32 [27-3/8]
	Width	mm	799 [650]	799 [780]	1,102 [824]	1,102 [824]	1,102 [875]
		inch	31-15/32 [25-19/32]	31-15/32 [30-23/32]	43-13/32 [32-15/32]	43-13/32 [32-15/32]	43-13/32 [34-15/32]
	Depth	mm	197 [230]	197 [289]	244 [299]	244 [299]	244 [320]
		inch	7-3/4 [9-1/16]	7-3/4 [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]	8 [18]	8 [18]	12 [26]	12 [26]	12 [26]
	Outdoor	kg [lb]	22 [49]	29 [64]	34 [75]	40 [88]	54 [119]
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
Pipe Extension		inch	3/8	1/2	1/2	5/8	5/8
	Chargeless Pipe Length	m	7.5	7.5	7.5	7.5	7.5
	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	20	30	30
Power Supply			Indoor	Indoor	Indoor	Indoor	Outdoor

Caution For CS-PV9/PV12/PV18/PV24/PV28TKH-1 [Important] Please do not use copper pipes that are less than 0.6mm in thickness.  
\*When pipes are not extended from the chargeless pipe length, the required amount of refrigerant is already in the unit.

## OUTDOOR



CU-PV9TKH-1



CU-PV12TKH-1

CU-PV18TKH-1  
CU-PV24TKH-1

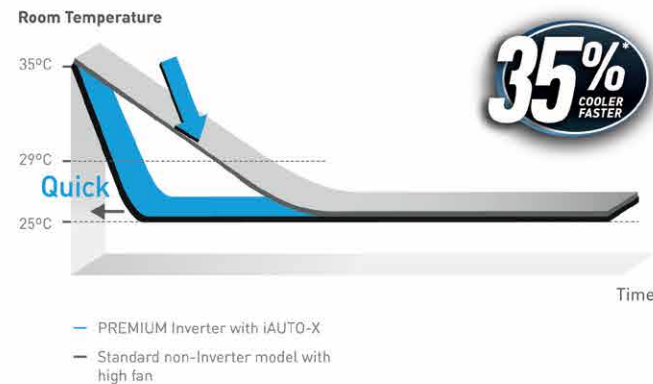
CU-PV28TKH-1

\*\*Net applicable for EER Label



## Faster Cooling

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



**35%\***  
Faster Cooling

\* Comparison of 1.5HP PREMIUM Inverter with iAUTO-X mode and Standard non-Inverter model with cooling mode

PREMIUM Inverter: 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

Standard non-Inverter: 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: 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.

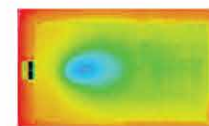
## Automatic Fan Speed

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.



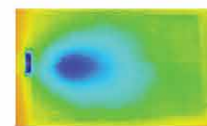
Remark:  
Applicable for PREMIUM Inverter with iAUTO-X

### CONVENTIONAL COOLING



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

### FAST COOLING



Concentrated airflow cools instantly. Room is evenly cooled.

\*Applicable to PREMIUM INVERTER only.

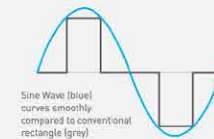


## True Comfort Is Just A Touch Away

### SINE WAVE DRIVE

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

#### SINE WAVE COMPARISONS



— Sine Wave drive produces smooth wave curves. This reduces power loss or energy waste.  
— Conventional rectangle drive produces distortions which results in power efficiency loss.



### 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

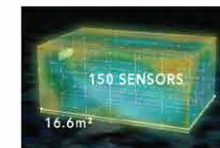
Sine Wave regulates power voltage that is identical to power supplied, ensuring consistent performance and stable operation.

#### 3. LOW VIBRATION

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

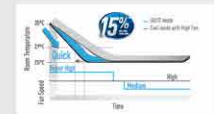
### QUALITY CONTROL THROUGH SIMULATED LABORATORY TEST

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 16.6m² 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.

