



Monoblock DC Inverter Series

Installation Manual



CGK030V2
CGK020V2



CGK050V2、CGK-050V2
CGK060V2、CGK-060V2
CGK-080V2

Air to Water Heat Pump
Heating+Cooling+DHW

Refrigerant: R410A

PC board code:

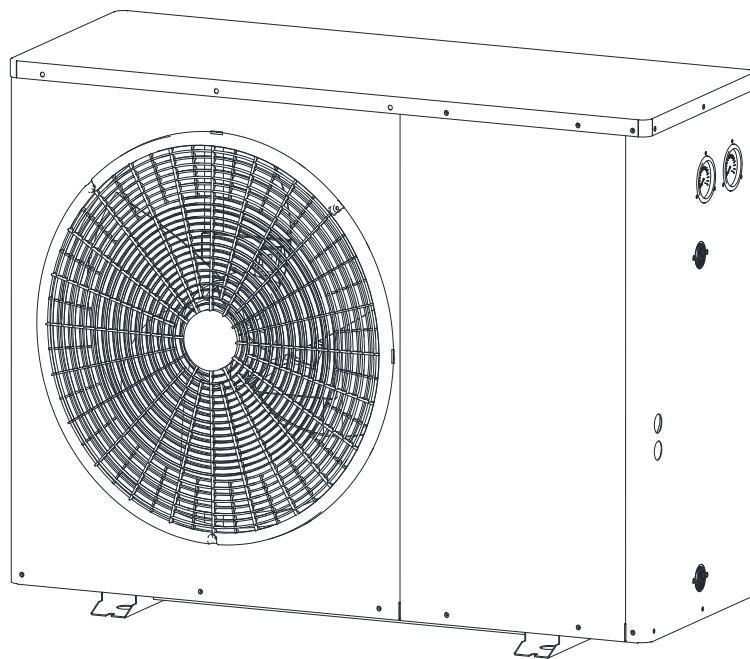
LCD code:

Safety precaution



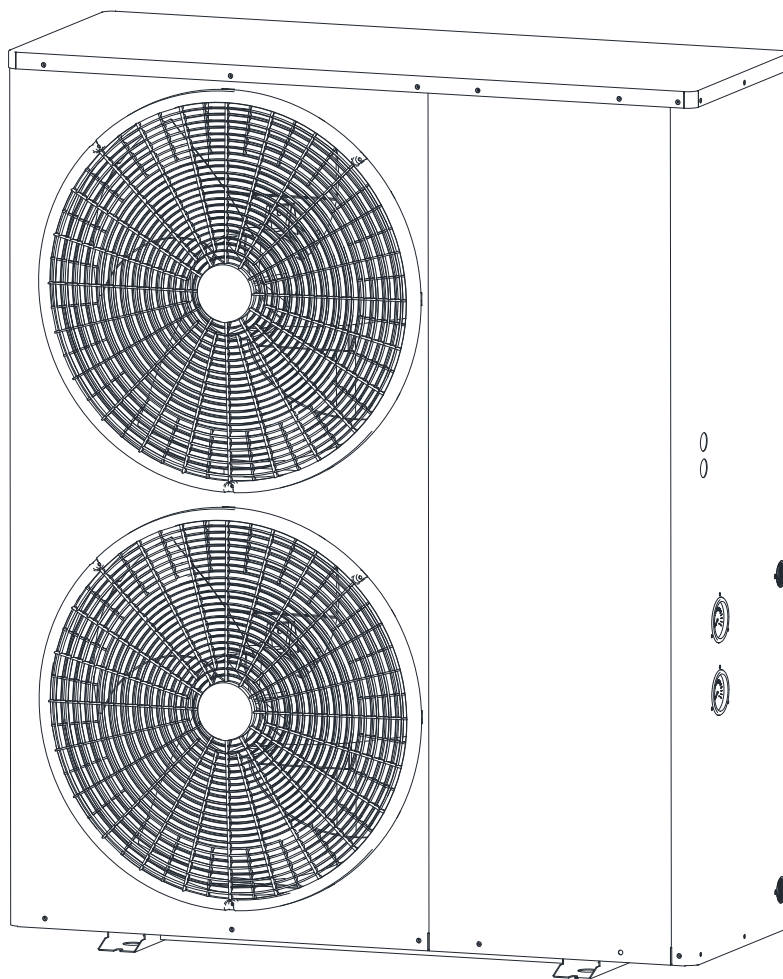
- a. To avoid electrical shock, make sure to disconnect power supply 1 minute or more before operating the electrical part. Even after 1 minute, always measure the voltage at the terminals of main circuit capacitors or electrical parts and, before touching, make sure that those voltages are lower than the safety voltage.
- b. Power supply wire line size must be selected according to this manual. And must be grounded.
- c. Don't put in hands or stick to air outlet grill when fan motor are working.
- d. Don't use wet hand touch wire lines, and don't pull any wire lines of the unit.
- e. Water or any other kind liquid is forbidden to poured into the unit.
- f. Select correct air breaker and leakage protection switch.
- g. Don't touch the fin of source side heat exchanger, it may hurt your finger.
- h. If any wire line is loose or damaged, suggest let qualified person to fix it.

