



EVERY  
**HOUSE**  
MATTERS



~~AQUAREA~~  
engineered for high performance



**'ECO IDEAS' FOR LIFESTYLES: WE WILL PROMOTE LIFESTYLES WITH VIRTUALLY ZERO CO<sub>2</sub> EMISSIONS THROUGHOUT THE WORLD. SPECIFICALLY:**

- 30% of total sales will be achieved through "eco labeled" products. This includes both external labels such as EU eco flower, Blue Angel or Nordic Swan, and our internal 'eco ideas' label, which is given to products which achieve industry-leading environmental performance.<sup>1)</sup>
- 3,500,000t of contribution in reducing CO<sub>2</sub> emissions with energy solution products (such as Solar Panels, Fuel Cells, Heat Pumps, Energy Recovering Ventilation, LED and Energy Saving Lamps).<sup>2)</sup>
- Educate 100,000 children on eco related topics through the 'kids school – eco learning' programme.

**'ECO IDEAS' FOR BUSINESS-STYLES: WE WILL CREATE AND PURSUE BUSINESS-STYLES THAT MAKE THE BEST USE OF RESOURCES AND ENERGY:**

- 99% of waste materials generated in European production will be recycled<sup>3)</sup>, meaning less than 1% will be allowed to go to landfill.
- 1,000t of reduction in CO<sub>2</sub> emissions from Panasonic's offices across Europe.<sup>4)</sup>
- 7,000t of contribution in reducing CO<sub>2</sub> emissions from production activities.<sup>5)</sup>

1) Products awarded the 'eco ideas' label include those whose environmental performance is greater than the industry's No.2 model by 10% or more at the time of release, and those which achieve the highest rank in the market by external environmental labels in accordance to environmental performance.

2) An amount of CO<sub>2</sub> reduction compared to the estimated figure assuming no improvement. Measures were taken after March 31, 2006.

3) Includes all Panasonic Group's European factories with the exception of IPS-Alpha and Panasonic.

4) Based on offices with 100 employees or more; based on FY 2009.

5) An amount of CO<sub>2</sub> reduction compared to the estimated figure assuming no improvement. Measures were taken after March 31, 2006.

## PANASONIC HEATING AND COOLING SYSTEMS

With more than 30 years of experience, exporting to more than 120 countries around the world, Panasonic is unquestionably one of the leaders in the air conditioning sector. The company is also a world leader in innovation as it has filed more than 91,539 patents to improve its customers' lives. Moreover, Panasonic is determined to remain at the forefront of its market – thanks to more than 500 researchers working in European laboratories to design increasingly innovative products. In all, the company has produced more than 200 million compressors and its products are manufactured in 294 plants which are located all over the world. You can be assured of the extremely high quality of Panasonic's air conditioners.

This wish to excel has made Panasonic the international leader in heating and air conditioning solutions. The company's industrial capacity and firm commitment to the environment has enabled it to open new avenues of research and to develop innovative technologies which enhance its customers' way of life.

Panasonic offers a range of turnkey heating and air conditioning solutions for homes, medium-sized buildings such as offices and restaurants, and large-scale buildings. These offer maximum effectiveness, comply with the strictest environmental standards and meet the most avant-garde construction requirements of our time.

At Panasonic we know what a great responsibility it is to install heating and cooling systems. Because offering you the best solutions in heating and cooling matters.

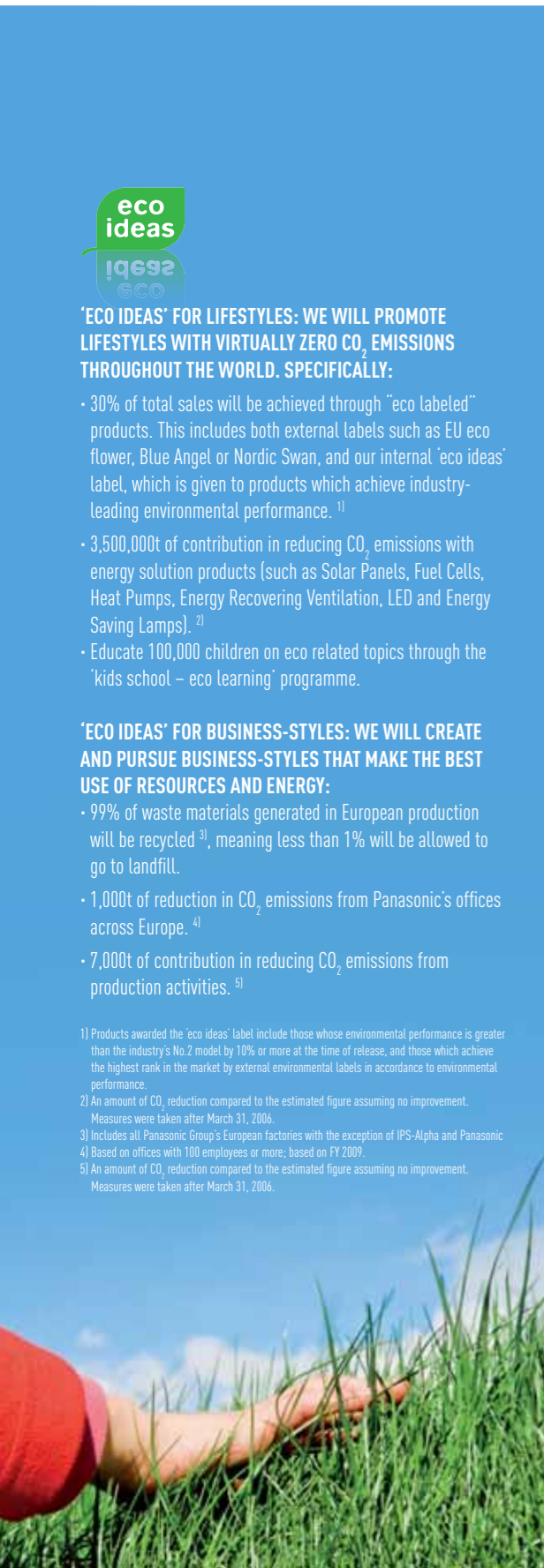
### EVERYTHING MATTERS

## AQUAREA

engineered for high performance

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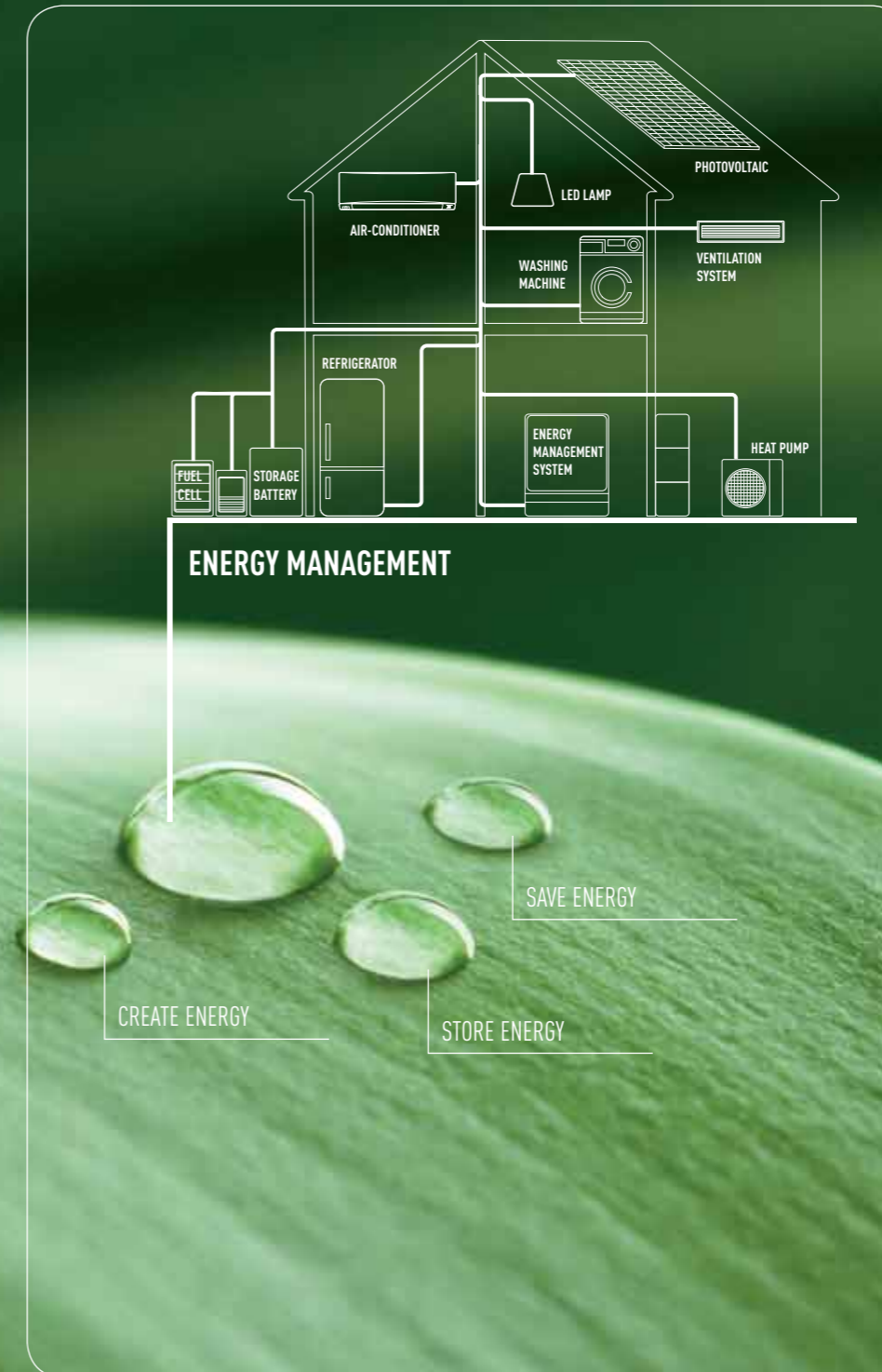
# PANASONIC ECOLOGY & ENERGY VISION

A STEP AHEAD IN ECOLOGY — IN HOMES,  
BUILDINGS AND TOWNS

Panasonic presents a more comfortable and ecological lifestyle. By linking a wide range of products for saving, creating and storing energy with Energy Management Systems, it is possible to control energy use in a smart way.

Panasonic aims to contribute towards reducing CO<sub>2</sub> emissions in the entire house and building.

Our steadfast commitment to the environment means that all of our air conditioners meet the most demanding requirements for energy consumption and noise emissions. But it also means that we search for new ideas to improve our environment, both in meticulous control of the processes of manufacturing and distributing our products and in new ways of living our day-to-day lives without endangering the planet's future.



# AQUAREA

engineered for high performance

## AQUAREA'S NEW AIR-TO-WATER HEAT PUMP THE BIGGEST LINE-UP ON THE MARKET TO MEET WITH YOUR DEMAND!

COST-EFFECTIVE AND ENVIRONMENTALLY FRIENDLY, PANASONIC'S NEW AQUAREA AIR-TO-WATER SYSTEM PROVIDES MAXIMUM EFFICIENCY AND CAPACITY EVEN AT -20 °C  
Panasonic's new Aquarea system, based on high-efficiency heat pump technology, not only heats your home and hot water, but also cools your home in summer with incredible performances. This creates perfect comfort whatever the weather conditions, even at outdoor temperatures as low as -20°C.

- output water 65°C  
HIGH TEMP HEAT PUMP
- high capacity at -15°C  
AQUAREA T-CAP
- 4.74 COP high efficiency  
AQUAREA HIGH CONNECTIVITY



### energysaving

**high efficiency heating**  
INVERTER+ SYSTEM

The A Inverter+ system provides energy savings of up to 30% compared to non inverter models. You win and nature wins.

**environmentally friendly refrigerant**  
R410A

REFRIGERANT R410A R410A offers optimal performance and involves no environmental cost since it does not harm the ozone layer.

**down to -20°C in heating mode**  
OUTDOOR TEMPERATURE

UP TO -20°C IN HEATING MODE The air conditioner works in heat pump mode with an outdoor temperature as low as -20°C.

### highconnectivity

**boiler connection**  
RETROFIT

RENOVATION Our Aquarea heat pumps can be connect to an existing or new boiler for optimum comfort even at very low outside temperatures.

**solar panels connection**  
SOLAR KIT

SOLAR KIT For even greater efficiency, our Aquarea heat pumps can be connected to solar panels with an optional kit.

**domestic hot water**  
DHW

DHW With Aquarea you can also heat your domestic hot water at a very low cost with the optional hot water cylinder.

**5 year compressor warranty**

5 YEARS WARRANTY We guarantee the compressors in the entire range for five years.



## AQUAREA INCREASE LINE-UP!

- **New** line-up of high temperature Heat Pumps (output water temperature of 65°C)
- **New** line-up of Total capacity Heat Pumps even at -15°C

### At the forefront of energy innovation, Aquarea is resolutely positioned as a "green" heating and air-conditioning system.

Aquarea is part of a new generation of heating and air-conditioning systems that use a renewable, free energy source – the air – to heat or cool the home and to produce hot water. The Aquarea heat pump is a much more flexible and cost-effective alternative to a traditional fossil fuel boiler.

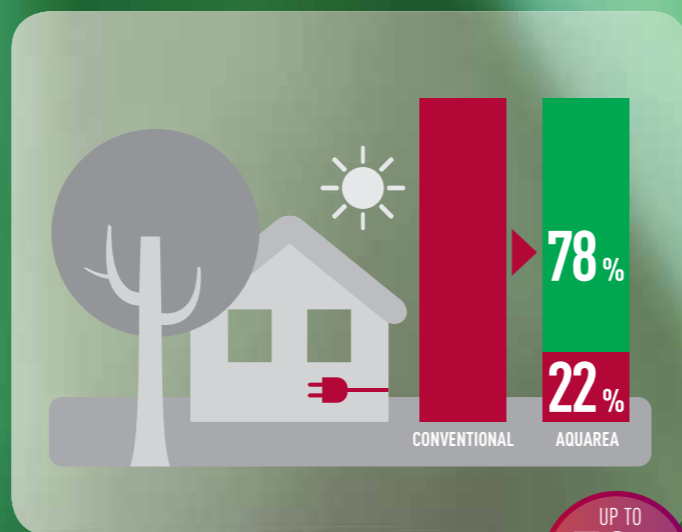
### An ideal heating solution for new and old buildings:

- A wide range from 7 to 16 kW, single and three phase, mono-bloc and bi-bloc
- 3 Versions:
  - the Standard Heat Pump
  - the High temperature Heat Pump (output water temperature of 65°C)
  - the Total capacity Heat Pump even at -15°C
- The High-efficiency Heat Pump which operates at outside temperatures as low as -20°C
- Reduces energy costs with its COP of 4.74\*
- Reduces energy consumption and CO<sub>2</sub> emissions
- Provides cooling in summer
- Highly flexible:
  - Connects to an existing heating system
  - Connects to solar panels

\* COP: energy efficiency in heating mode. COP of 4.74 for the 9kW WH-MDF09C9EB or WH-UD09CE8 models at an outside temperature of 7 °C, and for water. input and output temperatures of 30 °C and 35 °C (according to EN 14511-2)



## "GREEN" HIGH-EFFICIENT HEATING WITH PANASONIC'S NEW AIR-TO-WATER HEAT PUMP SYSTEMS



UP TO **78%** energy savings<sup>1)</sup>

At the forefront of energy innovation, Aquarea is resolutely positioned as a "green" heating and air-conditioning system. Aquarea is part of a new generation of heating and air-conditioning systems that use a renewable, free energy source; air, to heat or cool the home and to produce hot water. The Aquarea heat pump is a much more flexible and cost-effective alternative to a traditional fossil fuel boiler.

