

# Versati

## Air to Water Heat Pump



# VERSATI DC Inverter Multifunctional Air To Water Heat Pump

Nowadays, people are increasingly focusing on heating costs as well as environmental issues. Traditional heating systems are expensive and are bad for sustainable development of the environment. Thus, people are searching for new high efficiency heating technology, low operation costs and eco-friendly features.

**V**ersati takes natural heat from the ambient air and uses it for room heating. It not only satisfies room heating requirements but also supplies domestic hot water. Versati also provides cool air in hot summer. **All-in-One!**



## ECO-FRIENDLY

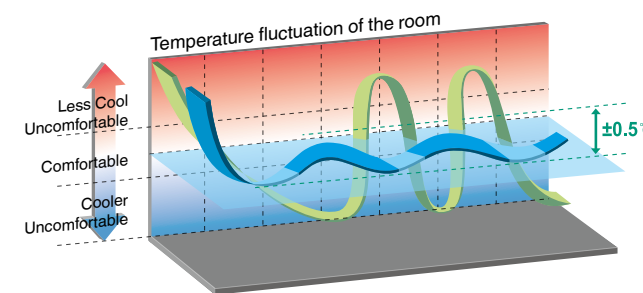
Versati adopts R410A, a new eco-friendly refrigerant, harmless to the atmosphere. Moreover, with advanced heat pump technology and powerful hardware, the efficiency of Versati has been improved, resulting in much lower CO<sub>2</sub> discharge. It is an eco-friendly product, which mirrors our social commitment to protect the environment.



## High Efficiency

Twin Rotary DC Inverter Compressor

Compared to traditional compressors, DC inverter compressors have the advantages of high performance and high efficiency



**DC Inverter System**

- The inverter technology with high-power and high energy efficiency not only creates comfortable living conditions, but also saves energy

**Traditional Systems**

- ON and OFF systems frequently cause temperature fluctuations

- By adopting DC inverter technology, the compressor regulates its output according to the heating requirements to achieve higher efficiency
- The DC Inverter compressor optimizes its output to ensure efficient operation
- Using stepless power regulation technology, the DC Inverter compressor achieves stepless output regulation between 20Hz and 120Hz
- The 180 degree sine wave current output uses low startup current, small torque pulse and free speed regulation between 900 and 6600 rpm. It enables the system to meet the temperature requirements of various circumstances, significantly lowers the power consumption and is easy to use

## Comfort

Precise Temperature Regulation

- The electronic expansion valve guarantees that the system made adjustments automatically according to the changes of the circumstance and water temperature

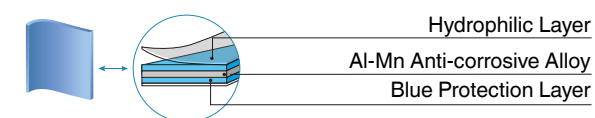
Quiet Mode

- By adjusting the output of the compressor and fan, the operation noise of the unit can be decreased by more than 3dB(A), meeting the quiet requirement at night or in special occasions

## Reliability

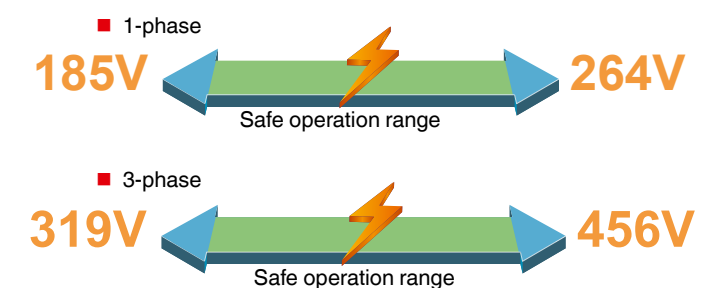
Heat Exchange Anti-corrosion

- Highly anti-corrosion blue hydrophilic coated aluminum fins have a longer lifespan than common fins



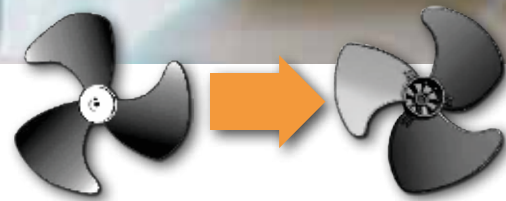
Wide Voltage Range Operation

- The unit can safely operate within the following:



# Outdoor Unit

# Hydro Box



## Fan

- Efficient axial fan with its streamline design and huge air flow volume offers powerful cooling capacity and ensures the stability and reliability of system