\*Applicable to STANDARD INVERTER, STANDARD Non-INVERTER & DELUXE Non-INVERTER.



#### 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 SEMI DELUXE 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 in installation and usage.



# 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.



DR NAOSHI KAKITSUBA

DEPT. OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY, MEIJO UNIVERSITY JAPAN



## THE PRINCIPLE OF RADIANT COOLING

### Conventional Cooling



Heat is absorbed by the breeze on the skin, resulting in a cool feeling.

#### Conventional air conditioner



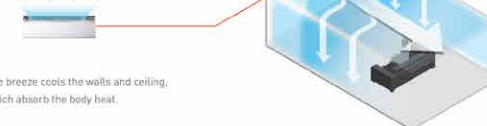
The breeze directly contacts the body for cooling.

### RADIANT COOLING



Heat is absorbed by the cool surrounding walls and ceiling, resulting in a cool feeling.

#### SKY SERIES



The breeze cools the walls and ceiling, which absorb the body heat.



### Conventional air conditioner

### SKY SERIES

## COOLS GENTLY AND EVENLY

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.

### Temperature distribution



"It's cold!"  
"It's comfortable!"

### Air velocity distribution



"I feel cold wind!"  
Discharge air flow  
Return air flow



"It's comfortable!"  
The temperature in all areas of the room can be evenly set at a comfortable level.



I don't feel much wind!  
Discharge air flow  
Return air flow  
Comfortable in living space with no wind (less than 0.2 m/s\*)  
\*Meter per second



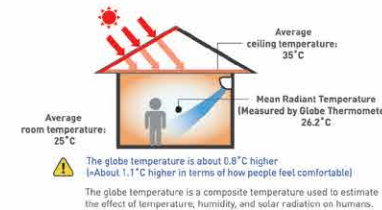
Test conditions: Measured in stable operation at 25°C cooling with fan speed set at "HI."



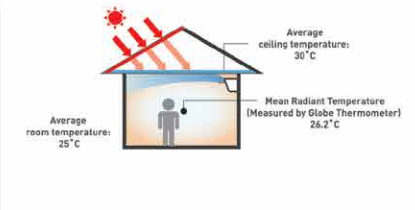
## RADIANT COOLING REMOVES HEAT FROM CEILING AND WALLS

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

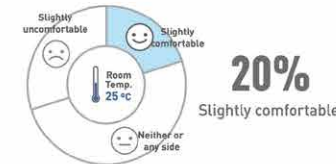
### Radiant heat from roof top and ceiling



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.



### Sensation evaluation



Measured in stable operation at 25°C cooling with fan speed set at "MEDIUM". The actual average room temperature is the same.



## THE BENEFITS OF RADIANT COOLING

SKYWING angles upwards to cool without direct airflow, thus PREVENTING OVERCOOLING AND MAINTAINS SKIN MOISTURE.

### Skin moisture after 60 minutes



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



\*Applicable to R32 ELITE INVERTER only.  
\*All test results are based on internal test.

# Expanding the nanoe™ World in Japan - 24/7, Anytime, Anywhere

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

## Public Transport



JR Kyushu

Cruise train adopted for "Seven stars in Kyushu"



KEIHAN  
Keihan Railway

Keihan railway adopted for admission-paid special railroad coach



KEIO

Kelo railway adopted for new model railroad coach



JR East

Yamanote line adopted for new models



● Humidifier Air Purifier



● Humidifier



● Clothes Drying Dehumidifier



● Fan



● Air Conditioner

## Home

06:00

Commuting

Office

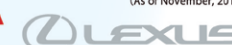
Home

Going home



TOYOTA

Expanding adoption to 34 models  
(As of November, 2017)



LEXUS

● MITSUBISHI MOTORS

adopted for 1 model



adopted for 3 models



Adopted as option accessory



MAZDA

SUBARU CORPORATION.

## Automobile

## Office



● 4-Way Ceiling Cassette Type Air Conditioner



HITACHI



日本エレベーター製造株式会社

## Public Space



● Ceiling embedded type nanoe™ generator

### Hotels



### Cafes



### Hospitals



### Nursery Schools



### Nursing Homes








































Panasonic is committed to the improvement of air quality with nanoe™ Technology.

