



ETHEREA



heatcharge





## WELCOME TO DOMESTIC RANGE

**Panasonic has developed a range of products designed for you, better than ever before.**

With its innovative design, high efficiency and incomparable purification system, the Etherea range has been designed with your clients in mind. Above all, it is also a range for air conditioning professionals, such as yourself, thanks to its broad range of products which are capable of conditioning rooms of all sizes – always with optimal efficiency and incomparable ease of installation. The Etherea range guarantees that you are offering your clients the very best.

**Go green. Go clean. Go your way**

Panasonic Air Conditioners are designed to provide more than just comfort cooling to homes. They save energy. They purify your surroundings. They adjust cooling power to suit your living spaces and styles. Living an eco-lifestyle your way is now easier than ever.





## Highlighted Features

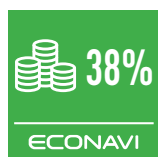
### **Panasonic air conditioners provide more savings and more comfort**

We believe that going green shouldn't compromise on comfort. That's why Panasonic is introducing the new Econavi system; combining human sensor and control program technology to detect and reduce energy waste by 38% .

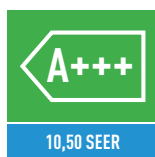
Our super silent air conditioners guarantee the purest air to take care of you and your family. And, for a cleaner living environment, the new Nanoe helps purify the air as well as your surroundings. Together, these breakthrough technologies define what Panasonic's Eco Clean Life Innovation is all about – innovations that improve our environment while making life as comfortable as possible.



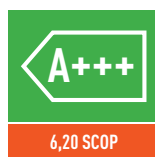
## ENERGY SAVING



Intelligent Human Activity Sensor and new Sunlight Sensor technologies that can detect and reduce waste by optimising air conditioner according to room conditions. With just one touch of a button, you can save energy.



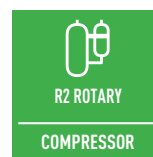
Exceptional Seasonal Cooling Efficiency based on the new ErP regulation. Higher SEER ratings mean greater efficiency. Save all the year while cooling!



Exceptional Seasonal Heating Efficiency based on the new ErP regulation. Higher SCOP ratings mean greater efficiency. Save all the year while heating!



The A Inverter system provides energy savings of up to 50%. Both you and nature wins!

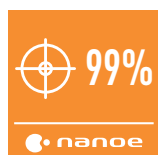


Panasonic R2 Rotary Compressor. Designed to withstand extreme conditions, it delivers high performance and efficiency.



Our heat pumps containing the new refrigerant R32 show a drastic reduction in the value of Global Warming Potential (GWP). An important step to reduce greenhouse gases. R32 is also a components refrigerant, making it easy to recycle.

## HIGH PERFORMANCE AND HEALTHY AIR



New Nanoe utilises nano-technology fine particles to purify the air in the room. It works effectively on airborne and adhesive micro-organisms such as bacteria, viruses and mould. Seal of Approval of the British Allergy Foundation.



Particulate matter (PM2,5) can be found suspended in the air, including dust, dirt, smoke and liquid droplets. Sized at 2,5µm, these particles are said to pose health problems as they can easily enter our lungs.



With Super Quiet technology our devices are much more quiet than a library (30dB(A)).



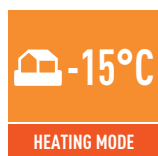
The Perfect Humidity Air controls the humidity level in the air to prevent over-dryness.



More comfort with Aerowings. Direct airflow to ceiling to create shower cooling effect by twin flap built in indoor.



Down to -10°C in cooling only mode. The air conditioner works in cooling only mode with an outdoor temperature of -10°C.



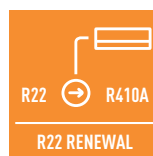
Down to -15°C in heating mode. The air conditioner works in heat pump mode with an outdoor temperature as low as -15°C.



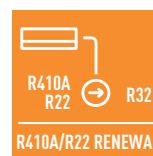
Heatcharge, this innovative, newly developed technology charges heat and uses it for heating. Thanks to this system, you can enjoy incredibly powerful, comfortable air conditioner heating.



Summer House, this innovative function keeps the house at 7/8°C to avoid freezing pipes during the winter. This function is highly appreciated in summer house or week end houses.



The Panasonic renewal system allows good quality existing R22 pipe work to be re-used whilst installing new high efficiency R410A systems.



The Panasonic renewal system allows good quality existing R410A or R22 pipe work to be re-used whilst installing new high efficiency R32 systems.

## HIGH CONNECTIVITY



Internet Control is a next generation system providing a user-friendly remote control of air conditioning or heat pump units from everywhere, using a simple Android or iOS smartphone, tablet or PC via internet.



The communication port is integrated into the indoor unit and provides easy connection to, and control of, your Panasonic heat pump to your home or building management system.



5 Years Warranty. We guarantee the outdoor unit compressors in the entire range for five years.



Panasonic Air Conditioning System Wins Prestigious Design Award. Panasonic is pleased to announce that its Etherea air conditioning system has won an iF 2013 Product Design Award.



Nanoe has been comprehensively tested in real-life chamber and demonstrated it is also effective against Allergy airborne particles. Due to this, Nanoe get the Seal of Approval of the British Allergy Foundation.



NEW ETHEREA HAS  
AN ASTONISHINGLY  
SLIM DESIGN

ETHEREA

## New Etherea 2016. Perfect outside, perfect inside

**New Etherea with Econavi intelligent sensor and new Nanoe air-purifying system: outstanding efficiency A+++, comfort (Super Quiet technology only 19 dB(A)) and healthy air combined with a breakthrough design**

### The new Etherea has an astonishingly slim design

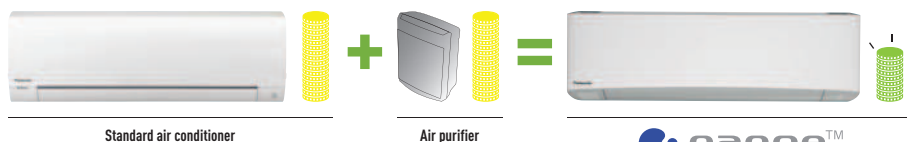
A breakthrough design that combines perfectly with the most modern environments. We have selected the best materials and processes for a refined design. And now they're available in an elegant metallic or matt silver and matt or gloss white.

### Discover how to achieve energy savings with the new Etherea A+++

Econavi Sensor technology reduce waste by adjusting the operation of the air conditioner to suit the requirements of the room. With just one touch of a button, you can save energy efficiently with uninterrupted cooling, comfort and convenience.

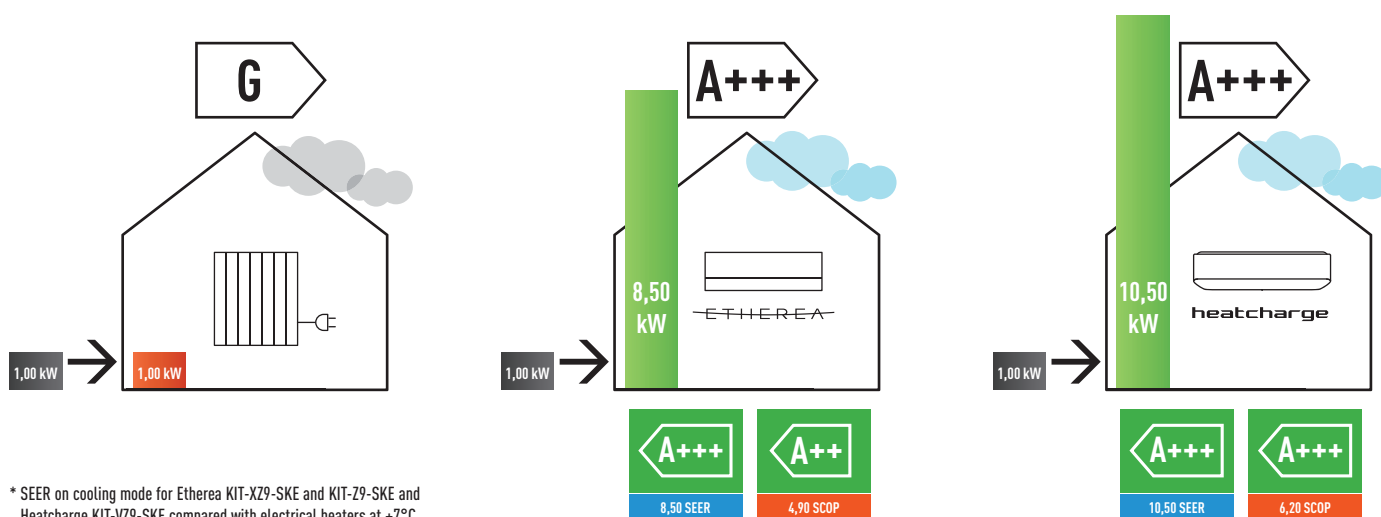
### Get the best for your health with Etherea and Nanoe™

Using Nanoe™ with nano-technology, fine particles purify the air in the room. It works effectively on airborne and adhesive micro-organisms such as bacteria, viruses and mould thus ensuring a cleaner living environment.



The new Etherea has an astonishingly slim design: only 19,4 cm





## New Etherea and Heatcharge performance: the very best SEER and SCOP available

Etherea and Heatcharge. Economical, environment-friendly operation high SCOP (Seasonal Coefficient of Performance).

Original Panasonic Inverter technology and a high performance compressor provide top-class operating efficiency. This lets you enjoy lower electricity bills while contributing to environmental protection.



## Seasonal Efficiency: New Energy Efficiency Label

From January 2013, the energy performance calculation for air conditioning systems changed from an overall EU based standard of EER and COP to a new standard based on seasonal efficiencies of SEER and SCOP. These changes to the Energy Related Products Directive or ErP are designed to give consumers a better understanding of the real efficiency of air conditioning and heat pump systems whose nominal power rating does not exceed 12kW.

Undergoing gradual implementation from 1 January 2013 until 1 January 2019, the schedule for each product category is as follows:

01 January 2013: A+++, A++, A+, A, B, C, D, E, F and G.

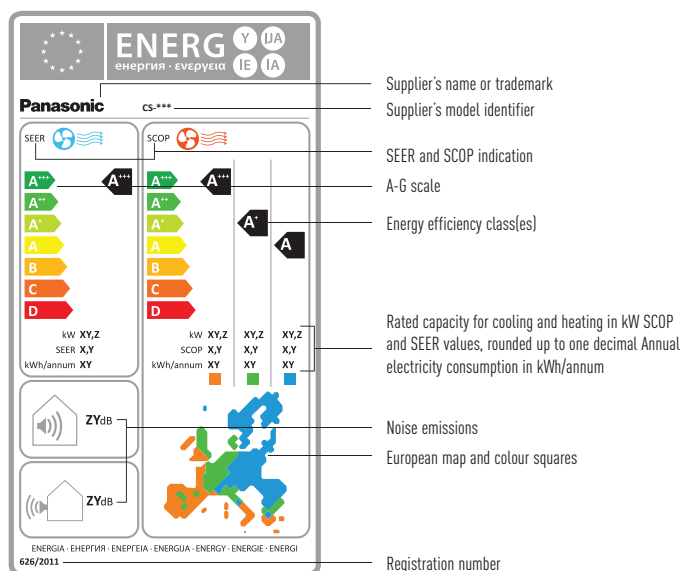
01 January 2015: A+++, A++, A+, A, B, C, D, E and F.

01 January 2017: A+++, A++, A+, A, B, C, D and E.

01 January 2019: A+++, A++, A+, A, B, C and D.

**Seasonal Energy Efficiency Ratio (SEER)** – This is the overall energy efficiency ratio of the unit, representative of the entire cooling season. It is calculated as the annual cooling demand divided by the annual consumption of electricity for cooling.

**Seasonal Coefficient of Performance (SCOP)** - This is the overall coefficient of performance of the unit, representative of the entire heating season designated (the value of SCOP corresponds to a determined heating season). It is calculated by dividing the reference annual heating demand by the annual consumption of electricity for heating.



SEER

A+++	SEER ≥ 8,50
A++	6,10 ≤ SEER < 8,50
A+	5,60 ≤ SEER < 6,10
A	5,10 ≤ SEER < 5,60
B	4,60 ≤ SEER < 5,10
C	4,10 ≤ SEER < 4,60
D	3,60 ≤ SEER < 4,10
E	3,10 ≤ SEER < 3,60
F	2,60 ≤ SEER < 3,10
G	SEER < 2,60

SCOP

A+++	SCOP ≥ 5,10
A++	4,60 ≤ SCOP < 5,10
A+	4,00 ≤ SCOP < 4,60
A	3,40 ≤ SCOP < 4,00
B	3,10 ≤ SCOP < 3,40
C	2,80 ≤ SCOP < 3,10
D	2,50 ≤ SCOP < 2,80
E	2,20 ≤ SCOP < 2,50
F	1,90 ≤ SCOP < 2,20
G	SCOP < 1,90



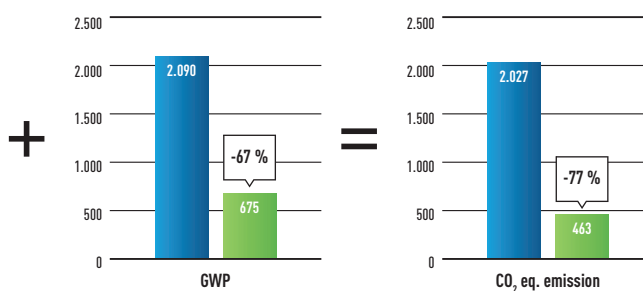
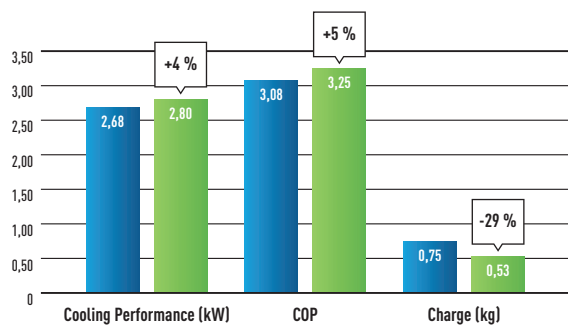
MORE  
SUSTAINABLE AND  
ENVIRONMENTALLY  
FRIENDLY



## Panasonic recommended R32 because it is environmental friendly

**Compared to R22 and R410A, R32 has a very low potential impact on the depletion of ozone layer and global warming**

In line with the European Countries who are concern in protecting and maintaining the environment by participating the Montreal Protocol to rectify one of its program in protecting the Ozone Layer and preventing Global Warming, Panasonic as the producer and maker of electronic products whom are close to the community has been actively making this program successfully on an ongoing basis.



R410A  
R32



## The Implementation of Government Regulations pertaining to Gas R32

We are continuously working to reduce our environmental impact. Using new technologies, we develop our products so that they are more sustainable and environmentally friendly. In connection with new regulations regarding the Global Warming Potential (GWP) of refrigerants, we have taken the development of our heat pumps a step further. Primarily when it comes to reduced environmental impact and increased energy efficiency.

## Refrigerant Regulatory Trends in the World

Japan	<ul style="list-style-type: none"> <li>The production sales of R32 in 2013</li> <li>Promotional activities of R32 to developing countries</li> </ul>
USA	<ul style="list-style-type: none"> <li>Substitutions of R22 to R410-A in 2011</li> </ul>
Europe	<ul style="list-style-type: none"> <li>F-Gas Regulatory Evaluation (HFC, PFC, SFC)</li> </ul>
Australia	<ul style="list-style-type: none"> <li>Started in 2012, Synthetic Green House Gases</li> </ul>
China	<ul style="list-style-type: none"> <li>Commercial AC → R32, R410A (still under consideration)</li> <li>Residential AC → R290 (only prototype), R410 A</li> </ul>
Indonesia	<ul style="list-style-type: none"> <li>In cooperation with MLF for technology transfer R22 → R32 Panasonic launching R32 in 2015</li> </ul>

## Introduction of Refrigerant R32

Our heat pumps containing the new R32 refrigerant show a drastic reduction in the Global Warming Potential (GWP) compared to other refrigerants. If you compare the GWP for R410A and R32, the GWP has been reduced to a third. The R32 refrigerant has clearly a smaller environmental impact than ever before. An important step in the right direction in reducing greenhouse gas emissions. R32 is also a one-component refrigerant, which makes it easy to recycle.

## What is R32?

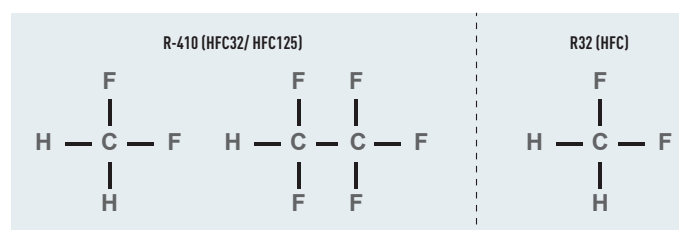
- CH<sub>2</sub>F<sub>2</sub> Single composition
- Work Load 1,6 x >
- Lifetime in atmospheric is shorten 4 – 9 years
- Ozone Potential Destroyer, ODP = 0
- Non Toxic

## Refrigerant Properties of R32

### Refrigerant Properties Table of R32, and R410A

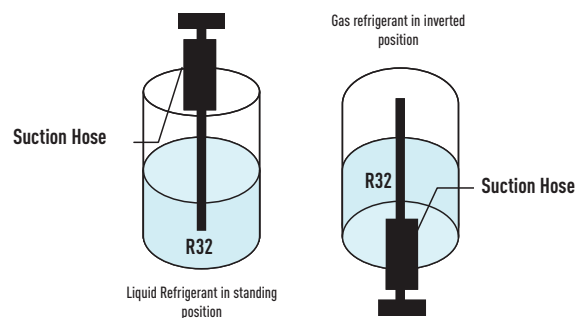
	R32	R410A
Composition	Single Component	2 Components
Mixing Ratio	CH <sub>2</sub> F <sub>2</sub>	CH <sub>2</sub> F <sub>2</sub> + CHF <sub>2</sub> CF <sub>3</sub>
Boiling Point (°C)	- 51,7	- 51,5
ODP (Ozone Depletion Potential)	0	0
GWP (Global Warming Potential)	675	2.090
Pressure	1.6 times	1.6 times
Refrigerant Oil	Synthetic Oil (FW50S)	Synthetic Oil (FV50S)
Toxicity	None	None
Safety Group	A2L	A1

## Refrigerant Series



## R32 Refrigerant Cylinder

Refrigerant Cylinder for R410A is pink, and for R32 is blue (however, it will differ according to the international standard).

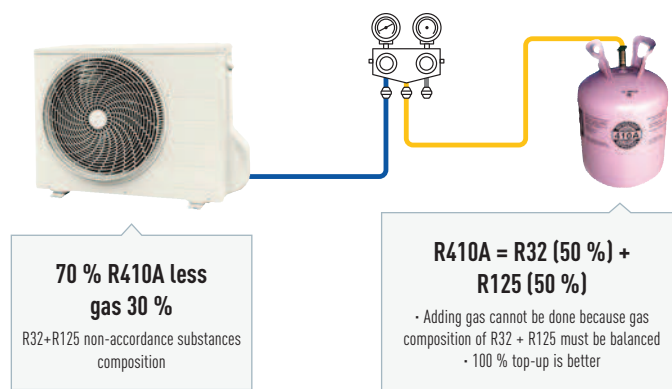


R32 is a single refrigerant as R22 in the form of liquid or gas.  
R410A and R407 are a blended refrigerant or mixture in a liquid phase.