## Self-diagnosis of the Outdoor Unit

- With the self-diagnosis function, the outdoor unit will start auto-protection if the power voltage or the current is out of the normal range. Protection will be cancelled automatically if the power condition resumes normal

## Heat Exchanger

- Compared with the common fin, the heat exchange efficiency of the louver fin is increased by 5%



Former Models:  
Normal Flat Fin

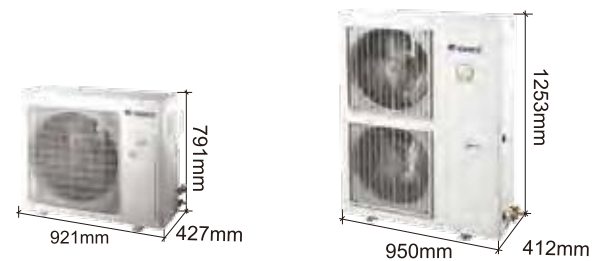


Versati:  
Louver Fin with  
Blue Coated

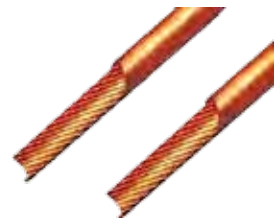
## Compact Design

- Stepless adjustment
- Higher air flow volume and lower power consumption

## Compact Design



- Special thickened inside-thread copper pipe enhances the heat exchange performance by over 8%



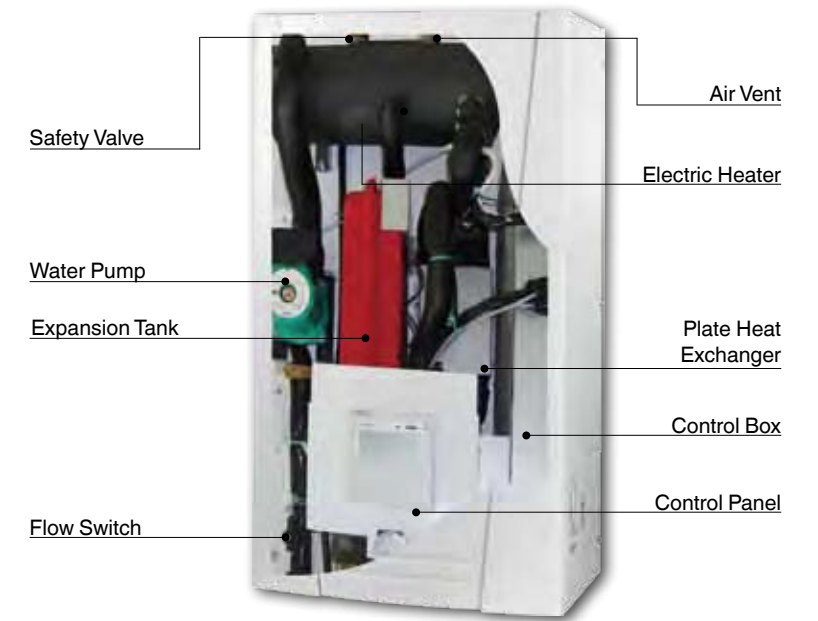
## High Efficiency



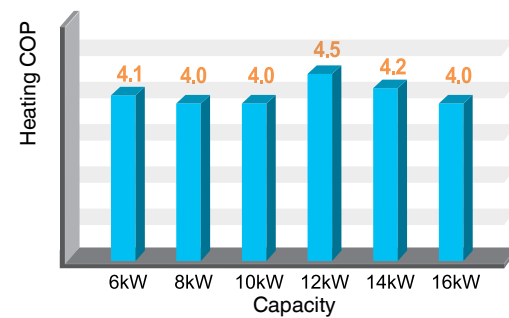
- High COP plate heat exchanger



- High efficient pump

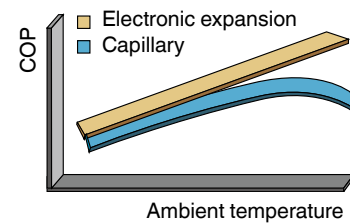


## COP up to 4.5



## Electronic Expansion Valve

- The electronic expansion valve is highly flexible. It can automatically adjust the throttle according to the refrigerant demand based on the stability of the system. It is more energy saving and stable than capillary



## Flexible and Compact Design



52kg  
Min. Weight

Compact design, easy for installation  
Dimensions (W x D x H) 500 x 324 x 900mm

Pressure safety, plate heat exchanger, expansion tank, water pump and control box all in one