To know the product from exterior



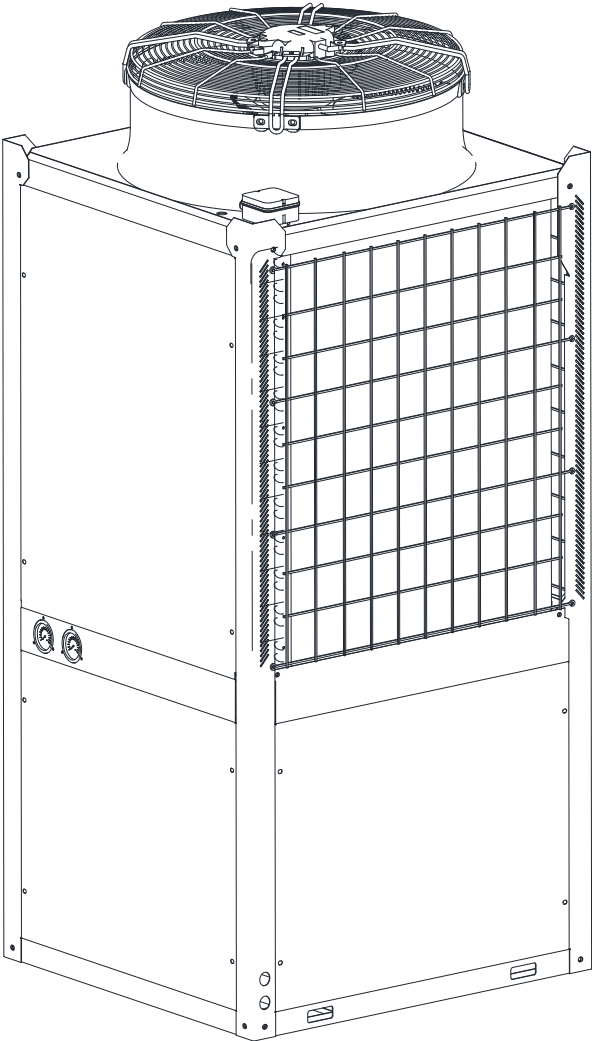
CGK020V2、CGK030V2、CGK-030V2、CGK040V2、CGK-040V2