We are surrounded by free, inexhaustible energy: supplied by the sun present in all spheres of our environment, in the air, the ground, the groundwater...

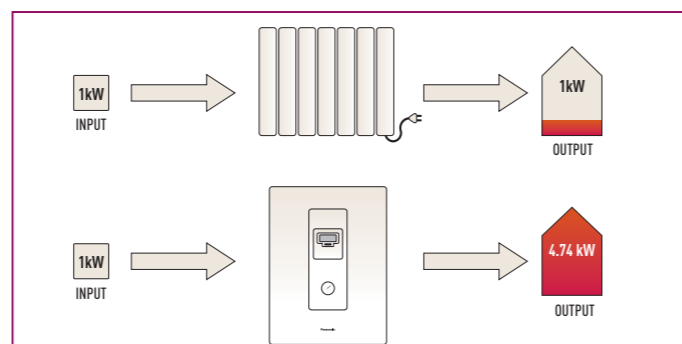
Heat pumps enable us to recover this free, inexhaustible energy and to use it to heat our homes. These systems have the huge advantage, apart from reducing your electricity bill, of saving fossil fuels while at the same time limiting greenhouse gas emissions\*.

Thus, Panasonic's Aquarea system is an air/water heat pump system that uses calories from the outdoor air and transmits them via a heat exchanger to the water used to heat your home in winter, in addition, some Aquarea models can even be used to cool your house in summer timer and produce your hot water all year round.

### UP TO 78% ENERGY SAVINGS<sup>1)</sup>

Panasonic's Aquarea heat pump provides savings of up to 78% on heating expenses compared with electrical heaters. For example, the Aquarea system of 9 kW has a COP of 4,74 which means that for every kW of electricity consumed, it returns 4,40 kW of energy, i.e. 3,40 kW more than a conventional electrical heating system which has a maximum COP of 1. This is equivalent to a 78% saving.

Consumption can be further reduced by connecting solar panels to the Aquarea system.



\* The comparison is made on nominal manufacturer values based on the following conditions:

Rating conditions	Heating	
Inside air temperature	20°C DB	
Outside air temperature	7°C DB / 6°C WB	Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C
DB: Dry Buld; WB: Wet Buld		

<sup>1)</sup> Up to 78% of the heat produced by a heat pump is free, since it comes from the outdoor air.

**NEW**  
2011

## PANASONIC HAS DESIGNED A COMPLETELY NEW LINE-UP TO GIVE THE BEST TO OUR CUSTOMERS

Which product for which application?

### AQUAREA HIGH CONNECTIVITY

For a house with low temperature radiators or floor heating, our high connectivity Aquarea heat pump is a good solution. This solution can work as a stand-alone unit or can be combined with a gas or oil boiler depending on requirements. This solution has the best ratio for heating capacity and efficiency.

**4.74\*\*** COP  
high efficiency  
AQUAREA HIGH CONNECTIVITY

### AQUAREA HT\*

For a house with high temperature radiators (for example, cast iron radiators), the Aquarea High Temperature Solution is probably the most adequate as Aquarea HT provides output water temperatures of 65°C even at -15°C. Aquarea HT is able to deliver 65°C with the Heat Pump alone.

output water **65°C**  
HIGH TEMP HEAT PUMP

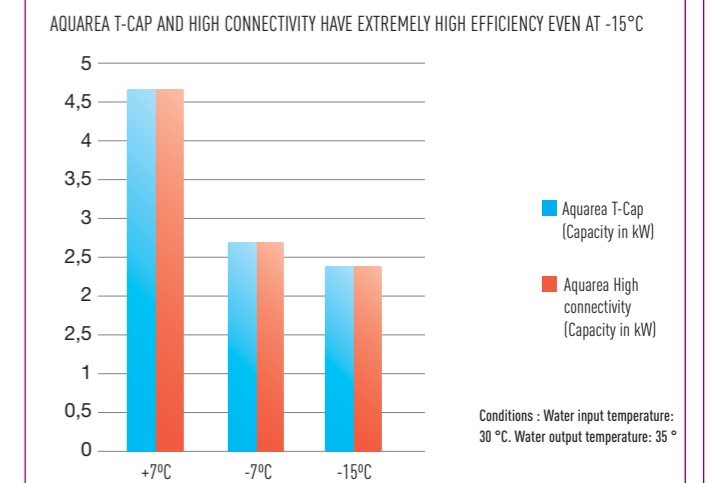
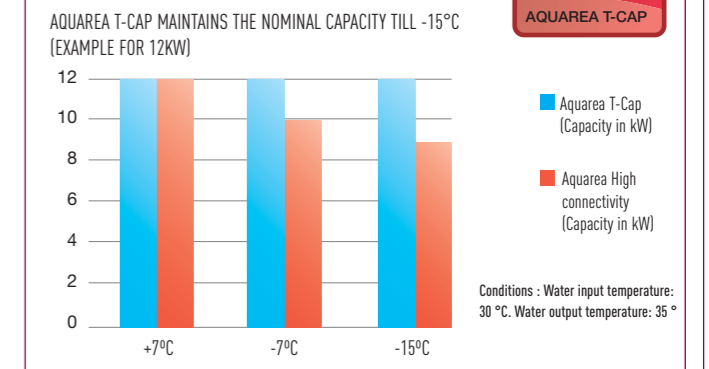


### AQUAREA T-CAP\*

If the most important aspect is to keep nominal capacities even at temperatures of -7°C or -15°C. This ensures that there is always enough capacity to heat the house without help from an external boiler – even at extremely low temperatures.



high capacity at **-15°C**  
AQUAREA T-CAP



Aquarea T-cap always has high efficiency and high heating capacity even at extremely low temperatures. With Aquarea T-Cap, you can always enjoy high savings.

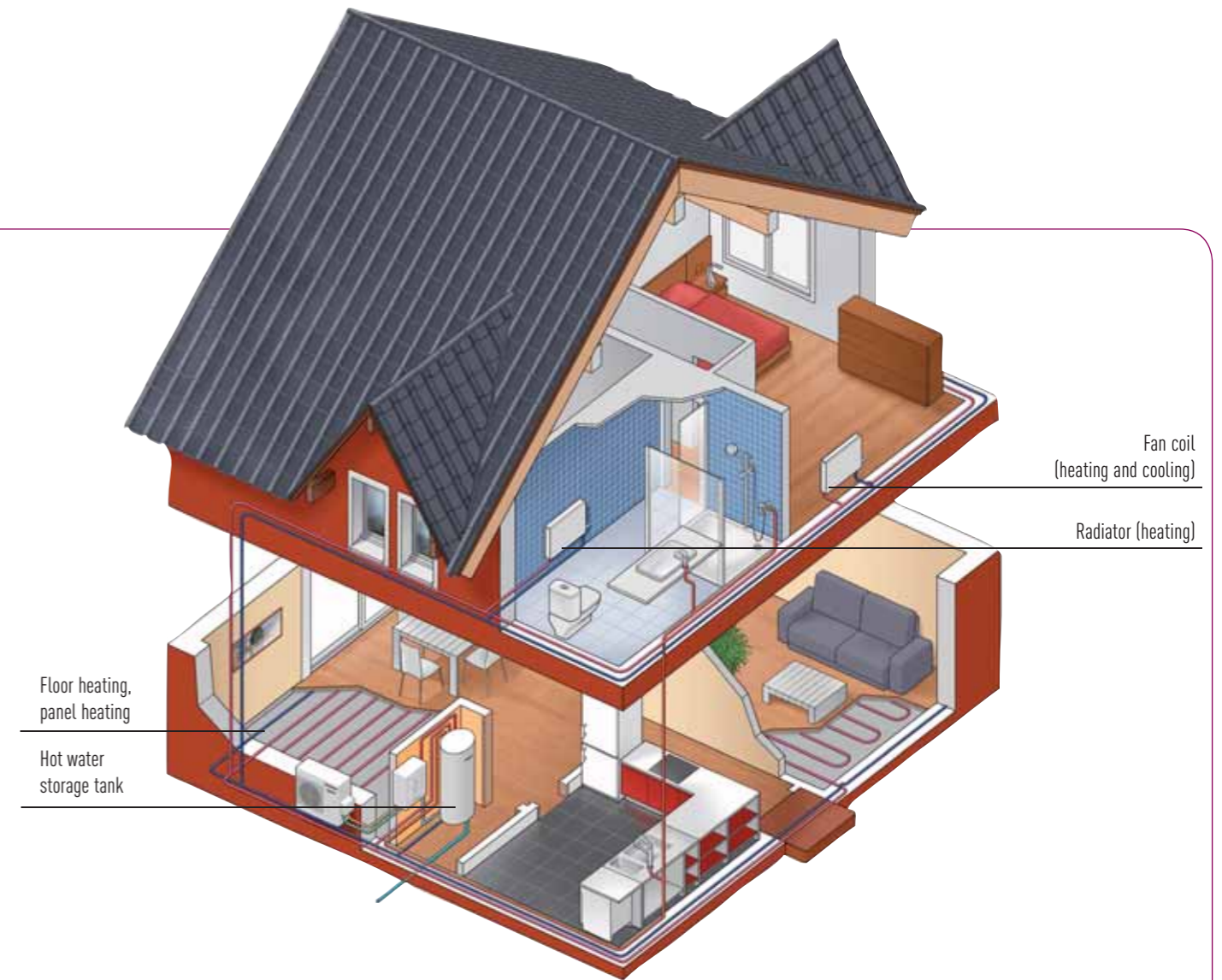
\* Availability: Aquarea T-CAP Single phase: June 2011; Aquarea T-CAP Three phase: September 2011; Aquarea HT: December 2011.  
\*\* Tentative spec, Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C; outside temperature: +7°C



### A COMPACT DESIGN: EASY TO INSTALL AND MAINTAIN

Aquarea is a very easy heating and air conditioning system to install either in new or old buildings.

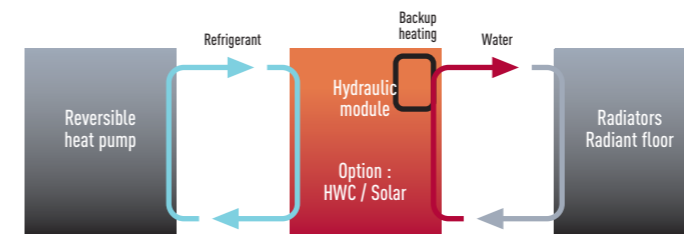
Panasonic's Aquarea air to water system provides a considerable reduction on installation and maintenance costs. For new buildings, no drilling or excavation work is necessary to capture the heat, unlike geothermal installations, nor any gas connection, chimneys or fuel reservoirs. For retrofits or refurbishing, it is easy to connect to an existing heating system with low-temperature radiators or a radiant floor.



### HOW DOES THE AQUAREA SYSTEM WORK ?

An air to water heat pump system uses heat energy present in the outdoor air to heat the house, cool it and also to produce hot water. The Aquarea system therefore uses free energy to heat or cool your home. It only consumes electricity to operate the compressor, the electronics, the pumps and in the event of very low temperatures, the electric elements. The result is very high efficiency and real energy savings.

Application: New or replacement boiler



Example : with split-system

### THERE ARE SEVERAL TYPES OF HEAT PUMP:

- The bi-bloc system  
This is formed by an outdoor unit and a hydraulic module, normally located in the utility room or garage. This configuration requires refrigerant pipes between the two units but is easily integrated in the house and can be connected to an existing boiler, for example.
- The mono-bloc system  
It only has an outdoor unit. The installation doesn't require a refrigerated connection and is only connected to the heating system. This system is therefore easier to install, but requires more outdoor space.



## COMFORT, SAVINGS AND POWER EVEN AT VERY LOW TEMPERATURES

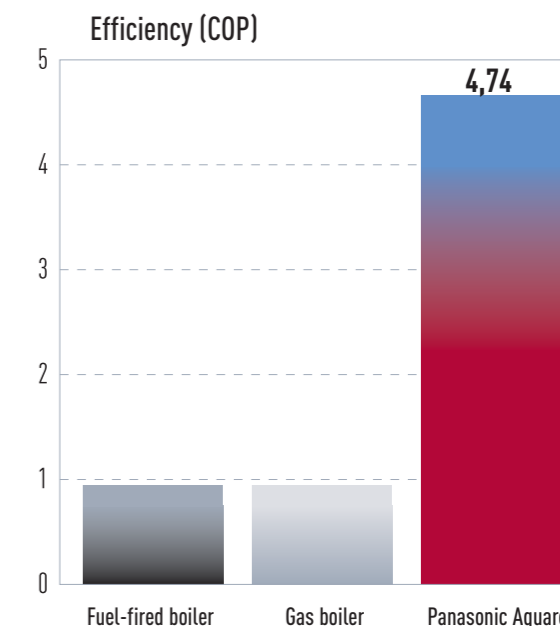
**HEAT PUMPS: MORE EFFICIENT THAN OTHER HEATING SYSTEMS**  
Panasonic heat pumps have a maximum COP of 4.74 at +7°C which makes them much more efficient than fuel-fired boilers, gas boilers and electrical heaters.

### Panasonic's inverter+ system

After quickly reaching the selected temperature, the Inverter+ system will gradually adjust the power in order to maintain a constant temperature. Thus, there will not be any sudden changes in temperature and the capacity of the power also guarantees a constant and pleasant temperature, even when the outside temperature changes.

### Maximum efficiency even at extremely low temperatures

The Aquarea range has been specially designed to provide maximum efficiency even at extreme temperatures when compared with electrical heaters or gas boilers.