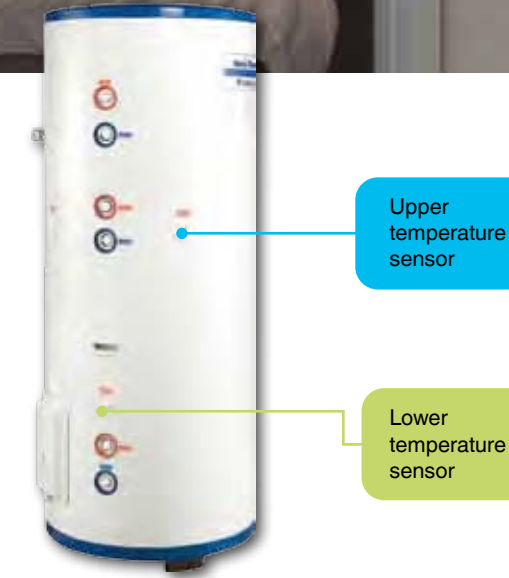




## User Friendly Control System



- |                           |   |
|---------------------------|---|
| Timer setting button      | On/Off button   |
| ESC button                | Parameter setting button  |
| Silent mode on/off button | Heating/Cooling button  |
| Address setting button    | Temperature set button  |
| Function setting button   | Operation mode setting button                                       |
| Child lock button         | Auto mode setting button (weather depending operation mode setting) |
| Clock setting button      | Confirm button (save parameter/enter the next menu)                 |
|                           | Return button (return back to the parameter)                        |



- Upper temperature sensor
- Lower temperature sensor



Cold water inlet pipe with decentralized water inlets

## Comfort

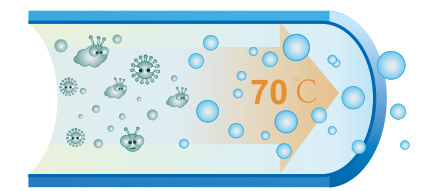
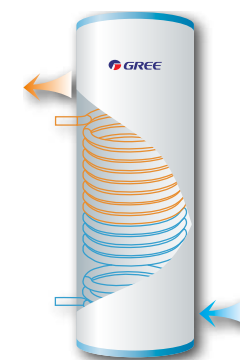
Smart Dual-temperature Detection Control Technology

- ON and OFF control of the unit is realized by upper and lower temperature sensors, which renews water temperature in real time, thus ensuring the perfect timing of startup
- Avoid premature startup. Improved hot water yielding rate by accurate timing of hot/cold water mixture
- Avoid overdue startup. Improved hot water use rate and shorten the waiting time of reheating

- Water is charged from the bottom and the water inlet pipe has equispaced water inlets, which can reduce cold water shock and enhance the service life of the tank

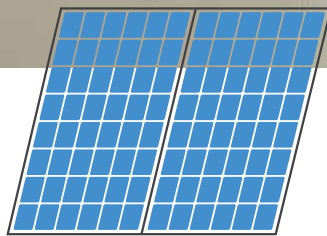
## Health

- The domestic water is sanitary and can be used directly
- The stainless steel tank and coil will not affect the water quality
- The disinfection function at a high temperature up to 70°C can prevent the growth of bacteria and ensure sanitary water, creating a wholesome life for the user



- |                        |                                 |  |   |
|------------------------|---------------------------------|--|---|
| Silent mode            | Water-Leaving temperature       | 24 hours timer                           | The second stage internal electric heater |
| Heating mode           | Sanitary water tank temperature | 24 hours decrease timer                  | Sanitary water tank heater                |
| Cooling mode           | Solar leaving temperature       | Weekly timer                             | Thermostat                                |
| Weather depending mode | Function setting                | Holiday reservation                      | Central Controller                        |
| Sanitary heating mode  | Temperature view                | Water pump                               | Auxiliary solar thermal pump              |
| Disinfection mode      | Trouble                         | Outdoor unit                             |   |
| Room air temperature   | Defrosting                      | The first stage internal electric heater |   |

# Water Tank



Solar panel

## Flexibility

- Dual-coil design makes it convenient to join solar panel or boiler



Boiler

## Reliability

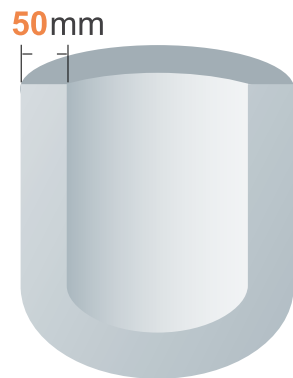
- Adopting bearing tank, the unit can replenish water when using water, ensuring rapid storage and continuous delivery