Trade names, trademarks and images of products/services are used in this material under approval by relevant entities in Japan. (As of December 1st, 2017)


































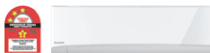
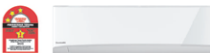
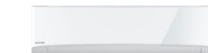



## FEATURES COMPARISON

Split Type	R32 ELITE INVERTER	R32 PREMIUM INVERTER		PREMIUM INVERTER		STANDARD INVERTER		DELUXE Non-INVERTER		STANDARD Non-INVERTER	
		Wall-Mounted									
Cooling Models	CS-VU10UKH-1 CS-VU13UKH-1 CS-VU18UKH-1	CS-XU10UKH-1 CS-XU13UKH-1	CS-XU18UKH-1 CS-XU24UKH-1	CS-S10TKH-1 CS-S13TKH-1 CS-S15TKH-1	CS-S18TKH-1 CS-S24TKH-1 CS-S28TKH-1	CS-PS9TKH-1 CS-PS12TKH-1	CS-PS18TKH-1 CS-PS24TKH-1	CS-V9RKH-1 CS-V12RKH-1	CS-V18RKH-1 CS-V24RKH-1 CS-V28RKH-1	CS-PV9TKH-1 CS-PV12TKH-1	CS-PV18TKH-1 CS-PV24TKH-1 CS-PV28TKH-1
											
COMFORT											
 Radiant Cooling	●										
 IAUTO-X	●	●	●	●	●						
 ECONAVI		●	●	●	●			●	●		
 Temperature Wave		●	●	●	●						
 SLEEP	●	●	●	●	●	●	●			●	●
 Inverter Control	●	●	●	●	●	●	●				
 IAUTO						●	●	●	●	●	●
 Quiet Mode	●	●	●	●	●	●	●	●	●	●	●
 Soft Dry Operation Mode	●	●	●	●	●	●	●	●	●	●	●
 Personal Airflow Creation	●	●	●	●	●			●	●		
 Airflow Direction Control (Up & Down)						●	●			●	●
 Manual Horizontal Airflow Direction Control						●	●			●	●
 Autocomfort								●	●		
CLEANER AIR											
 nanoe™X	●	●	●								
 nanoe-G	●	●	●	●	●			●	●		
 Anti-Dust Coating	●										
 Dust Sensor	●										
 Odour-Removing Function	●	●	●	●	●	●	●	●	●	●	●
 Removable, Washable Panel		●	●	●	●	●	●	●	●	●	●
CONVENIENCE											
 24-Hour Dual ON & OFF Real Setting Timer	●	●	●	●	●						
 24-Hour ON & OFF Real Setting Timer						●	●	●	●	●	●
 LCD Wireless Remote Control	●	●	●	●	●	●	●	●	●	●	●
 Wired Remote Control	● (Optional)	● (Optional)	● (Optional)			● (Optional)	● (Optional)			● (Optional)	● (Optional)
RELIABILITY											
 Random Auto Restart (32 Restart Patterns)	●	●	●	●	●	●	●	●	●	●	●
 Blue Fin Condenser	●	●	●	●	●	●	●	●	●	●	●
 Long Piping (Numbers indicate the maximum pipe length)	20m (VU10/13) 30m (VU18)	20m	30m	15m	20m (S24) 30m (S18/28)	15m	15m (PS18) 20m (PS24)	10m (V9) 15m (V12)	25m (V18/24) 30m (V28)	20m	30m
 Top-Panel Maintenance Access	●	●	●	●	●	●	●	●	●	●	●
 Self-Diagnostic Function	●	●	●	●	●	●	●				