## Simulation Comparison on Adding Gas

### R410A Simulation

R410A = Mixed Refrigerant from R32 (50 %) + R125 (50 %)

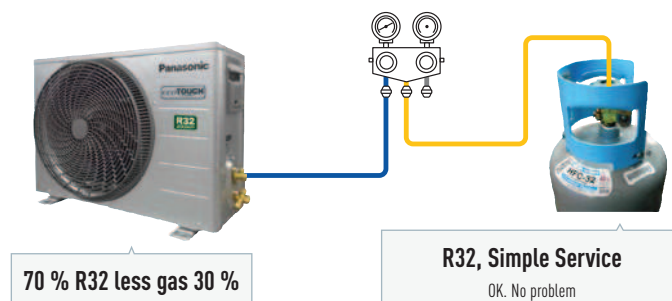


Differences in substance composition between R32 and R125 will affect the cooling effect.

Market potential claim for R410 is higher compared to R32.

### R32 Simulation

R32 = Single Refrigerant







## New nano-sized electrostatic atomized water particles, Nanoe™, that improve air quality

### Proven benefits of electrostatic atomized water particles, Nanoe™, through experiments

The benefits range widely from inhibiting viruses and bacteria, reducing residue pesticides, suppressing mould and allergen, moisturizing skin and hair, and to maintaining vegetable freshness. Experiments by universities and research institutions have proven the effects of Nanoe. The world is focusing its attention on this breakthrough technology that could be the key to the air purification.

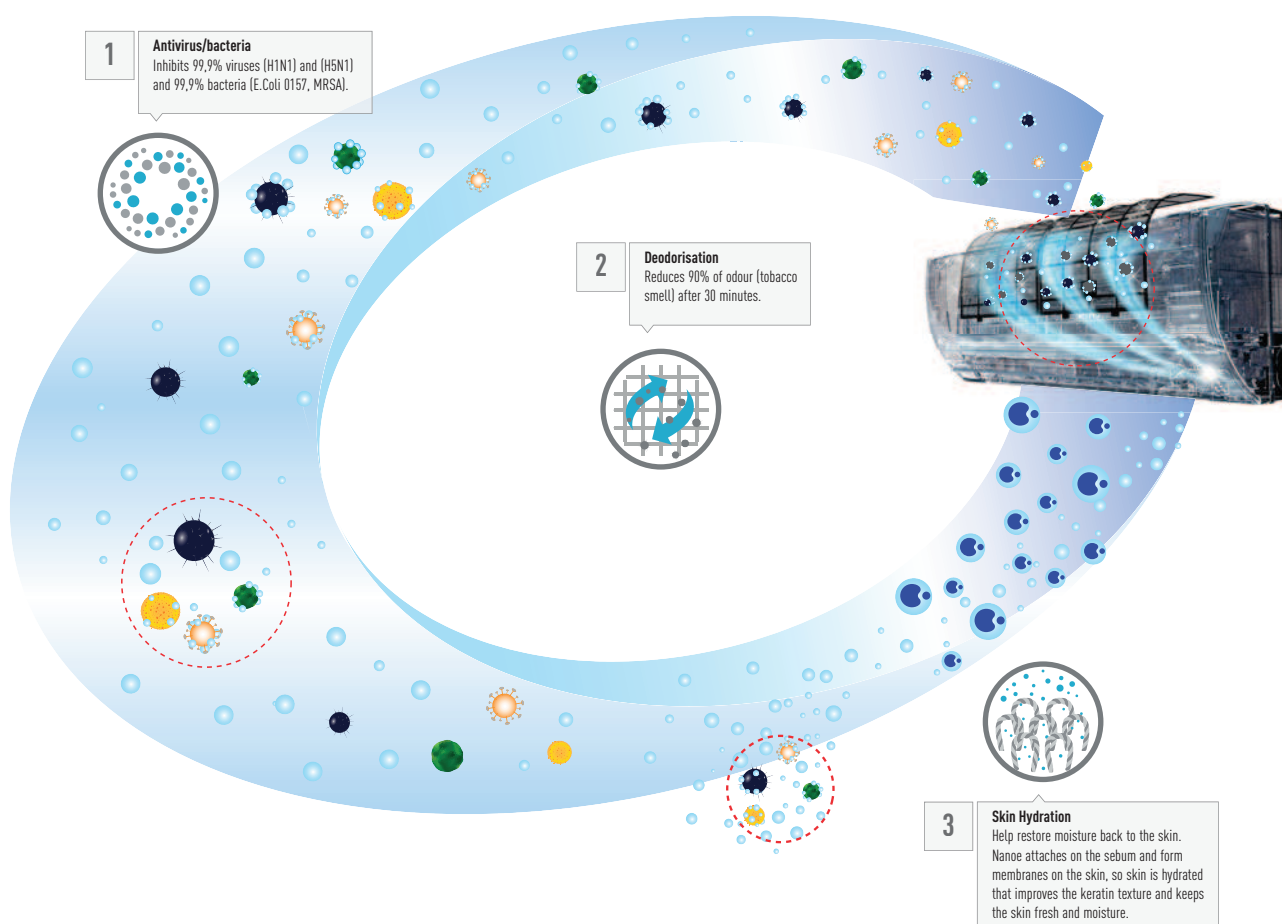
### Secure your family's health with 99% pure air

**PM2,5 Removal:** 99,94%\* removal of Particulate Matter up to 2,5 microns.

**Bacteria / Virus:** Removal Inhibits 99% bacteria / virus.

**Deodorization:** 90% odour reduction.

**3D Airflow:** 3 Dimensional front suction.



## Nano-technology + electric= Nanoe™

### What is a nano-sized electrostatic atomized water particle?

"The electrostatic atomized water technology" involves gathering moisture in the air that is invisible, and applying a high voltage to generate nano-sized water particles. These electrified water particles are called "electrostatic atomized water" and contain highly reactive components that easily affect a wide variety of substances, working to inhibit viruses and bacteria as well as reduce pesticides.

Highly reactive components are generally said to bond easily with other substances and therefore to have a short life. However, the reactive components produced through "the electrostatic atomized water technology" are contained inside of the water particles. Therefore it has been proven that the substances have a longer life and are delivered to a wider areas than the usual ones.

### There are some spaces where is wise to install an air conditioner with Nanoe™:

Nano can improve life in households with children, pets, elderly, people with allergies, smokers, etc.

### What electrostatic atomized water particles, Nanoe™ can do?

Panasonic has developed technology for producing nano-sized electrostatic atomized water particles, Nanoe™, that improve air quality and change our living. Experiments have proven a long list of the benefits of "electrostatic atomized water particles", produced by cutting-edge nanotechnology.

## How does Nanoe™ technology help you?

### Introduction of Panasonic's unique Nanoe™ technology

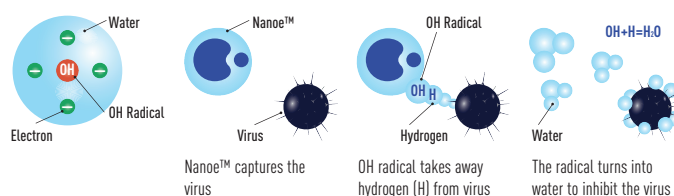
A Nanoe™ device can release radicals in water molecules which increase the effectiveness of bacteria and odour removal. Since Nanoe™ is generated from moisture in the air, it will not wear out the device. Thus, periodic replacement of device is not necessary.

### Nanoe™ is water-wrapped capsule with plentiful OH radicals

Its effectiveness of bacteria removal depends on the number of OH radical, which is generated at the rate of 480 billion per second.

### Nanoe™ wrapped in water molecule

A Nanoe™ is a fine (5 to 20nm) and weakly acidic water particle with a reactive substance and an electric charge.

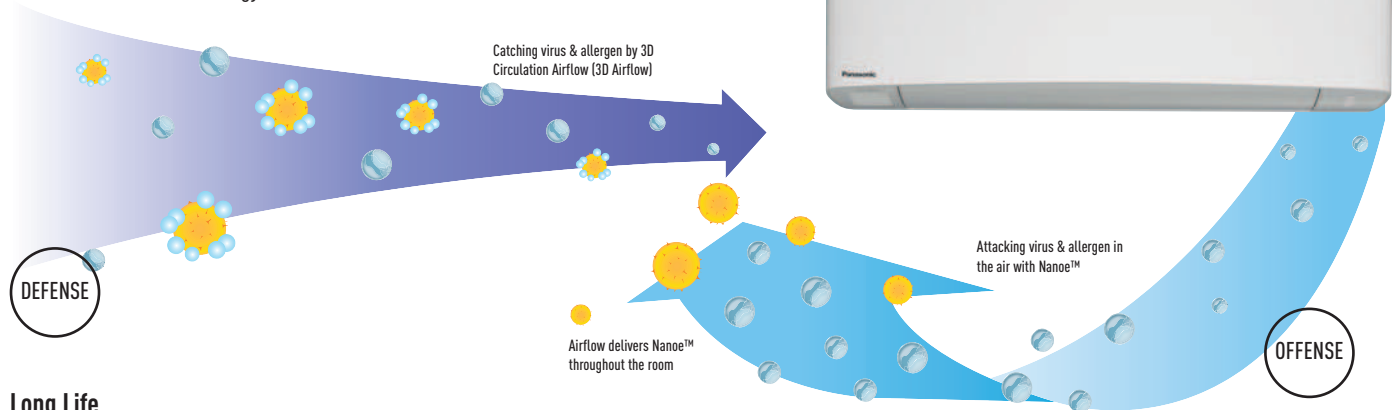




## Characteristics of Nanoe™ Technology

### Front Suction Design

Offense-Defence Technology.

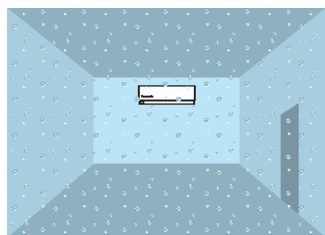


### Long Life

6 times longer lifespan than normal ion.

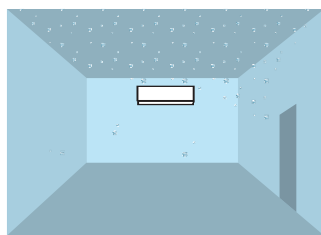
Nanoe™ contains moisture around 1,000 times more than minus ion. Being wrapped in water molecules, it has a longer lifespan and is able to retain its effectiveness even after travelling for a long distance.

### Comparison of distribution after 5 minutes



#### With Nanoe™

Nanoe™ spreads to every corner after 5 minutes.



#### Normal ion

Ions decay before spreading throughout the room.

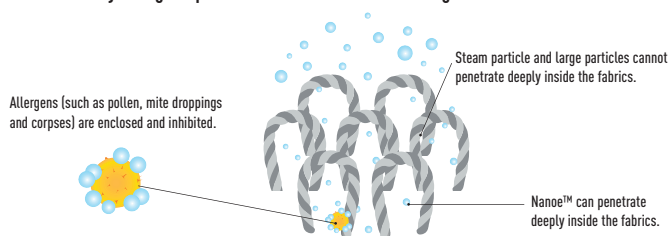
### Water-originated

Nanoe™ comes from condensed moisture in the air so that water replenishment for Nanoe™ generation is not required.

Conditions for generating Nanoe™

- Room temperature: around 5~35°C (dew point temperature: around 2°C or over)
- Room humidity: around 30~85%

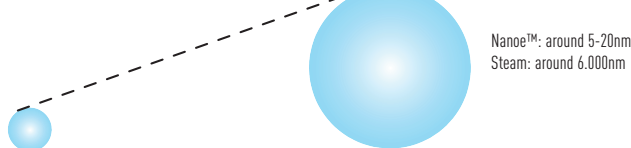
Nanoe™ is tiny enough to penetrate into clothes for inhibiting mold and odours



### Microscopic Scale

Only one-billionth the size of a steam particle Nanoe™ is much smaller than steam that can deeply penetrate into cloth fabrics to restrain dirt.

\* 1nm (nanometer) = one billionth of meter



## New PM2,5 Filter

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 sprays and dust carried by strong winds.

### What makes you think the air inside your home is safe?

The atmosphere around us contains harmful pollutants like PM2,5, carbon monoxide and carbon dioxide as a result of fuel burning, vehicular and factory emissions. The harmful air stays in our immediate surroundings and increases pollution.

### What is PM2,5?

PM2,5 is an air pollutant that can drastically affect people's health. The size of the suspended particulate is thirty times smaller than the width of human hair, essentially making it difficult to see with the naked eye.

PM2,5 means Particulate Matter up to 2,5 microns in size.

### Why PM2,5 is harmful?

The particulate matter easily travels into the lungs and can worsen asthma or heart conditions pre-existing in patients. It causes dangerous breathing problems such as acute bronchitis and lung cancer in older people and young children.



Asthma



Lung cancer



Birth defects



Premature deaths



## Advantages of Panasonic Air Conditioners

### PM2.5 Filtration

In-Filter Deactivation was certified by Kitasato Research Center for Environmental Science.

**99,94%<sup>1</sup>**  
PM2.5  
REMOVAL

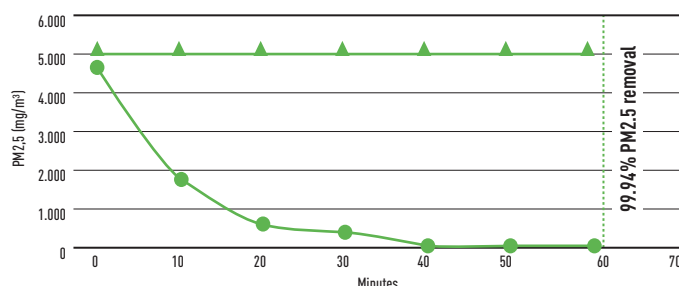
Minutes	PM2.5 (mg/m <sup>3</sup> )	%
0	4,630	0,00
10	1,650	64,36
20	0,527	55,52
30	0,171	96,31
40	0,054	98,83
50	0,015	99,68
60	0,003	99,94 <sup>1</sup>

1) In-Filter Deactivation was certified by Japan Food Research Laboratories.

• Test Report number: 12037932001 Bacteria: Staphylococcus aureus (NBRC 12732).

• Test Report number: 12014705001 Virus: Escherichia coli phage (aX-174 ATCC 13706-B1).

• Test Report number: KRCEs-Virus Test Report No. 24\_0013 Virus: Influenza (H1N1) 2009 Virus.

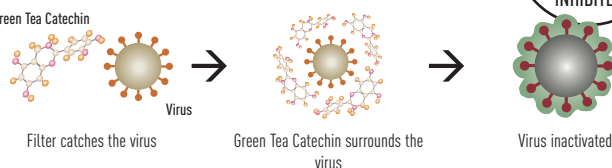


All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

### Virus / Bacteria removal

#### Inhibits Virus

Green Tea Catechin



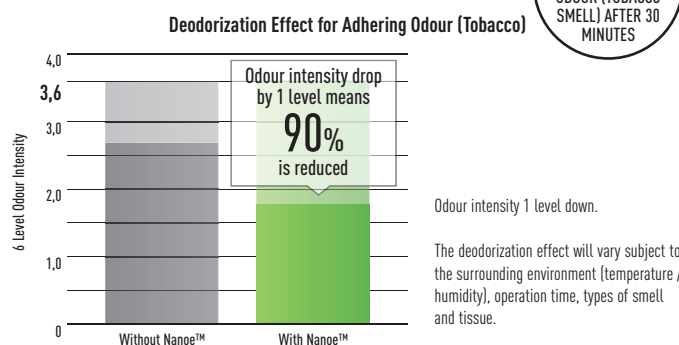
**99,9%**  
INFLUENZA VIRUS  
(H1N1, H5N1)  
INHIBITED

#### Inhibits Bacteria



### Deodorization

The smell adhered at curtain and sofa are deodorized



• Test Laboratory: Panasonic Corporation Analysis Center. • Test Methodology: Verifying with 6-level odour intensity indication in 250L test box. • Deodorization Method: Nanoe™ emit. • Test Subject: Adhering Tobacco Smell. • Test Result: 1,9 level of odour intensity is decreased after 30 minutes. • Report No.: E02-090313MH-01.

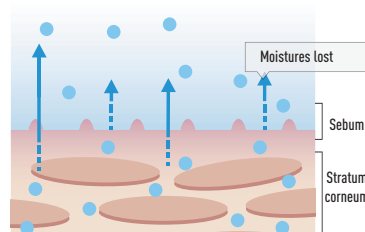
### Skin Hydration

Helps retain the moisture of the skin

#### Without Nanoe™

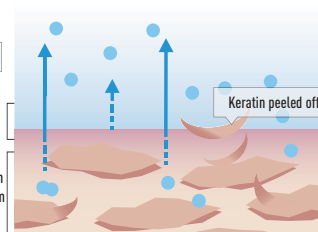
After 30 minutes

Moistures escape from the skin and let it become dry and dull.



After 28 days

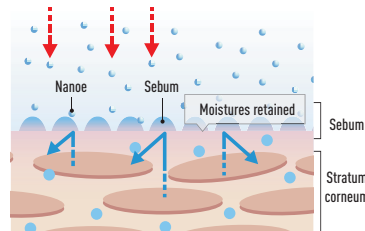
Cracks occur and keratin pieces peel off from the skin.



#### With Nanoe™

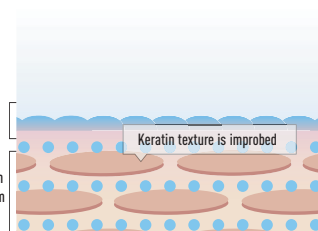
After 30 minutes

Nanoe™ attached on the sebum & form membranes on the skin to prevent the loss of moistures.



After 28 days

Skin is hydrated that improves the keratin texture and keeps the skin fresh and moisturized.



Test Laboratory: FCG Research Institute Inc. Report no. 19104

### House Dust Catcher

Usually, various types of pollutants appear at different positions between the ceiling and the floor in the room. In response, the 3D circulation airflow is divided into two modes - "Upward Airflow" and "Front Airflow" to remove pollutants accordingly.

#### Tiny dirt floating in the air:

Cooking Odour, Waste Odour, Pet Odour • Body Odour, Cigarette Odour, Mold Odour, Mold Spores, Viruses, Airborne Bacteria & smoke, etc.

#### Fine pollutants:

Allergens, such as mites' droppings & dead bodies.

#### Large house dust mostly float around the floor level:

Allergen, such as Pollen, Pollen Dust, Dust Mites / Pet Dandruff.



The cutting edge technology of Panasonic's Nanoe™ purifiers has been chosen by Lexus and Toyota to equip its high-end vehicles.





## Econavi Intelligent Sensors

### Discover how to achieve energy savings

When you are relaxing while watching television, the air conditioner's operation usually runs at a constant temperature setting.

### Econavi detects and reduces this waste in all the right ways

Using high-tech sensors and precise control programs, it analyses room conditions and adjusts cooling power accordingly.

Econavi is smart enough to locate and operate in all the right places to give you better energy savings.

### So much saved with so little effort

#### Up to 38%\* energy savings for Inverter cooling model with temperature wave

##### **ECONAVI ON, Outside temperature: 35°C/24°C**

Remote setting temperature: 23°C with Fan Speed (High)

Vertical Airflow direction: Auto, Horizontal Airflow direction: ECONAVI Mode

Setting temperature goes up 2°C in total, 1°C controlled by ECONAVI activity level detection and another 1°C controlled by ECONAVI light intensity detection.