- Magnesium stick protecting container contributes to lifespan



- 50mm thickness of thermal insulating layer



Isolation of water and electricity ensures safe operation

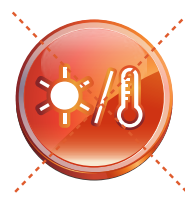
- Water and electricity are completely separated so that electrical leakage is absolutely avoided
- Advanced microcomputer control and complete protection functions help prevent electricity leakage, dry heating, overheating, etc



Dry heating



Electricity leakage



Overheating

# Flexible applications

## Five-Mode Operation

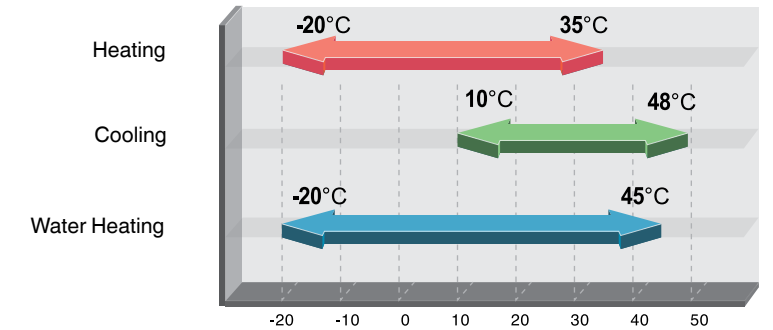
Heating	Cooling	Water Heating	Heating + water heating	Cooling +water heating
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Wide Range of Operation Temperature

- Heating -20~35°C
- Cooling 10~48°C
- Water Heating -20~48°C

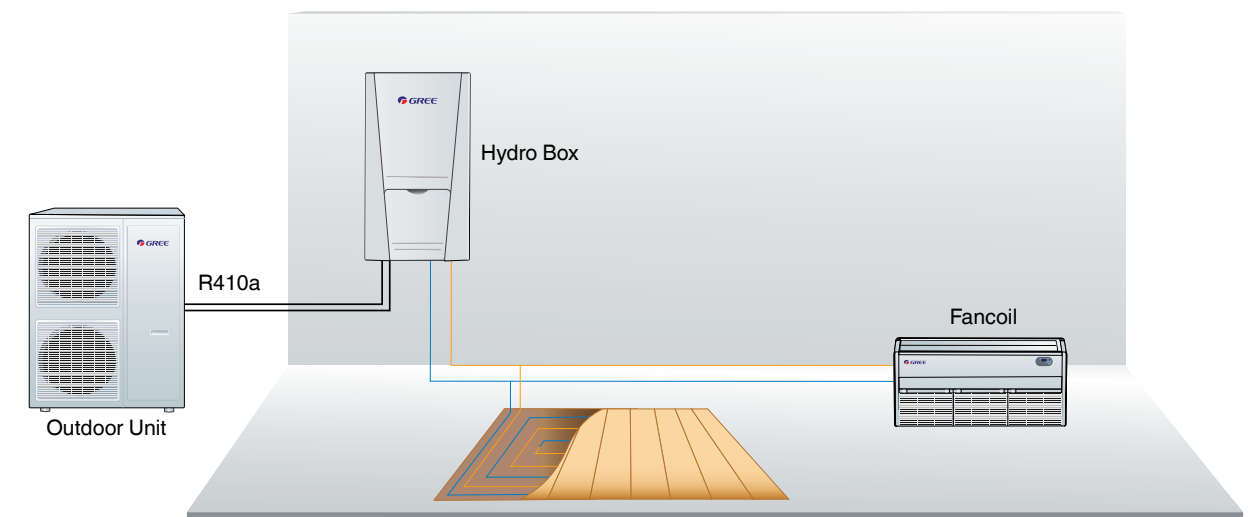
Hot Water Temperature Range

- Domestic water: 40~80°C
- Heating
  - Fan coil/Radiator: 25°C~55°C
  - Floor: 25°C~45°C
- Cooling
  - Fan coil/Radiator: 7°C~25°C
  - Floor: 18°C~25°C

