Panasonic
ideas for life

2010

AQUAREA AIR TO WATER HEAT PUMP // HEATING AND COOLING SYSTEMS

EVERY HOUSE MATTERS

AQUAREA
engineered for high performance

heatingandcoolingsystems

heatingandcoolingsystems

'ECO IDEAS' FOR PRODUCTS
We will produce energy-efficient products

'ECO IDEAS' FOR MANUFACTURING
We will reduce CO_2 emissions across all our manufacturing sites

'ECO IDEAS' FOR EVERYBODY, EVERYWHERE
We will encourage the spread of environmental activities throughout the world

For further information, go to www.panasonic.eu

AQUAREA AIR TO WATER HEAT PUMP RANGE
COST-EFFECTIVE AND ENVIRONMENTALLY FRIENDLY, PANASONIC'S NEW AQUAREA AIR TO WATER SYSTEM MAXIMUM EFFICIENCY 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 for guaranteed comfort whatever the weather conditions, even down to outdoor temperatures of -20°C.

An ideal solution for heating, cooling and hot water in new and old buildings.
- High-efficiency heat pump technology (COP of 4.67)
- A wide range from 7 to 16 kW, in single-phase and three-phase, single-unit or split
- Reduction of energy costs (78% saving compared to an electrical heating system)
- Connection possible to an existing heating system or solar panels.
- Reduced energy consumption and CO_2 emissions.

PANASONIC HEATING AND COOLING SYSTEMS
TECHNOLOGY MAKES US BETTER

The desire to advance has made Panasonic the international leader in air conditioning. Our industrial capabilities and firm commitment to the environment enable us to open new avenues of research and to develop innovative technologies which can enhance our way of life.

The domestic range, semi-industrial range and VRF industrial range, together with the new Aquarea system, are adjusted to the most avant-garde construction needs and environmental demands 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

"GREEN" ENERGY. EFFICIENT (COP) FUEL-FIRED BOILER / GAS BOILER

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.

AQUAREA
engineered for high performance

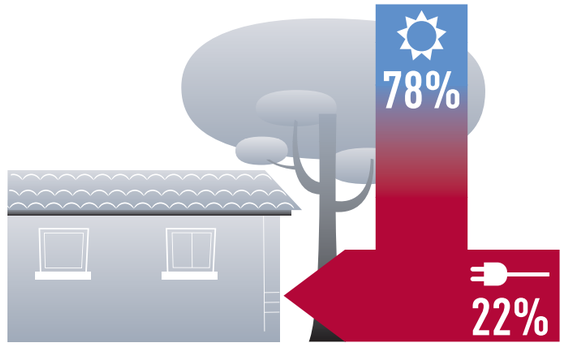
high efficiency heating
INVERTER +
down to -20°C in the heat pump
OUTDOOR TEMPERATURE

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 or cool 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, cool it in summer and produce your hot water all year round.

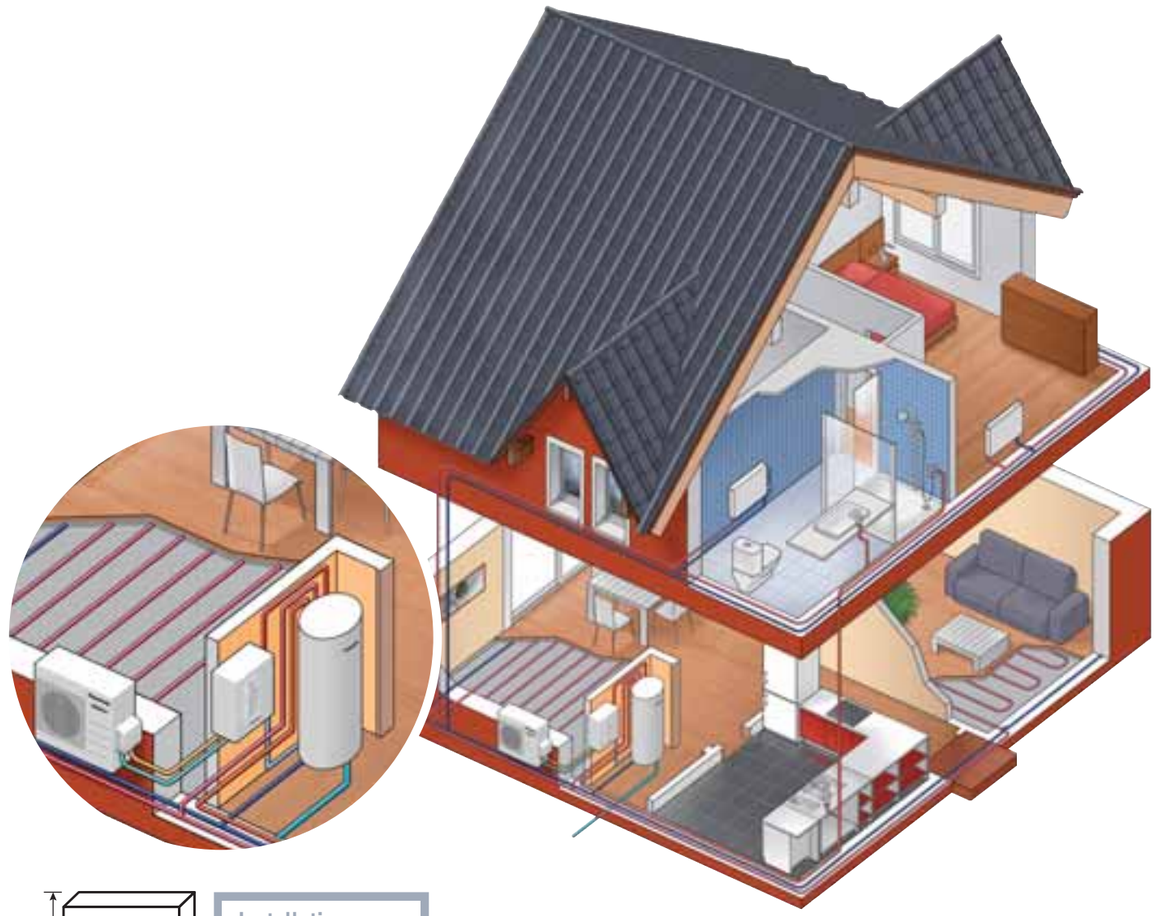
*We note that ADEME (French environmental and energy management agency) encourages consumers to choose heating and cooling systems that use heat pump systems.