To know the product from exterior



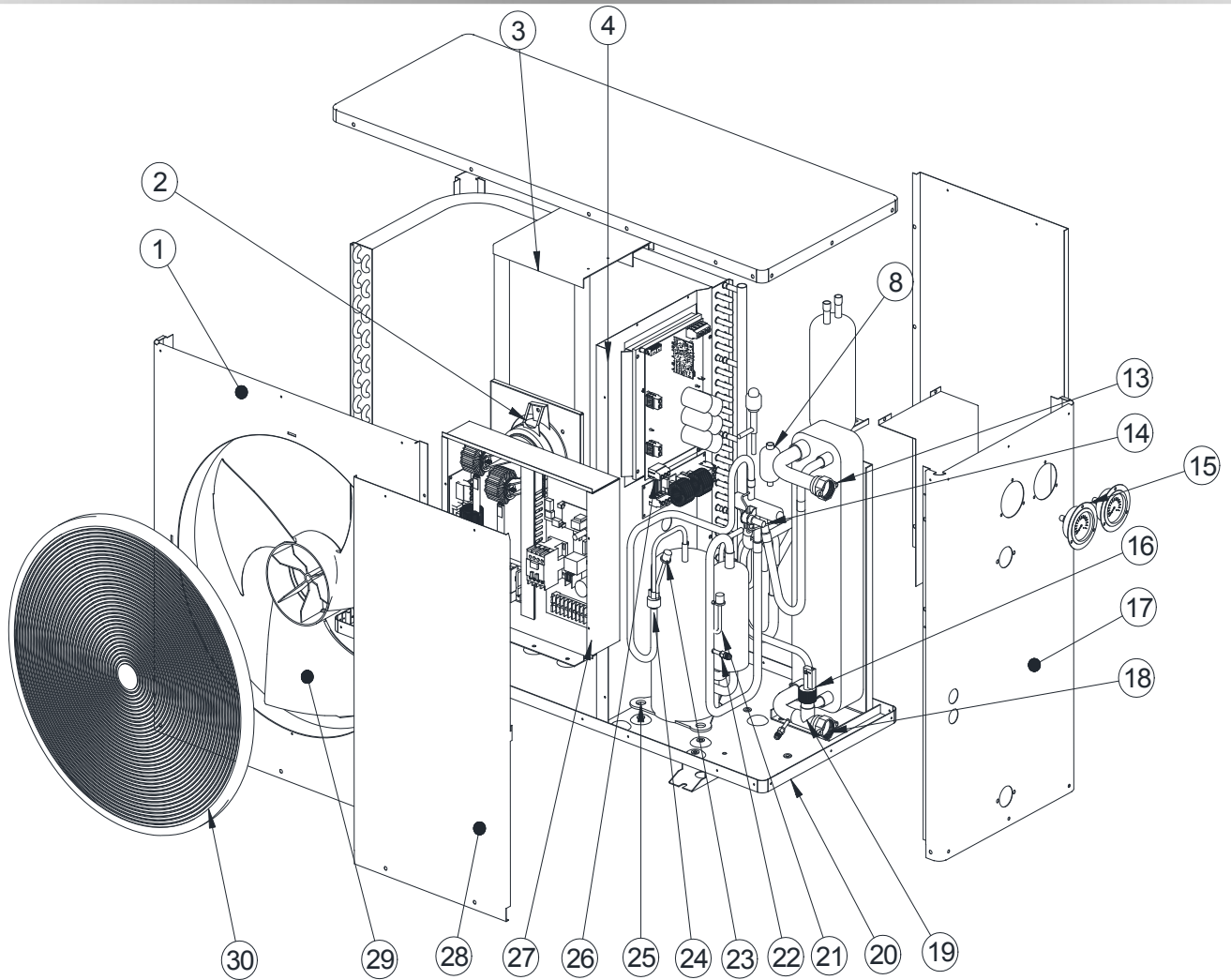
CGK050V2、CGK-050V2、CGK060V2、CGK-060V2、CGK-080V2