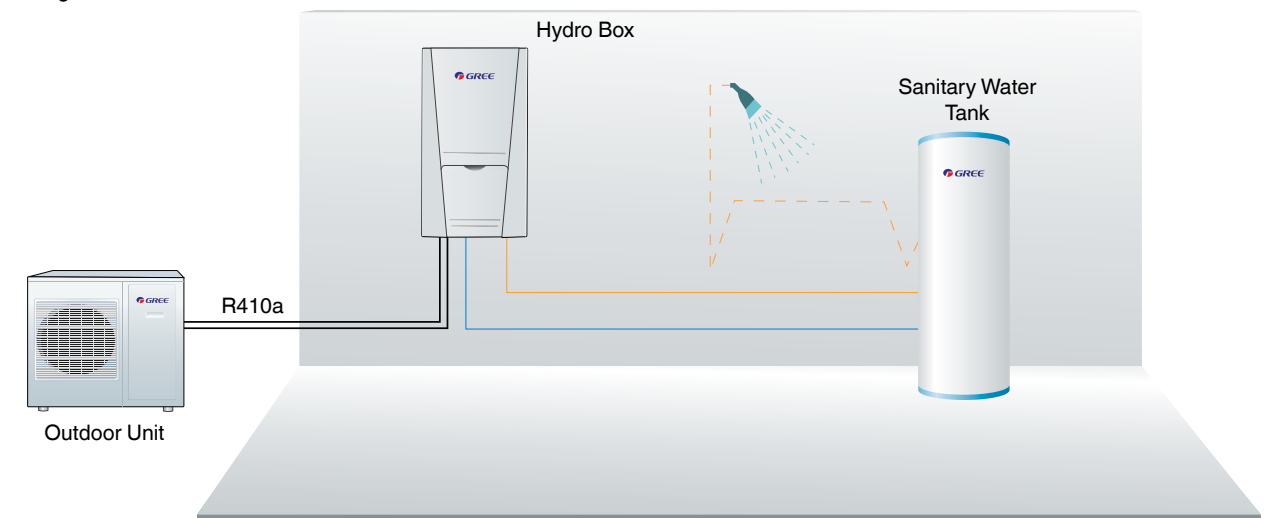


## Combination Examples

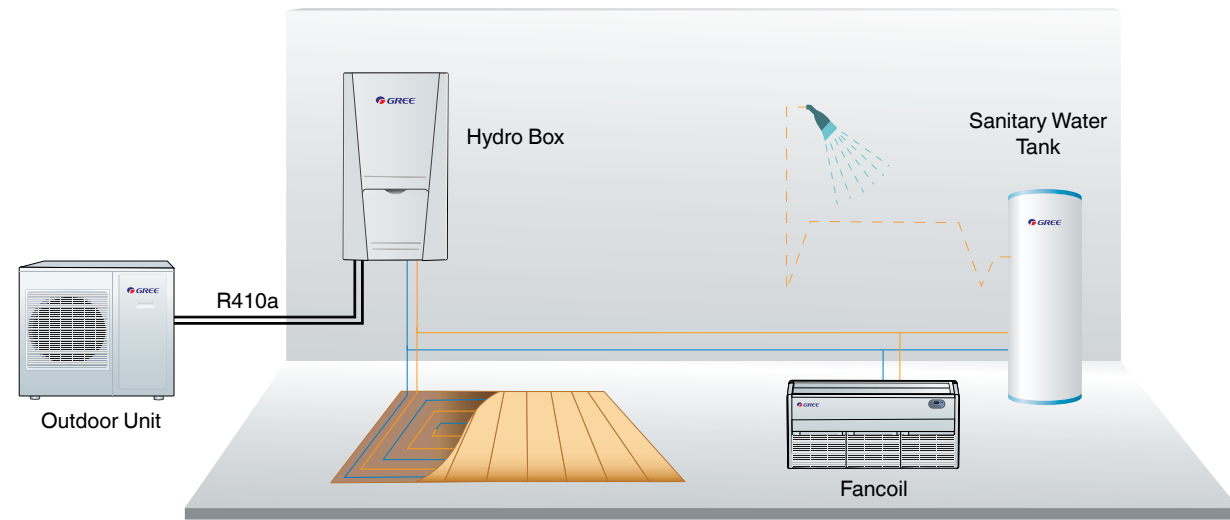
- Heating / Cooling



- Water Heating



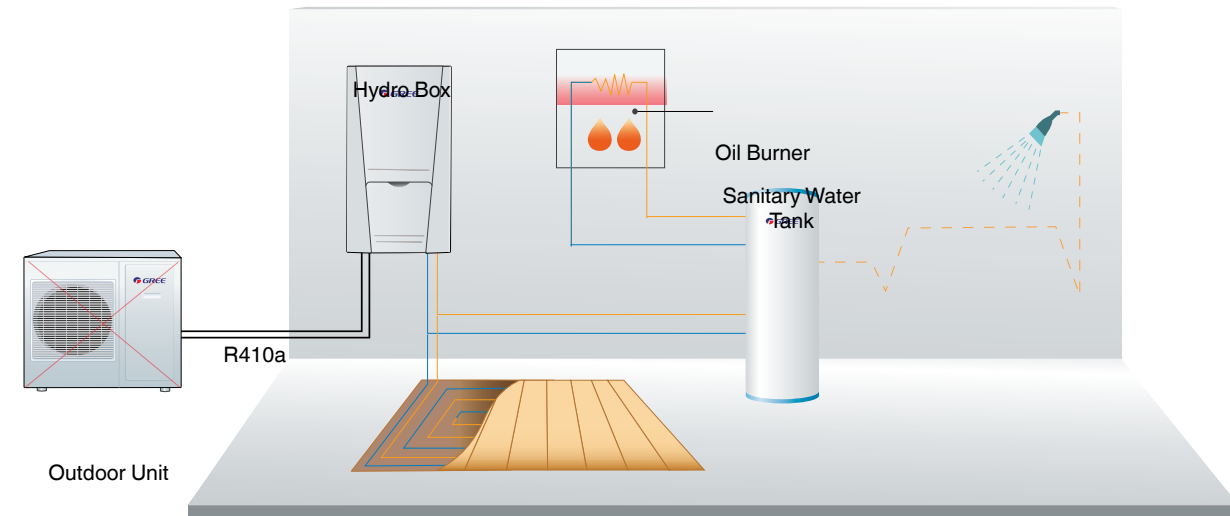
■ Heating / Cooling with Water Heating



## Multiple Additional Functions and Humanized Function

### Urgent Water Heating

- The heat pump uses the backup electrical heater in case that any fault occurred



### Quick Water Heating

- The heat pump and the electric heater of the water tank operate at the same time to realize rapid heating

### Disinfection

- The water will be heated to 70°C at set times to kill the bacteria in the water. The disinfection is usually carried out at night

### Holiday Mode

- When the user is on a trip in winter, the unit can be set to automatic operation so as to keep the room temperature between 10°C and 15°C

### Weather-dependent operation

- The unit can automatically adjust the operation state according to the temperature range set by the user

### Floor Protection

#### Under floor heating:

- As for under floor heating, the default highest water temperature is 45°C so that it will not damage the floor or reduce its lifespan due to superheat. (The highest temperature of outlet water during heating operation is 55°C)

#### Under floor cooling:

- As for under floor cooling, the default lowest water temperature is 18°C so that it will not produce condensate which will damage the floor or reduce the lifespan of the floor. (The lowest temperature of outlet water during cooling operation is 7°C)

Indoor Unit			GRS-CQ6.0Pd Na-K(I)	GRS-CQ8.0Pd Na-K(O)	GRS-CQ10Pd Na-K(O)	GRS-CQ12Pd Na-K(O)	GRS-CQ14Pd Na-K(O)	GRS-CQ16Pd Na-K(O)	