## FEATURES EXPLANATION

COMFORT	
<b>RADIANT COOLING</b> Cools the ceiling and walls first, providing continuous cooling comfort without direct airflow.	
<b>iAUTO-X</b> Come home to fast cooling. Then enjoy continuous comfort with Radiant Cooling/ Shower Cooling which avoids direct cooling.	
<b>ECONAVI</b> Detects and reduces waste for more energy savings.	
<b>TEMPERATURE WAVE</b> Rhythmic temperature-controlled pattern to save energy without sacrificing comfort.	
<b>AUTOCOMFORT</b> Detects high activity levels and adjusts cooling power to improve comfort.	
<b>SLEEP MODE</b> Delays off timer with temperature control for better sleep.	
<b>INVERTER CONTROL</b> Varies the rotation speed of the compressor for higher energy savings.	
<b>iAUTO</b> Automatic Intelligence switches fan speed for faster cooling with just one touch of a button.	
<b>QUIET MODE</b>	
<b>SOFT DRY OPERATION MODE</b> Starts with cooling to dehumidify, then provides continuous breeze at a low frequency to keep a room dry without much change to the temperature.	
<b>PERSONAL AIRFLOW CREATION</b> Vertical and horizontal airflow patterns can be combined as desired to achieve optimum comfort, with operation possible by remote even from a distance.	
<b>AIRFLOW DIRECTION CONTROL (UP &amp; DOWN)</b>	
<b>MANUAL HORIZONTAL AIRFLOW DIRECTION CONTROL</b>	
CLEANER AIR	
<b>nanoe™X</b> nanoe™X desorises and inhibits the growth of bacteria and viruses, for a fresher and cleaner living space.	
<b>nanoe-G</b> nanoe-G works effectively on airborne particles including PM2.5, adhesive and in-filter micro-organisms such as bacteria, viruses and mould for a cleaner living space.	
<b>DUST SENSOR</b> Monitors particle concentration levels and turns on nanoe-G if levels are high.	
<b>ANTI-DUST COATING</b> Anti-dust coating prevents dust from accumulating on cross flow fan by keeping it clean.	
<b>ODOUR-REMOVING FUNCTION</b> With this function, there's no unpleasant odor when the unit starts up. That's because the fan remains off momentarily, while the source of the odour inside the air conditioner is suppressed.	
The unit must be in cool or dry mode and the fan speed must be set to automatic.	
<b>REMOVABLE, WASHABLE PANEL</b>	
CONVENIENCE	
<b>24-HOUR DUAL ON &amp; OFF REAL SETTING TIMER</b> This feature enables you to preset two different sets of start/stop operation timer (hour and minute) within a 24-hour time frame.	
<b>24-HOUR ON &amp; OFF REAL SETTING TIMER</b> The exact operating time (hour and minute) of the air conditioner can be set in advance. From here on, the unit will operate in accordance to these preset hours every day until the system is reset.	
<b>LCD WIRELESS REMOTE CONTROL</b>	
<b>WIRED REMOTE CONTROL</b>	
RELIABILITY	
<b>RANDOM AUTO RESTART</b>	
<b>BLUE FIN CONDENSER</b>	
<b>SELF-DIAGNOSTIC FUNCTION</b> Should a malfunction occur, the unit diagnoses the problem and shows the corresponding alphanumeric code. This allows for quicker servicing.	
<b>LONG PIPING</b>	
<b>TOP-PANEL MAINTENANCE ACCESS</b>	
OPTIONAL ACCESSORIES	
■ REMOTE CONTROL	
<b>Wired Remote Control</b>  CZ-RD011C-1 CS-PV9TKH-1, CS-PV12TKH-1, CS-PV18TKH-1, CS-PV24TKH-1, CS-PV28TKH-1	<b>Wired Remote Control</b>  CZ-RD514C-1 CS-VU10UKH-1, CS-VU13UKH-1, CS-VU18UKH-1, CS-XU10UKH-1, CS-XU13UKH-1, CS-XU18UKH-1, CS-XU24UKH-1, CS-PS9TKH-1, CS-PS12TKH-1, CS-PS18TKH-1, CS-PS24TKH-1