To know the product from exterior



CGK-100V2

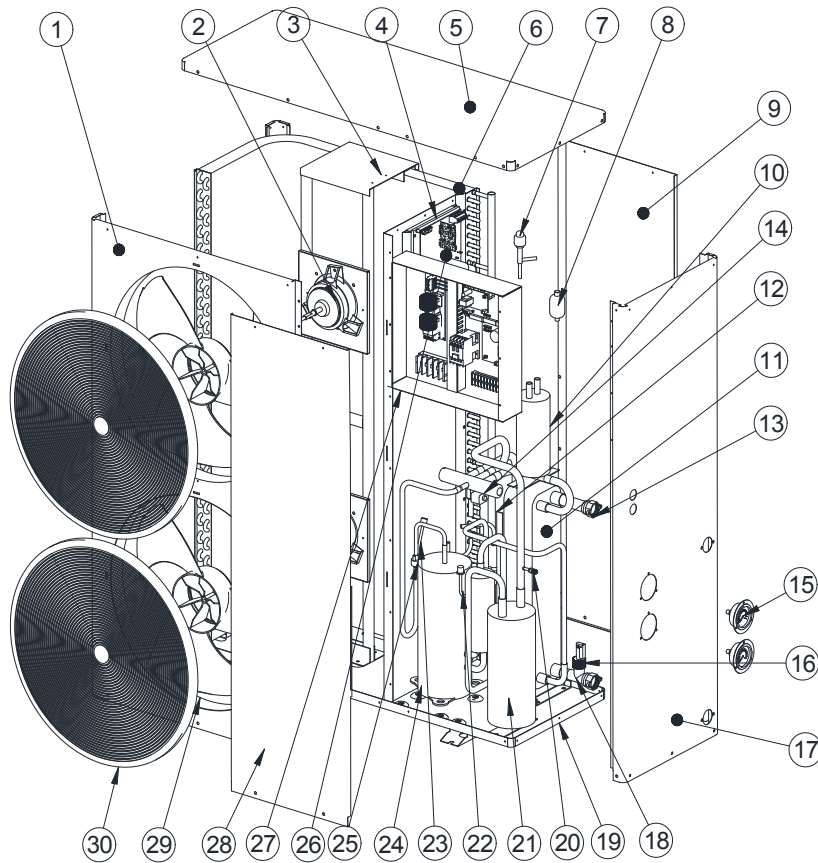
To know the product from exterior



CGK020V2、CGK030V2、CGK040V2

No.	Component	No.	Component
1	Air outlet board	16	Water flow switch
2	Fan motor	17	Right side plate
3	Motor bracket	18	Brass water connector
4	Middle septum board	19	T-type three-way valve
5	Top cover	20	Bottom plate
6	Evaporator	21	Low pressure sensor
7	Expansion valve	22	Needle valve
8	Copper filter	23	High pressure sensor
9	Back repair board	24	Trousers-type four-way valve
10	Reservoir	25	Compressor
11	Plate heat exchanger	26	Frequency converter
12	Plate exchanger bracket	27	Electric box
13	Brass water connector	28	Front repair board
14	Four-way valve	29	Fan
15	Pressure gauge	30	Plastic mesh cover