Power Supply		V/Ph/Hz	220~240/1/50						
Rated input		W	3,2	6,2	6,2	6,2	6,2	6,2	
Connecting pipe (refrigerant)	Gas	mm (inch)	12.7 (1/2)	15.9 (5/8)	15.9 (5/8)	15.9 (5/8)	15.9 (5/8)	15.9 (5/8)	
	Liquid	mm (inch)	6.35 (1/4)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	
Connecting pipe (water)	Water inlet	inch	1" Male BSP	1" Male BSP	1" Male BSP	1" Male BSP	1" Male BSP	1" Male BSP	
	Water outlet	inch	1" Male BSP	1" Male BSP	1" Male BSP	1" Male BSP	1" Male BSP	1" Male BSP	
Safety valve		Bar	3	3	3	3	3	3	
Leaving water temp.	Cooling (Fan coil unit)	[°C]	7~25						
	Cooling (Floor cooling)	[°C]	18~25						
	Heating (Fan coil unit)	[°C]	25~55 (High Temperature Cycle)						
	Heating (Floor heating)	[°C]	25~45 (Low Temperature Cycle)						
Main Components	Pump	Type	Water-cooled						
		Nr. of speed	3						
		Power input	200						
		Water flow limit	7,5						
	Expansion Vessel	Volume	Liter	10					
		Water Pressure (Max)	Bar	3					
	Electric Heater	Water Pressure (Pre)	Bar	1					
		Type	-	Sheath	Sheath	Sheath	Sheath	Sheath	Sheath
		Material	-	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
		Operation	-	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Steps		-	2	2	2	2	2	2	
Capacity		-	3	6	6	6	6	6	
Heat Exchanger	Combination	[kW]	1.5 + 1.5	3 + 3	3 + 3	3 + 3	3 + 3	3 + 3	
	Power input	V/Hz	1/230/50						
Sound Pressure Level	Type	-	Brazed Plate HEX	Brazed Plate HEX	Brazed Plate HEX	Brazed Plate HEX	Brazed Plate HEX	Brazed Plate HEX	
	Quantity	-	1	1	1	1	1	1	
Dimensions	Outline (WxDxH)	mm	900 x 500 x 324						
	Packaged (WxDxH)	mm	1040 x 605 x 380						
Weight	Net	Kg	52			53			
	Gross	Kg	62			63			