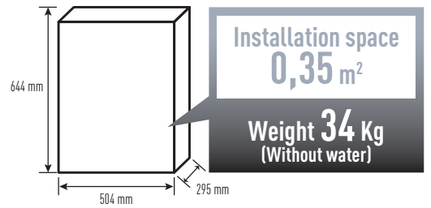


UP TO 78% ENERGY SAVINGS

Panasonic's Aquarea heat pump provides a saving of up to 78% on household electrical expenses. For example, the Aquarea system has a COP coefficient of 4.67: for every kW of electricity consumed, it returns 4.67 kW of energy, i.e. 3.67 kW more than a conventional electrical heating system, which adds up to a 78% saving.
Consumption can be further reduced by connecting solar panels to the Aquarea system.

Up to 70% of the heat produced by a heat pump is free, since it comes from the outdoor air.





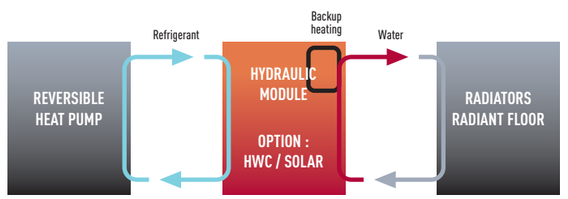
A COMPACT DESIGN: EASY TO INSTALL AND MAINTAIN

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

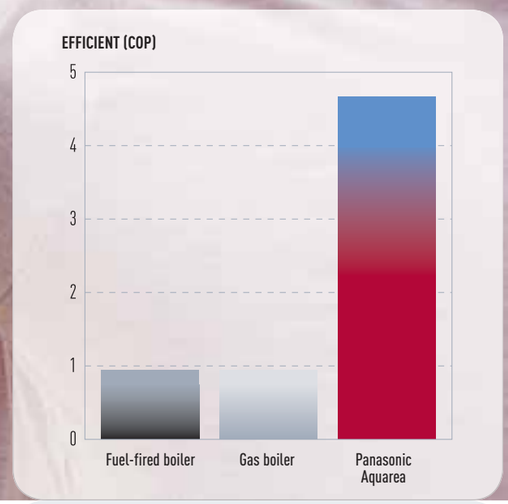


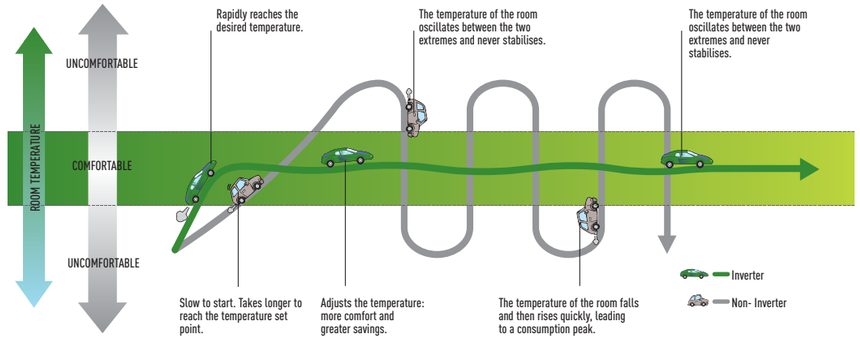
THERE ARE SEVERAL TYPES OF HEAT PUMP :

- The split system
  This is formed by an outdoor unit and a hydraulic module, normally located in the utility room or garage. This configuration requires refrigerated links between the two units but is easily integrated in the house and can be connected to an existing boiler, for example.
- The single-unit 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.

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.





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*.

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 x V x T
Where:
D = Total loss in W
V = Living space in m3
T = Difference between the indoor temperature and the minimum outdoor temperature where the house is located
G = The building's insulation coefficient in W/m3 .°C

Estimation of coefficient G according to the insulation type (G en W/m3 . °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.
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-m2 detached house with a ceiling height of 2.5 m in Seine et Marne (77), with a minimum outdoor temperature of -7 °C, built in 1995, has total energy loss: D = 1.1 x [(120 m2 x 2,5 m) x (20 °C - (- 7 °C)] = 9652 W (i.e. 9.65 kW)

We must therefore select a Heat pump capable of producing 9.65 kW at –7 °C, which leads us to a 12- kW Aquarea model.

* This calculation method is given for guidance only. Panasonic will not accept responsibility under any circumstances in the event of an assessment error.

MAXIMUM EFFICIENCY EVEN AT –7 °C

The Aquarea range has been specially designed to provide maximum efficiency even at extreme temperatures.

		7 kW	9 kW	12 kW	14 kW	16 kW
Outside temperature 7°C	Power (kW)	7.00	9.00	12.00	14.00	16.00
	COP	4.40	4.10	4.67	4.50	4.23
Outside temperature -7°C	Power (kW)	5.15	5.90	10.00	10.70	11.40
	COP	2.65	2.50	2.70	2.62	2.55

Conditions :
Water input temperature: 30 °C
Water output temperature: 35 °C

WHAT MAKES THE AIR 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. It also has a 400 µm particle filter.
  This hydraulic module is situated in the house in the case of the split system or in the outdoor unit in the case of the single-unit 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 element, situated at the top of the cylinder, guarantees maximum efficiency and faster heat-up..
- Other necessary or optional features (not provided by Panasonic):
  - 3-way valve for the hot water cylinder connection.
  - 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.