SDF/SDC/MDF/MDC	7 kW	9 kW	12kW	14 kW	16 kW
Heating Capacity at +7°C (kW)	7	9	12	14	16
COP at +7°C with heating water temperature at 35°C	4,4	4,74	4,67	4,5	4,23
Heating Capacity at +2°C	6,55	9	11,4	12,4	13
COP at +2°C with heating water temperature at 35°C	3,31	3,53	3,4	3,32	3,25
Heating Capacity at -7°C (kW)	5,15	9	10	10,7	11,4
COP at -7°C with heating water temperature at 35°C	2,65	2,81	2,7	2,62	2,55
Heating Capacity at -15°C (kW)	4,6	8,3	8,9	9,5	10,3
COP at -15°C with heating water temperature at 35°C	2,3	2,55	2,43	2,35	2,33

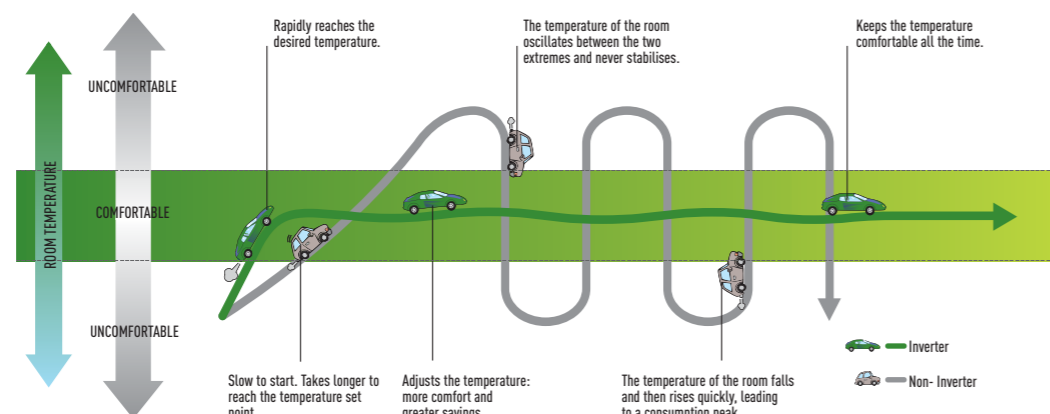
SXF/SXC/MXF/MXC	9 kW	12 kW
Heating Capacity at +7°C (kW)	9	12
COP at +7°C with heating water temperature at 35°C	4,74	4,67
Heating Capacity at +2°C	9	12
COP at +2°C with heating water temperature at 35°C	3,53	3,4
Heating Capacity at -7°C (kW)	9	12
COP at -7°C with heating water temperature at 35°C	2,81	2,7
Heating Capacity at -15°C (kW)	9	12
COP at -15°C with heating water temperature at 35°C	2,54	2,4

Conditions : Water input temperature: 30 °C. Water output temperature: 35 °.  
\* Tentative specifications



## INVERTER+ COMPRESSOR FOR EVEN GREATER EFFICIENCY

With over 100 million compressors supplied, Panasonic has demonstrated its status as leader and the excellent quality and reliability of its heat pumps.  
With a Panasonic Inverter+ compressor, you can save up to 30% energy compared to a traditional system no inverter.



## HOW TO CALCULATE THE POWER YOUR HOUSE NEEDS

To calculate the power, you will need a thermal balance report drawn up by a specialist who will analyse the house's insulation, its orientation, the openings, the minimum temperature in your area, etc.  
However, here is a quick calculation method to enable you to roughly estimate the power needed. This calculation method is given for guidance only. Panasonic will not accept responsibility under any circumstances in the event of an assessment error.

### 1- Calculation of the house's total energy loss:

A detached house's total energy loss can be calculated approximately using the following formula:  $D = G \times V \times \Delta T$

Where:

$D$  = Total loss in W

$V$  = Living space in  $m^3$

$\Delta T$  = Difference between the temperature inside the house and the minimum outdoor temperature where the house is located

$G$  = The building's insulation coefficient in  $W/m^3K \cdot ^\circ C$

Estimation of coefficient G according to the insulation type ( $G$  en  $W/m^3K \cdot ^\circ C$ )

- Old house without insulation  $G = 2$
- Old house with insulation  $G = 1.5$
- House built after 1990  $G = 1.1$
- House built after 2005  $G = 0.8$
- Very good insulation  $G = 0.6$
- Bioclimatic  $G = 0.4$

### 2- Power requirement:

The model selected must be capable of providing power at least equal to the estimated total energy loss value.

Example: A  $130 m^2$  detached house with a ceiling height of 2.5 m, with a minimum outdoor temperature of  $-7^\circ C$ , built in 1995, has total energy loss:  $D = 1.1 \times [(130 m^2 \times 2.5 m) \times (20^\circ C - (-7^\circ C))] = 9652 W$  (i.e. 9.65 kW)

We must therefore select a Heat Pump capable of producing 9.65 kW at  $-7^\circ C$ , which leads us to a 12- kW Aquarea model.



## WHAT MAKES THE AIR-TO-WATER HEAT PUMP WORK

- The outdoor unit: this captures the free energy from the outdoor air and brings it into the house by means of the hydraulic module. These free calories are transported to the hydraulic module using an environmentally-friendly refrigerant gas with a high thermal exchange coefficient (R410A).
- Via the hydraulic module, with control panel, the temperature inside the house can be controlled and efficiency maximised. It has a heat exchanger which transmits the calories contained in the refrigerant coming from the outdoor unit to the water used for the house's heating and hot water. The hydraulic module manages priorities in terms of heating and hot water production. This hydraulic module is situated in the house in the case of the bi-bloc system or in the outdoor unit in the case of the mono-bloc system.
- The hot water cylinder heats the hot water. It is made of stainless steel, which guarantees it a very long life. It is also fitted with a 3 kW element to ensure maximum comfort when outdoor temperatures are very low. The heater, situated at the top of the cylinder, guarantees maximum efficiency and faster heat-up.

- A 3-way valve for the hot water cylinder connection is supplied with the hot water cylinder.
- Other necessary or optional features (not provided by Panasonic):
  - Room temperature thermostat, which can be connected to the Aquarea system to ensure optimum room temperature conditions.
  - Solar kit, to connect solar panels for even greater efficiency.

## TWO EARTH LEAKAGE CUT-OUTS

The Aquarea hydraulic module has 2 differential cut-outs ensuring maximum safety in the event of a short circuit.



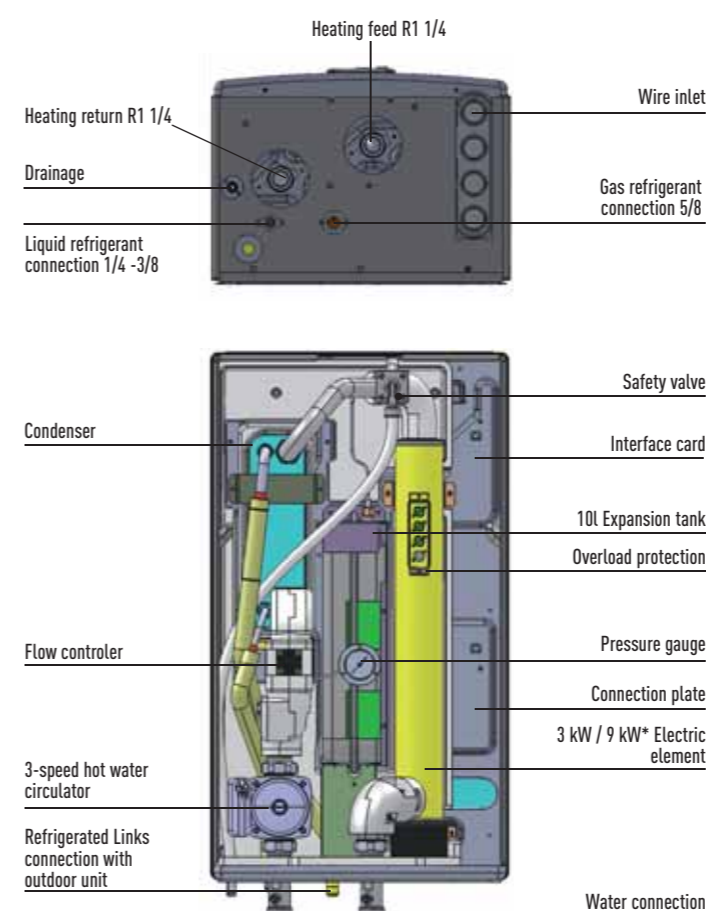
## THE CONTROL PANEL

The control panel allows perfect temperature control based on the outdoor temperature, providing maximum efficiency and comfort. The control panel controls the heating temperature and the hot water cylinder temperature very simply.

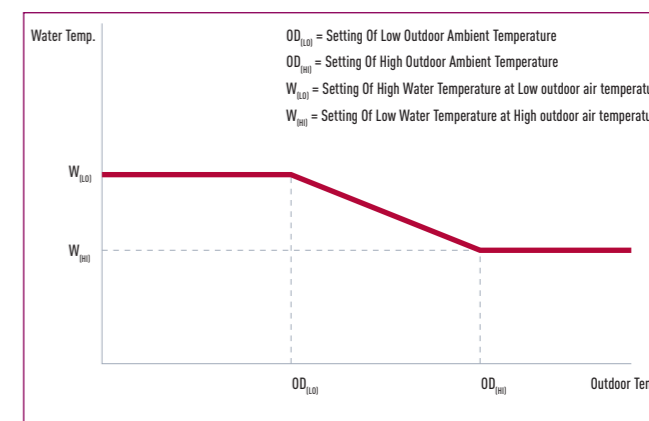
## EASY PROGRAMMING OF THE CONTROL PANEL

The primary circuit temperature is controlled based on the outdoor temperature. The temperature of the primary circuit is determined by your heating specialist depending on your installation. Enter the below parameters in the remote control on starting up the system. Your heating specialist must also select the type of operation you need: heating priority or hot water cylinder priority.

## THE HYDRAULIC MODULE



\* 3 kW for 7 and 9 kW, 6 kW for 12, 14, 16 kW single-phase  
9 kW for 12, 14, 16 kW three-phase



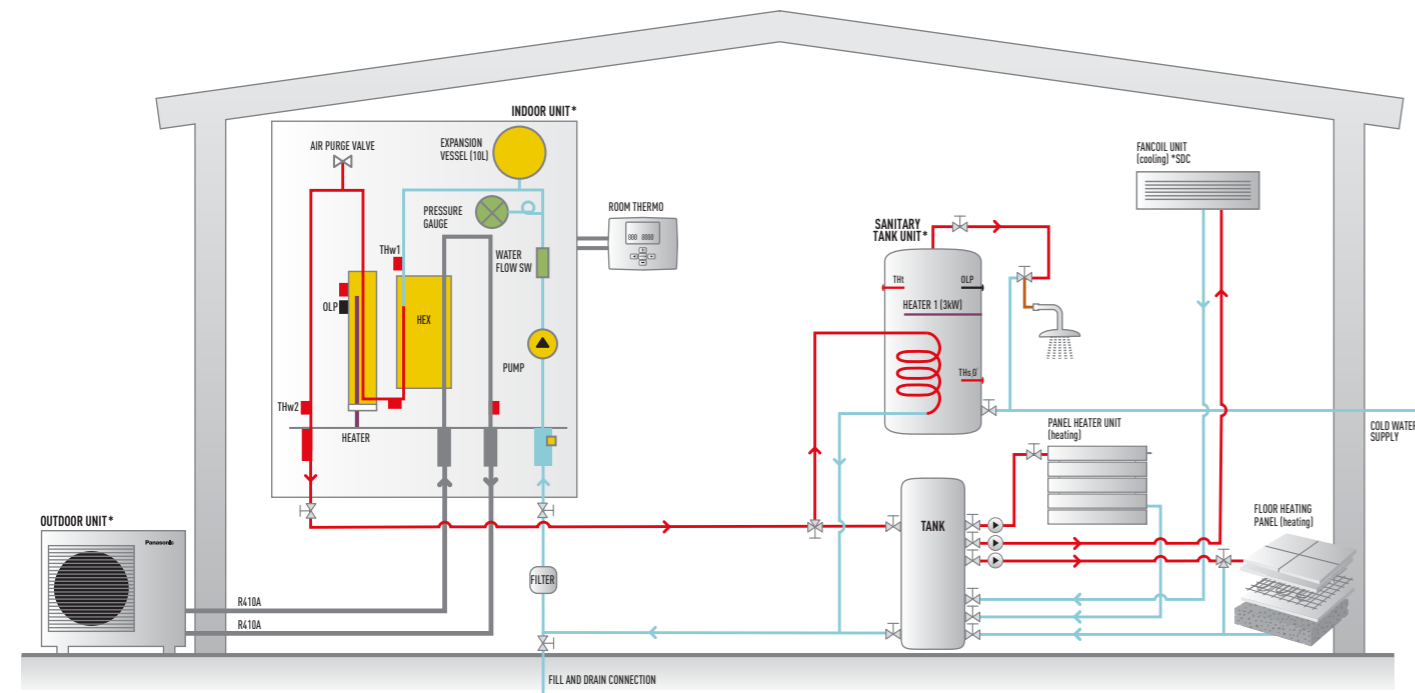
## EASY READING OF CONTROL OF WATER PRESSURE

Pressure gauge  
The water pressure must be between 0.055 and 0.19 MPa



## APPLICATION EXAMPLES

### AQUAREA IN A RADIANT FLOOR AND HOT WATER CYLINDER ON NEW HOUSES APPLICATION HEAT PUMP, SDF / SDC / SXF / SXC

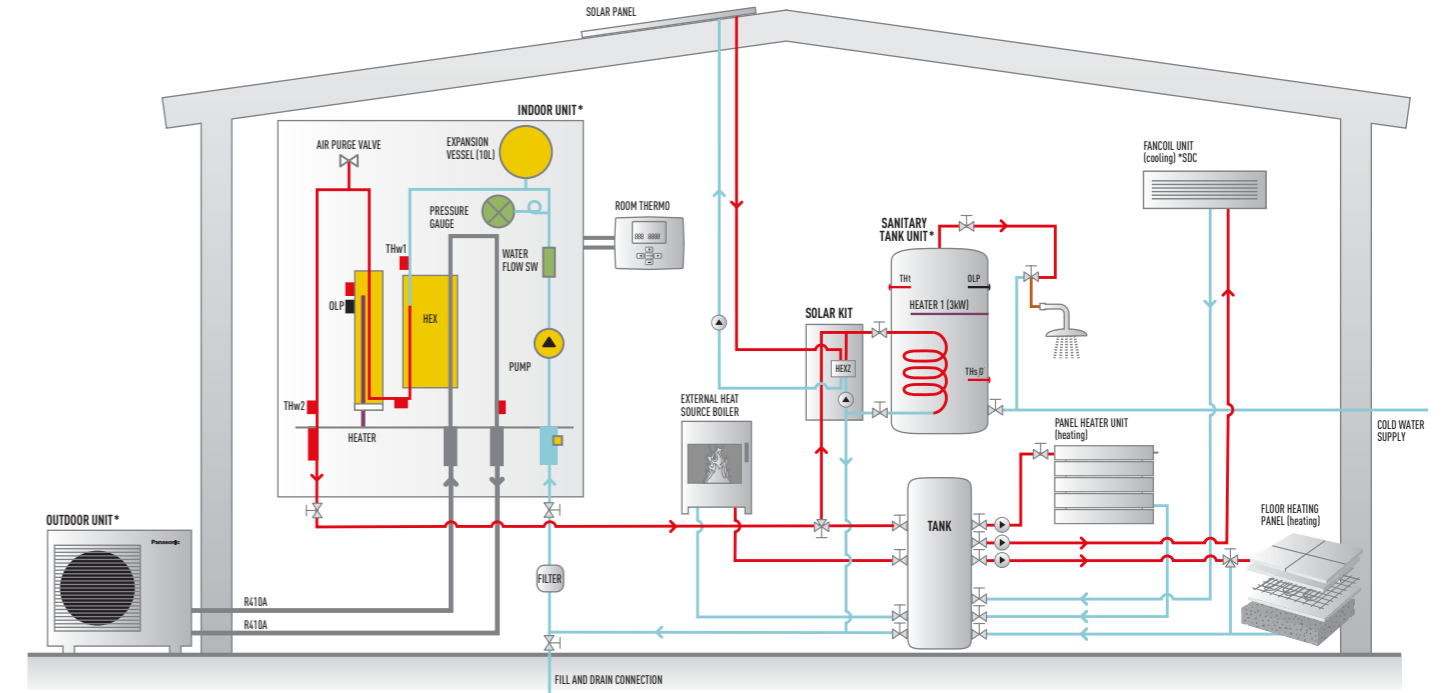


\* Panasonic supplies the outdoor unit, the indoor unit, the sanitary tank and a 3-way on/off valve (included with the sanitary tank)