Temperature Wave is ON, electric heater (300W; simulating the heat of human and TV etc)

##### **ECONAVI OFF, Outside temperature: 35°C/24°C**

Remote setting temperature: 23°C with Fan Speed (High)

Vertical Airflow direction: Auto, Horizontal Airflow direction: Front

Total power consumption amount are measured for 2 hours in stable condition. At Panasonic Amenity Room (size:16,6m<sup>2</sup>). This is the maximum energy savings value, and the effect differs according to conditions in installation and usage.

\* Comparison of 1,5HP Inverter model between ECONAVI with (Dual Human Activity Sensor, Sunlight Sensor, and Temperature Wave) ON and ECONAVI OFF (Cooling)

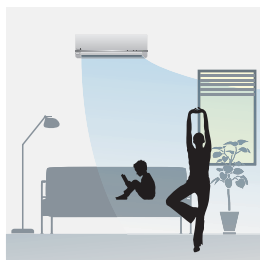
## 5 Features saving energy all at once: Econavi with intelligent eco sensors

Intelligent Sensors detect potential waste of energy using the Human Activity Sensor and Sunlight Sensor. It is able to monitor human location, movements, absence and sunlight intensity. It then automatically adjusts cooling power to save energy efficiently with uninterrupted heating and cooling comfort and convenience.



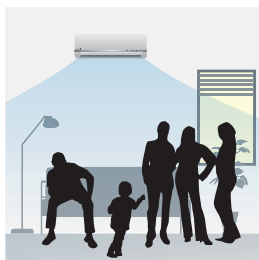
### Temperature Wave

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



### Area Search

Directs airflow to wherever you are in the room. Econavi detects changes in human movements and reduces the waste of cooling the unoccupied area of the room.



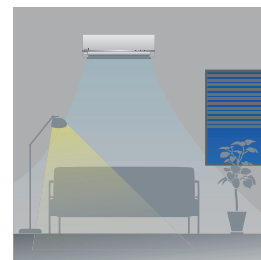
### Activity Detection

Adapts cooling power to your daily activities. Econavi detects changes in activity levels and reduces the waste of cooling with unnecessary power.



### Absence Detection

Reduces cooling power when you are not around. Econavi detects human absence in the room and reduces the waste of cooling an empty room.



### Sunlight Detection

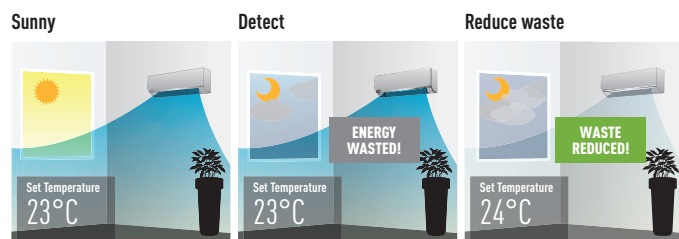
Adjusts cooling power to changes in sunlight intensity.

## Econavi sunlight sensor

### Sunlight Detection (on Cooling Mode)

Econavi detects changes in sunlight intensity in the room and judges whether it is sunny or cloudy/night. It reduces waste energy by reducing cooling under less sunny conditions.

When weather changes from sunny to cloudy/night, Econavi detects less sunlight intensity and determines less cooling power is required. If cooling power remains the same, energy will be wasted. Econavi detects this waste and reduces cooling power by an amount equivalent to increasing the set temperature by 1°C.



Econavi is switched on when it is sunny.

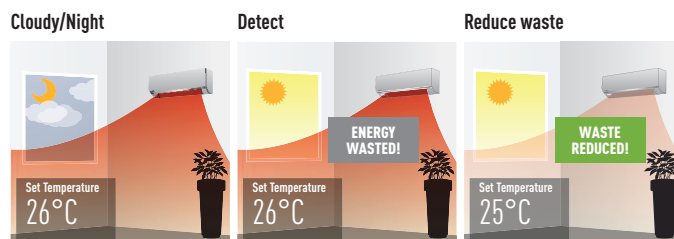
Econavi detects less cooling power is required.

Reduces cooling power by an amount equivalent to increasing the set temperature by 1°C.

### Sunlight Detection (on Heating Mode)

Econavi detects changes in sunlight intensity in the room and judges whether it is sunny or cloudy/night. It reduces heating operation (wasted energy) under more sunnier conditions.

When weather changes from cloudy/night to sunny, Econavi detects more sunlight intensity and determines less heating power is required. If heating power remains the same, energy will be wasted. Econavi detects this waste and reduces heating power by an amount equivalent to decreasing the set temperature by 1°C.



Econavi is switched on when it is cloudy/night.

Econavi detects less heating power is required.

Reduces heating power by an amount equivalent to decreasing the set temperature by 1°C.

## Temperature wave

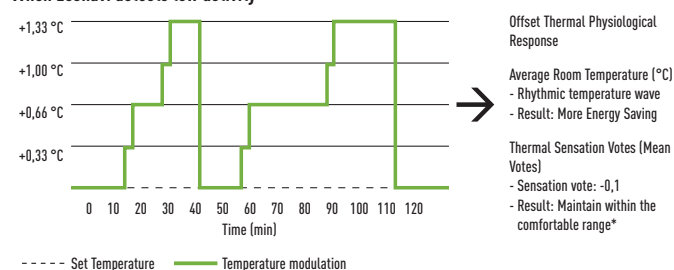
### Rhythmic temperature-controlled pattern to save energy without sacrificing comfort.

Econavi with Temperature Wave was developed based on an understanding of Thermal Physiology; the human body adapts physiologically to changes in temperature. Taking advantage of this understanding, Panasonic's R&D Centre has developed the Rhythmic Temperature Control pattern, which offsets the air conditioner's performance against thermal physiological responses.

Hence, when Econavi detects human presence and low activity level, Temperature Wave adapts to this rhythmic temperature control to realise further energy savings without sacrificing comfort.

### How does temperature wave works?

#### When Econavi detects low activity



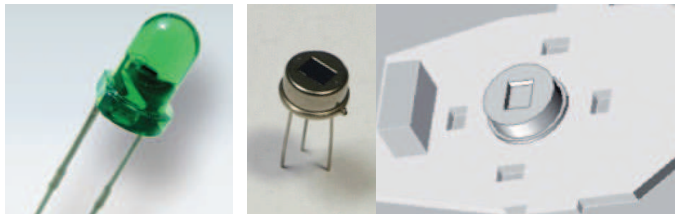
The result of the experiment showed that thermal sensation was maintained within the comfortable range\* even though average set temperature was moderately increased. Hence, when ECONAVI detects human presence and low activity level, Temperature Wave adapts to this rhythmic temperature control to realise further energy saving without sacrificing comfort.

\* The thermal condition of which PMV (Predicted Mean Value) is within -0.5 to +0.5 is recommended as comfortable condition (in the condition B) by International Standard EN ISO 7730.



## Econavi Intelligent Sensors

Econavi Intelligent Sensors are able to monitor sunlight intensity, human movements, activity levels and human absence to detect unconscious waste of energy and automatically adjusts cooling power to save energy efficiently whilst still providing uninterrupted cooling comfort and convenience.



**Sunlight Sensor**

Detects changes in Sunlight Intensity

**Human Activity Sensor**

Detects human movements, changes in activity levels and human absence.

### High-precision sensing

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

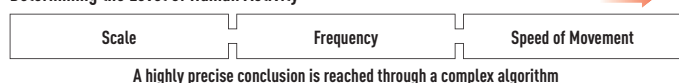
#### Detecting Human Presence

Difference in temperatures	<input checked="" type="checkbox"/>	Difference in temperatures	<input checked="" type="checkbox"/>	Difference in temperatures	<input checked="" type="checkbox"/>
Movement	<input checked="" type="checkbox"/>	Movement	<input checked="" type="checkbox"/>	Movement	<input checked="" type="checkbox"/>

When there is no movement for over 20 min.

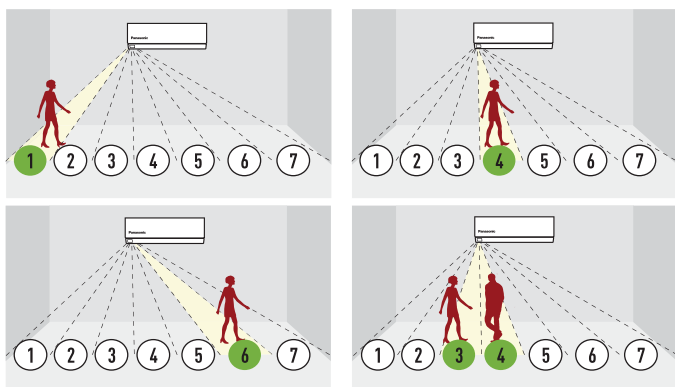


#### Determining the Level of Human Activity



### Sensor detection principle

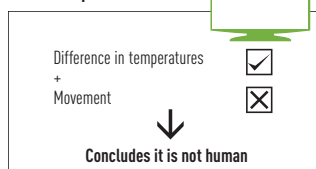
Human Activity Sensor detects human activity level and directs airflow to occupied or high activity zone.



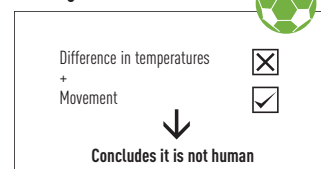
### Differentiating objects

Econavi's sensor technology uses factors such as speed, frequency and temperature of every object to determine if it is human.

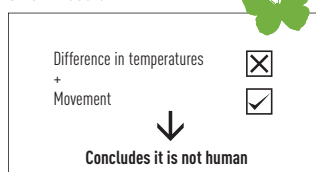
#### Electrical products



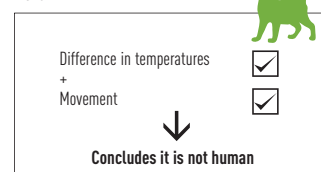
#### A rolling ball



#### Small insects



#### Pets



Both changes may be detected, but they are too small to have any effect on the sensor.

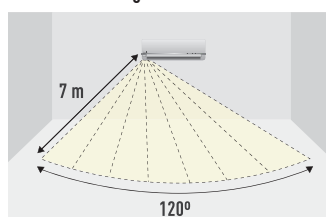
From the difference in temperatures and the nature of the object's movement, Econavi can determine if it's human\*.

\* The sensor may deem pets as humans, unless it moves within the detection zone at speeds that are not humanly possible.

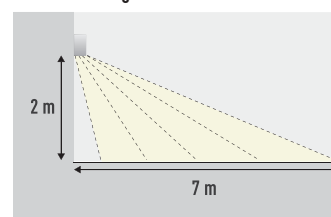
### Coverage capabilities

Human Activity Sensor covers a wider area due to its improved area detection function. The entire room is divided into 7 detection areas.

#### Horizontal sensing area



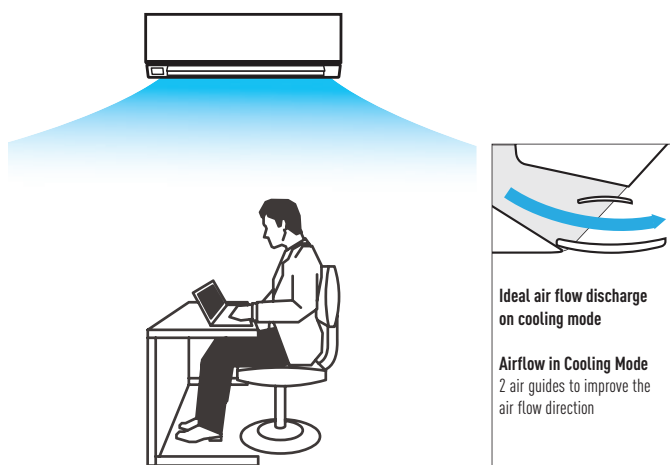
#### Vertical sensing area



### Aerowings

Direct airflow to ceiling to create shower cooling effect by twin flap built in indoor

### Indirect airflow after reaching set temperature



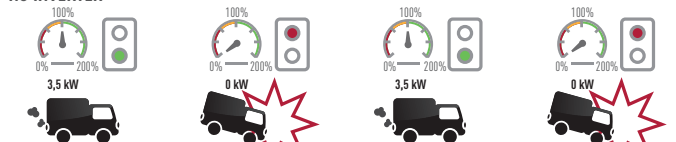
## Inverter technology

### The secret is flexibility

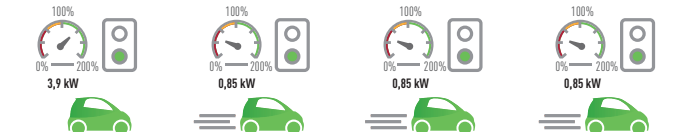
Panasonic Inverter air conditioners have the flexibility to vary the rotation speed of the compressor. This allows it to use less energy to maintain the set temperature while also being able to cool the room quicker at start up. So you can enjoy better savings on your electricity bills while maintaining cooling comfort

The advantages of inverter heat pumps. Comparing Inverter and non-Inverter heat pumps.

#### NO INVERTER



#### INVERTER



**NO INVERTER** Slow to start. Takes longer to reach the temperature set point. The temperature oscillates between the two extremes and never stabilises. The temperature falls and then rises quickly, leading to a consumption peak.

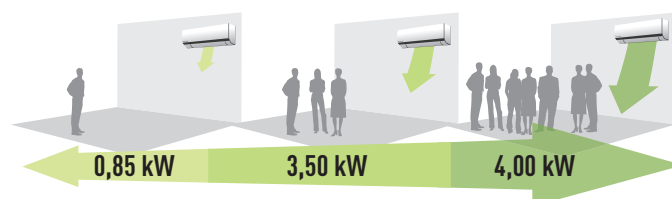
**INVERTER** Rapidly reaches the desired temperature. Adjusts the temperature: more comfort and greater savings. Keeps the temperature comfortable all the time.

### Exceptional energy-saving performance. Reduces electricity consumption

Panasonic Inverter air conditioners are designed to give you exceptional energy savings and performance. At the start up of an air conditioner's operation, a boost in power is required to reach the set temperature. After the set temperature is reached, less power is required to maintain it. The Panasonic Inverter air conditioner varies the rotation speed of the compressor. This provides a highly precise method of maintaining the set temperature.

### Constant Comfort

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



#### Minimum Power

Compressor rotation speed: SLOW.  
When not required, the unit operates at low power to save energy.

#### Medium Power

Normal Condition

#### Maximum Power

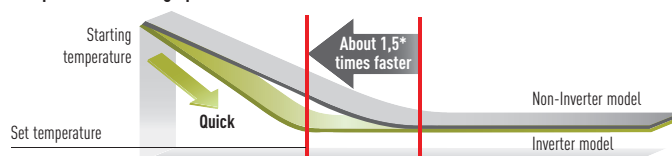
Compressor rotation speed: HIGH.  
When required, the unit operates at full power.

Graph shows the 1.5HP Inverter model's wide power output range during cooling. / Graph shows the 1.5HP Inverter model's wide power output range during cooling.

### Quick Comfort

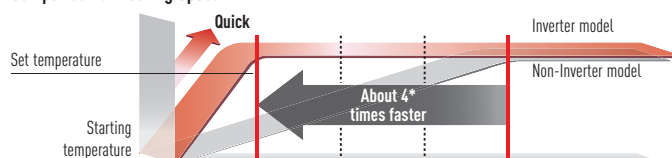
Panasonic Inverter air conditioners can operate with higher power during the start up period to cool the room 1.5 times faster and heat the room 4 times faster than non-Inverter models.

#### Comparison of Cooling Speed



\* 1.5HP Inverter vs. non-Inverter. Outside room temperature: 35°C; setting temperature: 25°C

#### Comparison of Heating Speed



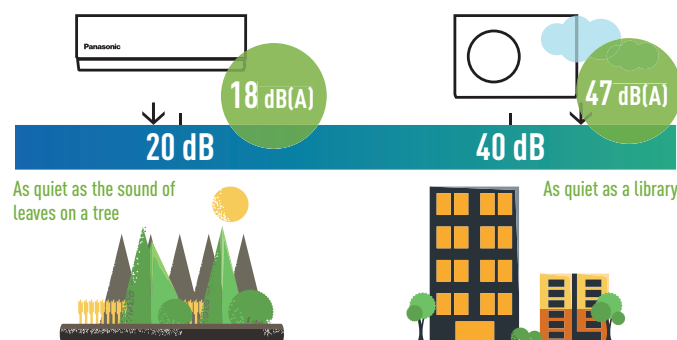
\* Comparison of 1.0HP Inverter and Non-Inverter. Outside room temperature: 2°C; Setting temperature: 25°C

### Silent ambient and relaxing atmosphere 18 dB(A)

We have succeeded in making one of the most silent air conditioners on the market. Panasonic Inverter air conditioner's indoor operating noise has been reduced as the Inverter constantly varies its output power to enable more precise temperature control.

Quiet Mode reduces operation noise to a quiet 18 dB(A)\* for a comfortable night's sleep

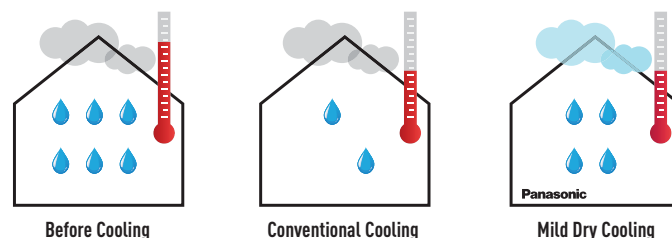
Noise is 5 dB(A) quieter than during regular operation



Heatcharge: In the Quiet Mode during cooling operation with low fan speed.

### Mild Dry Cooling

Mild dry cooling maintains a higher level of relative humidity of up to 10% compared to regular cooling operation. This helps to reduce skin dryness - and a dry throat.



Lowers room temperature while maintaining high humidity.



SEASONAL  
EFFICIENCY  
SEER — SCOP

A+++

heatcharge

## Heatcharge. Energy Charge System

### Heating power and efficiency

- Energy Charge System. Heat storage unit which features Non-Stop heating and fast heating function
- Maximum efficiency and comfort with Econavi sunlight detection and human activity detection
- Nanoe air purifying system
- More powerful airflow to quickly reach the desired temperature

### Panasonic's new full line-up of A+++ heat pumps

In response to the Kyoto Protocol, the European Union set some challenging targets for the reduction in greenhouse-gas emissions. By the year 2020, across the member states, the EU wants to have achieved the following objectives:

- A 20% cut in greenhouse gas emissions (from 1990 base levels)
- The share of renewables in the energy mix to increase by 20%
- An overall reduction of 20% in energy consumption



## Powerful, reliable heating even at low ambient winter temperatures

When the air conditioner is operating, the compressor, which is the power source of the unit, generates heat. Until now, this heat was released into the atmosphere. Panasonic focused on this waste heat! Heatcharge is a unique, innovative Panasonic technology that stores this waste heat in the compressor and effectively uses it as heating energy. This lets you enjoy a new level of air conditioner heating power and efficiency.



## Constant heating

Using stored heat provides stable heating with less drop in temperature.

Even when heating operation stops during defrost operation, stored heat continues to constantly warm the room. This eliminates the previous discomfort due to the temperature dropping when heating temporarily stops to ensure stable air conditioner heating.