Horse Power (HP)	1.0	1.5	1.75	2.0	2.5	3.0	
Capacity (Btu/h)	9,000 / 10,000	12,000 / 13,000	15,000	18,000	24,000	28,000	
Wall-Mounted <b>R32 ELITE INVERTER</b> Page 24-25	R32 ELITE INVERTER			R32 ELITE INVERTER		FEATURES	
	 <b>CS-VU10UKH-1</b> [CU-VU10UKH-1]	 <b>CS-VU13UKH-1</b> [CU-VU13UKH-1]		 <b>CS-VU18UKH-1</b> [CU-VU18UKH-1]			 SKYWING  INTELLIGENT DYNAMIC COOL... <b>INVERTER</b> XTRA QUIET18dB (CU-VU18UKH-1)
Wall-Mounted <b>R32 PREMIUM INVERTER</b> Page 26-27	R32 PREMIUM INVERTER			R32 PREMIUM INVERTER WIDE		FEATURES	
	 <b>CS-XU10UKH-1</b> [CU-XU10UKH-1]	 <b>CS-XU13UKH-1</b> [CU-XU13UKH-1]		 <b>CS-XU18UKH-1</b> [CU-XU18UKH-1]	 <b>CS-XU24UKH-1</b> [CU-XU24UKH-1]		 AEROWINGS  INTELLIGENT DYNAMIC COOL... <b>INVERTER</b> ECONAVI
Wall-Mounted <b>PREMIUM INVERTER</b> Page 28-29	PREMIUM INVERTER			PREMIUM INVERTER WIDE		FEATURES	
	 <b>CS-S10TKH-1</b> [CU-S10TKH-1]	 <b>CS-S13TKH-1</b> [CU-S13TKH-1]	 <b>CS-S15TKH-1</b> [CU-S15TKH-1]	 <b>CS-S18TKH-1</b> [CU-S18TKH-1]	 <b>CS-S24TKH-1</b> [CU-S24TKH-1]	 <b>CS-S28TKH-1</b> [CU-S28TKH-1]	 AEROWINGS  INTELLIGENT DYNAMIC COOL... <b>INVERTER</b> ECONAVI
Wall-Mounted <b>STANDARD INVERTER</b> Page 30-31	STANDARD INVERTER			STANDARD INVERTER WIDE		FEATURES	
	 <b>CS-PS9TKH-1</b> [CU-PS9TKH-1]	 <b>CS-PS12TKH-1</b> [CU-PS12TKH-1]		 <b>CS-PS18TKH-1</b> [CU-PS18TKH-1]	 <b>CS-PS24TKH-1</b> [CU-PS24TKH-1]		BIG FLAP  INTELLIGENT AUTO MODE <b>INVERTER</b>
Wall-Mounted <b>DELUXE NON-INVERTER</b> Page 32	DELUXE NON-INVERTER			DELUXE NON-INVERTER WIDE		FEATURES	
	 <b>CS-V9RKH-1</b> [CU-V9RKH-1]	 <b>CS-V12RKH-1</b> [CU-V12RKH-1]		 <b>CS-V18RKH-1</b> [CU-V18RKH-1]	 <b>CS-V24RKH-1</b> [CU-V24RKH-1]	 <b>CS-V28RKH-1</b> [CU-V28RKH-1]	 AEROWINGS  INTELLIGENT AUTO MODE <b>INVERTER</b> ECONAVI
Wall-Mounted <b>STANDARD NON-INVERTER</b> Page 33	STANDARD NON-INVERTER			STANDARD NON-INVERTER WIDE		FEATURES	
	 <b>CS-PV9TKH-1</b> [CU-PV9TKH-1]	 <b>CS-PV12TKH-1</b> [CU-PV12TKH-1]		 <b>CS-PV18TKH-1</b> [CU-PV18TKH-1]	 <b>CS-PV24TKH-1</b> [CU-PV24TKH-1]	 <b>CS-PV28TKH-1</b> [CU-PV28TKH-1]	BIG FLAP  INTELLIGENT AUTO MODE

( ): Outdoor Unit      Cooling Models