

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.

Versati 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!**



P.2 Versati Air to Water Heat Pump

ECO-FRIENDLY

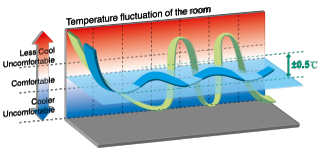
Versati adopts R410A, a new eco-friendly refrigerant, harmless to the atmosphere. Moreover, with advanced heat pump technology and powerful hardware, the efficiency of Versati has been improved, resulting in much lower CO₂ discharge. It is an eco-friendly product, which mirrors our social commitment to protect the environment.



Outdoor Unit

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

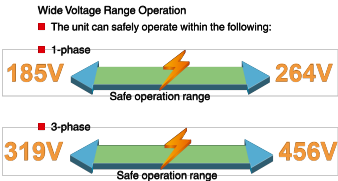
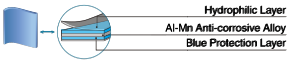
- By adopting DC inverter technology, the compressor regulates its output according to the heating requirements to achieve higher efficiency
- The DC inverter compressor optimizes its output to ensure efficient operation
- Using stepless power regulation technology, the DC Inverter compressor achieves 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



P.3 Versati, Air to Water Heat Pump

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%

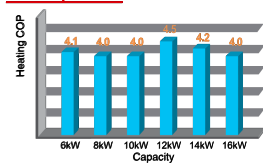


Former Models:
Normal Flat Fin



Versati:
Louver Fin with
Blue Coated

COP up to 4.5

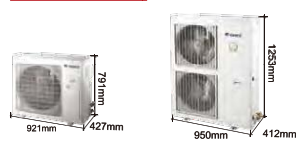


P.4 Versati Air to Water Heat Pump

Compact Design

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

Compact Design

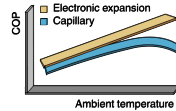


- Special thickened inside-thread copper pipe enhances the heat exchange performance by over 8%



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



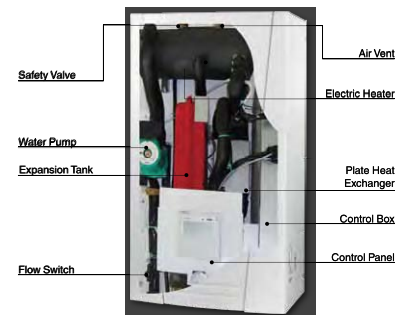
High Efficiency



- High COP plate heat exchanger



- High efficient pump



Flexible and Compact Design



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



P.5 Versati Air to Water Heat Pump

Controller

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) |



Water Tank



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

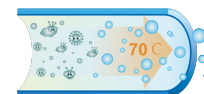
- Water is charged from the bottom and the water inlet pipe has equispaced water inlets, which can reduce cold water shock and enhance the service life of the tank

Health

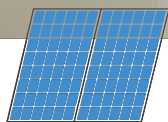
- The domestic water is sanitary and can be used directly

- 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



Water Tank



Solar panel

Flexibility

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



Boiler

Reliability

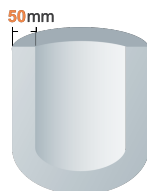
- Adopting bearing tank, the unit can replenish water when using water, ensuring rapid storage and continuous delivery



- 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

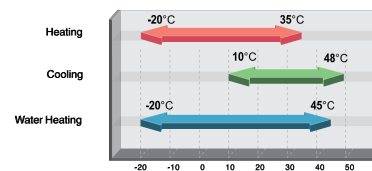
Heating	Cooling	Water Heating	Heating + water heating	Cooling + water heating
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Wide Range of Operation Temperature