SCREEN FILTER

The 400 µm screen filter protects the water exchanger from impurities and comes standard on the Aquarea hydraulic module.

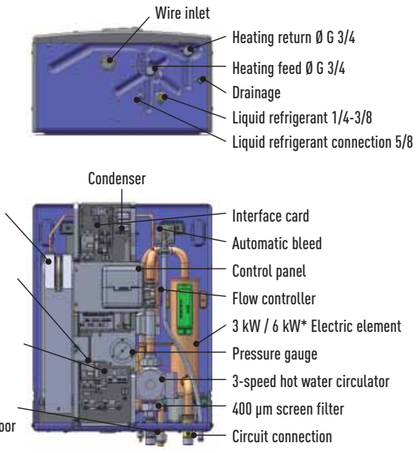
2 EARTH LEAKAGE CUT-OUTS

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 control the heating temperature and the hot water cylinder temperature very simply.

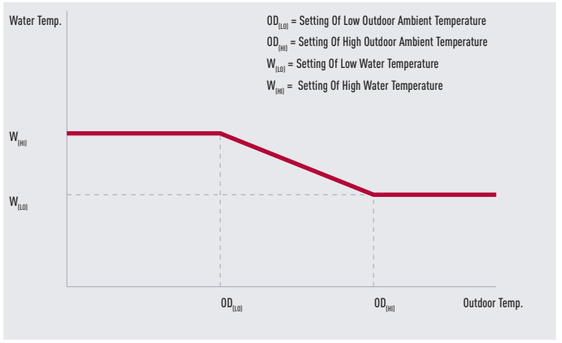
THE HYDRAULIC MODULE



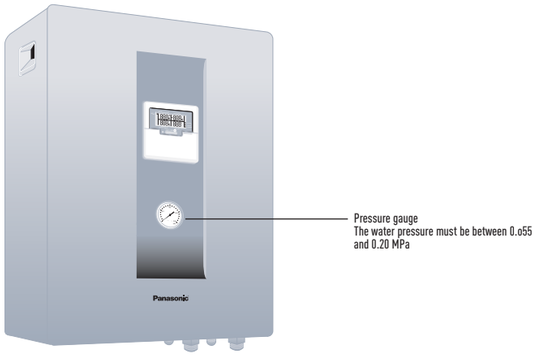
* 3 kW for 7 and 9 kW, and 6 kW for 12, 14 and 16 kW.

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. He enters 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 HW cylinder priority.

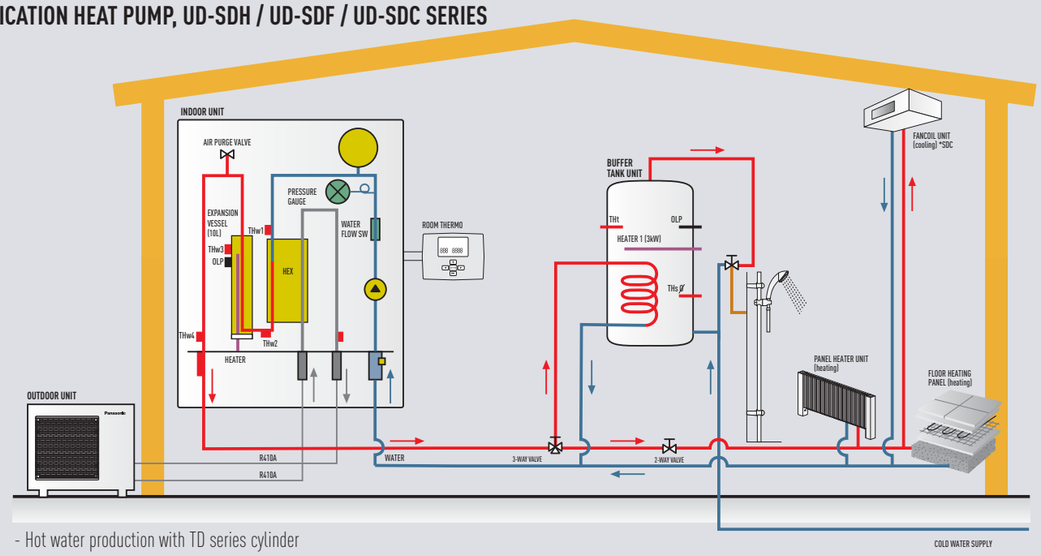


EASY CONTROL OF WATER PRESSURE



APPLICATION EXAMPLES

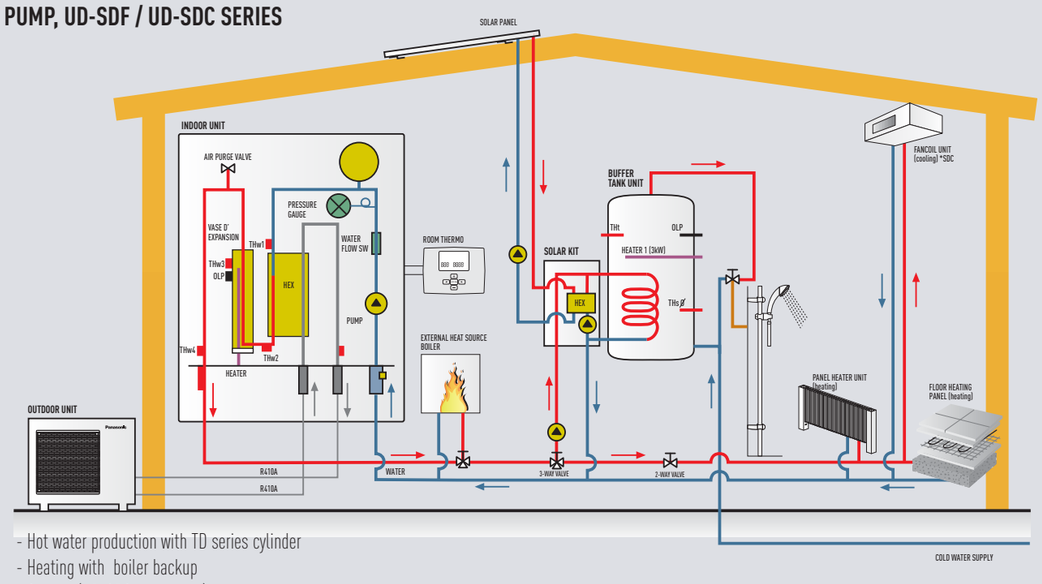
AQUAREA IN A RADIANT FLOOR AND HOT WATER CYLINDER APPLICATION HEAT PUMP, UD-SDH / UD-SDF / UD-SDC SERIES