# Specifications

# Specifications

6 kW, 8 kW, 10 kW

12 kW, 14 kW, 16 kW

Outdoor Unit			GRS-CQ6.0Pd Na-K(O)	GRS-CQ8.0Pd Na-K(O)	GRS-CQ10Pd Na-K(O)	GRS-CQ12Pd Na-K(O)	GRS-CQ14Pd Na-K(O)	GRS-CQ16Pd Na-K(O)
Capacity <sup>1</sup>	Heating (floor)	[kW]	6,2	8,5	10	12	14	16
	Cooling (floor)	[kW]	5,5	9	10,5	14	15	15,5
Power Input <sup>1</sup>	Heating (floor)	[kW]	1,5	2,1	2,5	2,67	3,33	3,9
	Cooling (floor)	[kW]	1,6	2,5	3,14	3,68	4,28	4,62
EER <sup>1</sup>	Cooling (floor)	-	3,4	3,6	3,35	3,8	3,5	3,35
COP <sup>1</sup>	Heating (floor)	-	4,1	4	4	4,5	4,2	4
Capacity <sup>2</sup>	Heating (Fancoil/ Radiator)	[kW]	5,5	8	9	11,5	13	14
	Cooling (Fancoil)	[kW]	4	6,5	8	10	11	11,5
Power Input <sup>2</sup>	Heating (Fancoil/ Radiator)	[kW]	1,8	2,65	2,9	3,35	3,88	4,59
	Cooling (Fancoil)	[kW]	1,53	2,5	3,08	3,45	3,93	4,2
EER <sup>2</sup>	Cooling (Fancoil)	-	2,6	2,6	2,6	2,9	2,8	2,5
COP <sup>2</sup>	Heating (Fancoil/ Radiator)	-	3	3	3,1	3,4	3,35	3,05
Power Supply	V/Ph/Hz	-	220~240/1/50					
Rated input	Cooling	[kW]	2,46	5	5	6,6	6,6	7
	Heating	[kW]	2,75	4,6	4,6	5,5	5,5	6
Rated current	Cooling	[A]	11	21,7	21,7	30	30	32
	Heating	[A]	12	20	20	25	25	28
Compressor	Type	-	Hermetically sealed swing compressor					
	Quantity	-	1	1	1	1	1	1
Fan	Type	-	Propeller					
	Quantity	-	1	1	1	2	2	2
	Air flow volume	[CFM]	/	/	/	3766	3766	3766
Fan Motor	Quantity	-	1	1	1	2	2	2
	Output	[W]	150	150	150	120	120	120
Refrigerant	Type	-	R410A	R410A	R410A	R410A	R410A	R410A
	Charge	[g]	1700	2000	2000	3300	3300	3300
	Control	-	Electronic Expansion Valve					
Heat exchanger	Quantity	-	1	1	1	2	2	2
	Type	-	hydrophile					
	Rows	-	2	2	2	2	2	2
	Columns	-	30	30	30	28	28	28
	FPI	Fins/inch	16	16	16	14	14	14
Sanitary water Temperature	T	[°C]	40~80					
Sound Pressure Level	cooling	[dB(A)]	57	57	57	57	57	60
	heating	[dB(A)]	59	59	59	59	59	62
Refrigerant pipe	Gas	[mm(inch)]	12,7(1/2)	15,9(5/8)	15,9(5/8)	15,9(5/8)	15,9(5/8)	15,9(5/8)
	Liquid	[mm(inch)]	6,35(1/4)	9,52(3/8)	9,52(3/8)	9,52(3/8)	9,52(3/8)	9,52(3/8)
	Connection	-	Flare Connection					
Dimensions	Outline (WxDxH)	[mm]	921x427x791	921x427x791	921x427x791	950x412x1253	950x412x1253	950x412x1253
	Packaged (WxDxH)	[mm]	1065x485x840	1065x485x840	1065x485x840	1110x450x1385	1110x450x1385	1110x450x1385
Weight	Net	[Kg]	66	69	69	99	99	99
	Gross	[Kg]	71	74	74	108	108	108