Schematic diagram

- Hot water production with TD series cylinder
- Heating
- Cooling (only for the SDC / SXC series)
- Connection of thermostat possible

### AQUAREA AS BOILER BACKUP AND SOLAR PANELS HEAT PUMP CONNECTED TO EXISTING BOILER, SDF / SDC / SXF / SXC



\* Panasonic supplies the outdoor unit, the indoor unit, the sanitary tank and a 3-way on/off valve (included with the sanitary tank)

Schematic diagram

- Hot water production with TD series cylinder
- Heating with boiler backup
- Cooling (SDC / SXC series only)
- Connection of solar panels possible
- Connection of a thermostat possible

LINE UP				7KW	9KW	12KW	14KW	16KW
Aquarea High connectivity	Bi-Bloc	Single phase	Heating only	WH-SDF07C3E5 / WH-UD07CE5-A <sup>(F1)</sup>	WH-SDF09C3E5 / WH-UD09CE5-A <sup>(F1)</sup>	WH-SDF12C6E5 / WH-UD12CE5-A <sup>(F2)</sup>	WH-SDF14C6E5 / WH-UD14CE5-A <sup>(F2)</sup>	WH-SDF16C6E5 / WH-UD16CE5-A <sup>(F2)</sup>
			Heating and cooling	WH-SDC07C3E5 / WH-UD07CE5-A <sup>(F1)</sup>	WH-SDC09C3E5 / WH-UD09CE5-A <sup>(F1)</sup>	WH-SDC12C6E5 / WH-UD12CE5-A <sup>(F2)</sup>	WH-SDC14C6E5 / WH-UD14CE5-A <sup>(F2)</sup>	WH-SDC16C6E5 / WH-UD16CE5-A <sup>(F2)</sup>
		Three phase	Heating only	WH-SDF09C3E8 / WH-UD09CE8 <sup>(F2)</sup>	WH-SDF12C9E8 / WH-UD12CE8 <sup>(F2)</sup>	WH-SDF14C9E8 / WH-UD14CE8 <sup>(F2)</sup>	WH-SDF16C9E8 / WH-UD16CE8 <sup>(F2)</sup>	
			Heating and cooling	WH-SDC09C3E8 / WH-UD09CE8 <sup>(F2)</sup>	WH-SDC12C9E8 / WH-UD12CE8 <sup>(F2)</sup>	WH-SDC14C9E8 / WH-UD14CE8 <sup>(F2)</sup>	WH-SDC16C9E8 / WH-UD16CE8 <sup>(F2)</sup>	
		Mono-Bloc	Single phase	Heating only	WH-MDF09C3E5 <sup>(F3)</sup>	WH-MDF12C6E5 <sup>(F3)</sup>	WH-MDF14C6E5 <sup>(F3)</sup>	WH-MDF16C6E5 <sup>(F3)</sup>
			Heating and cooling	WH-MDC09C3E5 <sup>(F3)</sup>	WH-MDC12C6E5 <sup>(F3)</sup>	WH-MDC14C6E5 <sup>(F3)</sup>	WH-MDC16C6E5 <sup>(F3)</sup>	
	Aquarea FLAT High connectivity	Bi-Bloc	Single phase	Heating only	WH-SXF09D3E5 / WH-UX09DE5 <sup>(F1)</sup>	WH-SXF12D6E5 / WH-UX12DE5 <sup>(F2)</sup>	WH-SXF14D6E5 / WH-UX14DE5 <sup>(F2)</sup>	WH-SXF16D6E5 / WH-UX16DE5 <sup>(F2)</sup>
				Heating and cooling	WH-SXC09D3E5 / WH-UX09DE5 <sup>(F1)</sup>	WH-SXC12D6E5 / WH-UX12DE5 <sup>(F2)</sup>	WH-SXC14D6E5 / WH-UX14DE5 <sup>(F2)</sup>	WH-SXC16D6E5 / WH-UX16DE5 <sup>(F2)</sup>
			Three phase	Heating only	WH-SXF09D3E8 / WH-UX09DE8 <sup>(F2)</sup>	WH-SXF12D9E8 / WH-UX12DE8 <sup>(F2)</sup>	WH-SXF14D9E8 / WH-UX14DE8 <sup>(F2)</sup>	WH-SXF16D9E8 / WH-UX16DE8 <sup>(F2)</sup>
		Mono-Bloc	Single phase	Heating only	WH-MXF09D3E5 <sup>(F3)</sup>	WH-MXF12D6E5 <sup>(F3)</sup>	WH-MXF14D6E5 <sup>(F3)</sup>	WH-MXF16D6E5 <sup>(F3)</sup>
			Heating and cooling	WH-MXC09D3E5 <sup>(F3)</sup>	WH-MXC12D6E5 <sup>(F3)</sup>	WH-MXC14D6E5 <sup>(F3)</sup>	WH-MXC16D6E5 <sup>(F3)</sup>	
			Three phase	Heating only	WH-MXF09D3E8 <sup>(F3)</sup>	WH-MXF12D9E8 <sup>(F3)</sup>	WH-MXF14D9E8 <sup>(F3)</sup>	WH-MXF16D9E8 <sup>(F3)</sup>
Aquarea High temperature, High connectivity	Bi-Bloc	Single phase	Heating only	WH-SHF09D3E5 / WH-UH09DE5 <sup>(F1)</sup>	WH-SHF12D6E5 / WH-UH12DE5 <sup>(F2)</sup>	WH-SHF14D6E5 / WH-UH14DE5 <sup>(F2)</sup>	WH-SHF16D6E5 / WH-UH16DE5 <sup>(F2)</sup>	
			Heating and cooling	WH-SHC09D3E5 / WH-UH09DE5 <sup>(F1)</sup>	WH-SHC12D6E5 / WH-UH12DE5 <sup>(F2)</sup>	WH-SHC14D6E5 / WH-UH14DE5 <sup>(F2)</sup>	WH-SHC16D6E5 / WH-UH16DE5 <sup>(F2)</sup>	
		Three phase	Heating only	WH-SHF09D3E8 / WH-UH09DE8 <sup>(F2)</sup>	WH-SHF12D9E8 / WH-UH12DE8 <sup>(F2)</sup>	WH-SHF14D9E8 / WH-UH14DE8 <sup>(F2)</sup>	WH-SHF16D9E8 / WH-UH16DE8 <sup>(F2)</sup>	
			Heating and cooling	WH-SHC09D3E8 / WH-UH09DE8 <sup>(F2)</sup>	WH-SHC12D9E8 / WH-UH12DE8 <sup>(F2)</sup>	WH-SHC14D9E8 / WH-UH14DE8 <sup>(F2)</sup>	WH-SHC16D9E8 / WH-UH16DE8 <sup>(F2)</sup>	
		Mono-Bloc	Single phase	Heating only	WH-MHF09D3E5* <sup>(F3)</sup>	WH-MHF12D6E5* <sup>(F3)</sup>	WH-MHF14D6E5* <sup>(F3)</sup>	WH-MHF16D6E5* <sup>(F3)</sup>
			Heating and cooling	WH-MHC09D3E5* <sup>(F3)</sup>	WH-MHC12D6E5* <sup>(F3)</sup>	WH-MHC14D6E5* <sup>(F3)</sup>	WH-MHC16D6E5* <sup>(F3)</sup>	
	Aquarea High temperature, High connectivity	Bi-Bloc	Single phase	Heating only	WH-SHF09D3E8* <sup>(F3)</sup>	WH-SHF12D9E8* <sup>(F3)</sup>	WH-SHF14D9E8* <sup>(F3)</sup>	WH-SHF16D9E8* <sup>(F3)</sup>
				Heating and cooling	WH-SHC09D3E8* <sup>(F3)</sup>	WH-SHC12D9E8* <sup>(F3)</sup>	WH-SHC14D9E8* <sup>(F3)</sup>	WH-SHC16D9E8* <sup>(F3)</sup>
			Three phase	Heating only	WH-MHF09D3E8* <sup>(F3)</sup>	WH-MHF12D9E8* <sup>(F3)</sup>	WH-MHF14D9E8* <sup>(F3)</sup>	WH-MHF16D9E8* <sup>(F3)</sup>
		Mono-Bloc	Single phase	Heating only	WH-MHF09D3E8* <sup>(F3)</sup>	WH-MHF12D9E8* <sup>(F3)</sup>	WH-MHF14D9E8* <sup>(F3)</sup>	WH-MHF16D9E8* <sup>(F3)</sup>
			Heating and cooling	WH-MHC09D3E8* <sup>(F3)</sup>	WH-MHC12D9E8* <sup>(F3)</sup>	WH-MHC14D9E8* <sup>(F3)</sup>	WH-MHC16D9E8* <sup>(F3)</sup>	
			Three phase	Heating only	WH-MHF09D3E8* <sup>(F3)</sup>	WH-MHF12D9E8* <sup>(F3)</sup>	WH-MHF14D9E8* <sup>(F3)</sup>	WH-MHF16D9E8* <sup>(F3)</sup>

High connectivity: Low connectivity + solar panels connection, room thermostat connection

\* Tentative references, may change without notice



FIGURE 1

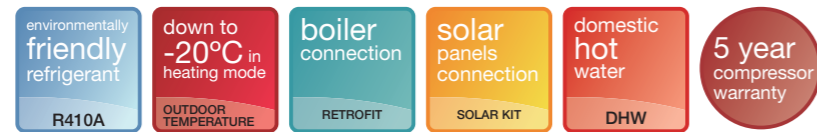
FIGURE 2

FIGURE 3



## AQUAREA SDF // BI-BLOC // HIGH CONNECTIVITY // HEATING ONLY SINGLE-PHASE // THREE-PHASE

The Aquarea SDF range adapts equally well to an existing installation such as a boiler backup or to a new installation with floor heating, low-temperature radiators or even fan-coil heaters. These ranges can also be connected to a solar kit in order to increase efficiency and minimize the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating control and management.



### BI-BLOC // HIGH-CONNECTIVITY // HEATING ONLY // SDF

		SINGLE-PHASE					THREE-PHASE				
Indoor unit		WH-SDF07C3E5	WH-SDF09C3E5	WH-SDF12C6E5	WH-SDF14C6E5	WH-SDF16C6E5	WH-SDF09C3E8	WH-SDF12C9E8	WH-SDF14C9E8	WH-SDF16C9E8	
Heating Capacity at +7°C	kW	7	9	12	14	16	9	12	14	16	
COP at +7°C with heating water temperature at 35°C		4,4	4,09	4,67	4,5	4,23	4,74	4,67	4,5	4,23	
Heating Capacity at -7°C	kW	5,15	5,9	10	10,7	11,4	9	10	10,7	11,4	
COP at -7°C		2,65	2,5	2,7	2,62	2,55	2,81	2,7	2,62	2,55	
Heating Capacity at -15°C	kW	4,6	5,9	8,9	9,5	10,3	8,3	8,9	9,5	10,3	
COP at -15°C with heating water temperature at 35°C		2,3	2,2	2,43	2,35	2,33	2,55	2,43	2,35	2,33	
Dimensions (H x W x D)	mm	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	
Weight	kg	43	43	49	49	49	50	51	51	51	
Water pipe connector		R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	
Pump	No. of Speed	3	3	3	3	3	3	3	3	3	
	Input power(max)	W	100	100	190	190	190	190	190	190	
Heating water flow (ΔT=5 K, 35°C)	l/min	20,1	25,8	34,4	40,1	45,9	25,8	34,4	40,1	45,9	
Capacity of integrated electric heater	kW	3	3	6	6	6	3	9	9	9	
Input Power	kW	1,59	2,2	2,57	3,11	3,78	1,9	2,57	3,11	3,78	
Running and starting Current	A	7,3	10,1	11,7	14,1	17,1	2,9	3,9	4,7	5,7	
Maximum Current	A	21	22,9	24	25	26	7,5	8,8	9,4	9,9	
Outdoor unit		WH-UD07CE5-A	WH-UD09CE5-A	WH-UD12CE5-A	WH-UD14CE5-A	WH-UD16CE5-A	WH-UD09CE8	WH-UD12CE8	WH-UD14CE8	WH-UD16CE8	
Sound pressure level	dB(A)	48	49	50	51	53	49	50	51	53	
Sound power level	dB	66	67	67	68	70	66	67	68	70	
Dimensions (H x W x D)	mm	795 x 900 x 320	795 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	
Weight	KG	66	66	106	106	106	109	109	109	109	
Pipe Diameter	Liquid	mm (Inch)	6,35 (1/4")	6,35 (1/4")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	
	Gas	mm (Inch)	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	
Refrigerant (R410A)	kg	1,45	1,45	2,75	2,75	2,75	2,75	2,75	2,75	2,95	
Pipe Length Range	m	3 - 30	3 - 30	3 - 40	3 - 40	3 - 40	3 - 40	3 - 40	3 - 40	3 - 40	
Pipe Length for nominal capacity	m	7	7	7	7	7	7	7	7	7	
Pipe Length for additional gas	m	10	10	30	30	30	30	30	30	30	
Additional Gas Amount (R410A)	g/m	30	30	50	50	50	50	50	50	50	
I/D&O/D Height Difference	m	20	20	30	30	30	30	30	30	30	
Operation Range	Outdoor Ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	
	Water Outlet (at-2/-7/-15) 2	°C	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55	

### OPTIONAL SANITARY TANK

SANITARY TANK		WH-TD20B3E5	WH-TD30B3E5
Water volume	L	200	300
Max. water temperature	°C	75	75
Dimension	Height	1.150	1.600
	Diameter	580	580
Weight	kg	46	60
Electric heater	kW	3	3
Power supply		Single Phase	Single Phase
Material inside tank		Inox	Inox

Performance calculation in agreement with Eurovent.  
Sound pressure measured at 1 m from the outdoor unit and at 1.5-m height  
Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C

### TECHNICAL FOCUS

- RANGE FROM 7 TO 16 KW, SINGLE AND THREE-PHASE
- MAXIMUM HYDRAULIC MODULE OUTPUT TEMPERATURE: 55 °C
- WORKS DOWN TO -20 °C
- MAXIMUM 20 m RISE BETWEEN THE OUTDOOR UNIT AND THE HYDRAULIC MODULE

### ENERGY AND ENVIRONMENTAL EFFICIENCY

- 78% more efficient than an electrical convection system
- Maximum COP of 4.74 for the 9 kW model
- Environmentally-friendly refrigerant gas R410A

### COMFORT

- Optimum control possible with an outside thermometer (not supplied)
- Maximum hydraulic module output temperature: 55 °C
- Power optimised based on the return water temperature
- Built-in management of the hot water cylinder and heating

### EASY TO USE

- Control on the hydraulic module
- Easy programming on the control panel

### EASY INSTALLATION AND MAINTENANCE

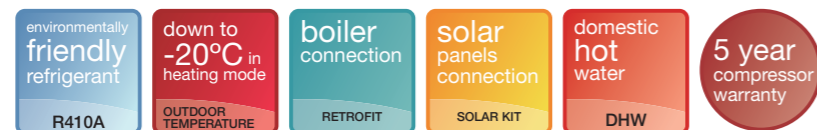
- Easy-to-access pressure gauge for easy control of the water pressure
- Easy-to-open hydraulic module and outdoor unit





## AQUAREA SDC // BI-BLOC // HIGH CONNECTIVITY // HEATING AND COOLING SINGLE-PHASE // THREE-PHASE

The Aquarea SDC range adapts equally well to an existing installation such as a boiler backup or to a new installation with floor heating, low-temperature radiators or even fan-coil heaters. These ranges can also be connected to a solar kit in order to increase efficiency and minimize the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating and cooling control and management.