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

SCHEMATIC DIAGRAM

AQUAREA AS BOILER BACKUP AND SOLAR PANELS HEAT PUMP, UD-SDF / UD-SDC SERIES



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

SCHEMATIC DIAGRAM

DESCRIPTION OF LOGOS

INVERTER+ SYSTEM
The A Inverter + system provides energy savings of up to 20%. You win and nature wins.

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

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

RENOVATION
With our Aquarea heat pumps you can connect an existing or new boiler for optimum comfort even at very low outside temperatures.

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

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

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

AQUAREA RANGE

	7 kW		9 kW		12 kW		14 kW		16 kW	
AQUAREA // BI-BLOC // SEMI-CONNECTIVITY // HEATING ONLY PAGE 14										
	WH-SDH07C3E5	WH-UD07CE5	WH-SDH09C3E5	WH-UD09CE5	WH-SDH12C3E5	WH-UD12CE5	WH-SDH14C3E5	WH-UD14CE5	WH-SDH16C3E5	WH-UD16CE5
AQUAREA // BI-BLOC // HIGH CONNECTIVITY // HEATING ONLY OR HEATING AND COOLING PAGE 16										
	WH-SDF07C3E5 WH-SDC07C3E5	WH-UD07CE5	WH-SDF09C3E5 WH-SDF09C9E8 WH-SDC09C3E5 WH-SDC09C9E8	WH-UD09CE5 WH-UD09CE8	WH-SDF12C6E5 WH-SDF12C9E8 WH-SDC12C6E5 WH-SDC12C9E8	WH-UD12CE5 WH-UD12CE8	WH-SDF14C6E5 WH-SDF14C9E8 WH-SDC14C6E5 WH-SDC14C9E8	WH-UD14CE5 WH-UD14CE8	WH-SDF16C6E5 WH-SDF16C9E8 WH-SDC16C6E5 WH-SDC16C9E8	WH-UD16CE5 WH-UD16CE8
AQUAREA // MONO-BLOC // HAUTE CONNECTIVITÉ // HEATING ONLY OR HEATING AND COOLING PAGE 18										
			WH-MDF09C3E5 WH-MDF09C3E8 WH-MDC09C3E5 WH-MDC09C3E8		WH-MDF12C6E5 WH-MDF12C9E8 WH-MDC12C6E5 WH-MDC12C9E8		WH-MDF14C6E5 WH-MDF14C9E8 WH-MDC14C6E5 WH-MDC14C9E8		WH-MDF16C6E5 WH-MDF16C9E8 WH-MDC16C6E5 WH-MDC16C9E8	

high efficiency heating
INVERTER+

AQUAREA // BI-BLOC // SEMI-CONNECTIVE // HEATING ONLY.

Aquarea's split UD/SHD unit is designed to be installed in your new house with radiant floor or low-temperature radiators. Aquarea provides a saving of up to 78% compared to electrical heating, with an energy efficiency 4.67 times greater than that of a gas or fuel-fired boiler, also reducing CO^2 emissions.
With its (optional) HW cylinder it also provides you with hot water all year round at a very low cost.

réfrigérant R410A

down to –20°C in the heat pump

5 years warranty on compressor

BI-BLOC // SEMI-CONNECTIVITY

			HEATING ONLY				
Outdoor unit, Monophase 220 V			**WH-UD07CE5**	**WH-UD09CE5**	**WH-UD12CE5** [1]	**WH-UD14CE5** [1]	**WH-UD16CE5** [1]
Heating Capacity at +7°C		kW	7,00	9,00	12,00	14,00	16,00
COP at +7°C with heating water temperature at 35°C		W/W	4,4	4,1	4,67	4,5	4,23
Heating Capacity at -7°C		kW	5,15	5,90	10,00	10,70	11,40
COP at -7°C		W/W	2,65	2,50	2,70	2,62	2,55
Sound pressure level		dB(A)	48	49	50	51	53
Sound power level		dB	66	67	67	68	70
Dimensions (H x W x D)		mm	900 x 795 x 320	900 x 795 x 320	900 x 1.340 x 320	900 x 1.340 x 320	900 x 1.340 x 320
Pipe Diameter	Liquid	mm (inch)	6,35 (1/4)	6,35 (1/4)	9,53 (3/8)	9,53 (3/8)	9,53 (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)
Refrigerant (R410A)		kg	1,45	1,45	3,10	3,10	3,10
Additional Gas Amount (R410A)		g/m	30	30	50	50	50
Pipe Length for additional gas		m	10	10	30	30	30
Pipe Length Range		m	3 / 30	3 / 30	3 / 40	3 / 40	3 / 40
I/D&O/D Hight Difference		m	20	20	20	20	20
Operation Range	Outdoor Ambient	°C	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35
	Water Outlet (at-2/-7/-15) [2]	°C	55	55	55	55	55
Indoor unit, Monophase 220 V			**WH-SDH07C3E5**	**WH-SDH09C3E5**	**WH-SDH12C6E5**	**WH-SDH14C6E5**	**WH-SDH16C6E5**
Dimensions (H x W x D)		mm	504 x 644 x 295	504 x 644 x 295	502 x 892 x 353	502 x 892 x 353	502 x 892 x 353
Water pipe connector		mm (inch)	19,05 (3/4)	19,05 (3/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)
Pump	No. of Speed		3	3	3	3	3
	Input Power(max)		100	100	190	190	190
Heating water flow ΔT=5 K, 35°C		m^3/h	1.2	1.6	2,1	2,4	2,8
Water Filter	Inner Diameter		22	22			
Capacity of integrated electric heater			3	3	6	6	6
Input Power		kW	1,59	2,20	2,57	3,11	3,78
Runing and starting Current		A	7,30	10,10			
Maximum Current		A	21	22,9	26	26	26
Connection to solar kit and boiler			Non	Non	Non	Non	Non