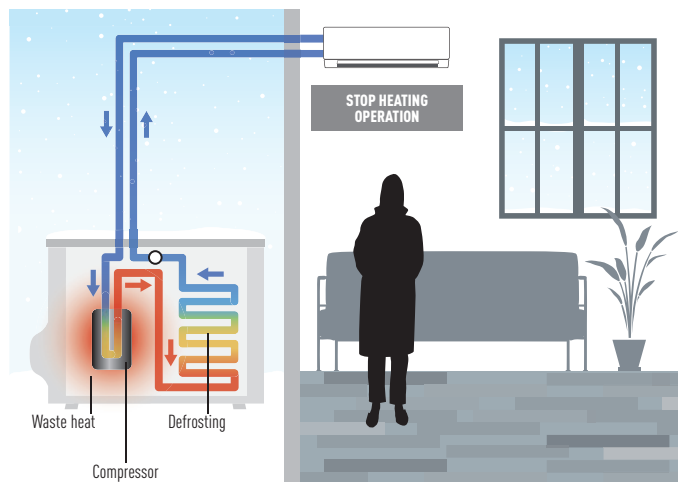
**-30°C**  
CONSTANT HEATING  
HEATCHARGE



You can check the charge level with the remote control. Press the Information button and the level is displayed in five stages (from 0 to 4).

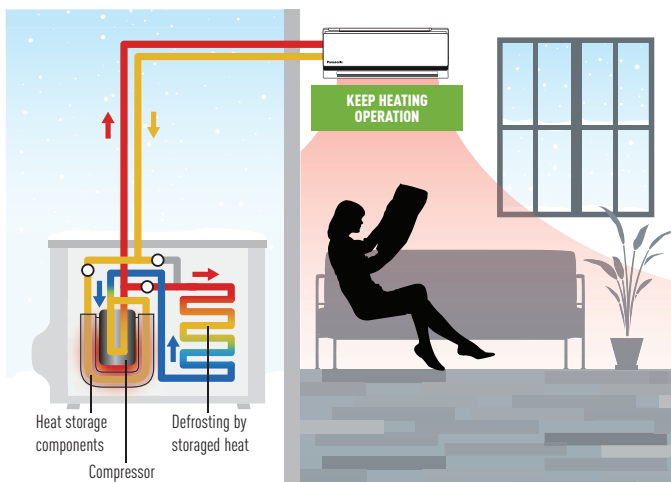
### Conventional: The room gradually becomes cold

Defrost operation: About 11 to 15 min.  
Fall in room temperature: About 5 to 6 °C



### Heatcharge: The room is thoroughly warmed

Defrost operation: About 5 to 6 min.  
Fall in room temperature: About 1 to 2 °C



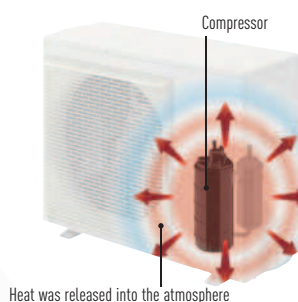
\* Defrost operation time and how low room temperature falls differ depending on the environment in which the unit is being used (how insulated and airtight and room is), operation conditions, and temperature conditions.

\* Output air temperature falls during defrost operation. How low room temperature falls differs depending on the environment in which the unit is being used (how insulated and airtight and room is), operation conditions, and temperature conditions.

\* In environments where a lot of frost accumulates, heating may stop during defrost operation.

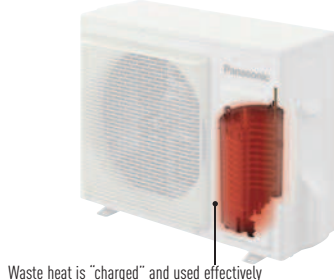
### Conventional

During operation, heat is generated inside the compressor.



### Heatcharge

Heat generated by the compressor is stored inside and used to warm the refrigerant to efficiently increase heating power.

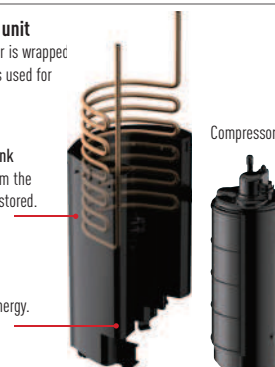


### Heatcharge unit

The compressor is wrapped exhaust heat is used for charging.

Heatcharge tank  
Waste heat from the compressor is stored.

Finless heat exchanger  
Stored heat is converted to energy.





- HIGHER EFFICIENCY
- SINGLE AND DUAL PISTON
- R-410A REFRIGERANT
- COMPACT SIZE



## Panasonic R2 Rotary Compressor

**Making the world a cooler place since 1978.**

Panasonic Rotary Compressors for Room Air Conditioners have been installed in the most demanding environments around the world. Designed to withstand extreme conditions, Panasonic Rotary delivers high performance, efficiency and reliable service, no matter where you are.

Panasonic, the world's largest manufacturer of rotary compressors.



### Why is the Panasonic R2 Rotary Compressor so efficient?

1. High Efficiency Motor The premium silicon steel motor meets industry efficiency requirements.
2. Improved Lubrication of High Volume Oil Pump The extended, high volume oil pump in conjunction with a larger capacity oil reservoir provides superior lubrication.
3. Accumulator has Larger Refrigerant Capacity The larger accumulator accommodates generous refrigerant amounts needed in longer line length installations.

## R2 rotary compressors utilize rolling piston technology.

The R2 compressor has been tested in extreme conditions.



## R2 Compressor Value

### About R2 Compressor

Built upon 36 years of compressor design and production experience, R2 is the next generation of Rotary Compressors for residential central air conditioning. New technology improvements, enhanced materials and simple design ensure R2 compressors are reliable, efficient and quiet. The R2 Compressor delivers quality, comfort and peace of mind in homes around the world.

Panasonic's Rotary Compressors have been life tested in some of the world's most demanding environments. Proven for years many of the most demanding areas of the world, the R2 design is the compressor of choice by contractors and homeowners in these challenging climates. For the high performance that homeowners demand, R2 Rotary Compressors are the best air conditioning engines for today's residential cooling solutions.

### Leading Technology

Used in over 80% of cooling solutions globally, rotary is the world's dominant residential air conditioning compression technology. Panasonic is the leading rotary and residential AC compressor manufacturer in the world, with over 200 million compressors produced.

### Benefits

Central air conditioning delivered with a Panasonic R2 Rotary Compressor ensures a superior level of comfort at an economical cost.



#### Vane - Long Life

The special Physical Vapor Deposition (PVD) coating applied to the Vane greatly enhances the durability and life of the compressor mechanism.



#### Piston - Durable

The piston is made of unique high-grade steel that prevents wear and extends operation life.

## FAQ

### How does a Panasonic Rotary compressor work?

R2 compressors are rolling piston rotary compressors. The heart of the rotary compressor is the cylinder which houses the piston and the vane. The vane maintains constant contact with the piston as the piston rolls along the inside wall of the cylinder. As the piston rotates, gas is compressed into an increasingly smaller area until the discharge pressure is reached, releasing gas into the shell chamber. At the same time, more gas comes in through the suction port, enabling a continuous process of suction and discharge. The simple design and symmetry of the cylinder components, combined with a special coating and premium materials, provide a highly durable and reliable product, rotation after rotation.

### What SEER range does the Panasonic Rotary compressor support?

R2 compressors are found in air conditioning products featuring the very latest technology and offering the highest efficiency on the market today. Our R2 compressors are engineered specifically for this SEER efficiency requirement. Combined with the inherently simple design of the rotary, this results in a high desirable and impressively economical solution.

### What makes Panasonic Rotary compressor so reliable?

Changes to the construction and material of internal components enables the R2 compressor to reliably operate with an above average maximum discharge

pressure. A Physical Vapor Deposition (PVD) coating on the vane, along with enhanced steel materials, significantly reduces wear and increases durability.

### What makes a Panasonic Rotary compressor so quiet?

The structure of the R2 compressor mechanism has been redesigned to increase stability and reduce vibration. Specifically, the compressor has an upper cylinder discharge, an enhanced fixed upper bearing, and reduced friction in the cylinder parts. The lower discharge and muffler in the dual piston compressors also enables lower noise levels. As a result, this new design optimises efficiency and minimises noise.

### How do R2 rotary compressors compare to scroll and reciprocating compressors?

R2 rotary compressors are very similar to some scroll compressors in overall performance, including efficiency and reliability. The simple and symmetrical key components contribute to the R2 compressor's reliability, light weight, compact size, and economical applied cost, without sacrificing the key performance requirements of high efficiency and low noise levels.

### Which refrigerants can be used with Panasonic Rotary compressor?

Panasonic has R2 Rotary Compressors available for R410A applications.





## R22 Renewal

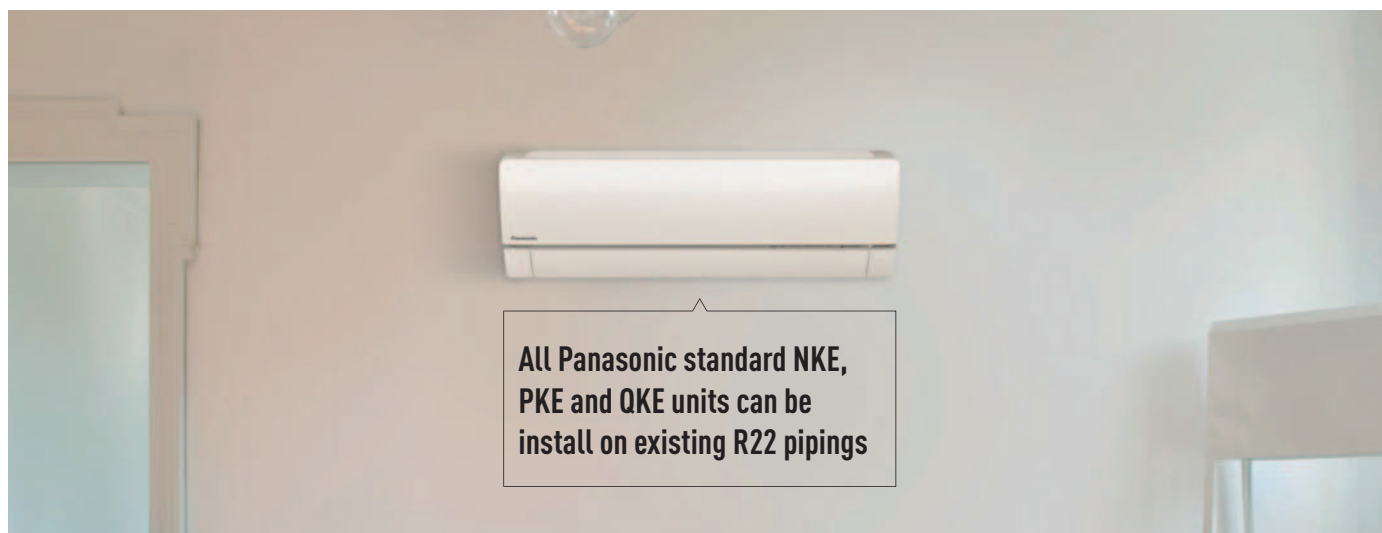
### **An important drive to further reduce the potential damage to our ozone**

It is often said that legislation is ruling our lives but sometimes it is there to help save lives. R22 phase out can be described as one of these and from Jan 1st 2010 the use of Virgin (new) R22 refrigerant was banned within the European Community.

- All Panasonic standard NKE, PKE and QKE units can be install on existing R22 pipings
- No need of additional accessories (only pipe reduces)
- Approximately 30% energy saving compare to R22 units







## Panasonic are doing our part

We at Panasonic are also doing our part – recognising that all finances are under pressure at the moment. Panasonic has developed a clean and cost effective solution to enable this latest legislation to be introduced with as minimum an effect on businesses and cash reserves as possible.

The Panasonic renewal system allows good quality existing R22 pipe work to be re-used whilst installing new high efficiency R410A systems.

By bringing a simple solution to the problem Panasonic can renew all Split Systems and PACi systems; and depending upon certain restrictions we don't even limit the manufacturer's equipment we are replacing.

By installing a new high efficiency Panasonic R410A system you can benefit from around 30% running cost saving compared to the R22 system.

Yes...

1. Check the capacity of the system you wish to replace
2. Select from the Panasonic range the best system to replace it with
3. Follow the procedure detailed in the brochure and technical data

Simple...

R22 - The reduction of Chlorine critical for a cleaner future

## Guidance on re-using of existing R22 piping for a new R410A installation

### 1. Precaution

The existing R22 piping can be re-used for a R410A system installation if the following conditions are met and the piping are finally verified to be:

- Dry (no moisture remained in the piping)
- Clean (no dust remained in the piping)
- Tight (no refrigerant leak at the joining and piping)

### 2. Conditions

- Recover the refrigerant and oil.

Operate "force cooling" according to the recommended operation time, regardless of the piping length.

Single split: 10min.

Multi split: 30min.

After that, carry out "pump down" to recover the refrigerant and oil from the existing R22 system

\* Note: If pump down operation is not possible due to the malfunction of the system, flush and wash the existing piping to collect back the oil and dirt inside the system.

- Check the oil condition.

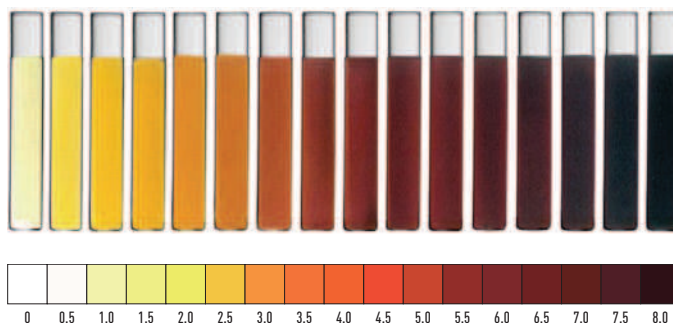
If the oil contains dirt, wash the existing pipes

- Check the oil color.

After pump down, use a cotton bud to wipe the oil from the existing pipe.

If the oil color is higher than ASTM3, use a new pipe as re-use of old piping is not allowed

### Deterioration Criteria for Refrigerant Oil



- Check pipe thickness.

Make sure that the pipe thickness is more than 0,8mm.

If the thickness is less than 0,8mm, use a new pipe

- Rework the flare for R410A connection.

Do not reuse the old flare nuts.

Make sure to use the new flare nuts attached to the R410a system

\*Note: If the existing piping size is 1/4" (6,35mm) and 1/2" (12,7mm), and the new R410a system is 1/4" and 3/8" (9,52mm), use a pipe reducer connected at indoor and outdoor unit.

### 3. Applicable Model

Panasonic single split room air conditioner from CS/CU-RE/UE/VE/XE/CE/NE/E\*NKE and PKE series onwards.

Panasonic multi split room air conditioner from CU-2E/3E/4E/5PBE series onwards.



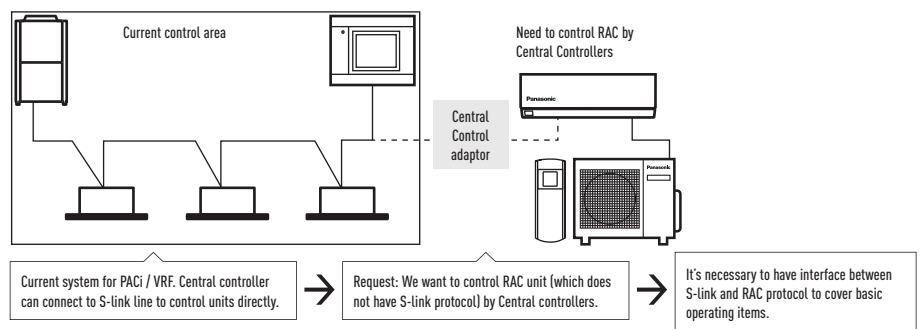
## Control & Connectivity

Aware of the importance of both control and connectivity in offering the best comfort at the lowest price, Panasonic offers its customers cutting-edge technology, specially designed to ensure our air conditioning systems deliver maximum performance. You can properly manage the air conditioning and perform comprehensive monitoring and control, with all of the features the remote control provides at home, from anywhere in the world thanks to the internet applications Panasonic has created for you.

<b>Individual Control Systems</b>	<b>8 Indoor Units</b>
<b>Centralized Control Systems</b>	<b>64 Indoor Units</b>
<b>Intelligent Controller / Web Server</b>	<b>256 Indoor Units</b>
<b>P-AIMS</b>	<b>1.024 Indoor Units</b>
<b>Panasonic Smart Cloud</b>	

### Domestic integration to P-Line - CZ-CAPR1

Can connect all ranges to P-Line. Full control is now possible.



#### Integrates any unit in big system control

- PKEA Server room integration
- Small offices with Domestic indoors
- Tender for refurbishment (old system Domestic and VRF in one installation)

Basic operation items	External input
ON/OFF	ON/OFF control signal
Mode select	Abnormal stop signal
Temperature setting	VRF remote control connection
Fan speed	Prohibit, Mode change
Flap setting	External output for Relay <sup>1)</sup>
Remote control prohibit	Operation status (ON/OFF)
Demand control	Alarm status output
Econavi ON/OFF	External heater control output

<sup>1)</sup> Because current CN-CNT connector can not provide the power for external output relay, additional power input for external relay is necessary.



## Internet Control

Control your air conditioning from wherever you are. Control your comfort and efficiency with the lowest energy consumption.

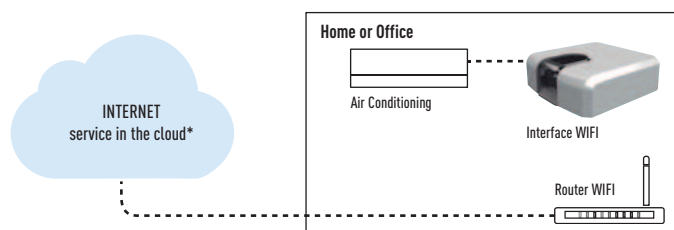
### Reference: PAW-IR-WIFI-1



IntesisHome IS-IR-WIFI-1 device is an easy to install and small device which allows connectivity with the IntesisHome application and connects with your climate system using Infrared (IR). The device enables the control of the Panasonic RAC units without CN-CNT connector (RE, UE, GFE and Free Multi lines).

Specific features: • ON/OFF, mode, set point, fan speed, vanes and room temperature • Easy installation (no special electrical work needed) • Feedback to the IntesisHome system when changes are made from the infrared remote controller.

General IntesisHome features: • Calendar scheduler • Scenes • Control from anywhere • Several languages



\* Functionalities depend on the license. The information indicated above is subject to changes and updates.  
Reference: PA-AC-WIFI-1 For Ethernia and Heatcharge, with full communication.  
Reference: PAW-IR-WIFI-1 by Infra red sensor, only ON/OFF and temperature setting.



## Connectivity. Control by BMS

Great flexibility for integration into your IntesisHome, KNX, EnOcean, Modbus and BacNet projects allows fully bi-directional monitoring and control of all the functioning parameters.