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

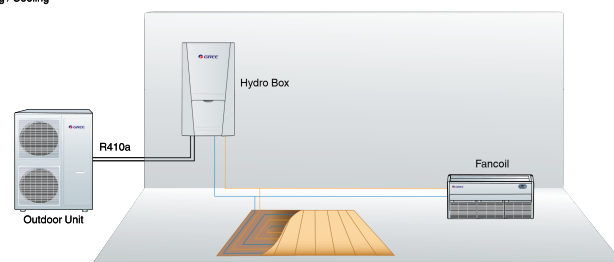
Hot Water Temperature Range

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

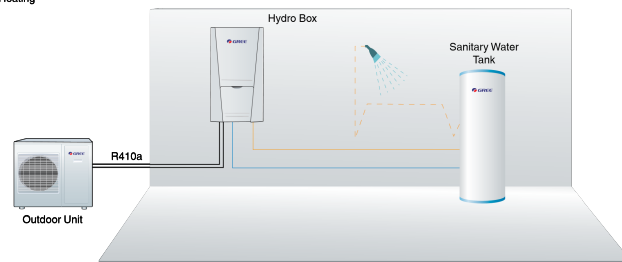


Combination Examples

- Heating / Cooling

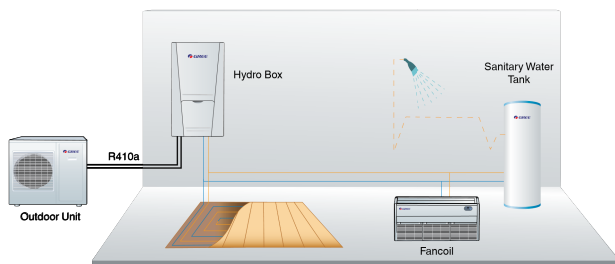


- Water Heating



Flexible applications

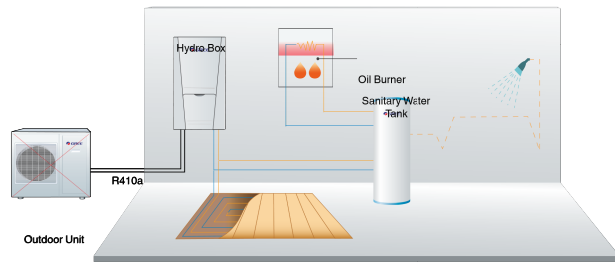
■ Heating / Cooling with Water Heating



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)

Specifications



Indoor Unit			GRS-CO6.0Pd Na-K(O)	GRS-CO8.0Pd Na-K(O)	GRS-CO10Pd Na-K(O)	GRS-CO12Pd Na-K(O)	GRS-CO14Pd Na-K(O)	GRS-CO16Pd Na-K(O)
Power Supply			220-240/150					
Connecting pipe (refrigerant)	Rated input	W	3.2	6.2	6.2	6.2	6.2	6.2
		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)
Connecting pipe (water)	Gas	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)
	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
		°C	7-25	7-25	7-25	7-25	7-25	7-25
Leaving water temp.	Cooling (Fan coil unit)	°C	18-25	18-25	18-25	18-25	18-25	18-25
	Cooling (Floor cooling)	°C	25-55 (High Temperature Cycle)	25-55 (High Temperature Cycle)	25-55 (High Temperature Cycle)	25-55 (High Temperature Cycle)	25-55 (High Temperature Cycle)	25-55 (High Temperature Cycle)
Main Components	Heating (Fan coil unit)	°C	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)
	Heating (Floor heating)	°C	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)	25-45 (Low Temperature Cycle)
Pump	Type	-	Water-cooled	Water-cooled	Water-cooled	Water-cooled	Water-cooled	Water-cooled
	Nr. of speed	-	3	3	3	3	3	3
Expansion Vessel	Power input	W	200	200	200	200	200	200
	Water flow limit	LPM	7.5	7.5	7.5	7.5	7.5	7.5
Electric Heater	Volume	Liter	10	10	10	10	10	10
	Water Pressure (Max)	Bar	3	3	3	3	3	3
Heat Exchanger	Water Pressure (Pre)	Bar	1	1	1	1	1	1
	Type	-	Sheath	Sheath	Sheath	Sheath	Sheath	Sheath
Sound Pressure Level	Material	-	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Operation	-	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Dimensions	Steps	-	2	2	2	2	2	2
	Capacity	-	3	6	6	6	6	6
Weight	Combination	[kW]	1.5 + 1.5	3 + 3	3 + 3	3 + 3	3 + 3	3 + 3
	Power input	W/Hz	1/230/50	1/230/50	1/230/50	1/230/50	1/230/50	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	900 x 500 x 324	900 x 500 x 324	900 x 500 x 324	900 x 500 x 324	900 x 500 x 324
	Packaged (WxDxH)	mm	1040 x 605 x 380	1040 x 605 x 380	1040 x 605 x 380	1040 x 605 x 380	1040 x 605 x 380	1040 x 605 x 380
Weight	Net	Kg	52	52	52	52	52	52
	Gross	Kg	62	62	62	62	62	62