HOT WATER CYLINDER

			WH-TD20B3E5 [1][WW]	**WH-TD30B3E5** [1]
Cylinder capacity		L	200	300
Max water temp.		°C	75	75
Dimensions	Height	mm	1.150	1.600
	Diameter	mm	580	580
Weight on empty		kg	46	60
Electrical backup element		kW	3	3
Electrical connections		φ / V / Hz	Single-Phase / 230 / 50	Single-Phase / 230 / 50
Exchanger material			Stainless steel	Stainless steel

Water quality must comply with standard EN 98/83EN. If the water's chlorides and sulphates contents exceed 250 mg/l, water treatment upstream is obligatory. The guarantee does not apply in the event of values over 250 mg/l.

1) Preliminary data.
2) Outdoor temperature.

TECHNICAL DATA

- RANGE FROM 7 TO 16 KW, SINGLE-PHASE
- KEEPS THE PRIMARY CIRCUIT'S TEMPERATURE AT 55 °C EVEN AT –15 °C
- WORKS DOWN TO –20 °C
- 400 M SCREEN FILTER INCLUDED IN THE HYDRAULIC MODULE
- 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 4.67 for the 12 kW model
- Environmentally friendly refrigerant gas R410

COMFORT
- Maximum hydraulic module output temperature: 55 °C
- Power optimised based on the return water temperature
- Built-in management of the HW 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
- 400 µm screen filter included in the hydraulic module
- Easy-to-open hydraulic module and outdoor unit


WH-UD07CE5
WH-UD09CE5

WH-UD12CE5
WH-UD14CE5
WH-UD16CE5


WH-TD20B3E5


WH-TD30B3E5

high efficiency heating
INVERTER+

AQUAREA // BI-BLOC // HIGH CONNECTIVITY // HEATING ONLY OR HEATING AND COOLING

The Aquarea UD/SDC and UD/SDF ranges adapt just as well to an existing installation as boiler backup or to a new installation with radiant floor, low-temperature radiators or even fan-coil heaters (in heating and cooling for the UD/SDF range). These ranges also allow you to connect a solar kit in order to increase efficiency and minimise the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating control and management.
Aquarea provides a saving of up to 78% compared to electrical heating, with energy efficiency 4.67 times greater than that of a gas or fuel-fired boiler, also reducing CO^2 emissions.
And by adding the HW cylinder (optional), you can enjoy hot water all the year round at a very low cost.

réfrigérant R410A
down to -20°C in the heat pump (OUTDOOR TEMPERATURE)
boiler connection (RETROFIT)
solar panels connection (SOLAR KIT)
domestic hot water (ACS)
5 years warranty on compressor

BI-BLOC // HIGH-CONNECTIVITY

			HEATING ONLY [1]					HEATING AND COOLING [1]				
Outdoor unit, Monophase 220 V			**WH-UD07CE5**	**WH-UD09CE5**	**WH-UD12CE5**	**WH-UD14CE5**	**WH-UD16CE5**	**WH-UD07CE5**	**WH-UD09CE5**	**WH-UD12CE5**	**WH-UD14CE5**	**WH-UD16CE5**
Outdoor unit, Triphase 400 V				**WH-UD09CE8**	**WH-UD12CE8**	**WH-UD14CE8**	**WH-UD16CE8**		**WH-UD09CE8**	**WH-UD12CE8**	**WH-UD14CE8**	**WH-UD16CE8**
Heating Capacity at +7°C		kW	7,00	9,00	12,00	14,00	16,00	7,00	9,00	12,00	14,00	16,00
COP at +7°C with heating water temperature at 35°C		W/W	4,4	4,1	4,67	4,5	4,23	4,4	4,1	4,67	4,5	4,23
Heating Capacity at -7°C		kW	5,15	5,90	10,00	10,70	11,40	5,15	5,90	10,00	10,70	11,40
COP at -7°C		W/W	2,65	2,50	2,70	2,62	2,55	2,65	2,50	2,70	2,62	2,55
Sound pressure level		dB(A)	48	49	50	51	53	48	49	50	51	53
Sound power level		dB	66	67	67	68	70	66	67	67	68	70
Dimensions (H x W x D)		mm	900x795x320	900x795x320	900x1.340x320	900x1.340x320	1.340x900x320	900x795x320	900x795x320	900x1.340x320	900x1.340x320	900x1.340x320
Pipe Diameter	Liquid	mm (inch)	6.35(1/4)	6.35(1/4)	9,53 (3/8)	9,53 (3/8)	9,53 (3/8)	6.35(1/4)	6.35(1/4)	9,53 (3/8)	9,53 (3/8)	9,53 (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)	15.88(5/8)	15.88(5/8)
Refrigerant (R410A)		kg	1,45	1,45	3,10	3,10	3,10	1,45	1,45	3,10	3,10	3,10
Additional Gas Amount (R410A)		g/m	30	30	50	50	50	30	30	50	50	50
Pipe Length for additional gas		m	10	10	30	30	30	10	10	30	30	30
Pipe Length Range		m	3 / 30	3 / 30	3 / 40	3 / 40	3 / 40	3 / 30	3 / 30	3 / 40	3 / 40	3 / 40
I/D&O/D Hight Difference		m	20	20	20	20	20	20	20	20	20	20
Operation Range	Outdoor Ambient	°C	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35
	Water Outlet (at-2/-7/-15) [2]	°C	55	55	55	55	55	55	55	55	55	55
Indoor unit, Monophase 220 V			**WH-SDF07C3E5**	**WH-SDF09C3E5**	**WH-SDF12C6E5**	**WH-SDF14C6E5**	**WH-SDF16C6E5**	**WH-SDC07C3E5**	**WH-SDC09C3E5**	**WH-SDC12C6E5**	**WH-SDC14C6E5**	**WH-SDC16C6E5**
Indoor unit, Triphase 400 V				**WH-SDF09C9E8**	**WH-SDF12C9E8**	**WH-SDF14C9E8**	**WH-SDF16C9E8**		**WH-SDC09C9E8**	**WH-SDC12C9E8**	**WH-SDC14C9E8**	**WH-SDC16C9E8**
Dimension		mm	502x892x353	502x892x353	502x892x353	502x892x353	502x892x353	502x892x353	502x892x353	502x892x353	502x892x353	502x892x353
Water pipe connector		mm (inch)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)
Pump	No. of Speed		3	3	3	3	3	3	3	3	3	3
	Input Power(max)		100	100	190	190	190	100	100	190	190	190
Heating water flow ΔT=5 K, 35°C		m³/h	1,2	1,6	2,1	2,4	2,8	1,2	1,6	2,1	2,4	2,8
Water Filter	Diamètre intérieur		22	22				22	22			
Capacity of integrated electric heater			3	3	6	6	6	3	3	6	6	6
Input Power		kW	1,59	2,20	2,57	3,11	3,78	1,59	2,20	2,57	3,11	3,78
Runing and starting Current		A	7,30	10,10				7,30	10,10			
Maximum Current		A	21	22,9	26	26	26	21	22,9	26	26	26
Connection to solar kit and boiler			Oui	Oui	Oui	Oui	Oui	Oui	Oui	Oui	Oui	Oui