### BI-BLOC // HIGH-CONNECTIVITY // HEATING AND COOLING // SDC

		SINGLE-PHASE					THREE-PHASE				
Indoor unit		WH-SDC07C3E5	WH-SDC09C3E5	WH-SDC12C6E5	WH-SDC14C6E5	WH-SDC16C6E5	WH-SDC09C9E8	WH-SDC12C9E8	WH-SDC14C9E8	WH-SDC16C9E8	
Heating Capacity at +7°C	kW	7	9	12	14	16	9	12	14	16	
COP at +7°C with heating water temperature at 35°C		4,4	4,09	4,67	4,5	4,23	4,74	4,67	4,5	4,23	
Heating Capacity at -7°C	kW	5,15	5,9	10	10,7	11,4	9	10	10,7	11,4	
COP at -7°C with heating water temperature at 35°C		2,65	2,5	2,7	2,62	2,55	2,81	2,7	2,62	2,55	
Heating Capacity at -15°C	kW	4,6	5,9	8,9	9,5	10,3	8,3	8,9	9,5	10,3	
COP at -15°C with heating water temperature at 35°C		2,3	2,2	2,43	2,35	2,33	2,55	2,43	2,35	2,33	
Cooling capacity at 35°C		6	7	10	11,5	12,2	7	10	11,5	12,2	
EER at 35°C with cooling water temperature at 7/12°C		2,2	2,1	2,39	2,24	2,19	2,68	2,42	2,25	2,19	
Dimensions (H x W x D)	mm	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	
Weight	kg	45	45	51	51	51	51	52	52	52	
Water pipe connector		R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	
Pump	No. of Speed	3	3	3	3	3	3	3	3	3	
	Input power(max)	W	75	75	190	190	190	190	190	190	
Heating water flow (T=5 K, 35°C)	l/min	20,1	25,8	34,4	40,1	45,9	25,8	34,4	40,1	45,9	
Capacity of integrated electric heater	kW	3	3	6	6	6	3	9	9	9	
Input Power	kW	1,59 / 2,30	2,2 / 2,9	2,57 / 3,6	3,11 / 4,4	3,78 / 4,8	1,9 / 2,25	2,57 / 3,55	3,11 / 4,4	3,78 / 4,8	
Running and starting Current	A	7,30 / 10,40	10,1 / 13,1	11,7 / 16,1	14,1 / 19,7	17,1 / 21,5	2,9 / 3,4	3,9 / 5,3	4,7 / 6,6	5,7 / 7,2	
Maximum Current	A	21	22,9	24	25	26	7,5	8,8	9,4	9,9	
Outdoor unit		WH-UD07CE5-A	WH-UD09CE5-A	WH-UD12CE5-A	WH-UD14CE5-A	WH-UD16CE5-A	WH-UD09CE8	WH-UD12CE8	WH-UD14CE8	WH-UD16CE8	
Sound pressure level	dB(A)	48	49	50	51	53	49	50	51	53	
Sound power level	dB	66	67	67	68	70	66	67	68	70	
Dimensions (H x W x D)	mm	795 x 900 x 320	795 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	
Weight	KG	66	66	106	106	106	109	109	109	109	
Pipe Diameter	Liquid	mm (Inch)	6,35 (1/4")	6,35 (1/4")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")	
	Gas	mm (Inch)	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	
Refrigerant (R410A)	kg	1,45	1,45	2,75	2,75	2,75	2,75	2,75	2,75	2,95	
Pipe Length Range	m	3 - 30	3 - 30	3 - 40	3 - 40	3 - 40	3 - 40	3 - 40	3 - 40	3 - 40	
Pipe Length for nominal capacity	m	7	7	7	7	7	7	7	7	7	
Pipe Length for additional gas	m	10	10	30	30	30	30	30	30	30	
Additional Gas Amount (R410A)	g/m	30	30	50	50	50	50	50	50	50	
I/D&O/D Hight Difference	m	20	20	30	30	30	30	30	30	30	
Operation Range	Outdoor Ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	
	Water Outlet (at-2/-7/-15) 2	°C	25 - 55 / 5 - 20	25 - 55 / 5 - 20	25 - 55 / 5 - 20	25 - 55 / 5 - 20	25 - 55 / 5 - 20	25 - 55 / 5 - 20	25 - 55 / 5 - 20	25 - 55 / 5 - 20	

### OPTIONAL SANITARY TANK

SANITARY TANK		WH-TD20B3E5	WH-TD30B3E5
Water volume	L	200	300
Max. water temperature	°C	75	75
Dimension	Hight	mm	1.150
	Diameter	mm	580
Weight	kg	46	60
Electric heater	kW	3	3
Power supply		Single Phase	Single Phase
Material inside tank		Inox	Inox

Performance calculation in agreement with Eurovent.  
Sound pressure measured at 1 m from the outdoor unit and at 1.5-m height  
Conditions : Water input temperature: 30 °C. Water output temperature: 35 °

### TECHNICAL FOCUS

- RANGE FROM 7 TO 16 KW, SINGLE AND THREE-PHASE
- MAXIMUM HYDRAULIC MODULE OUTPUT TEMPERATURE: 55 °C
- WORKS DOWN TO -20 °C
- MAXIMUM 20 m RISE BETWEEN THE OUTDOOR UNIT AND THE HYDRAULIC MODULE

### ENERGY AND ENVIRONMENTAL EFFICIENCY

- 78% more efficient than an electrical convection system
- Maximum COP of 4.74 for the 9 kW model
- Environmentally-friendly refrigerant gas R410A

### COMFORT

- Optimum control possible with an outside thermometer (not supplied)
- Maximum hydraulic module output temperature: 55 °C
- Power optimised based on the return water temperature
- Built-in management of the hot water cylinder and heating

### EASY TO USE

- Control on the hydraulic module
- Easy programming on the control panel

### EASY INSTALLATION AND MAINTENANCE

- Easy-to-access pressure gauge for easy control of the water pressure
- Easy-to-open hydraulic module and outdoor unit



**NEW**  
2011



## AQUAREA SXF // BI-BLOC // T-CAP // HEATING ONLY SINGLE-PHASE // THREE-PHASE

The Aquarea SXF is the new Aquarea product from Panasonic for central heating. T-CAP stands for Total capacity as this new line-up is able to keep the same nominal capacity even at -15°C without the help of an electrical booster heater. T-CAP is also able to provide extremely high efficiency, whatever the outside temperature or the water temperature.

**The new SXF is ideal for houses where keeping the same capacity is important such as new houses or houses without support from an external boiler.**

The SXF can be adapted to an existing installation such as a boiler backup or to a new installation with floor heating, low-temperature radiators or even fan-coil heaters. These ranges can also be connected to a solar kit in order to increase efficiency and minimize the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating or cooling control and management.

environmentally friendly refrigerant  
**R410A**

down to **-20°C** in heating mode  
**OUTDOOR TEMPERATURE**

boiler connection  
**RETROFIT**

solar panels connection  
**SOLAR KIT**

domestic hot water  
**DHW**

5 year compressor warranty



### BI-BLOC // AQUAREA T-CAP // HEATING ONLY // SXF

		SINGLE-PHASE		THREE-PHASE		
Indoor unit		WH-SXF09D3E5	WH-SXF12D6E5	WH-SXF09D3E8	WH-SXF12D9E8	
Heating Capacity at +7°C	kW	9	12	9	12	
COP at +7°C with heating water temperature at 35°C		4,74	4,67	4,74	4,67	
Heating Capacity at -7°C	kW	9	12	9	12	
COP at -7°C		2,81	2,7	2,81	2,7	
Heating Capacity at -15°C	kW	9	12	9	12	
COP at -15°C with heating water temperature at 35°C		2,54	2,43	2,54	2,43	
Dimensions (H x W x D)	mm	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	
Weight	kg	43	49	50	51	
Water pipe connector		R1 1/4	R1 1/4	R1 1/4	R1 1/4	
Pump	No. of Speed	3	3	3	3	
	Input power(max)	W	100	190	190	190
Heating water flow (T=5 K, 35°C)	l/min	25,8	34,4	25,8	34,4	
Capacity of integrated electric heater	kW	3	6	3	9	
Input Power	kW	1,9	2,57	1,9	2,57	
Running and starting Current	A	10,1	11,7	2,9	3,9	
Maximum Current	A	22,9	24	7,5	8,8	
Outdoor unit		WH-UX09DE5	WH-UX12DE5	WH-UX09DE8	WH-UX12DE8	
Sound pressure level	dB(A)	49	50	49	50	
Sound power level	dB	67	67	66	67	
Dimensions (H x W x D)	mm	795 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	
Weight	KG	66	106	109	109	
Pipe Diameter	Liquid	mm (Inch)	6,35 (1/4")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")
	Gas	mm (Inch)	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")
Refrigerant (R410A)	kg	1,45	2,75	2,75	2,75	
Pipe Length Range	m	3 - 30	3 - 40	3 - 40	3 - 40	
Pipe Length for nominal capacity	m	7	7	7	7	
Pipe Length for additional gas	m	10	30	30	30	
Additional Gas Amount (R410A)	g/m	30	50	50	50	
I/D&O/D Hight Difference	m	20	30	30	30	
Operation Range	Outdoor Ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35
	Water Outlet (at -2/-7/-15) 2]	°C	25 - 55	25 - 55	25 - 55	25 - 55

OPTIONAL SANITARY TANK		WH-TD20B3E5	WH-TD30B3E5	
SANITARY TANK				
Water volume	L	200	300	
Max. water temperature	°C	75	75	
Dimension	Hight	mm	1.150	1.600
	Diameter		580	580
Weight	kg	46	60	
Electric heater	kW	3	3	
Power supply		Single Phase	Single Phase	
Material inside tank		Inox	Inox	

\* Tentative specifications

Performance calculation in agreement with Eurovent.  
Sound pressure measured at 1 m from the outdoor unit and at 1.5-m height  
Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C

### TECHNICAL FOCUS

- RANGE FROM 7 TO 16 KW, SINGLE AND THREE-PHASE
- MAXIMUM HYDRAULIC MODULE OUTPUT TEMPERATURE: 55 °C
- WORKS DOWN TO -20 °C
- MAXIMUM 20 m RISE BETWEEN THE OUTDOOR UNIT AND THE HYDRAULIC MODULE

### ENERGY AND ENVIRONMENTAL EFFICIENCY

- 78% more efficient than an electrical convection system
- Maximum COP of 4.74 for the 9 kW model
- Environmentally-friendly refrigerant gas R410A

### COMFORT

- Optimum control possible with an outside thermometer (not supplied)
- Maximum hydraulic module output temperature: 55 °C
- Power optimised based on the return water temperature
- Built-in management of the hot water cylinder and heating

### EASY TO USE

- Control on the hydraulic module
- Easy programming on the control panel

### EASY INSTALLATION AND MAINTENANCE

- Easy-to-access pressure gauge for easy control of the water pressure
- Easy-to-open hydraulic module and outdoor unit



high  
efficiency  
heating

INVERTER +

INVERTER +

AQUAREA SXC // BI-BLOC // T-CAP // HEATING AND COOLING  
SINGLE-PHASE // THREE-PHASE

The Aquarea SXC is the new Aquarea product from Panasonic for heating and cooling. T-CAP stands for Total capacity as this new line-up is able to keep the same nominal capacity even at -15°C without the help of an electrical booster heater. T-CAP is also able to provide extremely high efficiency, whatever the outside temperature or the water temperature.

**The new SXC is ideal for houses where keeping the same capacity is important such as new houses or houses without support from an external boiler.**

The SXC can be adapted to an existing installation such as a boiler backup or to a new installation with floor heating, low-temperature radiators or even fan-coil heaters. These ranges can also be connected to a solar kit in order to increase efficiency and minimize the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating or cooling control and management.

environmentally  
friendly  
refrigerant  
R410Adown to  
-20°C in  
heating mode  
OUTDOOR  
TEMPERATUREboiler  
connection  
RETROFITsolar  
panels  
connection  
SOLAR KITdomestic  
hot  
water  
DHW5 year  
compressor  
warrantyNEW  
2011

## BI-BLOC // AQUAREA T-CAP // HEATING AND COOLING // SXC

		SINGLE-PHASE		SINGLE-PHASE		
Indoor unit		WH-SXC09D3E5	WH-SXC12D6E5	WH-SXC09D3E8	WH-SXC12D9E8	
Heating Capacity at +7°C	kW	9	12	9	12	
COP at +7°C with heating water temperature at 35°C		4,74	4,67	4,74	4,67	
Heating Capacity at -7°C	kW	9	12	9	12	
COP at -7°C with heating water temperature at 35°C		2,81	2,7	2,81	2,7	
Heating Capacity at -15°C	kW	9	12	9	12	
COP at -15°C with heating water temperature at 35°C		2,54	2,43	2,54	2,43	
Cooling capacity at 35°C		7	10	7	10	
EER at 35°C with cooling water temperature at 7/12°C		2,1	2,39	2,1	2,39	
Dimensions (H x W x D)	mm	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	892 x 502 x 353	
Weight	kg	43	49	50	51	
Water pipe connector		R1 1/4	R1 1/4	R1 1/4	R1 1/4	
Pump	No. of Speed	3	3	3	3	
	Input power(max)	W	100	190	190	190
Heating water flow (ΔT=5 K, 35°C)	l/min	25,8	34,4	25,8	34,4	
Capacity of integrated electric heater	kW	3	6	3	9	
Input Power	kW	1,9	2,57	1,9	2,57	
Running and starting Current	A	10,1	11,7	2,9	3,9	
Maximum Current	A	22,9	24	7,5	8,8	
Outdoor unit		WH-UX09DE5	WH-UX12DE5	WH-UX09DE8	WH-UX12DE8	
Sound pressure level	dB(A)	49	50	49	50	
Sound power level	dB	67	67	66	67	
Dimensions (H x W x D)	mm	795 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	
Weight	KG	66	106	109	109	
Pipe Diameter	Liquid	mm (Inch)	6,35 (1/4")	9,52 (3/8")	9,52 (3/8")	9,52 (3/8")
	Gas	mm (Inch)	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")	15,88 (5/8")
Refrigerant (R410A)	kg	1,45	2,75	2,75	2,75	
Pipe Length Range	m	3 - 30	3 - 40	3 - 40	3 - 40	
Pipe Length for nominal capacity	m	7	7	7	7	
Pipe Length for additional gas	m	10	30	30	30	
Additional Gas Amount (R410A)	g/m	30	50	50	50	
I/D&O/D Hight Difference	m	20	30	30	30	
Operation Range	Outdoor Ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35
	Water Outlet (at -2/-7/-15) 2	°C	25 - 55	25 - 55	25 - 55	25 - 55

## OPTIONAL SANITARY TANK

SANITARY TANK		WH-TD20B3E5	WH-TD30B3E5	
Water volume	L	200	300	
Max. water temperature	°C	75	75	
Dimension	Height	mm	1.150	1.600
	Diameter	mm	580	580
Weight	kg	46	60	
Electric heater	kW	3	3	
Power supply		Single Phase	Single Phase	
Material inside tank		Inox	Inox	