### Reference: PAW-AC-KNX-1i



- Quick installation and possibility of hidden installation
- External power not required
- Direct connection to the AC indoor unit (split unit or Multi split unit)
- Fully KNX compatible. Control and monitoring, from sensors or gateways, of the internal variables of the indoor unit and error codes and indication
- Use the air conditioner ambient temperature or the one measured by a KNX temperature sensor or Thermostat
- AC unit can be controlled simultaneously by the remote control of the AC unit and by KNX devices
- Advanced control functions: use it as a room controller
- 4 binary inputs. They work as standard KNX binary inputs as well as being used to control the AC directly

### Reference: PAW-AC-ENO-1i



- Quick installation and possibility of hidden installation
- External power not required
- Direct connection to the AC indoor unit (split unit)
- Fully EnOcean compatible. Control and monitoring, from sensors or gateways, of the internal variables of the indoor unit and error codes and indication
- Use the air conditioner ambient temperature or the one measured by an EnOcean temperature sensor or Thermostat
- AC unit can be controlled simultaneously by the remote control of the AC unit and by EnOcean devices
- Advanced control functions: use it as a room controller
- 4 binary inputs. They work as standard EnOcean binary inputs as well as being used to control the AC directly

### Reference: PAW-AC-MBS-1



- Quick installation and possibility of hidden installation
- External power not required
- Direct connection to the AC indoor unit (split unit or Multi split unit)
- Fully Modbus compatible. Control and monitoring, from sensors or gateways, of the internal variables of the indoor unit and error codes and indication
- Use the air conditioner ambient temperature or the one measured by a Modbus temperature sensor or Thermostat
- AC unit can be controlled simultaneously by the remote control of the AC unit and by Modbus devices
- Advanced control functions: use it as a room controller
- 4 binary inputs. They work as standard Modbus binary inputs as well as being used to control the AC directly

### Reference: PAW-AC-BAC-1



This interface allows a complete and natural integration of Panasonic air conditioners into either BACnet IP or MS/TP networks.

- Quick installation and possibility of hidden installation
- External power not required
- Direct connection to the AC indoor unit
- Total Control and Supervision. Real states of the AC unit's internal variables
- Allows using simultaneously the IR and wired remote controls and BACnet.

### Reference: PAW-AC-DIO

Dry contact ON/OFF Interface. Panasonic has developed for hotels applications a dry contact PCB which works with Ethernia, RE, UE and YE indoor units in order to control simply the unit centrally.

- ON/OFF signal by 3rd party BMS
- PCB connected to CN-RMT port on Indoor Unit PCB

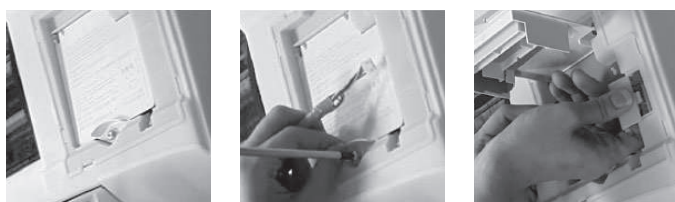


## Easy connectivity

CN-CNT easy to access. Previous Ethernia indoor unit had to be dismantle to reach connector.

### Can easier connect:










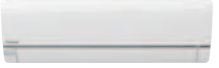
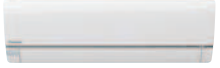
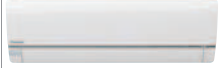





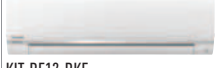


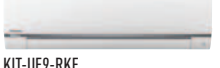
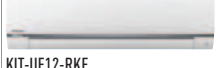
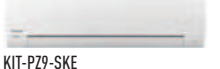
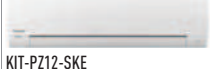
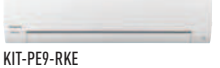

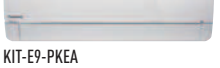
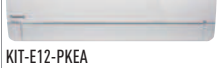






Wi-Fi accessory / KNX / Modbus / New CZ-CAPR1 to integrate to PACi control.





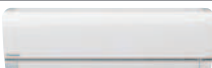
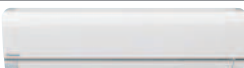
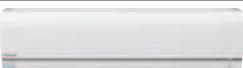
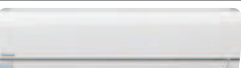
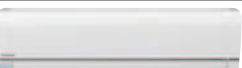








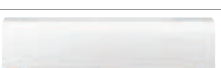
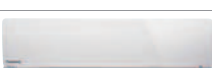







Model name	Interface
PA-AC-WIFI-1	Interface for IntesisHome for Ethernia, Heatcharge and Flagship, with full communication
PAW-IR-WIFI-1	Interface for IntesisHome by Infra red sensor, only ON/OFF and temperature setting
PAW-AC-ENO-1i	Interface for En-ocean (Ethernia, 4-Way 60x60 cassette and Low static pressure hide away)
PAW-AC-KNX-1i	Interface for KNX (Ethernia, 4-Way 60x60 cassette and Low static pressure hide away)
PAW-AC-MBS-1	Interface for Modbus (Ethernia, 4-Way 60x60 cassette and Low static pressure hide away)
PAW-AC-BAC-1	Interface for BacNet (Ethernia, 4-Way 60x60 cassette and Low static pressure hide away)
PAW-AC-HEAT-1	Heating only PCB for Ethernia, 4-Way 60x60 cassette and Low static pressure hide away
PAW-AC-DIO	PCB for wall mounted with dry contacts, On/Off, Error message (all QKE and RKE wall mounted)
PAW-SMSCONTROL	Control of the Ethernia, Flagship and Heatcharge by SMS (need additional SIM card)



## Domestic Air Conditioner Range

1x1 and Multi Split Kits			2,2 kW	2,8 kW	3,2 kW
Wall Mounted Etherea Inverter+ Silver Plated • R32 GAS	NEW	R32	 KIT-XZ7-SKE	 KIT-XZ9-SKE	 KIT-XZ12-SKE
Wall Mounted Etherea Inverter+ White • R32 GAS	NEW	R32	 KIT-Z7-SKEG / KIT-Z7-SKEM	 KIT-Z9-SKEG / KIT-Z9-SKEM	 KIT-Z12-SKEG / KIT-Z12-SKEM
Wall Mounted Etherea Inverter+ Silver			 KIT-XE7-QKE	 KIT-XE9-QKE	 KIT-XE12-QKE
Wall Mounted Etherea Inverter+ White			 KIT-E7-QKE	 KIT-E9-QKE	 KIT-E12-QKE
Wall Mounted VZ Inverter+ • R32 GAS	NEW	R32		 KIT-VZ9-SKE	 KIT-VZ12-SKE
Wall Mounted TZ Type Standard Inverter • R32 GAS	NEW	R32		 KIT-TZ9-SKE	 KIT-TZ12-SKE
Wall Mounted RE Type Standard Inverter				 KIT-RE9-RKE	 KIT-RE12-RKE
Wall Mounted UZ Type Standard Inverter • R32 GAS	NEW	R32		 KIT-UZ9-SKE	 KIT-UZ12-SKE
Wall Mounted UE Type Standard Inverter				 KIT-UE9-RKE	 KIT-UE12-RKE
Wall Mounted PZ Type Standard Inverter • R32 GAS	NEW	R32		 KIT-PZ9-SKE	 KIT-PZ12-SKE
Wall Mounted PE Type Standard Inverter				 KIT-PE9-RKE	 KIT-PE12-RKE
Wall Mounted Professional Inverter -15°C				 KIT-E9-PKEA	 KIT-E12-PKEA
Floor Console Type Inverter+				 KIT-E9-PFE	 KIT-E12-PFE
4-Way 60x60 Cassette Standard Inverter				 KIT-E9-PB4EA	 KIT-E12-PB4EA
Low Static Pressure Hide Away Standard Inverter				 KIT-E9-PD3EA	 KIT-E12-QD3EA

4,5 kW	5,0 kW	6,0 kW	6,5 kW	8,0 kW
	 KIT-XZ18-SKE			
 KIT-Z15-SKEG / KIT-Z15-SKEM	 KIT-Z18-SKEG / KIT-Z18-SKEM			
	 KIT-XE18-QKE			
 KIT-E15-QKE	 KIT-E18-QKE	 KIT-E21-QKE	 KIT-E24-QKE	 KIT-E28-QKE
 KIT-TZ15-SKE	 KIT-TZ18-SKE		 KIT-TZ24-SKE	
 KIT-RE15-RKE	 KIT-RE18-RKE		 KIT-RE24-RKE	
	 KIT-UZ18-SKE			
	 KIT-UE18-RKE			
	 KIT-PZ18-SKE			
 KIT-E15-PKEA	 KIT-E18-PKEA			
	 KIT-E18-PFE			
	 KIT-E18-RB4EA	 KIT-E21-RB4EA		
	 KIT-E18-RD3EA			

## ENERGY SAVING



### Econavi

The sensor determines the human activity level and the position in the room and adjust the air flow orientation for maximum comfort and maximum savings, and detects changes in sunlight intensity and judges whether it is sunny or cloudy/night. It reduces unnecessary heating under more sunlight conditions.



### Econavi Sunlight Detection

Detects changes in sunlight intensity and judges whether it is sunny or cloudy/night. It reduces the heating and therefore wasted energy under more sunlight conditions.



### Inverter Plus System

Inverter plus products improve on the characteristics of standard Inverter air conditioners by over 20%. This means 20% less consumption and 20% off your electric bill. Inverter plus is also A class on cooling and heating mode.



### Inverter system

The Inverter range provides greater efficiency, more comfort. Provides more precise temperature control, without highs and lows, and keeps the ambient temperature constant with lower energy consumption and a significant reduction in noise and vibration levels.



### R2 Rotary Compressor

Panasonic R2 Rotary Compressor. Designed to withstand extreme conditions, it delivers high performance and efficiency.



### Refrigerant R32

Our heat pumps containing the new refrigerant R32 show a drastic reduction in the value of Global Warming Potential (GWP). An important step to reduce greenhouse gases. R32 is also a components refrigerant, making it easy to recycle.

## HIGH PERFORMANCE AND HEALTHY AIR



### Nanoe

Nanoe utilises nano-technology fine particles to purify the air in the room. It works effectively on airborne and adhesive micro-organisms such as bacteria, viruses and mould thus ensuring a cleaner living environment. Seal of Approval of the British Allergy Foundation.



### PM2.5 Filter

Particulate matter (PM2.5) can be found suspended in the air, including dust, dirt, smoke and liquid droplets. Sized at 2.5µm, these particles are said to pose health problems as they can easily enter our lungs.



### Antiallergy Properties

System is equipped with antiallergy properties filter.



### Super Quiet

Thanks to its latest generation compressor and its twin blade fan, our outdoor unit is one of the most silent on the market. The indoor unit emits an almost imperceptible 18 dB(A).



### Mild Dry Cooling

Fine control helps prevent a rapid decrease in room humidity while maintaining the set temperature. Maintains an RH\* up to 10% higher than cooling operation (\*RH: Relative Humidity). Ideal when sleeping with the air conditioner on.



### Aerowings

More comfort with Aerowings. Direct airflow to ceiling to create shower cooling effect by twin flap built in indoor.



### Down to -10°C in cooling only mode

The air conditioner works in cooling only mode with an outdoor temperature of -10°C.



### Down to -15°C in heating mode

The air conditioner works in heat pump mode with an outdoor temperature as low as -15°C.



### Heatcharge

This innovative, newly developed technology charges heat and uses it for heating. Thanks to this system, you can enjoy incredibly powerful, comfortable air conditioner heating.



### Summer House

This innovative function keeps the house at 7/8°C to avoid freezing pipes during the winter. This function is highly appreciated in summer house or week end houses.



### R22 Renewal

The Panasonic renewal system allows good quality existing R22 pipe work to be re-used whilst installing new high efficiency R410A systems.



### R410A/R22 Renewal

The Panasonic renewal system allows good quality existing R410A or R22 pipe work to be re-used whilst installing new high efficiency R32 systems.



### Odour-removing function

Allows the exchanger to be cleaned, preventing possible odours. While this function is connected, the fan also remains off momentarily to avoid unpleasant odours while the exchanger is being cleaned.



### Removable, washable panel

The front panel is easy to keep clean. It can be removed quickly in one single step and can be washed in water. A clean front panel ensures smoother, more efficient operation, which can save energy.



### Powerful Mode

The rapid and effective powerful mode is ideal for when you come home on the hottest or coldest days. It works at maximum power to reach the desired temperature in just 15 minutes.



### Soft Dry Operation Mode

The soft dry mode eliminates excess moisture with a soft breeze and provides a sense of wellbeing without much change in temperature.



### Wide & Long Airflow Vane

This vane has been designed so that the air goes further. It sends air to every corner of the room to keep the whole room in the comfort zone.



### Personal Airflow Creation

Permits the air direction to be adjusted vertically and horizontally. This feature can be conveniently selected by remote control.



### Automatic Vertical Airflow Control

The flap swings up and down automatically. The flow can also be set at a fixed angle with the remote control.



### Manual Horizontal Airflow Control



### Auto Mode (Inverter)

Automatically changes from cooling to heating depending on the set temperature for the room.



### Simple Auto Changeover

When the difference between the measured temperature and the set temperature is 3°C or more, it automatically switches the current operation mode to heating or cooling mode necessary to keep the temperature at a constantly comfortable level.



### Hot Start Mode

At the start of heating cycle and after defrost cycle, the indoor fan will start up once the indoor heat exchanger is warm.



### Real time clock with dual ON&OFF timer

This feature enables you to preset two different sets of start/stop operation timer (hour and minute) within a 24-hour time frame.



### Real time clock with single ON&OFF timer

The exact operating time (hour and minute) can be set in advance. From here on, the unit will operate in accordance to these preset hours every day until the system is reset.



### LCD Wireless Remote Controller



### Automatic Restart

This function permits automatic restarting if safe mode operation has stopped for some unusual reason, such as after a power cut. As soon as the power is back, the unit restarts with the parameters selected before it stopped.



### Long Piping

Indicates the maximum length of pipe between the outdoor unit and the indoor unit(s). The distances permitted, demonstrate the installations possible.



### Top-Panel Maintenance Access

Maintenance of an outdoor unit used to be quite a tedious task. Now, with the possibility of removing the top cover, maintenance is quick and easy.



### Self-Diagnosis Function

With this function the unit carries out a process self-diagnosis when a particular function does not work correctly. This allows faster servicing.

## HIGH CONNECTIVITY



### Internet Control

Internet Control is a next generation system providing user-friendly remote control of air conditioning or heat pump units from everywhere, using a simple Android or iOS smartphone, tablet or PC via internet.



### Easy control by BMS








































The communication port is integrated into the indoor unit and provides easy connection to, and control of, your Panasonic heat pump to your home or building management system.



### 5 Years Warranty.

Panasonic guarantees the compressors in the entire range for five years.



	MODELS	WALL MOUNTED ETHEREA INVERTER+ SILVER • R32 GAS	WALL MOUNTED ETHEREA INVERTER+ WHITE • R32 GAS	WALL MOUNTED ETHEREA INVERTER+ SILVER	WALL MOUNTED ETHEREA INVERTER+ WHITE	WALL MOUNTED VZ INVERTER+ • R32 GAS	WALL MOUNTED TZ TYPE STANDARD INVERTER • R32 GAS	WALL MOUNTED RE TYPE STANDARD INVERTER	WALL MOUNTED UZ TYPE STANDARD INVERTER • R32 GAS	WALL MOUNTED UE TYPE STANDARD INVERTER	WALL MOUNTED PZ TYPE STANDARD INVERTER • R32 GAS	WALL MOUNTED PE TYPE STANDARD INVERTER	WALL MOUNTED PROFESSIONAL INVERTER -15°C	FLOOR CONSOLE TYPE INVERTER+	4-WAY 60X60 CASSETTE INVERTER	LOW STATIC PRESSURE HIDE AWAY INVERTER
 38% ECONAVI	Econavi	✓	✓	✓	✓	✓										
 38% ECONAVI	Econavi Sunlight Detection			✓	✓	✓										
 Inverter+ system	Inverter+ system	✓	✓	✓	✓	✓							✓	✓		
 Inverter system	Inverter system						✓	✓	✓	✓	✓	✓			✓	✓
 R2 Rotary Compressor	R2 Rotary Compressor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Refrigerant R32	Refrigerant R32	✓	✓			✓	✓		✓		✓					
 Nanoe	Nanoe	✓	✓	✓	✓	✓										
 PM2.5 Filter	PM2.5 Filter						✓		✓		✓					
 Antiallergy properties	Antiallergy properties			✓ 3rd party tested	✓ 3rd party tested			✓		✓						
 Super Quiet*	Super Quiet*	✓ 19 dB(A) for XZ7, XZ9 and XZ12	✓ 19 dB(A) for Z7, Z9 and Z12	✓ 20 dB(A) for XE7, XE9 and XE12	✓ 20 dB(A) for E7, E9 and E12	✓	✓ 20 dB(A) for TZ9 and TZ12	✓ 22 dB(A) for RE9-12	✓ 20 dB(A) for UZ9 and UZ12	✓ 22 dB(A) for UE9 and UE12	✓ 20 dB(A) for PZ9 and PZ12	✓ 22 dB(A)	✓ 23 dB(A) for E9	✓ 23 dB(A) for E9	✓ 23 dB(A) for E9 and E12	
 Mild Dry Cooling	Mild Dry Cooling	✓	✓	✓	✓											
 Aerowings	Aerowings	✓	✓													
 Down to -10°C	Down to -10°C in cooling only			✓	✓								✓ -15°C		✓	✓
 Down to -15°C	Down to -15°C in heating mode			✓	✓			✓		✓ -10°C		✓ -10°C	✓	✓ -20°C	✓ -10°C	✓ -10°C
 Heatcharge	Heatcharge					✓										
 Summer House	Summer House					✓										
 R22 renewal	R22 renewal			✓	✓	✓		✓		✓		✓		✓	✓	✓
 R410A/R22 Renewal	R410A/R22 Renewal	✓	✓				✓		✓		✓					
 Odour-removing function	Odour-removing function	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Removable, washable panel	Removable, washable panel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Powerful mode	Powerful mode	✓	✓	✓	✓	✓							✓	✓	✓	✓
 Soft dry operation mode	Soft dry operation mode	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Wide & long airflow vane	Wide & long airflow vane															
 Personal airflow creation	Personal airflow creation	✓	✓	✓	✓	✓	✓ For TZ18 and TZ24	✓ For RE18 and RE24								
 Automatic vertical airflow control	Automatic vertical airflow control						✓ For TZ9, TZ12 and TZ15	✓ For RE9, RE12 and RE15	✓ For UZ9 and UZ12	✓ For UE9 and UE12	✓	✓		✓	✓	
 Manual horizontal airflow control	Manual horizontal airflow control						✓ For TZ9, TZ12 and TZ15	✓ For RE9, RE12 and RE15	✓ For UZ9 and UZ12	✓ For UE9 and UE12	✓	✓		✓		
 AUTO mode (Inverter)	AUTO mode (Inverter)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Simple Auto Changeover	Simple Auto Changeover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
 Hot start mode	Hot start mode	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓
 Real time clock with dual ON&OFF timer	Real time clock with dual ON&OFF timer	✓	✓	✓	✓	✓							✓			
 Real time clock with single ON&OFF timer	Real time clock with single ON&OFF timer						✓	✓	✓	✓	✓	✓		✓	✓	✓
 LCD Wireless remote controller	LCD Wireless remote controller	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Automatic restart	Automatic restart	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Long piping	Long piping	✓ 15 m (XZ18) 20 m (XZ18)	✓ 15 m (Z18) 20 m (Z18)	✓ 15 m (XE18) 20 m (XE18)	✓ 15 m (E18-21) 30 m (E24-28)	✓ 15 m	✓ 15 m (TZ18) 20 m (TZ18) 30 m (TZ24)	✓ 15 m (RE18) 20 m (RE18) 30 m (RE24)	✓ 15 m	✓ 15 m	✓ 15 m	✓ 15 m	✓ 15 m (E18) 20 m (E18)	✓ 15 m (E18) 20 m (E18)	✓ 20 m (E18-21) 30 m (E18)	✓ 20 m (E18) 30 m (E18)
 Top-Panel maintenance access	Top-Panel maintenance access	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Self-diagnosis function	Self-diagnosis function	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Internet Control	Internet Control	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		
 Easy control by BMS	Easy control by BMS	✓	✓	✓	✓	✓	✓ PCB Dry Contact	✓ PCB Dry Contact	✓		✓		✓		✓	✓
 Warranty on the compressor	Warranty on the compressor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

\* At the lowest fan speed.