HOT WATER CYLINDER

			WH-TD20B3E5 [1]WW	WH-TD30B3E5 [1]
Cylinder capacity		L	200	300
Max water temp.		°C	75	75
Dimensions	Height	mm	1.150	1.600
	Diameter	mm	580	580
Weight on empty		kg	46	60
Electrical backup element		kW	3	3
Electrical connections		φ / V / Hz	Single-Phase / 230 / 50	Single-Phase / 230 / 50
Exchanger material			Stainless steel	Stainless steel

Water quality must comply with standard EN 98/83EN. If the water's chlorides and sulphates contents exceed 250 mg/l, water treatment upstream is obligatory. The guarantee does not apply in the event of values over 250 mg/l.

1) Preliminary data.
2) Outdoor temperature.

TECHNICAL DATA

- RANGE FROM 7 TO 16 KW, SINGLE AND THREE-PHASE
- KEEPS THE PRIMARY CIRCUIT TEMPERATURE AT 55 °C EVEN WITH –15 °C
- WORKS DOWN TO –20 °C
- 400 M SCREEN FILTER INCLUDED IN THE HYDRAULIC MODULE
- 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 4.67 for the 12 kW model
- Environmentally-friendly refrigerant gas R410

COMFORT
- Heating and cooling possible in the UD/SDF range
- 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 HW 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
- 400 µm screen filter included in the hydraulic module
- Easy-to-open hydraulic module and outdoor unit