\* Tentative specifications

Performance calculation in agreement with Eurovent.  
Sound pressure measured at 1 m from the outdoor unit and at 1.5-m height  
Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C

## TECHNICAL FOCUS

- RANGE FROM 7 TO 16 KW, SINGLE AND THREE-PHASE
- MAXIMUM HYDRAULIC MODULE OUTPUT TEMPERATURE: 55 °C
- WORKS DOWN TO -20 °C
- MAXIMUM 20 m RISE BETWEEN THE OUTDOOR UNIT AND THE HYDRAULIC MODULE

## ENERGY AND ENVIRONMENTAL EFFICIENCY

- 78% more efficient than an electrical convection system
- Maximum COP of 4.74 for the 9 kW model
- Environmentally-friendly refrigerant gas R410A

## COMFORT

- Optimum control possible with an outside thermometer (not supplied)
- Maximum hydraulic module output temperature: 55 °C
- Power optimised based on the return water temperature
- Built-in management of the hot water cylinder and heating

## EASY TO USE

- Control on the hydraulic module
- Easy programming on the control panel

## EASY INSTALLATION AND MAINTENANCE

- Easy-to-access pressure gauge for easy control of the water pressure
- Easy-to-open hydraulic module and outdoor unit



WH-UX09DE5

WH-UX12DE5  
WH-UX09DE8  
WH-UX12DE8

WH-TD20B3E5



WH-TD30B3E5



## AQUAREA MDF // MONO-BLOC // HIGH CONNECTIVITY // HEATING ONLY SINGLE-PHASE // THREE-PHASE

The Aquarea MDF range adapts equally well to an existing installation such as a boiler backup or to a new installation with floor heating, low-temperature radiators or even fan-coil heaters. These ranges can also be connected to a solar kit in order to increase efficiency and minimize the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating control and management.

environmentally friendly refrigerant  
**R410A**

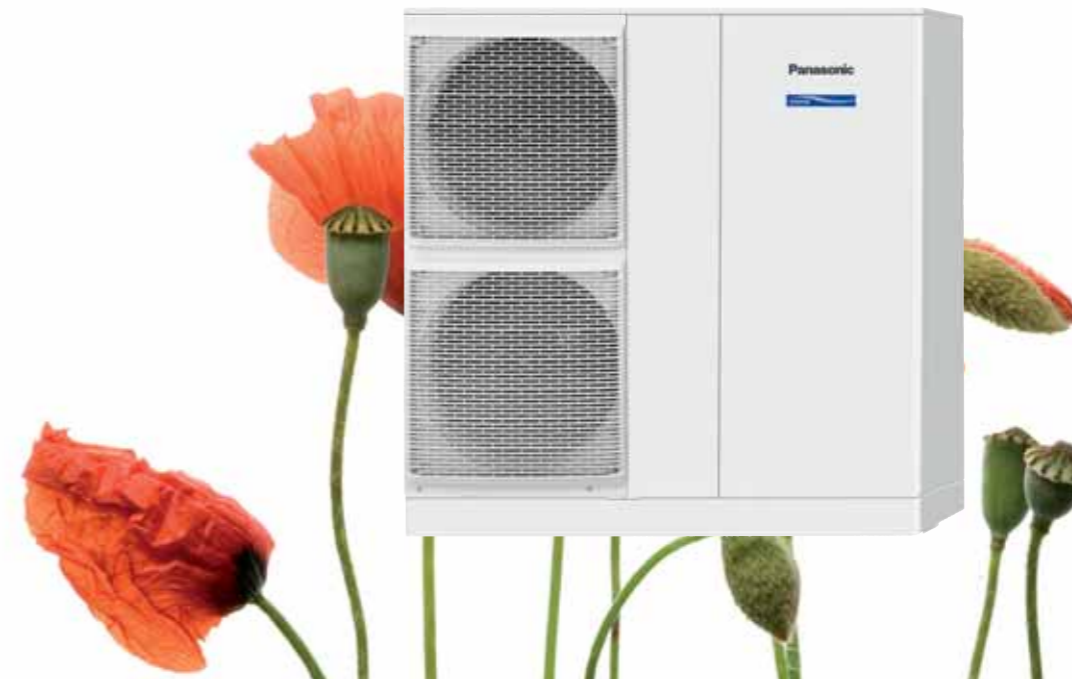
down to **-20°C** in heating mode  
**OUTDOOR TEMPERATURE**

boiler connection  
**RETROFIT**

solar panels connection  
**SOLAR KIT**

domestic hot water  
**DHW**

5 year compressor warranty



### MONO-BLOC // HIGH-CONNECTIVITY // HEATING ONLY // MDF

Outdoor unit		SINGLE-PHASE				THREE-PHASE			
		WH-MDF09C3E5	WH-MDF12C6E5	WH-MDF14C6E5	WH-MDF16C6E5	WH-MDF09C3E8	WH-MDF12C9E8	WH-MDF14C9E8	WH-MDF16C9E8
Heating Capacity at +7°C	kW	9	12	14	16	9	12	14	16
COP at +7°C with heating water temperature at 35°C		4,74	4,67	4,5	4,23	4,74	4,67	4,5	4,23
Heating Capacity at -7°C	kW	9	10	10,7	11,4	9	10	10,7	11,4
COP at -7°C		2,81	2,7	2,62	2,55	2,81	2,7	2,62	2,55
Heating Capacity at -15°C	kW	8,3	8,9	9,5	10,3	8,3	8,9	9,5	10,3
COP at -15°C with heating water temperature at 35°C		2,55	2,43	2,35	2,33	2,55	2,43	2,35	2,33
Sound pressure level		49	50	51	53	49	50	51	53
Sound power level		66	67	68	70	66	67	68	70
Dimensions (H x W x D)	mm	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320
Weight	kg	153	153	153	153	157	157	157	157
Water pipe connector		R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4
Pump	No. of Speed	3	3	3	3	3	3	3	3
	Input power(max)	W	190	190	190	190	190	190	190
Heating water flow (T=5 K, 35°C)	l/min	25,8	34,4	40,1	45,9	25,8	34,4	40,1	45,9
Capacity of integrated electric heater	kW	3	6	6	6	3	9	9	9
Input Power	kW	1,9	2,57	3,11	3,78	1,9	2,57	3,11	3,78
Running and starting Current	A	8,7	11,7	14,1	17,1	2,9	3,9	4,7	5,7
Maximum Current	A	22,9	25	26	22,9	7,5	8,8	9,4	9,9
Operation Range	Outdoor Ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35
	Water Outlet (at-2/-7/-15) 2	°C	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55

### OPTIONAL SANITARY TANK

SANITARY TANK			WH-TD20B3E5	WH-TD30B3E5
Water volume	L		200	300
Max. water temperature	°C		75	75
Dimension	Height	mm	1.150	1.600
	Diameter		580	580
Weight	kg		46	60
Electric heater	kW		3	3
Power supply			Single Phase	Single Phase
Material inside tank			Inox	Inox

Performance calculation in agreement with Eurovent.  
Sound pressure measured at 1 m from the outdoor unit and at 1.5-m height  
Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C

### TECHNICAL FOCUS

- RANGE FROM 9 TO 16 KW, SINGLE AND THREE-PHASE
- MAXIMUM HYDRAULIC MODULE OUTPUT TEMPERATURE: 55 °C
- WORKS DOWN TO -20 °C

### ENERGY AND ENVIRONMENTAL EFFICIENCY

- 78% more efficient than an electrical convection system
- Maximum COP of 4.74 for the 9 kW model

### COMFORT

- Optimum control possible with an outside thermometer (not supplied)
- Maximum hydraulic module output temperature: 55 °C
- Power optimised according to the return water temperature
- Autonomous management of the hot water cylinder and heating

### EASY TO USE

- Single-unit range, with no refrigerant connections
- Wired control panel for installation in the house
- Easy programming on the control panel

### EASY INSTALLATION AND MAINTENANCE

- Outdoor unit easy to open for maintenance



WH-TD20B3E5

WH-TD30B3E5



## AQUAREA MDC // MONO-BLOC // HIGH CONNECTIVITY // HEATING AND COOLING SINGLE-PHASE // THREE-PHASE

The Aquarea MDC range adapts equally well to an existing installation such as a boiler backup or to a new installation with floor heating, low-temperature radiators or even fan-coil heaters. These ranges can also be connected to a solar kit in order to increase efficiency and minimize the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating and cooling control and management.

environmentally friendly refrigerant  
**R410A**

down to **-20°C** in heating mode  
 OUTDOOR TEMPERATURE

boiler connection  
 RETROFIT

solar panels connection  
 SOLAR KIT

domestic hot water  
 DHW

5 year compressor warranty



### MONO-BLOC // HIGH-CONNECTIVITY // HEATING AND COOLING // MDC

Outdoor unit		SINGLE-PHASE				THREE-PHASE			
		WH-MDC09C3E5	WH-MDC12C6E5	WH-MDC14C6E5	WH-MDC16C6E5	WH-MDC09C3E8	WH-MDC12C9E8	WH-MDC14C9E8	WH-MDC16C9E8
Heating Capacity at +7°C	kW	9	12	14	16	9	12	14	16
COP at +7°C with heating water temperature at 35°C		4,74	4,67	4,5	4,23	4,74	4,67	4,5	4,23
Heating Capacity at -7°C	kW	9	10	10,7	11,4	9	10	10,7	11,4
COP at -7°C with heating water temperature at 35°C		2,81	2,7	2,62	2,55	2,81	2,7	2,62	2,55
Heating Capacity at -15°C	kW	8,3	8,9	9,5	10,3	8,3	8,9	9,5	10,3
COP at -15°C with heating water temperature at 35°C		2,55	2,43	2,35	2,33	2,55	2,43	2,35	2,33
Cooling capacity at 35°C		7	10	11,5	12,2	7	10	11,5	12,2
EER at 35°C with cooling water temperature at 7/12°C		2,68	2,39	2,25	2,19	2,68	2,39	2,25	2,19
Sound pressure level		49	50	51	53	49	50	51	53
Sound power level		66	67	68	70	66	67	68	70
Dimensions (H x W x D)	mm	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320
Weight	kg	153	153	153	153	157	157	157	157
Water pipe connector		R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4	R1 1/4
Pump	No. of Speed	3	3	3	3	3	3	3	3
	Input power(max)	W	190	190	190	190	190	190	190
Heating water flow (T=5 K, 35°C)	l/min	25,8	34,4	40,1	45,9	25,8	34,4	40,1	45,9
Capacity of integrated electric heater	kW	3	6	6	6	3	9	9	9
Input Power	kW	1,9 / 2,25	2,57 / 3,6	3,11 / 4,4	3,78 / 4,8	1,9 / 2,25	2,57 / 3,6	3,11 / 4,4	3,78 / 4,8
Running and starting Current	A	8,7 / 10,2	11,6 / 16,1	14,1 / 19,7	17,1 / 21,5	2,9 / 3,4	3,9 / 5,3	4,7 / 6,6	5,7 / 7,2
Maximum Current	A	22,9	24	25	21,5	7,5	8,8	9,4	9,9
Operation Range	Outdoor Ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35
	Water Outlet (at -2/-7/-15) 2	°C	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55	25 - 55

### OPTIONAL SANITARY TANK

SANITARY TANK			WH-TD20B3E5	WH-TD30B3E5
Water volume	L		200	300
Max. water temperature	°C		75	75
Dimension	Height	mm	1.150	1.600
	Diameter		580	580
Weight	kg		46	60
Electric heater	kW		3	3
Power supply			Single Phase	Single Phase
Material inside tank			Inox	Inox

Performance calculation in agreement with Eurovent.  
 Sound pressure measured at 1 m from the outdoor unit and at 1.5-m height  
 Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C

### TECHNICAL FOCUS

- RANGE FROM 9 TO 16 KW, SINGLE AND THREE-PHASE
- MAXIMUM HYDRAULIC MODULE OUTPUT TEMPERATURE: 55 °C
- WORKS DOWN TO -20 °C

### ENERGY AND ENVIRONMENTAL EFFICIENCY

- 78% more efficient than an electrical convection system
- Maximum COP of 4.74 for the 9 kW model

### COMFORT

- Optimum control possible with an outside thermometer (not supplied)
- Maximum hydraulic module output temperature: 55 °C
- Power optimised according to the return water temperature
- Autonomous management of the hot water cylinder and heating

### EASY TO USE

- Single-unit range, with no refrigerant connections
- Wired control panel for installation in the house
- Easy programming on the control panel

### EASY INSTALLATION AND MAINTENANCE

- Outdoor unit easy to open for maintenance



WH-TD20B3E5

WH-TD30B3E5



## AQUAREA MXF // MONO-BLOC // T-CAP // HEATING ONLY SINGLE-PHASE // THREE-PHASE

The Aquarea MXF is the new Aquarea product from Panasonic for central heating. T-CAP stands for Total capacity as this new line-up is able to keep the same nominal capacity even at -15°C without the help of an electrical booster heater. T-CAP is also able to provide extremely high efficiency, whatever the outside temperature or the water temperature. The new MXF is ideal for houses where keeping the same capacity is important such as new houses or houses without support from an external boiler.