## WALL MOUNTED ETHEREA INVERTER+ SILVER / WHITE • R32 GAS



—ETHEREA—

### Etherea with enhanced Econavi sensor and new Nanoe air-purifying system: outstanding efficiency, comfort and healthy air combined with state-of-the-art design

Econavi features an in-built human activity sensor and a new sunlight detection technology to adjust output thereby giving you the best comfort at anytime whilst saving energy.

Econavi not only optimizes air flow orientation and volume according to human presence, it also reduces cooling power automatically by no/less sunshine. With Econavi, energy savings of up to 38% are possible, whilst increasing your comfort.

Furthermore, the Nanoe revolutionary air-purifying system utilises nano technology fine particles to remove and deactivate 99% of both airborne and adhesive micro-organisms like bacteria, viruses and mould.

### Technical focus

- **NEW!** R32 gas environmental friendly
- **NEW!** design
- Maximum efficiency and comfort with Econavi, now with sunlight detection
- Nanoe air purifying system, 99% effective on both airborne and adhesive mould, viruses, bacteria and pollen allergen
- Optional smartphone control
- Mild Dry Cooling: prevent a rapid decrease in room humidity
- Super Quiet! Only 19 dB(A), equivalent to night-time in the countryside (XZ7, XZ9, XZ12, Z7, Z9 and Z12)
- More powerful airflow to quickly reach the desired temperature

Kit Silver*			KIT-XZ7-SKE	KIT-XZ9-SKE	KIT-XZ12-SKE	—	KIT-XZ18-SKE
Kit White Gloss (SKEG)** / Matt (SKEM)*			KIT-Z7-SKEG / -SKEM	KIT-Z9-SKEG / -SKEM	KIT-Z12-SKEG / -SKEM	KIT-Z15-SKEG / -SKEM	KIT-Z18-SKEG / -SKEM
Cooling capacity	Nominal (Min - Max)	kW	2,05 (0,75 - 2,40)	2,50 (0,85 - 3,00)	3,50 (0,85 - 4,00)	4,20 (0,85 - 5,00)	5,00 (0,98 - 5,60)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	4,56 (3,13 - 4,32) A	4,76 (3,54 - 4,20) A	4,17 (3,54 - 3,77) A	3,39 (3,27 - 3,18) A	3,33 (3,50 - 3,26) A
SEER	Nominal	W/W	7,50 <b>A++</b>	8,50 <b>A+++</b>	8,50 <b>A+++</b>	6,90 <b>A++</b>	7,30 <b>A+++</b>
Pdesign (cooling)		kW	2,1	2,5	3,5	4,2	5,0
Power input cooling	Nominal (Min - Max)	kW	0,450 (0,240 - 0,555)	0,525 (0,240 - 0,715)	0,840 (0,240 - 1,060)	1,240 (0,260 - 1,570)	1,500 (0,280 - 1,720)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	225	263	420	620	750
Heating capacity	Nominal (Min - Max)	kW	2,80 (0,70 - 4,00)	3,40 (0,80 - 5,00)	4,00 (0,80 - 5,80)	5,30 (0,80 - 6,80)	5,80 (0,98 - 7,50)
Heating capacity at -7°C	Nominal	kW	2,38	2,95	3,40	4,11	4,66
COP <sup>3)</sup>	Nominal (Min - Max)	W/W	4,52 (3,89 - 4,04) A	4,72 (4,44 - 3,94) A	4,35 (4,44 - 3,82) A	3,68 (4,21 - 3,51) A	3,41 (2,88 - 3,19) B
SCOP	Nominal	W/W	4,70 <b>A++</b>	4,90 <b>A++</b>	4,90 <b>A++</b>	4,00 <b>A+</b>	4,40 <b>A+</b>
Pdesign at -10°C		kW	2,1	2,7	3,2	3,6	4,2
Power input heating	Nominal (Min - Max)	kW	0,620 (0,180 - 0,990)	0,720 (0,180 - 1,270)	0,920 (0,180 - 1,520)	1,440 (0,190 - 1,940)	1,700 (0,340 - 2,350)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	626	771	914	1,260	1,336
Indoor Unit Silver			CS-XZ7SKEW	CS-XZ9SKEW	CS-XZ12SKEW	—	CS-XZ18SKEW
Indoor Unit White Gloss (SKEW) / Matt (SKEW-M)			CS-Z7SKEW / SKEW-M	CS-Z9SKEW / SKEW-M	CS-Z12SKEW / SKEW-M	CS-Z15SKEW / SKEW-M	CS-Z18SKEW / SKEW-M
Power source		V	230	230	230	230	230
Recommended fuse		A	16	16	16	16	16
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 1,5	4 x 1,5	4 x 2,5
Air volume	Cooling / Heating	m <sup>3</sup> /h	594 / 648	600 / 678	642 / 720	672 / 732	702 / 744
Moisture removal volume		l/h	1,3	1,5	2,0	2,4	2,8
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	37 / 24 / 19 — 38 / 25 / 19	39 / 25 / 19 — 40 / 27 / 19	42 / 28 / 19 — 42 / 33 / 19	43 / 31 / 25 — 43 / 35 / 29	44 / 37 / 34 — 44 / 37 / 34
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	295 x 919 x 194 / 9	295 x 919 x 194 / 10	295 x 919 x 194 / 10	295 x 919 x 194 / 10	295 x 919 x 194 / 10
Outdoor			CU-Z7SKE	CU-Z9SKE	CU-Z12SKE	CU-Z15SKE	CU-Z18SKE
Air volume	Cooling / Heating	m <sup>3</sup> /h	1.614 / 1.614	1.722 / 1.722	2.064 / 2.136	1.998 / 2.022	2.352 / 2.274
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	45 / 46	46 / 47	48 / 50	49 / 51	47 / 47
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 30	542 x 780 x 289 / 33	619 x 824 x 299 / 35	619 x 824 x 299 / 32	695 x 875 x 320 / 46
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out) <sup>5)</sup>		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 20 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 10	7,5 / 10	7,5 / 10	7,5 / 10	7,5 / 15
Operating range	Cooling — Heating Min / Max	°C	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24

Accessories	
PAW-AC-WIFI-1	Full bidirectional Wifi interface for Internet control
PAW-IR-WIFI-1	IR Wifi interface for Internet control

Accessories	
CZ-RD514C	Wired remote control for wall type
CZ-CAPR1	H Generation interface to ECOi control integration (available in June 2016)

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 metre in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: Quiet mode. Lo: The lowest fan speed. 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit.

\* Available in June 2016. \*\* Available in April 2016.

38%  
ECONAVI

A+++  
8,50 SEER

A++  
4,90 SCOP

INVERTER+

R2 ROTARY  
COMPRESSOR

99%  
nanoe

19dB(A)  
SUPER QUIET

HUMIDITY CONTROL  
MILD DRY

AEROWINGS

R410A/R32  
RENEWAL

INTERNET CONTROL

BMS  
CONNECTIVITY

5 YEARS  
COMRESSOR  
WARRANTY

SEER and SCOP: For KIT-XZ9-SKE and KIT-Z9-SKE. SUPER QUIET: For KIT-XZ7-SKE, KIT-XZ9-SKE, KIT-XZ12-SKE, KIT-Z7-SKE, KIT-Z9-SKE and KIT-Z12-SKE. INTERNET CONTROL: Optional.

## WALL MOUNTED ETHEREA

### INVERTER+ SILVER PLATED / WHITE



White

## ETHEREA

### Etherea with enhanced Econavi sensor and new Nanoe air-purifying system: outstanding efficiency, comfort and healthy air combined with state-of-the-art design

Econavi features an in-built human activity sensor and a new sunlight detection technology to adjust output thereby giving you the best comfort at anytime whilst saving energy. Econavi not only optimizes air flow orientation and volume according to human presence, it also reduces cooling power automatically by no/less sunshine. With Econavi, energy savings of up to 38% are possible, whilst increasing your comfort.

Furthermore, the Nanoe revolutionary air-purifying system utilises nano technology fine particles to remove and deactivate 99% of both airborne and adhesive micro-organisms like bacteria, viruses and mould.

### Technical focus

- This units can be installed on R22 pipings
- Maximum efficiency and comfort with Econavi, now with sunlight detection
- Nanoe air purifying system, 99 % effective on both airborne and adhesive mould, viruses, bacteria and pollen allergen
- Optional smartphone control
- Mild Dry Cooling: prevent a rapid decrease in room humidity
- Super Quiet! Only 20 dB(A), equivalent to night-time in the countryside (XE7, XE9, XE12, E7, E9 and E12)
- More powerful airflow to quickly reach the desired temperature

Kit Silver Plated			KIT-XE7-QKE	KIT-XE9-QKE	KIT-XE12-QKE	—
Kit White			KIT-E7-QKE	KIT-E9-QKE	KIT-E12-QKE	KIT-E15-QKE
Cooling capacity	Nominal (Min - Max)	kW	2,05 (0,75 - 2,40)	2,50 (0,85 - 3,00)	3,50 (0,85 - 4,00)	4,20 (0,85 - 5,00)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	4,46 (3,13-4,25) A	4,76 (3,47-4,20) A	4,19 (3,40-3,81) A	3,39 (3,27-3,25) A
SEER	Nominal	W/W	6,90 A++	6,90 A++	7,60 A++	6,60 A++
Pdesign (cooling)		kW	2,1	2,5	3,5	4,2
Power input cooling	Nominal (Min - Max)	kW	0,460 (0,240 - 0,565)	0,525 (0,245 - 0,715)	0,835 (0,250 - 1,050)	1,240 (0,260 - 1,540)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	107	127	161	223
Heating capacity	Nominal (Min - Max)	kW	2,80 (0,70 - 4,00)	3,40 (0,80 - 5,00)	4,00 (0,80 - 6,00)	5,30 (0,80 - 6,80)
Heating capacity at -7°C	Nominal	kW	2,38	2,95	3,45	4,11
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,48 (3,89-4,00) A	4,72 (4,21-3,92) A	4,76 (4,21-3,75) A	3,73 (4,21-3,54) A
SCOP	Nominal	W/W	4,40 A+	4,70 A++	4,80 A++	4,00 A+
Pdesign at -10°C		kW	2,1	2,7	3,2	3,6
Power input heating	Nominal (Min - Max)	kW	0,625 (0,180 - 1,000)	0,720 (0,190 - 1,270)	0,840 (0,190 - 1,600)	1,420 (0,190 - 1,920)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	668	804	933	1.260
Indoor Unit Silver Plated			CS-XE7QKEW	CS-XE9QKEW	CS-XE12QKEW	—
Indoor Unit White			CS-E7QKEW	CS-E9QKEW	CS-E12QKEW	CS-E15QKEW
Power source		V	230	230	230	230
Recommended fuse		A	16	16	16	16
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 1,5	4 x 1,5
Air volume	Cooling / Heating	m <sup>3</sup> /h	726 / 738	768 / 774	804 / 822	852 / 876
Moisture removal volume		l/h	1,3	1,5	2	2,4
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	37 / 24 / 20 — 38 / 25 / 20	39 / 25 / 20 — 40 / 27 / 20	42 / 28 / 20 — 42 / 33 / 20	43 / 31 / 25 — 43 / 35 / 29
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	295 x 870 x 255 / 10	295 x 870 x 255 / 10	295 x 870 x 255 / 10	295 x 870 x 255 / 10
Outdoor Unit			CU-E7QKE	CU-E9QKE	CU-E12QKE	CU-E18QKE
Air volume	Cooling / Heating	m <sup>3</sup> /h	2.034 / 2.034	1.788 / 1.788	2.106 / 2.160	1.998 / 1.998
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	45 / 46	46 / 47	48 / 50	49 / 51
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 31	542 x 780 x 289 / 33	619 x 824 x 299 / 35	619 x 824 x 299 / 33
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out) <sup>5)</sup>		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 20	7,5 / 20	7,5 / 20	7,5 / 20
Operating range	Cooling — Heating Min / Max	°C	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24

#### Accessories

PAW-AC-WIFI-1	Full bidirectional Wifi interface for Internet control
PAW-IR-WIFI-1	IR Wifi interface for Internet control

#### Accessories

CZ-RD514C	Wired remote control for wall type
CZ-CAPR1	H Generation interface to ECOi control integration (available in June 2016)

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 metre in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: Quiet mode. Lo: The lowest fan speed. 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit.

CU-E7QKE  
CU-E9QKE

CU-E12QKE  
CU-E15QKE

Included

Optional wired remote control CZ-RD514C

SEER and SCOP: For KIT-XE12-QKE. INTERNET CONTROL: Optional. iF Award: Awarded with the prestigious iF Design Award 2013.

Rating Conditions: Cooling Indoor 27°C DB / 19°C WB. Cooling Outdoor 35°C DB / 24°C WB. Heating Indoor 20°C DB. Heating Outdoor 7°C DB / 6°C WB. (DB: Dry Bulb; WB: Wet Bulb) Specifications subject to change without notice. For detailed information about ErP, please visit our websites [www.aircon.panasonic.eu](http://www.aircon.panasonic.eu) or [www.ptc.panasonic.eu](http://www.ptc.panasonic.eu).



## WALL MOUNTED ETHEREA INVERTER+ SILVER PLATED / WHITE



White

### ETHEREA

#### Ethera with enhanced Econavi sensor and new Nanoe air-purifying system: outstanding efficiency, comfort and healthy air combined with state-of-the-art design

Econavi features an in-built human activity sensor and a new sunlight detection technology to adjust output thereby giving you the best comfort at anytime whilst saving energy.

Econavi not only optimizes air flow orientation and volume according to human presence, it also reduces cooling power automatically by no/less sunshine. With Econavi, energy savings of up to 38% are possible, whilst increasing your comfort.

Furthermore, the Nanoe revolutionary air-purifying system utilises nano technology fine particles to remove and deactivate 99% of both airborne and adhesive micro-organisms like bacteria, viruses and mould.

#### Technical focus

- This units can be installed on R22 pipings
- Maximum efficiency and comfort with Econavi, now with sunlight detection
- Nanoe air purifying system, 99% effective on both airborne and adhesive mould, viruses, bacteria and pollen allergen
- Optional smartphone control
- Mild Dry Cooling: prevent a rapid decrease in room humidity
- More powerful airflow to quickly reach the desired temperature

Kit Silver Plated			KIT-XE18-QKE	—	—	—
Kit White			KIT-E18-QKE	KIT-E21-QKE	KIT-E24-QKE	KIT-E28-QKE
Cooling capacity	Nominal (Min - Max)	kW	5,00 (0,98 - 6,00)	6,30 (0,98 - 7,10)	6,80 (0,98 - 8,10)	7,65 (0,98 - 8,60)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,47 (3,50-3,02) A	2,89 (3,50-2,84) C	3,27 (2,58-3,06) A	3,04 (2,58-2,95) B
SEER	Nominal	W/W	6,90 <b>A++</b>	6,50 <b>A++</b>	6,10 <b>A++</b>	6,00 <b>A+</b>
Pdesign (cooling)		kW	5,0	6,3	6,8	7,7
Power input cooling	Nominal (Min - Max)	kW	1,440 (0,280 - 1,990)	2,180 (0,280 - 2,500)	2,080 (0,380 - 2,650)	2,520 (0,380 - 2,920)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	254	339	390	449
Heating capacity	Nominal (Min - Max)	kW	5,80 (0,98 - 8,00)	7,20 (0,98 - 8,50)	8,60 (0,98 - 9,90)	9,60 (0,98 - 11,00)
Heating capacity at -7°C	Nominal (Min - Max)	kW	4,98	5,24	6,13	6,77
COP <sup>3)</sup>	Nominal (Min - Max)	W/W	3,82 (2,88-3,11) A	3,44 (2,88-3,11) B	3,33 (2,18-3,19) C	2,96 (2,18-3,01) D
SCOP	Nominal	W/W	4,20 <b>A+</b>	4,00 <b>A+</b>	3,90 <b>A</b>	3,80 <b>A</b>
Pdesign at -10°C		kW	4,4	4,6	5,5	6,0
Power input heating	Nominal (Min - Max)	kW	1,520 (0,340 - 2,570)	2,090 (0,340 - 2,730)	2,580 (0,450 - 3,100)	3,240 (0,450 - 3,650)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	1.467	1.610	1.974	2.211
Indoor Unit Silver Plated			CS-XE18QKEW	—	—	—
Indoor Unit White			CS-E18QKEW	CS-E21QKEW	CS-E24QKEW	CS-E28QKES
Power source		V	230	230	230	230
Recommended fuse		A	16	20	20	20
Connection indoor / outdoor		mm <sup>2</sup>	4 x 2,5	4 x 2,5	4 x 2,5	4 x 2,5
Air volume	Cooling / Heating	m <sup>3</sup> /h	1.074 / 1.158	1.134 / 1.200	1.188 / 1.272	1.266 / 1.314
Moisture removal volume		l/h	2,8	3,5	3,9	4,5
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	44 / 37 / 34 — 44 / 37 / 34	45 / 37 / 34 — 45 / 37 / 34	47 / 38 / 35 — 47 / 38 / 35	49 / 38 / 35 — 48 / 38 / 35
Dimensions / Net weight	H x W x D	mm / kg	295 x 1.070 x 255 / 13	295 x 1.070 x 255 / 13	295 x 1.070 x 255 / 13	295 x 1.070 x 255 / 13
Outdoor Unit			CU-E18QKE	CU-E21QKE	CU-E24QKE	CU-E28QKE
Air volume	Cooling / Heating	m <sup>3</sup> /h	2.352 / 2.274	2.502 / 2.424	3.012 / 3.012	3.270 / 3.270
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	47 / 47	48 / 49	52 / 52	53 / 53
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	695 x 875 x 320 / 46	695 x 875 x 320 / 47	795 x 875 x 320 / 67	795 x 875 x 320 / 67
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 5/8 (15,88)	1/4 (6,35) / 5/8 (15,88)
Piping length range / Elevation difference (in/out) <sup>5)</sup>		m	3 - 20 / 15	3 - 20 / 15	3 - 30 / 20	3 - 30 / 20
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 20	7,5 / 20	10 / 30	10 / 30
Operating range	Cooling — Heating Min / Max	°C	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24

Accessories	
PAW-AC-WIFI-1	Full bidirectional Wifi interface for Internet control
PAW-IR-WIFI-1	IR Wifi interface for Internet control

Accessories	
CZ-RD514C	Wired remote control for wall type
CZ-CAPR1	H Generation interface to ECOi control integration (available in June 2016)

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 metre in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: Quiet mode. Lo: The lowest fan speed. 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit.