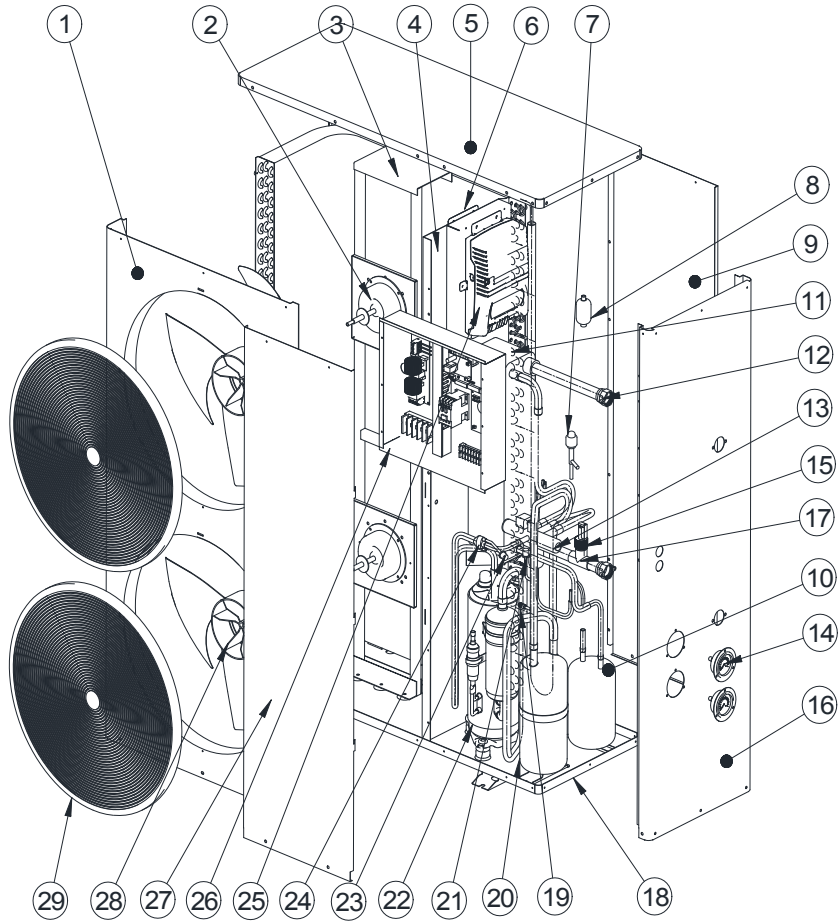
To know the product from exterior



CGK050V2、CGK-050V2、CGK060V2、CGK060V2

No.	Component	No.	Component
1	Air outlet board	16	Water flow switch
2	Fan motor	17	Right side plate
3	Motor bracket	18	T-type three-way valve
4	Middle septum board	19	Bottom plate
5	Top cover	20	Needle valve
6	Evaporator	21	separator
7	Expansion valve	22	Low pressure sensor
8	Copper filter	23	High pressure sensor
9	Back repair board	24	Compressor
10	Reservoir	25	Trousers-type four-way valve
11	Plate heat exchanger	26	Frequency converter
12	Plate exchanger bracket	27	Electric box
13	Brass water connector	28	Front repair board
14	Four-way valve	29	Fan
15	Pressure gauge	30	Plastic mesh cover

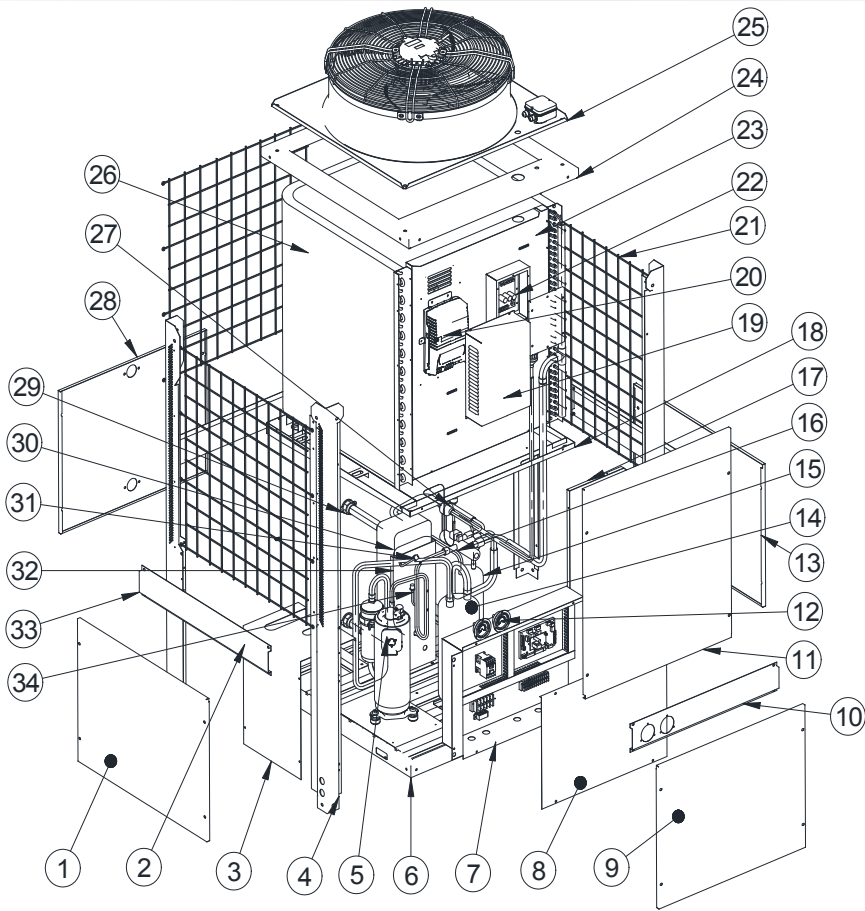
Important parts in heat pump



CGK-080V2

No.	Component	No.	Component
1	Air outlet board	16	Right side plate
2	Fan motor	17	T-type three-way valve
3	Motor bracket	18	Bottom plate
4	Middle septum board	19	Needle valve
5	Top cover	20	separator
6	Evaporator	21	Low pressure sensor
7	Expansion valve	22	Compressor
8	Copper filter	23	High pressure sensor
9	Back repair board	24	Trousers-type four-way valve
10	Reservoir	25	Frequency converter
11	Plate heat exchanger	26	Electric box
12	Brass water connector	27	Front repair board
13	Four-way valve	28	Fan
14	Pressure gauge	29	Plastic mesh cover
15	Water flow switch		