The MXF can be adapted to an existing installation such as a boiler backup or to a new installation with floor heating, low-temperature radiators or even fan-coil heaters. These ranges can also be connected to a solar kit in order to increase efficiency and minimize the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating or cooling control and management.

environmentally friendly refrigerant  
R410A

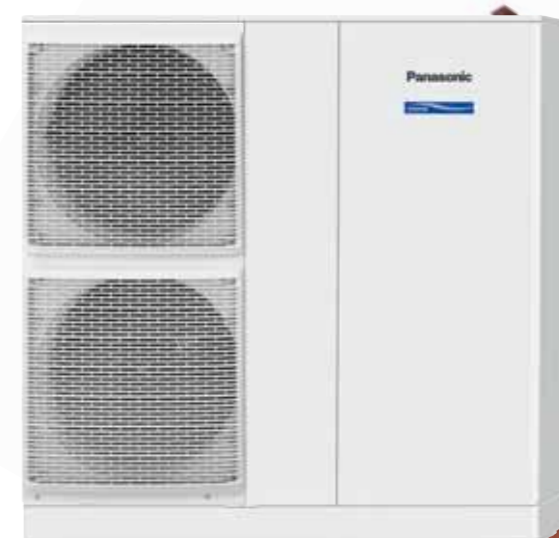
down to -20°C in heating mode  
OUTDOOR TEMPERATURE

boiler connection  
RETROFIT

solar panels connection  
SOLAR KIT

domestic hot water  
DHW

5 year compressor warranty



**NEW**  
2011

### MONO-BLOC // AQUAREA T-CAP // HEATING ONLY // MXF

		SINGLE-PHASE		SINGLE-PHASE	
Outdoor unit		WH-MXF09D3E5	WH-MXF12D6E5	WH-MXF09D3E8	WH-MXF12D9E8
Heating Capacity at +7°C	kW	9	12	9	12
COP at +7°C with heating water temperature at 35°C		4,74	4,67	4,74	4,67
Heating Capacity at -7°C	kW	9	12	9	12
COP at -7°C		2,81	2,7	2,81	2,7
Heating Capacity at -15°C	kW	9	12	9	12
COP at -15°C with heating water temperature at 35°C		2,54	2,43	2,54	2,43
Sound pressure level		49	50	49	50
Sound power level		66	67	66	67
Dimensions (H x W x D)	mm	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320	1410 x 1287 x 320
Weight	kg	153	153	157	157
Water pipe connector		R1 1/4	R1 1/4	R1 1/4	R1 1/4
Pump	No. of Speed	3	3	3	3
	Input power(max)	190	190	190	190
Heating water flow (ΔT=5 K, 35°C)	l/min	25,8	34,4	25,8	34,4
Capacity of integrated electric heater	kW	3	6	3	9
Input Power	kW	1,9	2,57	1,9	2,57
Running and starting Current	A	8,7	11,7	2,9	3,9
Maximum Current	A	22,9	25	7,5	8,8
Operation Range	Outdoor Ambient	°C	-20 to 35	-20 to 35	-20 to 35
	Water Outlet (at-2/-7/-15) 2	°C	25 - 55	25 - 55	25 - 55

### OPTIONAL SANITARY TANK

SANITARY TANK		WH-TD20B3E5	WH-TD30B3E5
Water volume	L	200	300
Max. water temperature	°C	75	75
Dimension	Height	mm	1.600
	Diameter		580
Weight	kg	46	60
Electric heater	kW	3	3
Power supply		Single Phase	Single Phase
Material inside tank		Inox	Inox

Performance calculation in agreement with Eurovent.  
Sound pressure measured at 1 m from the outdoor unit and at 1.5-m height  
Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C

\* Tentative specifications

### TECHNICAL FOCUS

- RANGE FROM 9 TO 16 KW, SINGLE AND THREE-PHASE
- MAXIMUM HYDRAULIC MODULE OUTPUT TEMPERATURE: 55 °C
- WORKS DOWN TO -20 °C

### ENERGY AND ENVIRONMENTAL EFFICIENCY

- 78% more efficient than an electrical convection system
- Maximum COP of 4.74 for the 9 kW model

### COMFORT

- Optimum control possible with an outside thermometer (not supplied)
- Maximum hydraulic module output temperature: 55 °C
- Power optimised according to the return water temperature
- Autonomous management of the hot water cylinder and heating

### EASY TO USE

- Single-unit range, with no refrigerant connections
- Wired control panel for installation in the house
- Easy programming on the control panel

### EASY INSTALLATION AND MAINTENANCE

- Outdoor unit easy to open for maintenance



WH-TD20B3E5



WH-TD30B3E5



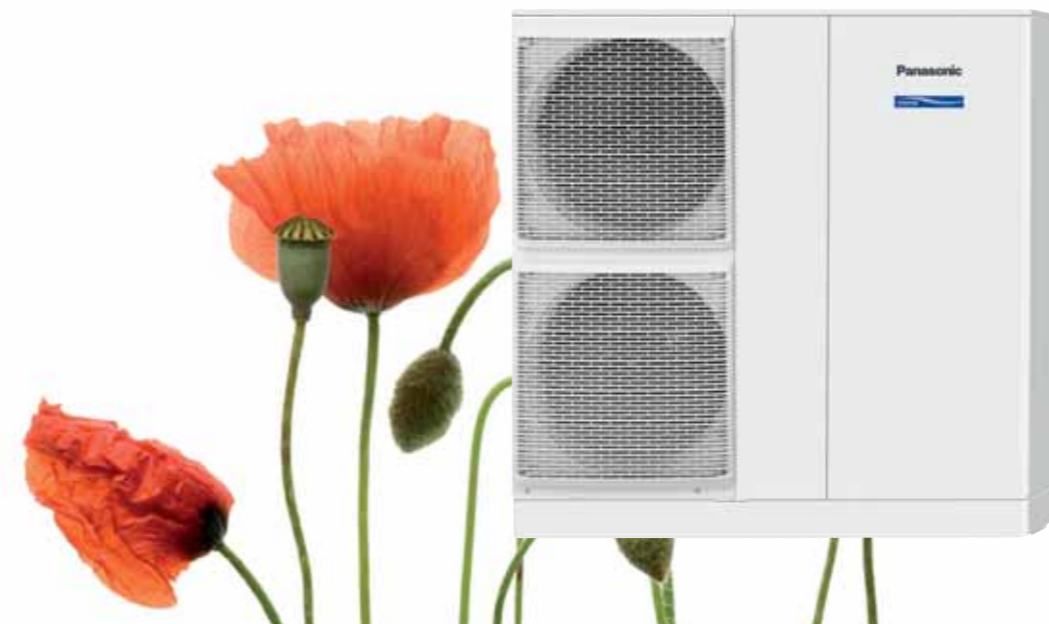
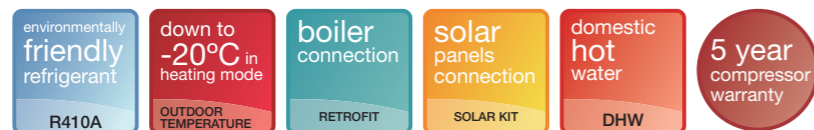
**NEW**  
2011



## AQUAREA MXC // MONO-BLOC // T-CAP // HEATING AND COOLING SINGLE-PHASE // THREE-PHASE

The Aquarea MXC is the new Aquarea product from Panasonic for heating and cooling. T-CAP stands for Total capacity as this new line-up is able to keep the same nominal capacity even at -15°C without the help of an electrical booster heater. T-CAP is also able to provide extremely high efficiency, whatever the outside temperature or the water temperature. The new MXC is ideal for houses where keeping the same capacity is important such as new houses or houses without support from an external boiler.

The MXC can be adapted to an existing installation such as a boiler backup or to a new installation with floor heating, low-temperature radiators or even fan-coil heaters. These ranges can also be connected to a solar kit in order to increase efficiency and minimize the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating or cooling control and management.



### MONO-BLOC // AQUAREA T-CAP // HEATING AND COOLING// MXC

Outdoor unit		SINGLE-PHASE		THREE-PHASE	
		WH-MXC09D3E5	WH-MXC12D6E5	WH-MXC09D3E8	WH-MXC12D9E8
Heating Capacity at +7°C	kW	9	12	9	12
COP at +7°C with heating water temperature at 35°C		4,74	4,67	4,74	4,67
Heating Capacity at -7°C	kW	9	12	9	12
COP at -7°C with heating water temperature at 35°C		2,81	2,7	2,81	2,7
Heating Capacity at -15°C	kW	9	12	9	12
COP at -15°C with heating water temperature at 35°C		2,54	2,43	2,54	2,43
Cooling capacity at 35°C		7	10	7	10
EER at 35°C with cooling water temperature at 7/12°C		2,1	2,39	2,1	2,39
Sound pressure level		49	50	49	50
Sound power level		66	67	66	67
Dimensions (H x W x D)	mm	1410 x 1283 x 320	1410 x 1283 x 320	1410 x 1283 x 320	1410 x 1283 x 320
Weight	kg	153	153	157	157
Water pipe connector		R1 1/4	R1 1/4	R1 1/4	R1 1/4
Pump	No. of Speed	3	3	3	3
	Input power(max)	W	190	190	190
Heating water flow (T=5 K, 35°C)	l/min	25,8	34,4	25,8	34,4
Capacity of integrated electric heater	kW	3	6	3	9
Input Power	kW	1,9	2,57	1,9	2,57
Running and starting Current	A	8,7	11,7	2,9	3,9
Maximum Current	A	22,9	25	7,5	8,8
Operation Range	Outdoor Ambient	°C	-20 to 35	-20 to 35	-20 to 35
	Water Outlet (at-2/-7/-15) 2	°C	25 - 55	25 - 55	25 - 55

### OPTIONAL SANITARY TANK

SANITARY TANK			WH-TD20B3E5	WH-TD30B3E5
Water volume	L		200	300
Max. water temperature	°C		75	75
Dimension	Height	mm	1.150	1.600
	Diameter		580	580
Weight	kg		46	60
Electric heater	kW		3	3
Power supply			Single Phase	Single Phase
Material inside tank			Inox	Inox

Performance calculation in agreement with Eurovent.  
Sound pressure measured at 1 m from the outdoor unit and at 1.5-m height  
Conditions : Water input temperature: 30 °C. Water output temperature: 35 °C

\* Tentative specifications

### TECHNICAL FOCUS

- RANGE FROM 9 TO 16 KW, SINGLE AND THREE-PHASE
- MAXIMUM HYDRAULIC MODULE OUTPUT TEMPERATURE: 55 °C
- WORKS DOWN TO -20 °C

### ENERGY AND ENVIRONMENTAL EFFICIENCY

- 78% more efficient than an electrical convection system
- Maximum COP of 4.74 for the 9 kW model

### COMFORT

- Optimum control possible with an outside thermometer (not supplied)
- Maximum hydraulic module output temperature: 55 °C
- Power optimised according to the return water temperature
- Autonomous management of the hot water cylinder and heating

### EASY TO USE

- Single-unit range, with no refrigerant connections
- Wired control panel for installation in the house
- Easy programming on the control panel

### EASY INSTALLATION AND MAINTENANCE

- Outdoor unit easy to open for maintenance



WH-TD20B3E5

WH-TD30B3E5

## HEATING CAPACITY TABLE BASED ON OUTLET TEMPERATURE AND OUTSIDE TEMPERATURE

WH-SDF07C3E5 // WH-UD07CE5-A													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	4.60	1.87	4.60	2.00	4.60	2.19	4.60	2.42	4.55	2.68	4.50	3.00	
-7	5.15	1.80	5.15	1.94	5.08	2.14	5.00	2.38	4.90	2.47	4.80	2.67	
2	6.70	1.83	6.55	1.98	6.58	2.29	6.60	2.64	6.30	2.90	6.00	3.16	
7	7.00	1.43	7.00	1.59	7.00	1.77	7.00	2.12	6.90	2.30	6.80	2.72	
25	7.00	0.79	7.00	0.93	6.40	1.03	6.10	1.17	5.90	1.33	5.70	1.49	

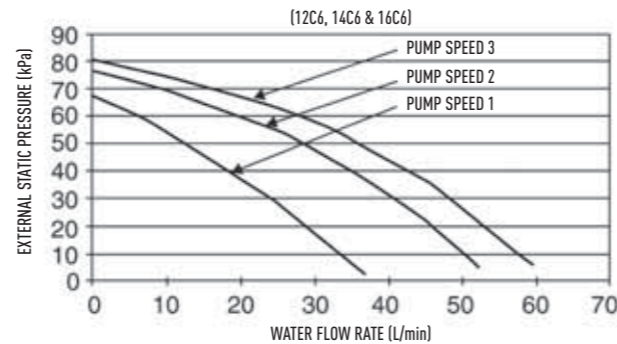
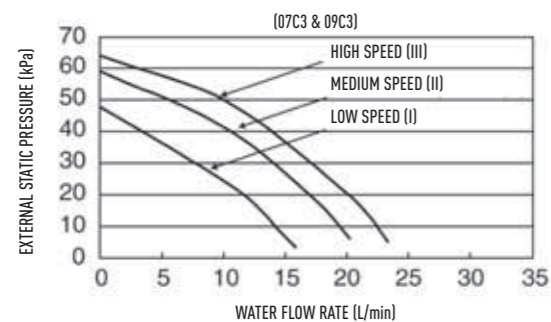
WH-SDF09C3E5 // WH-UD09CE5-A													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	6.00	2.55	5.90	2.68	5.50	2.82	5.40	3.00	5.20	3.14	5.00	3.33	
-7	6.10	2.16	5.90	2.36	5.85	2.63	5.80	2.90	5.80	3.06	5.80	3.22	
2	6.80	1.87	6.70	2.16	6.70	2.38	6.60	2.64	6.30	2.90	6.00	3.16	
7	9.00	1.93	9.00	2.20	9.00	2.45	9.00	2.81	8.95	3.23	8.90	3.87	
25	9.00	1.07	9.00	1.27	8.40	1.40	8.00	1.59	7.80	1.81	7.50	2.03	

WH-SDF12C6E5 // WH-UD12CE5-A													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	9.30	3.50	8.90	3.66	8.50	3.83	8.10	3.99	7.50	4.09	7.00	4.20	
-7	10.40	3.41	10.00	3.70	9.60	3.99	9.20	4.28	8.70	4.30	8.20	4.31	
2	11.80	3.14	11.40	3.35	11.00	3.57	10.60	3.78	9.80	3.98	9.10	4.18	
7	12.00	2.14	12.00	2.57	12.00	3.00	12.00	3.43	12.00	3.82	12.00	4.20	
25	12.00	1.42	12.00	1.70	11.80	1.98	11.70	2.27	11.50	2.53	11.40	2.78	

WH-SDF14C6E5 // WH-UD14CE5-A													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	9.90	3.91	9.50	4.05	9.00	4.19	8.60	4.33	7.90	4.45	7.30	4.56	
-7	11.10	3.73	10.70	4.08	10.20	4.43	9.80	4.78	9.10	4.76	8.50	4.74	
2	12.90	3.51	12.40	3.73	11.90	3.95	11.40	4.17	10.40	4.29	9.50	4.40	
7	14.00	2.60	14.00	3.11	14.00	3.63	14.00	4.14	13.60	4.61	13.30	5.08	
25	14.00	1.75	14.00	2.10	14.00	2.45	14.00	2.80	14.00	3.05	14.00	3.44	

WH-SDF16C6E5 // WH-UD16CE5-A													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	10.60	4.13	10.30	4.42	10.00	4.71	9.70	5.00	8.80	4.98	7.90	4.95	
-7	11.90	4.07	11.40	4.47	10.80	4.87	10.30	5.26	9.60	5.13	9.00	4.99	
2	13.50	3.78	13.00	4.00	12.40	4.22	11.90	4.44	10.80	4.50	9.80	4.55	
7	16.00	3.25	16.00	3.78	16.00	4.31	16.00	4.84	15.20	5.15	14.50	5.45	
25	16.00	2.35	16.00	2.73	16.00	3.11	16.00	3.49	16.00	3.71	15.90	3.93	

## HYDRAULIC PUMP PERFORMANCE



HC: Heating Capacity (kW)  
 IP: Power Input (kW)  
 LWC: Leaving Water Condenser Temperature (°C)  
 Tamb: Ambient Temperature (°C)

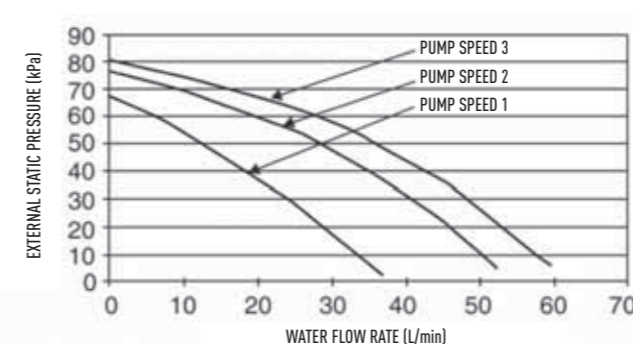
WH-SDF09C3E8 // WH-UD09CE8													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	8.65	3.10	8.30	3.25	7.95	3.45	7.60	3.65	7.15	3.75	6.70	3.85	
-7	9.35	2.95	9.00	3.20	8.85	3.58	8.70	3.96	8.30	3.93	7.90	3.90	
2	9.31	2.39	9.00	2.55	9.00	2.82	9.00	3.09	8.90	3.53	8.80	3.98	
7	9.00	1.58	9.00	1.90	9.00	2.20	9.00	2.50	9.00	2.80	9.00	3.10	
25	9.00	1.09	9.00	1.28	8.73	1.48	8.46	1.68	8.28	1.86	8.10	2.04	