CU-E18QKE  
CU-E21QKE

CU-E24QKE  
CU-E28QKE

Included

Optional wired remote control CZ-RD514C

38%  
ECONAVI

A++  
6,50 SEER

A+  
4,00 SCOP

INVERTER+

R2 ROTARY  
COMPRESSOR

99%  
nanoe

HUMIDITY CONTROL  
MILD DRY

R22  
R410A  
R22 RENEWAL

INTERNET CONTROL

BMS  
CONNECTIVITY

5 YEARS  
COMPRESSOR  
WARRANTY

GREEN APPROPRIATE

IF

SEER and SCOP: For KIT-E21-QKE. INTERNET CONTROL: Optional. IF Award: Awarded with the prestigious IF Design Award 2013.

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## WALL MOUNTED HEATCHARGE VZ INVERTER+ • R32 GAS

NEW



### heatcharge

The new Heatcharge from Panasonic has the capacity to store heat on the outdoor unit which allows heating to start quickly just after turning on the heat pump. It also ensures maximum comfort and heat in the house even during defrost operation as Heat charge also stores heat to prevent cool air during defrost.

Econavi builds-in a new Sunlight Detection technology to adjust output ideally thereby giving you the best comfort at anytime whilst saving energy.

Furthermore, the Nanoe revolutionary air-purifying system utilises nano technology fine particles to remove and deactivate 99% of both airborne and adhesive micro-organisms like bacteria, viruses and mould.

#### Technical focus

- **NEW!** R32 gas environmental friendly
- **NEW!** design
- Work up to -35°C
- Energy Charge System. Heat storage unit which realizes NON-STOP heating and fast heating function
- Maximum efficiency and comfort with Econavi sunlight detection
- Nanoe air purifying system, 99% effective on both airborne and adhesive mould, viruses and bacteria
- Super Quiet! Only 18 dB(A), equivalent to night-time in the country
- More powerful airflow to quickly reach the desired temperature

Kit			KIT-VZ9-SKE	KIT-VZ12-SKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,60 - 3,00)	3,50 (0,60 - 4,00)
SEER	Nominal	W/W	10,50 <b>A+++</b>	10,00 <b>A+++</b>
Pdesign (cooling)		kW	2,5	3,5
Power input cooling	Nominal (Min - Max)	kW	0,430 (0,140 - 0,610)	0,800 (0,140 - 1,010)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a		
Heating capacity	Nominal (Min - Max)	kW	3,60 (0,60 - 7,80)	4,20 (0,60 - 9,20)
COP <sup>1)</sup>	Nominal	W/W	5,63 A	5,04 A
Heating capacity at -7 °C	Nominal	kW	5,00	5,60
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	2,07	2,00
SCOP	Nominal	W/W	6,20 <b>A+++</b>	5,90 <b>A+++</b>
Pdesign at -10°C		kW	3,6	4,2
Power input heating	Nominal (Min - Max)	kW	0,640 (0,140 - 2,720)	0,830 (0,140 - 3,160)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a		
Indoor Unit			CS-VZ9SKE	CS-VZ12SKE
Power source		V	230	230
Recommended fuse		A	16	16
Connection		mm <sup>2</sup>	4 x 1,5	4 x 1,5
Air volume	Cooling / Heating	m <sup>3</sup> /h	1.020	1.050
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	44 / 27 / 18 — 44 / 26 / 18	45 / 33 / 18 — 45 / 29 / 18
Dimensions / Net weight	H x W x D	mm / kg	295 x 890 x 375 / 14,5	295 x 890 x 375 / 14,5
Outdoor Unit			CU-VZ9SKE	CU-VZ12SKE
Air volume	Cooling / Heating	m <sup>3</sup> /h	1.980 / 1.890	2.052 / 1.890
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	49 / 49	50 / 50
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	630 x 799 x 299 / 41,5	630 x 799 x 299 / 41,5
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 12	3 - 15 / 12
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 20	7,5 / 20
Operating range	Cooling — Heating Min / Max	°C	-10 / +43 — -35 / +24	-10 / +43 — -35 / +24

#### Accessories

PA-AC-WIFI-1	Interface for IntesisHome
PAW-IR-WIFI-1	IR Wifi interface for Internet control

#### Accessories

PAW-SMSCONTROL	Control by SMS (need additional SIM card)
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1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured at a position 1 meter in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. 4) Add 70mm for piping port.

\* Available in January 2016.



CU-VE9NKE  
CU-VE12NKE



Included



SEER and SCOP: For KIT-VZ9-SKE. INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27°C DB / 19°C WB. Cooling Outdoor 35°C DB / 24°C WB. Heating Indoor 20°C DB. Heating Outdoor 7°C DB / 6°C WB. (DB: Dry Bulb; WB: Wet Bulb)  
Specifications subject to change without notice. For detailed information about ErP, please visit our websites [www.aircon.panasonic.eu](http://www.aircon.panasonic.eu) or [www.ptc.panasonic.eu](http://www.ptc.panasonic.eu).

## WALL MOUNTED TZ STANDARD INVERTER • R32 GAS

NEW



CS-TZ24SKE

New TZ Inverter models are powerful and efficient, with an outstanding energy ranking of A++/A+, unique in the market! The TZ works up to an outdoor temperature of -15°C in heating mode and -10°C up to an outdoor temperature of -15°C in heating and -10 in cooling and still with a high efficiency and capacity! Furthermore, the annual energy consumption has never been so low.

### Technical focus

- **NEW!** R32 gas environmental friendly
- **NEW!** New design
- Wired Controller (optional)
- Complete line-up of standard Inverter models
- Super Quiet! Only 20 dB(A)
- High energy savings
- Long connection distance (from 15 m up to 30 m)

Kit			KIT-TZ9-SKE*	KIT-TZ12-SKE*	KIT-TZ15-SKE*	KIT-TZ18-SKE*	KIT-TZ24-SKE**
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,00)	3,50 (0,85 - 3,90)	4,20 (0,85 - 4,60)	5,00 (0,98 - 5,40)	6,80 (0,98 - 8,10)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,73 (3,40 - 3,37) A	3,50 (3,33 - 3,28) A	3,33 (3,21 - 2,79) A	3,09 (3,44 - 3,00) B	3,24 (2,58 - 3,03) A
SEER	Nominal	W/W	6,20 <b>A++</b>	6,20 <b>A++</b>	5,60 <b>A+</b>	6,70 <b>A++</b>	6,10 <b>A++</b>
Pdesign (cooling)		kW	2,5	3,5	4,2	5,0	6,8
Power input cooling	Nominal (Min - Max)	kW	0,670 (0,250 - 0,890)	1,000 (0,255 - 1,190)	1,260 (0,265 - 1,650)	1,620 (0,285 - 1,800)	2,100 (0,380 - 2,670)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	335	500	630	810	1.050
Heating capacity	Nominal (Min - Max)	kW	3,30 (0,80 - 4,10)	4,00 (0,80 - 5,10)	5,00 (0,80 - 6,80)	5,80 (0,98 - 7,50)	8,60 (0,98 - 9,90)
Heating capacity at -7°C	Nominal	kW	2,70	3,30	3,90	4,67	6,13
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,13 (4,10 - 3,63) A	3,81 (4,00 - 3,59) A	3,70 (4,00 - 3,32) A	3,30 (2,88 - 3,10) C	3,30 (2,18 - 3,16) C
SCOP	Nominal	W/W	4,20 <b>A+</b>	4,20 <b>A+</b>	3,80 <b>A</b>	4,10 <b>A+</b>	4,00 <b>A+</b>
Pdesign at -10°C		kW	2,4	2,8	3,6	4,0	5,5
Power input heating	Nominal (Min - Max)	kW	0,800 (0,195 - 1,130)	1,050 (0,200 - 1,420)	1,350 (0,200 - 2,050)	1,760 (0,340 - 2,420)	2,610 (0,450 - 3,130)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	800	933	1.326	1.366	1.925
Indoor Unit			CS-TZ9SKEW	CS-TZ12SKEW	CS-TZ15SKEW	CS-TZ18SKEW	CS-TZ24SKEW
Air volume	Cooling / Heating	m³/h	690 / 732	714 / 738	738 / 786	696 / 744	1.020 / 1.080
Moisture removal volume		l/h	1,5	2,0	2,4	2,8	3,9
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	40 / 26 / 20 — 40 / 27 / 24	42 / 30 / 20 — 42 / 33 / 25	44 / 31 / 29 — 44 / 35 / 28	44 / 37 / 34 — 44 / 37 / 34	47 / 38 / 35 — 47 / 38 / 35
Dimensions / Net weight	H x W x D	mm / kg	290 x 870 x 204 / 9	290 x 870 x 204 / 9	290 x 870 x 204 / 10	290 x 870 x 204 / 10	290 x 1.070 x 235 / 12
Outdoor Unit			CU-TZ9SKE	CU-TZ12SKE	CU-TZ15SKE	CU-TZ18SKE	CU-TZ24SKE
Power source		V	230	230	230	230	230
Recommended fuse		A	16	16	16	16	20
Connection (indoor/outdoor)		mm²	4 x 1,5	4 x 1,5	4 x 1,5	4 x 2,5	4 x 2,5
Air volume	Cooling / Heating	m³/h	1.800 / 1.734	1.722 / 1.824	1.998 / 1.998	2.064 / 2.040	3.012 / 3.012
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	47 / 48	48 / 50	49 / 51	48 / 49	52 / 52
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 27	542 x 780 x 289 / 32	619 x 824 x 299 / 35	619 x 824 x 299 / 41	795 x 875 x 320 / 67
Piping connections	Liquid / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 5/8 (15,88)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 20 / 15	3 - 30 / 25
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 10	7,5 / 10	7,5 / 10	7,5 / 15	10,0 / 25
Operating range	Cooling — Heating Min / Max	°C	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24

Accessories	
PAW-AC-WIFI-1	Full bidirectional Wifi interface for Internet control
PAW-IR-WIFI-1	IR Wifi interface for Internet control

Accessories	
CZ-RD514C	Wired remote control for wall type
CZ-CAPR1	H Generation interface to ECoI control integration (available in June 2016)

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 metre in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: The lowest fan speed. Lo: The second lowest fan speed (the lowest fan speed for RE18/24). 4) Add 70mm for piping port.

\* Available in April 2016. \*\* Available in May 2016.

CU-TZ9SKE  
CU-TZ12SKE

CU-TZ15SKE  
CU-TZ18SKE

CU-TZ24SKE

Included for TZ9,  
TZ12 and TZ15

Included for  
TZ18 and TZ24

Optional wired  
remote control  
CZ-RD514C

6,70 SEER

4,20 SCOP

INVERTER

R2 ROTARY COMPRESSOR

PM2.5 FILTER

20dB(A) SUPER QUIET

R410A/R32 RENEWAL

INTERNET CONTROL

DRY CONTACT

5 YEARS COMPRESSOR WARRANTY

SEER: For KIT-TZ18-SKE. SCOP: For KIT-TZ9-SKE and KIT-TZ12-SKE. SUPER QUIET: For KIT-TZ9-SKE and KIT-TZ12-SKE. INTERNET CONTROL: Optional.



## WALL MOUNTED RE STANDARD INVERTER



CS-RE18RKEW // CS-RE24RKEW

RE Inverter models are powerful and efficient, with an outstanding energy ranking of A++/A+, unique in the market! The RE works up to an outdoor temperature of -15°C in heating mode and -10°C up to an outdoor temperature of -15°C in heating and -10 in cooling and still with a high efficiency and capacity! Furthermore, the annual energy consumption has never been so low.

### Technical focus

- Wired Controller (optional)
- This units can be installed on R22 pipings
- Complete line-up of standard Inverter models
- Quieter indoor units
- High energy savings
- Long connection distance (from 15 m up to 30 m)

Kit			KIT-RE9-RKE	KIT-RE12-RKE	KIT-RE15-RKE	KIT-RE18-RKE	KIT-RE24-RKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,00)	3,50 (0,85 - 3,90)	4,20 (0,85 - 4,60)	5,00 (0,98 - 6,00)	6,80 (0,98 - 8,10)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,73 (3,40 - 3,16) A	3,50 (3,33 - 3,28) A	3,33 (3,21 - 2,79) A	3,40 (3,50 - 2,96) A	3,24 (2,58 - 3,03) A
SEER	Nominal	W/W	6,10 <b>A++</b>	6,10 <b>A++</b>	5,60 <b>A+</b>	6,70 <b>A++</b>	6,00 <b>A+</b>
Pdesign (cooling)		kW	2,5	3,5	4,2	5,0	6,8
Power input cooling	Nominal (Min - Max)	kW	0,670 (0,250 - 0,950)	1,000 (0,255 - 1,190)	1,260 (0,265 - 1,650)	1,470 (0,280 - 2,030)	2,100 (0,380 - 2,670)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	143	201	263	261	397
Heating capacity	Nominal (Min - Max)	kW	3,30 (0,80 - 4,10)	4,00 (0,80 - 5,10)	5,00 (0,80 - 6,80)	5,80 (0,98 - 8,00)	8,60 (0,98 - 9,90)
Heating capacity at -7°C	Nominal	kW	2,70	3,30	3,90	4,98	6,13
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,13 (4,10 - 3,63) A	3,81 (4,00 - 3,59) A	3,70 (4,00 - 3,32) A	3,77 (2,88 - 3,08) A	3,30 (2,18 - 3,16) C
SCOP	Nominal	W/W	4,00 <b>A+</b>	4,00 <b>A+</b>	3,80 <b>A</b>	4,10 <b>A+</b>	3,80 <b>A</b>
Pdesign at -10°C		kW	2,4	2,8	3,6	4,4	5,5
Power input heating	Nominal (Min - Max)	kW	0,800 (0,195 - 1,130)	1,050 (0,200 - 1,420)	1,350 (0,200 - 2,050)	1,540 (0,340 - 2,600)	2,610 (0,450 - 3,130)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	840	980	1.326	1.502	2.026
Indoor Unit			CS-RE9RKEW	CS-RE12RKEW	CS-RE15RKEW	CS-RE18RKEW	CS-RE24RKEW
Air volume	Cooling / Heating	m³/h	702 / 768	762 / 804	750 / 804	978 / 1.074	1.104 / 1.170
Moisture removal volume		l/h	1,5	2,0	2,4	2,8	3,9
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	41 / 26 / 22 — 41 / 27 / 24	42 / 30 / 22 — 42 / 33 / 25	44 / 31 / 29 — 44 / 35 / 28	44 / 37 / 34 — 44 / 37 / 34	47 / 38 / 35 — 47 / 38 / 35
Dimensions / Net weight	H x W x D	mm / kg	290 x 870 x 214 / 9	290 x 870 x 214 / 9	290 x 870 x 214 / 9	290 x 1.070 x 240 / 12	290 x 1.070 x 240 / 12
Silver decoration sheet		Yes	Yes	Yes	Yes	Yes	Yes
Outdoor Unit			CU-RE9RKE	CU-RE12RKE	CU-RE15RKE	CU-RE18RKE	CU-RE24RKE
Power source		V	230	230	230	230	230
Recommended fuse		A	16	16	16	16	16
Connection (indoor/outdoor)		mm²	4 x 1,5	4 x 1,5	4 x 1,5	4 x 1,5	4 x 1,5
Air volume	Cooling / Heating	m³/h	1.926 / 1.872	1.998 / 1.998	1.998 / 1.998	2.352 / 2.274	3.012 / 3.012
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	47 / 48	48 / 50	49 / 51	47 / 47	52 / 52
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 31	619 x 824 x 299 / 34	619 x 824 x 299 / 34	695 x 875 x 320 / 46	795 x 875 x 320 / 67
Piping connections	Liquid / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 5/8 (15,88)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 20 / 15	3 - 30 / 20
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 20	7,5 / 20	7,5 / 20	7,5 / 20	10,0 / 30
Operating range	Cooling — Heating Min / Max	°C	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24	-10 / +43 — -15 / +24

#### Accessories

PAW-IR-WIFI-1 IR Wifi interface for Internet control

#### Accessories

CZ-RD514C Wired remote control for wall type

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 metre in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: The lowest fan speed. Lo: The second lowest fan speed (the lowest fan speed for RE18/24). 4) Add 70mm for piping port.



CU-RE9RKE

CU-RE12RKE  
CU-RE15RKE

CU-RE18RKE



CU-RE24RKE

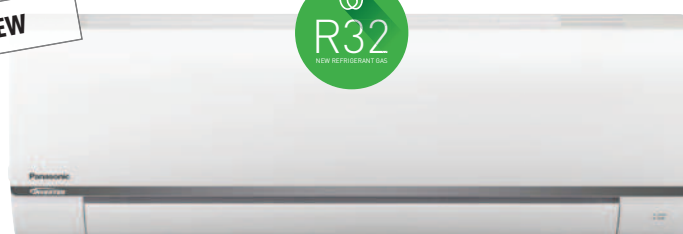
Included for RE9,  
RE12 and RE15Included for  
RE18 and RE24

SEER and SCOP: For KIT-RE18-RKE. SUPER QUIET: For KIT-RE9-RKE and KIT-RE12-RKE. INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27°C DB / 19°C WB. Cooling Outdoor 35°C DB / 24°C WB. Heating Indoor 20°C DB. Heating Outdoor 7°C DB / 6°C WB. (DB: Dry Bulb; WB: Wet Bulb)  
Specifications subject to change without notice. For detailed information about ErP, please visit our websites [www.aircon.panasonic.eu](http://www.aircon.panasonic.eu) or [www.ptc.panasonic.eu](http://www.ptc.panasonic.eu).

## WALL MOUNTED UZ STANDARD INVERTER • R32 GAS

NEW



New UZ series inverter powerful and efficient.

### Technical focus

- **NEW!** R32 gas environmental friendly
- **NEW!** New design
- Wired Controller (optional)
- Super Quiet! Only 20 dB(A)
- High energy savings
- Long connection distance

Kit			KIT-UZ9-SKE	KIT-UZ12-SKE	KIT-UZ18-SKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,00)	3,40 (0,85 - 3,90)	5,00 (0,98 - 5,40)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,68 (3,40 - 3,33)	3,18 (3,33 - 3,05)	3,03 (3,44 - 2,90)
SEER	Nominal	W/W	6,20 <b>A++</b>	6,10 <b>A++</b>	6,50 <b>A++</b>
Pdesign (cooling)		kW	2,5	3,4	5,0
Power input cooling	Nominal (Min - Max)	kW	0,680 (0,250 - 0,900)	1,070 (0,255 - 1,280)	1,650 (0,285 - 1,860)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	340	535	825
Heating capacity	Nominal (Min - Max)	kW	3,15 (0,80 - 3,60)	3,84 (0,80 - 4,40)	5,40 (0,98 - 7,50)
Heating capacity at -7°C	Nominal	kW	2,14	2,60	4,58
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,04 (4,10 - 3,46)	3,66 (4,10 - 3,41)	3,42 (2,80 - 3,06)
SCOP	Nominal	W/W	3,80 <b>A</b>	3,80 <b>A</b>	3,90 <b>A</b>
Pdesign at -10 °C		kW	1,9	2,4	4,0
Power input heating	Nominal (Min - Max)	kW	0,780 (0,195 - 1,040)	1,050 (0,195 - 1,290)	1,580 (0,350 - 2,450)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	700	884	1,436
Indoor Unit			CS-UZ9SKE	CS-UZ12SKE	CS-UZ18SKE
Power source		V	230	230	230
Recommended fuse		A	16	16	16
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 2,5
Air volume	Cooling / Heating	m <sup>3</sup> /h	618 / 660	642 / 672	678 / 720
Moisture removal volume		l/h	1,5	2,0	2,8
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	37 / 26 / 20 — 37 / 27 / 24	38 / 30 / 20 — 38 / 33 / 25	44 / 37 / 34 — 44 / 37 / 34
Dimensions / Net weight	H x W x D	mm / kg	290 x 850 x 199 / 8	290 x 850 x 199 / 8	290 x 870 x 214 / 9
Outdoor Unit			CU-UZ9SKE	CU-UZ12SKE	CU-UZ18SKE
Air volume	Cooling / Heating	m <sup>3</sup> /h	1.872 / 1.872	1.866 / 1.866	2.064 / 2.040
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	48 / 49	48 / 50	48 / 49
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 26	542 x 780 x 289 / 27	619 x 824 x 299 / 38
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 10	7,5 / 10	7,5 / 15
Operating range	Cooling — Heating Min / Max	°C	+5 / +43 — -10 / +24	+5 / +43 — -10 / +24	+5 / +43 — -10 / +24

Accessories	
PAW-IR-WIFI-1	IR Wifi interface for Internet control

Accessories	
CZ-RD514C	Wired remote control for wall type

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 metre in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: The lowest fan speed. Lo: The second lowest fan speed (the lowest fan speed for UE18) 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit. \* Available in March 2016.