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 ¹	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 ¹	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 ¹ COP ¹	Cooling (floor)	-	3.4	3.6	3.35	3.8	3.5	3.35
	Heating (floor)	-	4.1	4	4	4.5	4.2	4
Capacity ²	Heating (Fancoil/ Radiator)	[kW]	5.5	8	9	11.5	13	14
	Cooling (Fancoil/ Radiator)	[kW]	4	6.5	8	10	11	11.5
Power Input ²	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 ² COP ²	Cooling (Fancoil)	-	2.6	2.6	2.6	2.9	2.8	2.5
	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
	Cooling	[A]	11	21.7	21.7	30	30	32
Rated current	Heating	[A]	12	20	20	25	25	28
	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
	Type	-	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant	Charge	[g]	1700	2000	2000	3300	3300	3300
	Control	-	Electronic Expansion Valve					
	Quantity	-	1	1	1	2	2	2
Heat exchanger	Type	-	hydrophile					
	Rows	-	2	2	2	2	2	2
	Columns	-	30	30	30	28	28	28
Sanitary water Temperature Level	FPI	Fins/inch	16	16	16	14	14	14
	T	[°C]	40-80					
	Sound Pressure	-	57	57	57	57	57	60
Refrigerant pipe	cooling	[dB(A)]	57	57	57	57	57	60
	heating	[dB(A)]	59	59	59	59	59	62
	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)
Dimensions	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					
	Outline (WxDxH)	[mm]	921x427x791	921x427x791	921x427x791	950x412x1253	950x412x1253	950x412x1253
Weight	Packaged (WxDxH)	[mm]	1065x455x840	1065x455x840	1065x455x840	1110x450x1385	1110x450x1385	1110x450x1385
	Net	[Kg]	66	69	69	99	99	99
	Gross	[Kg]	71	74	74	108	108	108

P.12 Versa® Air to Water Heat Pump



Note:

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

- Cooling conditions
Indoor Water Temperature 23°C/18°C;
Outdoor Air Temperature 35°CDB/24°CWB
- Heating conditions
Indoor Water Temperature 30°C/35°C
Outdoor Air Temperature 7°CDB/6°CWB
- Standard piping length 7.5m

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

- Cooling conditions
Indoor Water Temperature 12°C/7°C;
Outdoor Air Temperature 35°CDB/24°CWB
- Heating conditions
Indoor Water Temperature 40°C/45°C;
Outdoor Air Temperature 7°CDB/6°CWB
- 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	3000
Power Supply	V/Hz	1/230/50	1/230/50	1/230/50	1/230/50
	mm	DN15	DN15	DN15	DN15
Cool Water Inlet Pipe	Outer diameter	1/2	1/2	1/2	1/2
	Screw thread spec	1/2" Female BSP	1/2" Female BSP	1/2" Female BSP	1/2" Female BSP
Hot Water Outlet Pipe	Outer diameter	DN15	DN15	DN15	DN15
	Screw thread spec	1/2" Female BSP	1/2" Female BSP	1/2" Female BSP	1/2" Female BSP
Circulation Water Inlet/Outlet Pipe	Outer diameter	mm	/	DN20	/
	inch	/	3/4	3/4	3/4
Unit Dimension (øD x H)	mm	DN20	DN20	DN20	DN20
	inch	3/4	3/4	3/4	3/4
Packing Dimension	Height	mm	630	630	630
	Width	mm	1620	1645	1645
Net/Gross Weight	kg	68/77	71/80	82/92	87/97

P.13 Versa® Air to Water Heat Pump