WH-UD07CE5
WH-UD09CE5
WH-UD09CE8

WH-UD12CE5
WH-UD14CE5
WH-UD16CE5

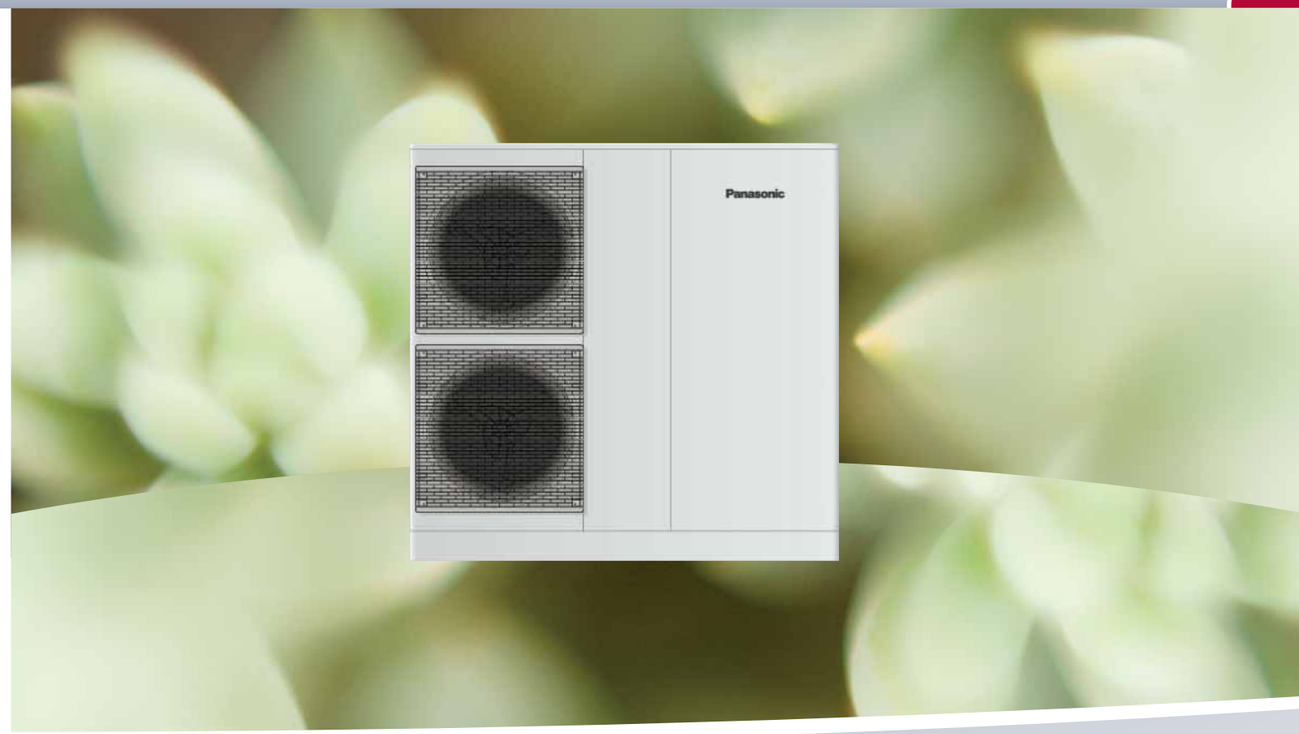
WH-UD12CE8
WH-UD14CE8
WH-UD16CE8

WH-TD20B3E5

WH-TD30B3E5

AQUAREA // MONO-BLOC // HIGH CONNECTIVITY // HEATING ONLY OR HEATING AND COOLING

The Aquarea MDF / MDC single-unit range adapt just as well to an existing installation as boiler backup or to a new installation with radiant floor, low-temperature radiators or even fan-coil heaters (in heating and cooling for the MDC range). This range also allows you to connect a solar kit in order to increase efficiency and minimise the impact on the ecosystem. Finally, it is possible to connect a thermostat for even better heating control and management.
Aquarea provides a saving of up to 78% compared to electrical heating, with energy efficiency 4.67 times greater than that of a gas or fuel-fired boiler, also reducing CO^2 emissions.
With its (optional) HW cylinder it also provides you with hot water all year round at a very low cost.



MONO-BLOC // HIGH-CONNECTIVITY

			HEATING ONLY [1]				HEATING AND COOLING [1]			
Outdoor unit, Monophase 220 V			WH-MDF09C3E5	WH-MDF12C6E5	WH-MDF14C6E5	WH-MDF16C6E5	WH-MDC09C3E5	WH-MDC12C6E5	WH-MDC14C6E5	WH-MDC16C6E5
Outdoor unit, Triphase 400 V			WH-MDF09C3E8	WH-MDF12C9E8	WH-MDF14C9E8	WH-MDF16C9E8	WH-MDC09C3E8	WH-MDC12C9E8	WH-MDC14C9E8	WH-MDC16C9E8
Heating Capacity at +7°C		kW	9,00	12,00	14,00	16,00	9,00	12,00	14,00	16,00
COP at +7°C with heating water temperature at 35°C		W/W	4,1	4,67	4,5	4,23	4,1	4,67	4,5	4,23
Heating Capacity at -7°C		kW	5,90	10,00	10,70	11,40	5,90	10,00	10,70	11,40
COP at -7°C		W/W	2,50	2,70	2,62	2,55	2,50	2,70	2,62	2,55
Sound pressure level		dB(A)	49	50	51	53	49	50	51	53
Sound power level		dB	67	67	68	70	67	67	68	70
Dimensions (H x W x D)		mm	900 x 795 x 320	900 x 1.340 x 320	900 x 1.340 x 320	900 x 1.340 x 320	900 x 795 x 320	900 x 1.340 x 320	900 x 1.340 x 320	900 x 1.340 x 320
Operation Range	Outdoor Ambient	°C	°C	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35	-20 / 35
	Water Outlet (at-2/-7/-15) [2]	°C	°C	55	55	55	55	55	55	55
Water pipe connector		mm (inch)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)	19,05 (3/4)	31,75 (11/4)	31,75 (11/4)	31,75 (11/4)
Poump	No. of Speed		3	3	3	3	3	3	3	3
	Input Power(max)		100	190	190	190	100	190	190	190
Heating water flow ΔT=5 K, 35°C		m^3/h	1,6	2,1	2,4	2,8	1,6	2,1	2,4	2,8
Capacity of integrated electric heater			3	6	6	6	3	6	6	6
Input Power		kW	2,20	2,57	3,11	3,78	2,20	2,57	3,11	3,78
Runing and starting Current		A	10,10				10,10			
Maximum Current		A	22,9	26	26	26	22,9	26	26	26
Connection to solar kit and boiler			Oui	Oui	Oui	Oui	Oui	Oui	Oui	Oui

HOT WATER CYLINDER

			WH-TD20B3E5 [1][WW]	WH-TD30B3E5 [1]
Cylinder capacity		L	200	300
Max water temp.		°C	75	75
Dimensions	Height	mm	1.150	1.600
	Diameter	mm	580	580
Weight on empty		kg	46	60
Electrical backup element		kW	3	3
Electrical connections		φ / V / Hz	Single-Phase / 230 / 50	Single-Phase / 230 / 50
Exchanger material			Stainless steel	Stainless steel

Water quality must comply with standard EN 98/83EN. If the water's chlorides and sulphates contents exceed 250 mg/l, water treatment upstream is obligatory. The guarantee does not apply in the event of values over 250 mg/l.

1) Preliminary data.
2) Outdoor temperature.