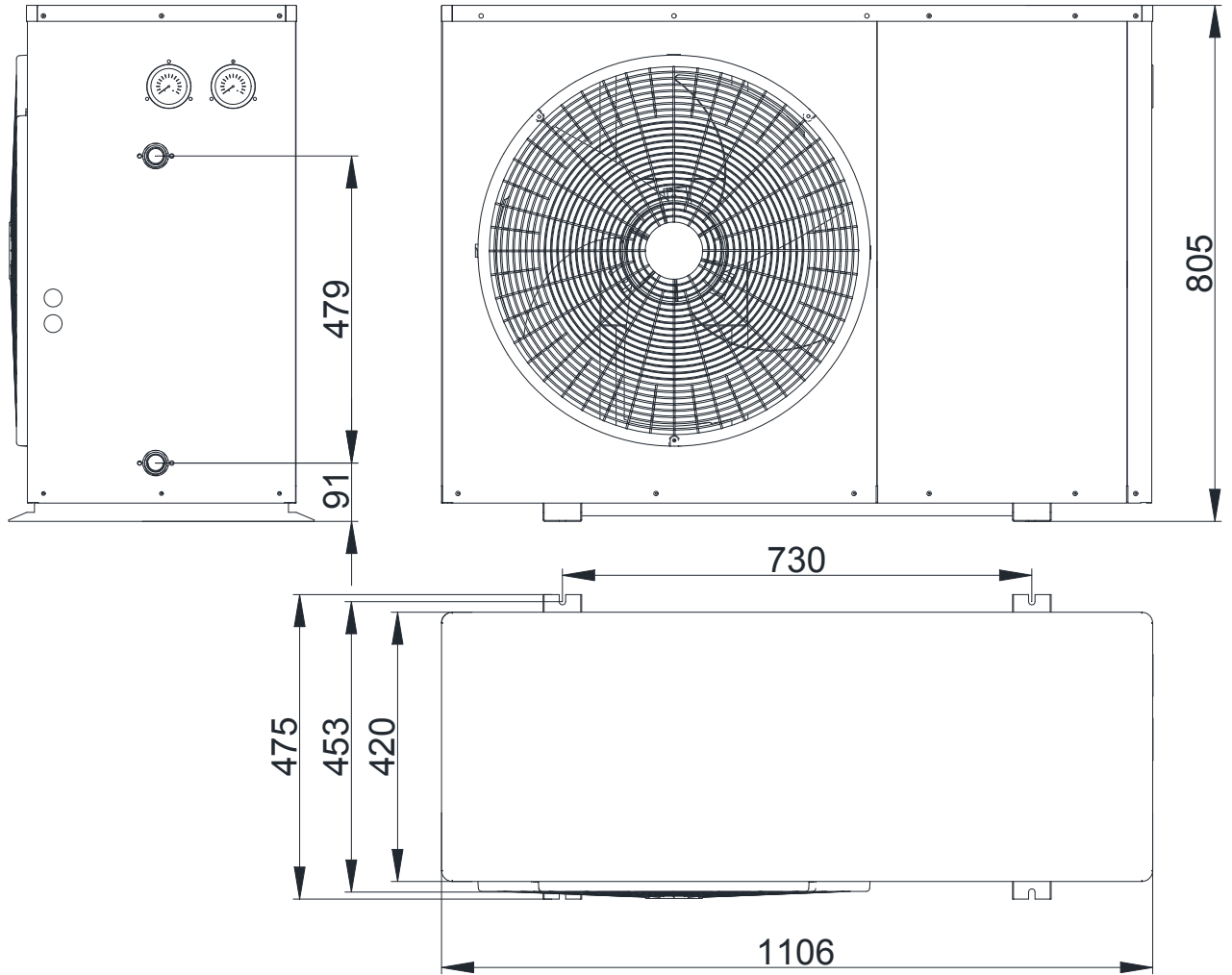
Important parts in heat pump



CGK-100V2

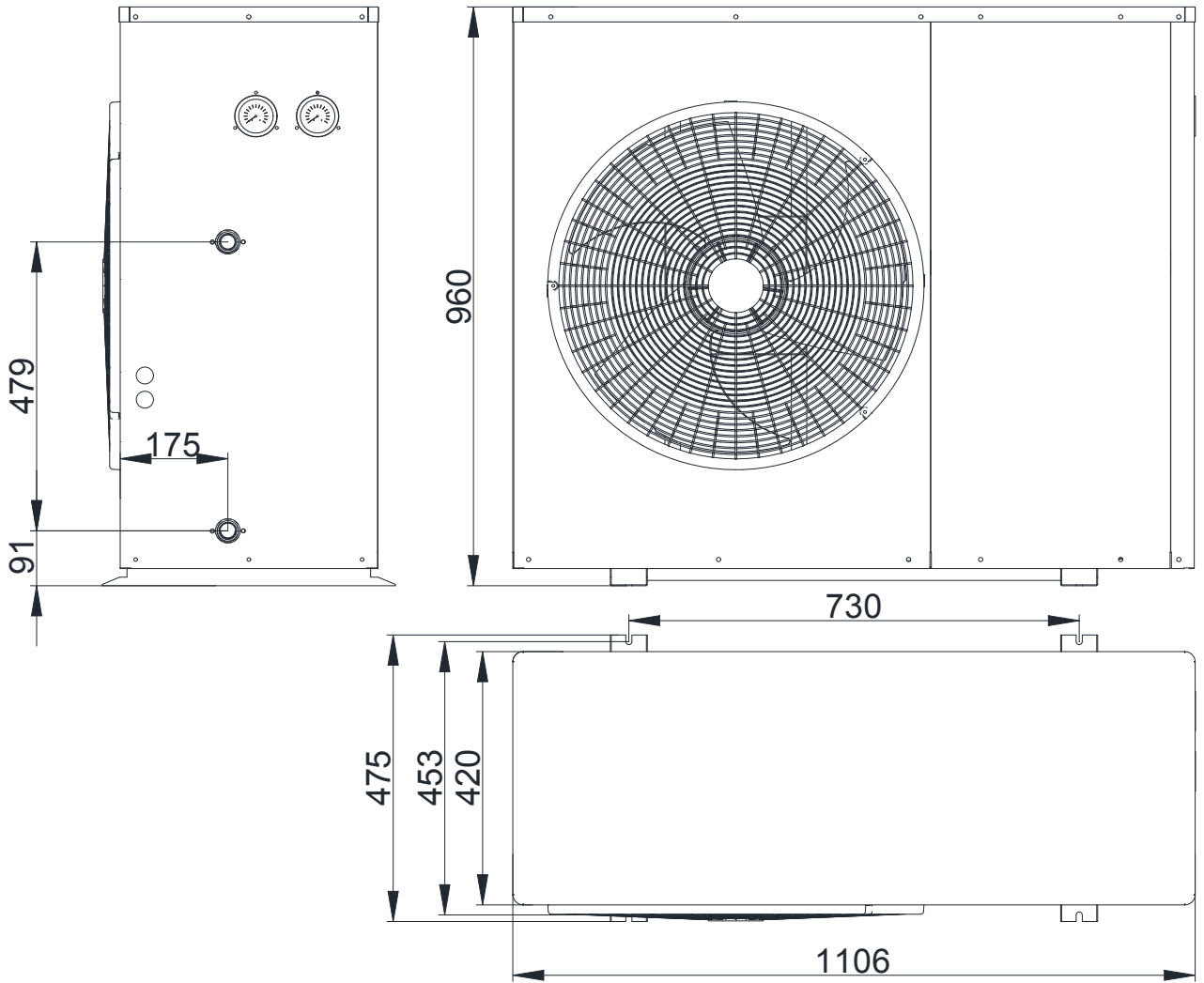
No.	Component	No.	Component
1	Front service panel	18	Water tray
2	Lower panel	19	Drive cover plate
3	Compressor cover plate	20	Frequency converter
4	Column	21	Needle valve
5	Compressor	22	DC Fan drive
6	Bottom plate	23	Wind shield
7	Electric box	24	cover
8	Copper filter	25	DC fan
9	Front service panel	26	Evaporator
10	Front and rear cross members	27	Expansion valve
11	Upper panel	28	Outlet plate
12	Pressure gauge	29	Brass water connector
13	Lower panel	30	Plate heat exchanger
14	separator	31	Low pressure sensor
15	Reservoir	32	Plate exchanger bracket
16	Four-way valve	33	Left and right crossbeams
17	Compressor cover plate	34	High pressure sensor