CU-UZ9SKE  
CU-UZ12SKE

CU-UZ18SKE

Included

Optional wired remote control  
CZ-RD514C

6,50 SEER

3,90 SCOP

INVERTER

R2 ROTARY COMPRESSOR

PM2,5 FILTER

20dB(A) SUPER QUIET

R410A/R32 RENEWAL

INTERNET CONTROL

PCB DRY CONTACT

5 YEARS COMPRESSOR WARRANTY

SEER and SCOP: For KIT-UZ18-SKE. SUPER QUIET: For KIT-UZ9-SKE and KIT-UZ12-SKE. INTERNET CONTROL: Optional.

## WALL MOUNTED UE STANDARD INVERTER



CS-UE18RKE

New UE series inverter powerful and efficient.

### Technical focus

- Wired Controller (optional)
- This units can be installed on R22 pipings
- Quieter indoor units
- High energy savings
- Long connection distance

Kit			KIT-UE9-RKE	KIT-UE12-RKE	KIT-UE18-RKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,00)	3,50 (0,85 - 3,90)	5,00 (0,98 - 5,60)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,47 (3,40 - 2,94) A	3,21 (3,33 - 3,05) A	3,25 (3,44 - 3,20) A
SEER	Nominal	W/W	5,60 <b>A+</b>	5,60 <b>A+</b>	6,50 <b>A++</b>
Pdesign (cooling)		kW	2,5	3,5	5,0
Power input cooling	Nominal (Min - Max)	kW	0,720 (0,250 - 1,020)	1,090 (0,255 - 1,280)	1,540 (0,285 - 1,750)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	156	219	269
Heating capacity	Nominal (Min - Max)	kW	3,30 (0,80 - 4,10)	4,00 (0,80 - 5,10)	5,40 (0,98 - 7,70)
Heating capacity at -7°C	Nominal	kW	2,66	3,20	4,79
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	3,84 (4,10 - 3,47) A	3,64 (4,00 - 3,47) A	3,67 (2,80 - 3,35) A
SCOP	Nominal	W/W	3,80 <b>A</b>	3,80 <b>A</b>	4,30 <b>A+</b>
Pdesign at -10 °C		kW	1,9	2,4	4,0
Power input heating	Nominal (Min - Max)	kW	0,860 (0,195 - 1,180)	1,100 (0,200 - 1,470)	1,470 (0,350 - 2,300)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	700	884	1.302
Indoor Unit			CS-UE9RKE	CS-UE12RKE	CS-UE18RKE
Power source		V	230	230	230
Recommended fuse		A	16	16	16
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 1,5
Air volume	Cooling / Heating	m <sup>3</sup> /h	702 / 768	762 / 804	978 / 1.074
Moisture removal volume		l/h	1,5	2,0	2,8
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	41 / 26 / 22 — 41 / 27 / 24	42 / 30 / 22 — 42 / 33 / 25	44 / 37 / 34 — 44 / 37 / 34
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	290 x 870 x 214 / 9	290 x 870 x 214 / 9	290 x 1.070 x 240 / 12
Outdoor Unit			CU-UE9RKE	CU-UE12RKE	CU-UE18RKE
Air volume	Cooling / Heating	m <sup>3</sup> /h	1.926 / 1.872	1.860 / 1.860	2.064 / 2.040
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	47 / 48	48 / 50	48 / 49
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 31	542 x 780 x 289 / 33	619 x 824 x 299 / 38
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out) <sup>5)</sup>		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 20	7,5 / 20	7,5 / 20
Operating range	Cooling — Heating Min / Max	°C	+5 / +43 — -10 / +24	+5 / +43 — -10 / +24	+5 / +43 — -10 / +24

#### Accessories

PAW-IR-WIFI-1 IR Wifi interface for Internet control

#### Accessories

CZ-RD514C Wired remote control for wall type

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 metre in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: The lowest fan speed. Lo: The second lowest fan speed (the lowest fan speed for UE18) 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit.



CU-UE9RKE  
CU-UE12RKE



CU-UE18RKE



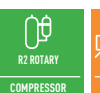
Included for  
UE9 and UE12



Included for  
UE18



Optional wired  
remote control  
CZ-RD514C



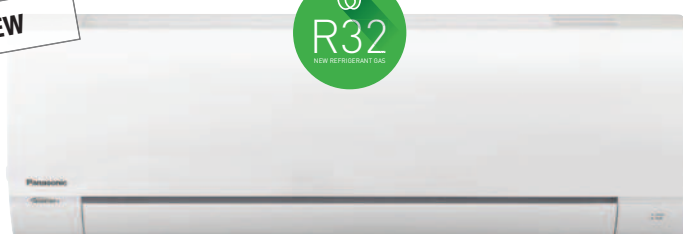
SEER and SCOP: For KIT-UE18-RKE. SUPER QUIET: For KIT-UE9-RKE and KIT-UE12-RKE. INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27°C DB / 19°C WB. Cooling Outdoor 35°C DB / 24°C WB. Heating Indoor 20°C DB. Heating Outdoor 7°C DB / 6°C WB. (DB: Dry Bulb; WB: Wet Bulb)  
Specifications subject to change without notice. For detailed information about ErP, please visit our websites [www.aircon.panasonic.eu](http://www.aircon.panasonic.eu) or [www.ptc.panasonic.eu](http://www.ptc.panasonic.eu).



## WALL MOUNTED PZ STANDARD INVERTER • R32 GAS

NEW



New PZ Inverter models are powerful and efficient.

### Technical focus

- **NEW!** R32 gas environmental friendly
- **NEW!** New design
- Wired Controller (optional)
- Super Quiet! Only 20 dB(A)
- High energy savings
- Long connection distance

Kit			KIT-PZ9-SKE	KIT-PZ12-SKE	KIT-PZ18-SKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,00)	3,40 (0,85 - 3,90)	5,00 (0,98 - 5,40)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,62 (3,40 - 3,30)	3,09 (3,33 - 3,00)	2,98 (3,44 - 2,86)
SEER	Nominal	W/W	5,80 <b>A+</b>	5,60 <b>A+</b>	6,00 <b>A+</b>
Pdesign (cooling)		kW	2,5	3,4	5,0
Power input cooling	Nominal (Min - Max)	kW	0,690 (0,250 - 0,910)	1,100 (0,255 - 1,300)	1,680 (0,285 - 1,890)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	345	550	840
Heating capacity	Nominal (Min - Max)	kW	3,15 (0,80 - 3,60)	3,84 (0,80 - 4,40)	5,40 (0,98 - 7,50)
Heating capacity at -7°C	Nominal	kW	2,14	2,60	4,58
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,04 (4,10 - 3,46)	3,66 (4,10 - 3,41)	3,42 (2,80 - 3,06)
SCOP	Nominal	W/W	3,80 <b>A</b>	3,80 <b>A</b>	3,90 <b>A</b>
Pdesign at -10 °C		kW	1,9	2,4	4,0
Power input heating	Nominal (Min - Max)	kW	0,780 (0,195 - 1,040)	1,050 (0,195 - 1,290)	1,580 (0,350 - 2,450)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	700	884	1,436
Indoor Unit			CS-PZ9SKE	CS-PZ12SKE	CS-PZ18SKE
Power source		V	230	230	230
Recommended fuse		A	16	16	16
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 1,5
Air volume	Cooling / Heating	m <sup>3</sup> /h	618 / 660	642 / 672	678 / 720
Moisture removal volume		l/h	1,5	2,0	2,8
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	37 / 26 / 20 — 37 / 27 / 24	38 / 30 / 20 — 38 / 33 / 25	44 / 37 / 34 — 44 / 37 / 34
Dimensions / Net weight	H x W x D	mm / kg	290 x 850 x 199 / 8	290 x 850 x 199 / 8	290 x 870 x 214 / 9
Outdoor Unit			CU-PZ9SKE	CU-PZ12SKE	CU-PZ18SKE
Air volume	Cooling / Heating	m <sup>3</sup> /h	1.872 / 1.872	1.866 / 1.866	2.064 / 2.040
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	48 / 49	48 / 50	48 / 49
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 26	542 x 780 x 289 / 27	619 x 824 x 299 / 38
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 10	7,5 / 10	7,5 / 15
Operating range	Cooling — Heating Min / Max	°C	+5 / +43 — -10 / +24	+5 / +43 — -10 / +24	+5 / +43 — -10 / +24

Accessories		Accessories	
PAW-AC-DIO	PCB for wall mounted with dry contacts, On/Off, Error message	CZ-RD514C	Wired remote control for wall type

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 meter in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: The lowest fan speed. Lo: The second lowest fan speed. 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit. \* Available in March 2016.

CU-PZ9SKE  
CU-PZ12SKE

CU-PZ18SKE

Included

Optional wired remote control CZ-RD514C

SEER and SCOP: For KIT-PZ18-SKE. SUPER QUIET: For KIT-PZ9-SKE and KIT-PZ12-SKE.

## WALL MOUNTED PE STANDARD INVERTER



PE Inverter models are powerful and efficient.

### Technical focus

- Wired Controller (optional)
- This units can be installed on R22 pipings
- Quieter indoor units
- High energy savings
- Long connection distance

Kit			KIT-PE9-RKE	KIT-PE12-RKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,00)	3,50 (0,85 - 3,90)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,47 (3,42 - 2,94) A	3,21 (3,33 - 3,05) A
SEER	Nominal	W/W	5,60 <b>A+</b>	5,60 <b>A+</b>
Pdesign (cooling)		kW	2,5	3,5
Power input cooling	Nominal (Min - Max)	kW	0,720 (0,250 - 1,020)	1,090 (0,255 - 1,280)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	156	219
Heating capacity	Nominal (Min - Max)	kW	3,30 (0,80 - 4,10)	4,00 (0,80 - 5,10)
Heating capacity at -7°C	Nominal	kW	2,66	3,2
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	3,84 (4,10 - 3,47) A	3,64 (4,00 - 3,47) A
SCOP	Nominal	W/W	3,80 <b>A</b>	3,80 <b>A</b>
Pdesign at -10 °C		kW	1,9	2,4
Power input heating	Nominal (Min - Max)	kW	0,860 (0,195 - 1,180)	1,100 (0,200 - 1,470)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	700	884
Indoor Unit			CS-PE9RKE	CS-PE12RKE
Power source		V	230	230
Recommended fuse		A	16	16
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5
Air volume	Cooling / Heating	m <sup>3</sup> /h	702 / 768	762 / 804
Moisture removal volume		l/h	1,5	2,0
Sound pressure level <sup>3)</sup>	Cooling — Heating (Hi / Lo / Q-Lo)	dB(A)	41 / 26 / 22 — 41 / 27 / 24	42 / 30 / 22 — 42 / 33 / 25
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	290 x 870 x 214 / 9	290 x 870 x 214 / 9
Outdoor Unit			CU-PE9RKE	CU-PE12RKE
Air volume	Cooling / Heating	m <sup>3</sup> /h	1.926 / 1.872	1.860 / 1.860
Sound pressure level <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	47 / 48	48 / 50
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 31	542 x 780 x 289 / 33
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 15	3 - 15 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 20	7,5 / 20
Operating range	Cooling — Heating Min / Max	°C	+5 / +43 — -10 / +24	+5 / +43 — -10 / +24

Accessories	
PAW-AC-DIO	PCB for wall mounted with dry contacts, On/Off, Error message

Accessories	
CZ-RD514C	Wired remote control for wall type

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 meter in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: The lowest fan speed. Lo: The second lowest fan speed. 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit.

CU-PE9RKE  
CU-PE12RKE

Included

Optional wired  
remote control  
CZ-RD514C

## WALL MOUNTED PROFESSIONAL INVERTER -20°C



### Complete line-up with high efficiency even at -20°C

This Wall Mounted air conditioner is especially designed for professional applications such as computer rooms where cooling inside the room is necessary even when the outside temperature is low. Furthermore this air conditioner has an automatic changeover system, in order to maintain the inside temperature even when sharp outside temperature changes occur.

### Technical focus

- This units can be installed on R22 pipings
- Designed for 24h/7d a week operation
- Highly efficient even at -20°C
- High durability rolling bearings
- Additional piping sensors to prevent freezing

KIT			KIT-E9-PKEA	KIT-E12-PKEA	KIT-E15-PKEA	KIT-E18-PKEA
Cooling capacity	Nominal (Min-Max)	kW	2,50 (0,85-3,00)	3,50 (0,85-4,00)	4,20 (0,98-5,00)	5,00 (0,98-6,00)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	4,85 (4,23-5,00) A	4,02 (3,57-5,00) A	3,50 (3,50-3,16) A	3,47 (3,50-3,02) A
Cooling capacity at -10°C	Nominal	kW	2,63	3,69	5,04	6,00
EER at -10°C	Nominal	W/W	7,19	5,96	6,01	6,00
Cooling capacity at -20°C	Nominal	kW	2,61	3,66	4,06	5,82
EER at -20°C	Nominal	W/W	6,71	5,56	4,39	5,39
SEER <sup>2)</sup>	Nominal	W/W	7,1 A++	6,7 A++	6,3 A++	6,9 A++
Pdesign		kW	2,5	3,5	4,2	5,0
Power input cooling	Nominal (Min-Max)	kW	0,515 (0,170-0,710)	0,870 (0,170-1,120)	1,200 (0,280-1,580)	1,440 (0,280-1,990)
Annual electricity consumption (cooling) <sup>3)</sup>		kWh/a	123	183	233	254
Heating capacity	Nominal (Min-Max)	kW	3,40 (0,85-5,40)	4,00 (0,85-6,60)	5,40 (0,98-7,10)	5,80 (0,98-8,00)
Heating capacity at -7°C <sup>4)</sup>	Nominal	kW	3,33	4,07	4,10	4,98
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,86 (4,12-5,15) A	4,35 (3,63-5,15) A	3,75 (2,88-3,24) A	3,82 (2,88-3,11) A
SCOP <sup>5)</sup>	Nominal	W/W	4,4 A+	4,1 A+	3,9 A	4,2 A+
Pdesign at -10 °C		kW	2,8	3,6	3,6	4,4
Power input heating	Nominal (Min-Max)	kW	0,700 (0,165-1,310)	0,920 (0,165-1,820)	1,440 (0,340-2,190)	1,520 (0,340-2,570)
Annual electricity consumption (heating) <sup>3)</sup>		kWh/a	891	1.229	1.292	1.467
Indoor Unit			CS-E9PKEA	CS-E12PKEA	CS-E15PKEA	CS-E18PKEA
Power source		V	230	230	230	230
Recommended fuse		A	16	16	16	16
Connection indoor / outdoor		mm	4 x 1,5	4 x 1,5	4 x 1,5	4 x 2,5
Air Volume	Cooling / Heating	m³/h	798 / 876	816 / 882	846 / 900	1.074 / 1.158
Moisture removal volume		l/h	1,5	2,0	2,4	2,8
Sound pressure level <sup>6)</sup>	Cooling — Heating (Hi / Lo / S-Lo)	dB(A)	39 / 26 / 23 — 40 / 27 / 24	42 / 29 / 26 — 42 / 33 / 29	43 / 32 / 29 — 43 / 35 / 29	44 / 37 / 34 — 44 / 37 / 34
Dimensions <sup>7)</sup> / Net weight	H x W x D	mm / kg	295 x 870 x 255 / 10	295 x 870 x 255 / 10	295 x 870 x 255 / 10	295 x 1.070 x 255 / 13
Outdoor Unit			CU-E9PKEA	CU-E12PKEA	CU-E15PKEA	CU-E18PKEA
Sound pressure level <sup>6)</sup>	Cooling / Heating (Hi)	dB(A)	46 / 47	48 / 50	46 / 46	47 / 47
Dimensions <sup>7)</sup> / Net weight	H x W x D	mm / kg	622 x 824 x 299 / 36	622 x 824 x 299 / 36	695 x 875 x 320 / 45	695 x 875 x 320 / 46
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out) <sup>8)</sup>		m	3 - 15 / 5	3 - 15 / 5	3 - 15 / 15	3 - 20 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 20	7,5 / 20	7,5 / 20	7,5 / 20
Operating range	Cooling — Heating Min / Max	°C	-20 / +43 — -15 / +24	-20 / +43 — -15 / +24	-20 / +43 — -15 / +24	-20 / +43 — -15 / +24

Accessories	
PAW-GRDSTD40	Outdoor elevation platform
PAW-WTRAY	Tray for condenser water compatible with base ground support

Accessories	
PAW-GRDBSE20	Outdoor base ground support for noise and vibration absorption
PAW-SERVER-PKEA	PCB for installation in server rooms with security

Rating Conditions for cooling capacity at low temperature: Cooling Indoor 27°C DB / 19°C WB. Cooling Outdoor 0°C DB / -10°C WB. 1) EER and COP, Energy Saving Classification, is at 220 / 240 V (380 / 415 V) only in accordance with EU directive 2002/31/EC. 2) SEER is calculated in base Eurovent IPLV for SBEM for U1 indoor unit SEER=a(EER25)+b(EER50)+c(EER75)+d(EER100) where EER25, EER50, EER75 and EER100 are the EER measured value at 25%, 50%, 75% and 100% part load for temperatures 20, 25, 30 and 35°C DB, respectively. a, b, c and d are values assigned for an office type. These values are given as a=0,2, b=0,36, c=0,32 and d=0,03. The internal temperatures are taken at 27°C DB and 19°C WB. 3) The annual consumption (ErP) is calculated by formula determined by ErP regulation. 4) Heating capacity is calculated including defrost factor correction. 5) SCOP is calculated in base Eurovent IPLV for SBEM with U1 indoor unit including defrost correction factor. 6) The Sound pressure level of the units shows the value measured of a position 1 meter in front of the main body and 1,5m from the ground. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. 7) Add 70mm for piping port. 8) When installing the outdoor unit at a higher position than the indoor unit. // Recommended fuse for the indoor 3A.



SEER and SCOP: For KIT-E9-PKEA. SUPER QUIET: For KIT-E9-PKEA. INTERNET CONTROL: Optional.