WH-SDF12C9E8 // WH-UD12CE8													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	9.30	3.50	8.90	3.66	8.50	3.83	8.10	3.99	7.50	4.09	7.00	4.20	
-7	10.40	3.41	10.00	3.70	9.60	3.99	9.20	4.28	8.70	4.30	8.20	4.31	
2	11.80	3.14	11.40	3.35	11.00	3.57	10.60	3.78	9.80	3.98	9.10	4.18	
7	12.00	2.14	12.00	2.57	12.00	3.00	12.00	3.43	12.00	3.82	12.00	4.20	
25	12.00	1.42	12.00	1.70	11.80	1.98	11.70	2.27	11.50	2.53	11.40	2.78	

WH-SDF14C9E8 // WH-UD14CE8													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	9.90	3.91	9.50	4.05	9.00	4.19	8.60	4.33	7.90	4.45	7.30	4.56	
-7	11.10	3.73	10.70	4.08	10.20	4.43	9.80	4.78	9.10	4.76	8.50	4.74	
2	12.90	3.51	12.40	3.73	11.90	3.95	11.40	4.17	10.40	4.29	9.50	4.40	
7	14.00	2.60	14.00	3.11	14.00	3.63	14.00	4.14	13.60	4.61	13.30	5.08	
25	14.00	1.75	14.00	2.10	14.00	2.45	14.00	2.80	14.00	3.05	14.00	3.44	

WH-SDF16C9E8 // WH-UD16CE8													
LWC	30		35		40		45		50		55		
Tamb	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	HC	IP	
-15	10.60	4.13	10.30	4.42	10.00	4.71	9.70	5.00	8.80	4.98	7.90	4.95	
-7	11.90	4.07	11.40	4.47	10.80	4.87	10.30	5.26	9.60	5.13	9.00	4.99	
2	13.50	3.78	13.00	4.00	12.40	4.22	11.90	4.44	10.80	4.50	9.80	4.55	
7	16.00	3.25	16.00	3.78	16.00	4.31	16.00	4.84	15.20	5.15	14.50	5.45	
25	16.00	2.35	16.00	2.73	16.00	3.11	16.00	3.49	16.00	3.71	15.90	3.93	

## HYDRAULIC PUMP PERFORMANCE



HC: Heating Capacity (kW)  
 IP: Power Input (kW)  
 LWC: Leaving Water Condenser Temperature (°C)  
 Tamb: Ambient Temperature (°C)

## HEATING CAPACITY TABLE BASED ON OUTLET TEMPERATURE AND OUTSIDE TEMPERATURE

WH-MDF09C3E5												
Water Out	30		35		40		45		50		55	
Outdoor Air	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power
-15	8650	3100	8300	3250	7950	3450	7600	3650	7150	3750	6700	3850
-7	9350	2950	9000	3200	8850	3500	8700	3800	8300	3850	7900	3900
2	9310	2390	9000	2550	9000	2820	9000	3090	8900	3530	8800	3980
7	9000	1580	9000	1900	9000	2200	9000	2500	9000	2800	9000	3100
25	9000	1090	9000	1280	8730	1480	8460	1680	8280	1860	8100	2040

WH-MDF12C6E5												
Water Out	30		35		40		45		50		55	
Outdoor Air	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power
-15	9300	3500	8900	3660	8500	3830	8100	3990	7500	4090	7000	4200
-7	10400	3410	10000	3700	9600	3900	9200	4100	8700	4200	8200	4310
2	11800	3140	11400	3340	11000	3570	10600	3780	9800	3980	9100	4180
7	12000	2140	12000	2570	12000	3000	12000	3430	12000	3820	12000	4200
25	12000	1420	12000	1700	11800	1980	11700	2270	11500	2530	11400	2780

WH-MDF14C6E5												
Water Out	30		35		40		45		50		55	
Outdoor Air	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power
-15	9900	3910	9500	4050	9000	4190	8600	4330	7900	4450	7300	4560
-7	11100	3730	10700	4000	10200	4200	9800	4400	9100	4570	8500	4740
2	12900	3510	12400	3730	11900	3950	11400	4170	10400	4290	9500	4400
7	14000	2600	14000	3110	14000	3630	14000	4140	13600	4610	13300	5080
25	14000	1750	14000	2100	14000	2450	14000	2800	14000	3050	14000	3440

WH-MDF16C6E5												
Water Out	30		35		40		45		50		55	
Outdoor Air	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power
-15	10600	4130	10300	4420	10000	4710	9700	5000	8800	4980	7900	4950
-7	11900	4070	11400	4300	10800	4500	10300	4700	9600	4850	9000	4990
2	13500	3780	13000	4000	12400	4220	11900	4440	10800	4500	9800	4550
7	16000	3250	16000	3780	16000	4310	16000	4840	15200	5150	14500	5450
25	16000	2350	16000	2730	16000	3110	16000	3490	16000	3710	15900	3930

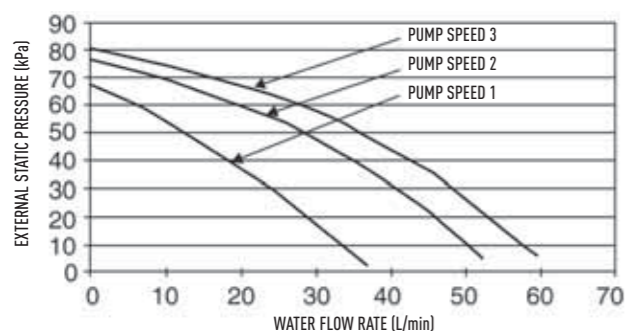
WH-MDF09C3E8												
Water Out	30		35		40		45		50		55	
Outdoor Air	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power
-15	8650	3100	8300	3250	7950	3450	7600	3650	7150	3750	6700	3850
-7	9350	2950	9000	3200	8850	3500	8700	3800	8300	3850	7900	3900
2	9310	2390	9000	2550	9000	2820	9000	3090	8900	3530	8800	3980
7	9000	1580	9000	1900	9000	2200	9000	2500	9000	2800	9000	3100
25	9000	1090	9000	1280	8730	1480	8460	1680	8280	1860	8100	2040

WH-MDF12C9E8												
Water Out	30		35		40		45		50		55	
Outdoor Air	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power
-15	9300	3500	8900	3660	8500	3830	8100	3990	7500	4090	7000	4200
-7	10400	3410	10000	3700	9600	3900	9200	4100	8700	4200	8200	4310
2	11800	3140	11400	3340	11000	3570	10600	3780	9800	3980	9100	4180
7	12000	2140	12000	2570	12000	3000	12000	3430	12000	3820	12000	4200
25	12000	1420	12000	1700	11800	1980	11700	2270	11500	2530	11400	2780

WH-MDF14C9E8												
Water Out	30		35		40		45		50		55	
Outdoor Air	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power
-15	9900	3910	9500	4050	9000	4190	8600	4330	7900	4450	7300	4560
-7	11100	3730	10700	4000	10200	4200	9800	4400	9100	4570	8500	4740
2	12900	3510	12400	3730	11900	3950	11400	4170	10400	4290	9500	4400
7	14000	2600	14000	3110	14000	3630	14000	4140	13600	4610	13300	5080
25	14000	1750	14000	2100	14000	2450	14000	2800	14000	3050	14000	3440

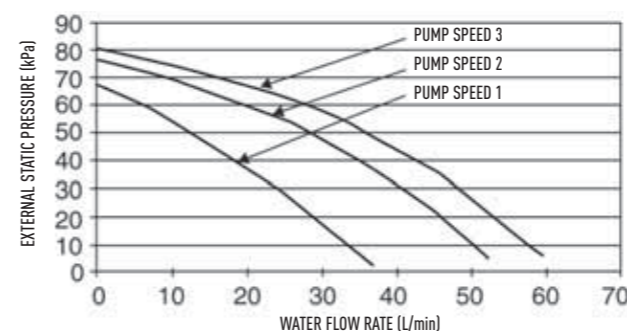
WH-MDF16C9E8												
Water Out	30		35		40		45		50		55	
Outdoor Air	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power	Capacity	Input Power
-15	10600	4130	10300	4420	10000	4710	9700	5000	8800	4980	7900	4950
-7	11900	4070	11400	4300	10800	4500	10300	4700	9600	4850	9000	4990
2	13500	3780	13000	4000	12400	4220	11900	4440	10800	4500	9800	4550
7	16000	3250	16000	3780	16000	4310	16000	4840	15200	5150	14500	5450
25	16000	2350	16000	2730	16000	3110	16000	3490	16000	3710	15900	3930

### HYDRAULIC PUMP PERFORMANCE



HC: Heating Capacity (kW)  
 IP: Power Input (kW)  
 LWC: Leaving Water Condenser Temperature (°C)  
 Tamb: Ambient Temperature (°C)

### HYDRAULIC PUMP PERFORMANCE



HC: Heating Capacity (kW)  
 IP: Power Input (kW)  
 LWC: Leaving Water Condenser Temperature (°C)  
 Tamb: Ambient Temperature (°C)

## ACCESSORIES

## PANASONIC ACCESSORIES

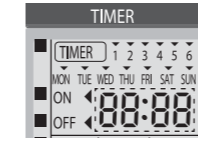
SOLAR KIT ACCESSORIES	
CZ-NS1P	Solar connection PCB ( for Bi-split type )
CZ-NS2P	Solar connection PCB ( for Mono-bloc type )
SANITARY TANK ACCESSORIES	
CZ-TK1	Temperature sensor kit for third party tank
DEICE ACCESSORIES	
CZ-NE1P	Base pan heater kit

## FIELD PROCURED OPTIONAL PARTS

SOLAR KIT			
Brand	Model No.	Feature	
RESOL	FlowConS_DeltaSol_BS_Plus	Remote Control	
Oventrop	Regusol X-25	Remote Control	
3 WAY-VALVE			
Brand	Model No.	Feature	
Siemens	CZV322 3 Port	Spring return	
2 WAY VALVE			
Brand	Model No.	Feature	
Honeywell	V4043C1007	Spring return	
Siemens	CZV222 2 Port	Spring return	
ROOM THERMOSTAT ON / OFF			
Brand	Model No.	Feature	
Siemens	RAA20	Dial type	
Siemens	REV200	Programme	
THERMAL VALVE			
Brand	Model No.	Feature	
Taconova	RA57	NC	
Danfoss	AVB-NC	NC	


## ERROR CODES

## THE OPERATION LED BLINKS AND AN ERROR CODE APPEARS ON THE CONTROL PANEL DISPLAY.



- Turn the unit off and inform the authorised dealer of the error code.
- The timer operation is cancelled when an error code occurs.

## FORCE HEATER MODE BUTTON

- The backup heater also serves as backup in case of malfunctioning of the outdoor unit.
- Press  to stop the force heater operation.
- During Force Heater mode, all other operations are not allowed.

## ERROR CODES TABLE

Diagnosis display	Abnormality / Protection control	Abnormality Judgement	Primary location to verify
H00	No abnormality detected	—	—
H12	Indoor/Outdoor capacity unmatched	90s after power supply	• Indoor/outdoor connection wire • Indoor/outdoor PCB • Specification and combination table in catalogue
H15	Outdoor compressor temperature sensor abnormality	Continue for 5 sec.	• Compressor temperature sensor (defective or disconnected)
H23	Indoor refrigerant liquid temperature sensor abnormality	Continue for 5 sec.	• Refrigerant liquid temperature sensor (defective or disconnected)
H38	Indoor/Outdoor mismatch	—	• Indoor/Outdoor PCB
H42	Compressor low pressure abnormality	—	• Outdoor pipe temperature sensor • Clogged expansion valve or strainer • Insufficient refrigerant • Outdoor PCB • Compressor
H62	Water flow switch abnormality	Continue for 1 min.	• Water flow switch
H64	Refrigerant high pressure abnormality	Continue for 5 sec.	• Outdoor high pressure sensor (defective or disconnected)
H70	Back-up heater OLP abnormality	Continue for 60 sec.	• Back-up heater OLP (Disconnection or activated)
H72	Tank sensor abnormal	Continue for 5 sec.	• Tank sensor
H76	Indoor - control panel communication abnormality	—	• Indoor - control panel (defective or disconnected)
H90	Indoor / outdoor abnormal communication	> 1 min after starting operation	• Internal / external cable connections • Indoor / Outdoor PCB
H91	Tank heater OLP abnormality	Continue for 60 sec.	• Tank heater OLP (Disconnection or activated)
H95	Indoor/Outdoor wrong connection	—	• Indoor/Outdoor supply voltage
H98	Outdoor high pressure overload protection	—	• Outdoor high pressure sensor • Water pump or water leakage • Clogged expansion valve or strainer • Excess refrigerant • Outdoor PCB
H99	Indoor heat exchanger freeze prevention	—	• Indoor heat exchanger • Refrigerant shortage
F12	Pressure switch activate	4 times occurrence within 20 minutes	• Pressure switch
F14	Outdoor compressor abnormal revolution	4 times occurrence within 20 minutes	• Outdoor compressor
F15	Outdoor fan motor lock abnormality	2 times occurrence within 30 minutes	• Outdoor PCB • Outdoor fan motor
F16	Total running current protection	3 times occurrence within 20 minutes	• Excess refrigerant • Outdoor PCB
F20	Outdoor compressor overheating protection	4 times occurrence within 30 minutes	• Compressor tank temperature sensor • Clogged expansion valve or strainer • Insufficient refrigerant • Outdoor PCB • Compressor
F22	IPM (power transistor) overheating protection	3 times occurrence within 30 minutes	• Improper heat exchange • IPM (Power transistor)
F23	Outdoor Direct Current (DC) peak detection	7 times occurrence continuously	• Outdoor PCB • Compressor
F24	Refrigeration cycle abnormality	2 times occurrence within 20 minutes	• Insufficient refrigerant • Outdoor PCB • Compressor low compression
F25	Cooling / Heating cycle changeover abnormality	4 times occurrence within 30 minutes	• 4-way valve • V-coil
F27	Pressure switch abnormality	Continue for 1 min.	• Pressure switch
F36	Outdoor air temperature sensor abnormality	Continue for 5 sec.	• Outdoor air temperature sensor (defective or disconnected)
F37	Indoor water inlet temperature sensor abnormality	Continue for 5 sec.	• Water inlet temperature sensor (defective or disconnected)
F40	Outdoor discharge pipe temperature sensor abnormality	Continue for 5 sec.	• Outdoor discharge pipe temperature sensor (defective or disconnected)
F41	PFC control	4 times occurrence within 10 minutes	• Voltage at PFC
F42	Outdoor heat exchanger temperature sensor abnormality	Continue for 5 sec.	• Outdoor heat exchanger temperature sensor (defective or disconnected)
F43	Outdoor defrost sensor abnormality	Continue for 5 sec.	• Outdoor defrost sensor (defective or disconnected)
F45	Indoor water outlet temperature sensor abnormality	Continue for 5 sec.	• Water outlet temperature sensor (defective or disconnected)
F46	Outdoor Current Transformer open circuit	—	• Insufficient refrigerant • Outdoor PCB • Compressor low
F95	Cooling high pressure overload protection	—	• Outdoor high pressure sensor • Water pump or water leakage • Clogged expansion valve or strainer • Excess refrigerant • Outdoor PCB

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