TECHNICAL DATA

- RANGE FROM 9 TO 16 KW, SINGLE AND THREE-PHASE
- KEEPS THE PRIMARY CIRCUIT'S TEMPERATURE AT 55 °C EVEN WITH –15 °C
- WORKS DOWN TO –20 °C
- 400 M SCREEN FILTER INCLUDED IN THE HYDRAULIC MODULE
- MAXIMUM 20M RISE BETWEEN THE OUTDOOR UNIT AND THE HYDRAULIC MODULE


WH-TD20B3E5

WH-TD30B3E5

ENERGY AND ENVIRONMENTAL EFFICIENCY
- 78% more efficient than an electrical convection system
- Maximum COP of 4.67 for the 12 kW model
- Environmentally friendly refrigerant gas R410 A

COMFORT
- Heating and cooling possible with the MDC range
- 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 HW cylinder and heating

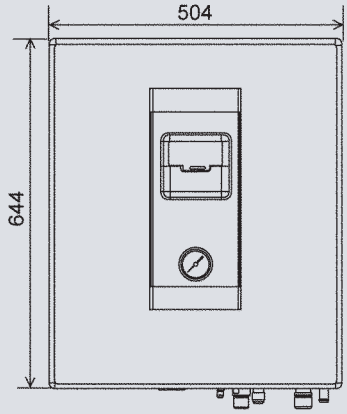
EASY TO USE
- Single-unit range, with no refrigerant connections
- Wired control panel for installation in the house
- Easy programming on the control panel

EASY INSTALLATION AND MAINTENANCE
- 400 µm screen filter included in the outdoor unit
- Outdoor unit easy to open for maintenance

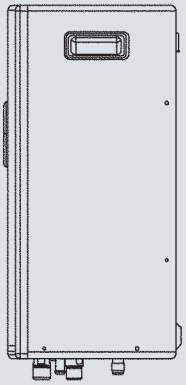
DIMENSIONS

WH-SDH07/09C3E5

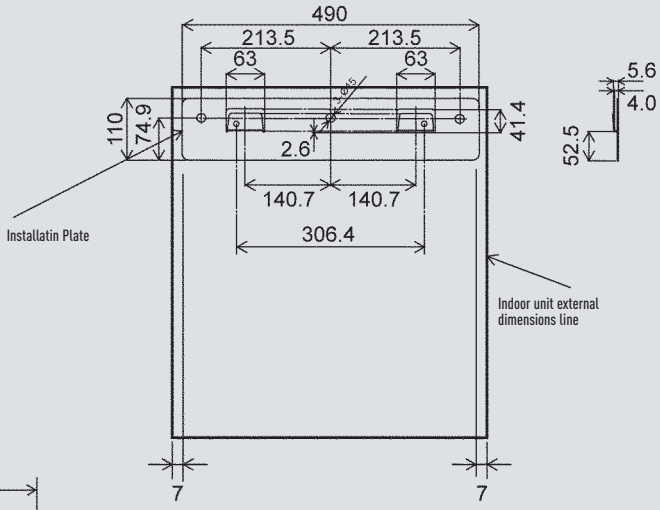
FRONT VIEW



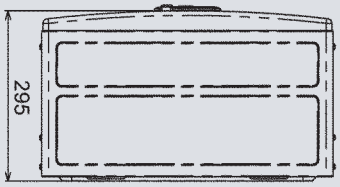
SIDE VIEW



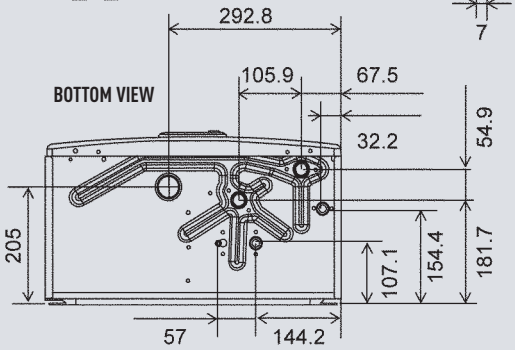
RELATIVE POSITION BETWEEN THE INDOOR UNIT AND THE INSTALLATION PLATE (FRONT VIEW)



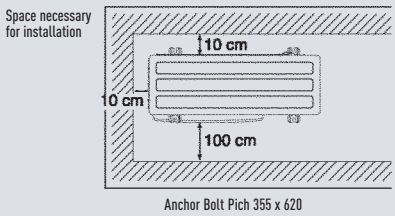
TOP VIEW



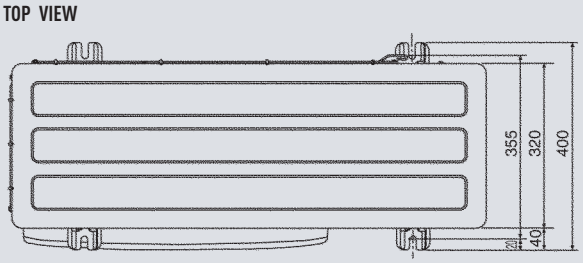
BOTTOM VIEW



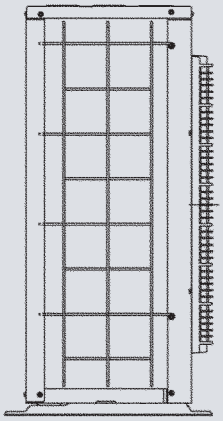
WH-UD07/09CE5 // WH-UD09CE8



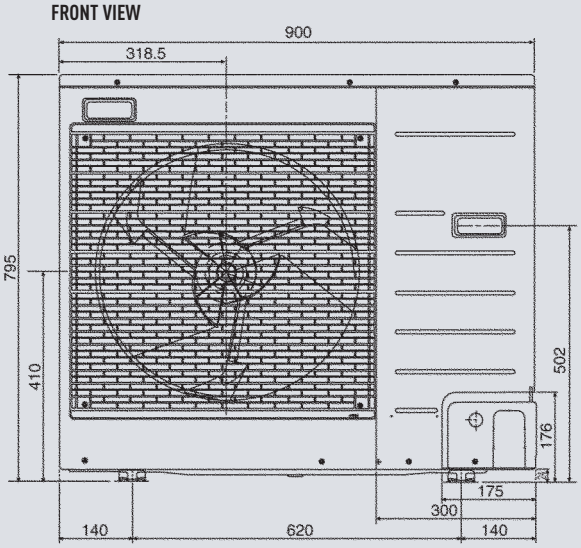
TOP VIEW



SIDE VIEW



FRONT VIEW



SIDE VIEW