## Note:

1 Capacities and power inputs are based on the following conditions:

<sup>1</sup> Cooling conditions  
Indoor Water Temperature 23°C/18°C;  
Outdoor Air Temperature 35°CDB/24°CWB

<sup>2</sup> Heating conditions  
Indoor Water Temperature 30°C/35°C  
Outdoor Air Temperature 7°CDB/6°CWB

<sup>3</sup> Standard piping length 7.5m

2 Capacities and power inputs are based on the following conditions:

<sup>1</sup> Cooling conditions  
Indoor Water Temperature 12°C/7°C;  
Outdoor Air Temperature 35°CDB/24°CWB

<sup>2</sup> Heating conditions  
Indoor Water Temperature 40°C/45°C;  
Outdoor Air Temperature 7°CDB/6°CWB

<sup>3</sup> Standard piping length 7.5m



Water Tank			SXVD200LC_/A-K		SXVD300LC_/A-K		SXVD200LC_/A-M		SXVD300LC_/A-M	
Water Tank Volume	L		200		300		200		300	
Electric Heater Power	W		3000				3000			
Power Supply	V/Hz		1/230/50				3/400/50			
Cool Water Inlet Pipe	Outer diameter	mm	DN15				DN15			
		inch	1/2				1/2			
	Screw thread spec		1/2" Female BSP				1/2" Female BSP			
Hot Water Outlet Pipe	Outer diameter	mm	DN15				DN15			
		inch	1/2				1/2			
	Screw thread spec		1/2" Female BSP				1/2" Female BSP			
Circulation Water Inlet/Outlet Pipe	Outer diameter	mm	/	DN20	/	DN20	/	DN20	/	DN20
		inch	/	3/4	/	3/4	/	3/4	/	3/4
	Screw thread spec		/	3/4" Female BSP	/	3/4" Female BSP	/	3/4" Female BSP	/	3/4" Female BSP
Unit Dimension (øD x H)	mm		DN20				DN20			
Packing Dimension	Height	mm	3/4				3/4			
	Width	mm	3/4" Female BSP				3/4" Female BSP			
Unit Dimension (øD x H)	mm		ø540 x 1595		ø620 x 1620		ø540 x 1595		ø620 x 1620	
Packing Dimension	Height	mm	630		710		630		710	
	Width	mm	1620		1645		1620		1645	
	Depth	mm	625		705		625		705	
Net/Gross Weight	kg		68/77	71/80	82/92	87/97	68/77	71/80	82/92	87/97

## Thinking and acting in harmony

Air Trade Centre is a prominent supplier of Heating, Ventilation and Air Conditioning products (HVAC), active both within Europe and beyond. The strength of Air Trade Centre derives from our unique combination of people, knowledge, experience and technology. We provide customized advice and specialize in supplying HVAC equipment and components and consistently deliver high-quality HVAC solutions.

### Air Trade Centre offers:

- One-stop-shopping
- A broad spectrum of more than 10.000 products of which 80% are available in stock
- Over 250 employees in 11 countries
- Company information in 6 languages
- An E-shop in 8 languages.

Our organization stimulates development and the sharing of technology. By allocating a fixed percentage of our income to internal and external training programs, Air Trade Centre aims to satisfy customers, employees and shareholders through our company's growth on the international HVAC market. **Durable** HVAC solutions are central to this. With this vision in mind, we have adopted a strategy designed to establish long-term relationships with the help of **Single Sourcing** and a broad, comprehensive product range.

Air Trade Centre believes in an organization of people who are unconditionally faithful and loyal to one another. Our personnel is persistently ambitious and resolute in their actions, which ultimately leads to greater feeling for and involvement with each other and the world around us. This is symbolized by the special qualities of the Crane, a strong, tranquil and majestic bird that for centuries has been a symbol of happiness, good health and long life in many cultures. The dancing Crane, our company's perfect metaphor for the harmony between people and technology.

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