Heat pump size



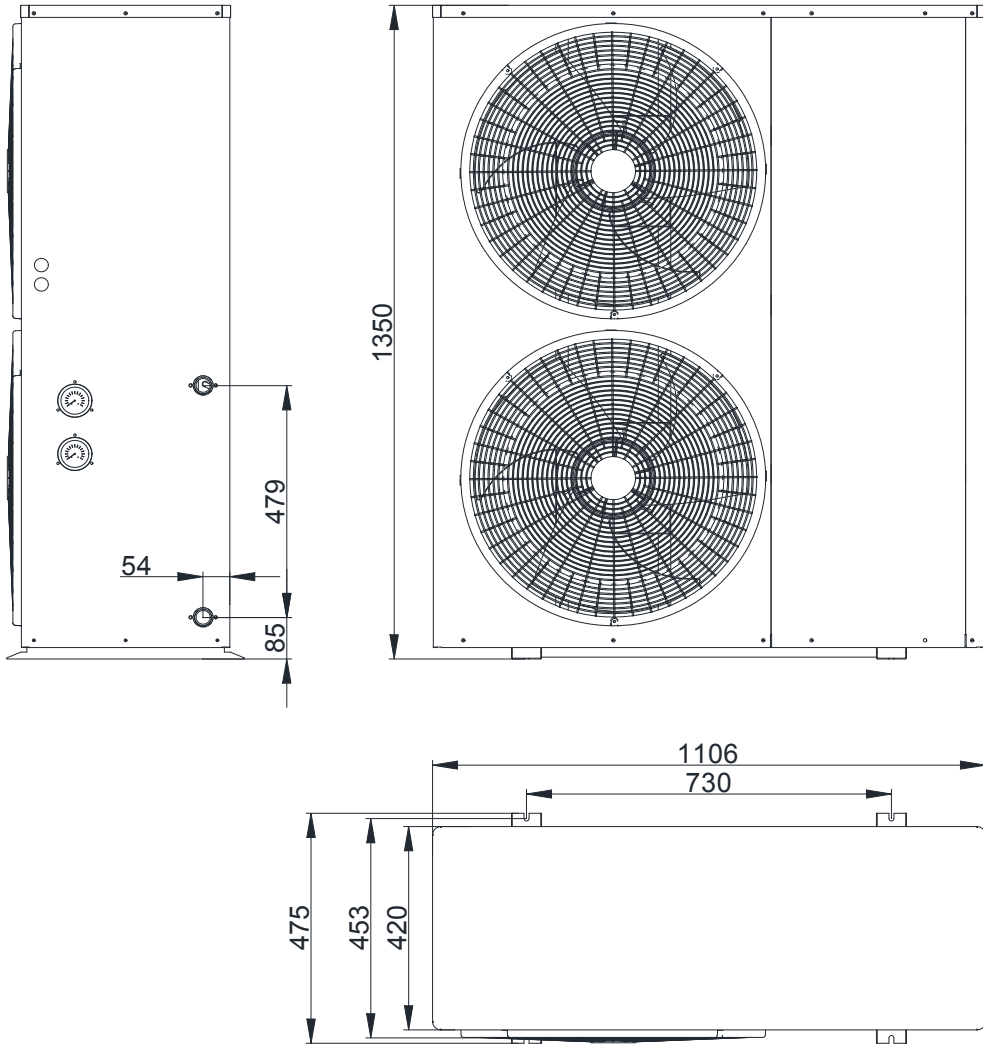
CGK020V2、GK030V2、CGK-030V2

Heat pump size



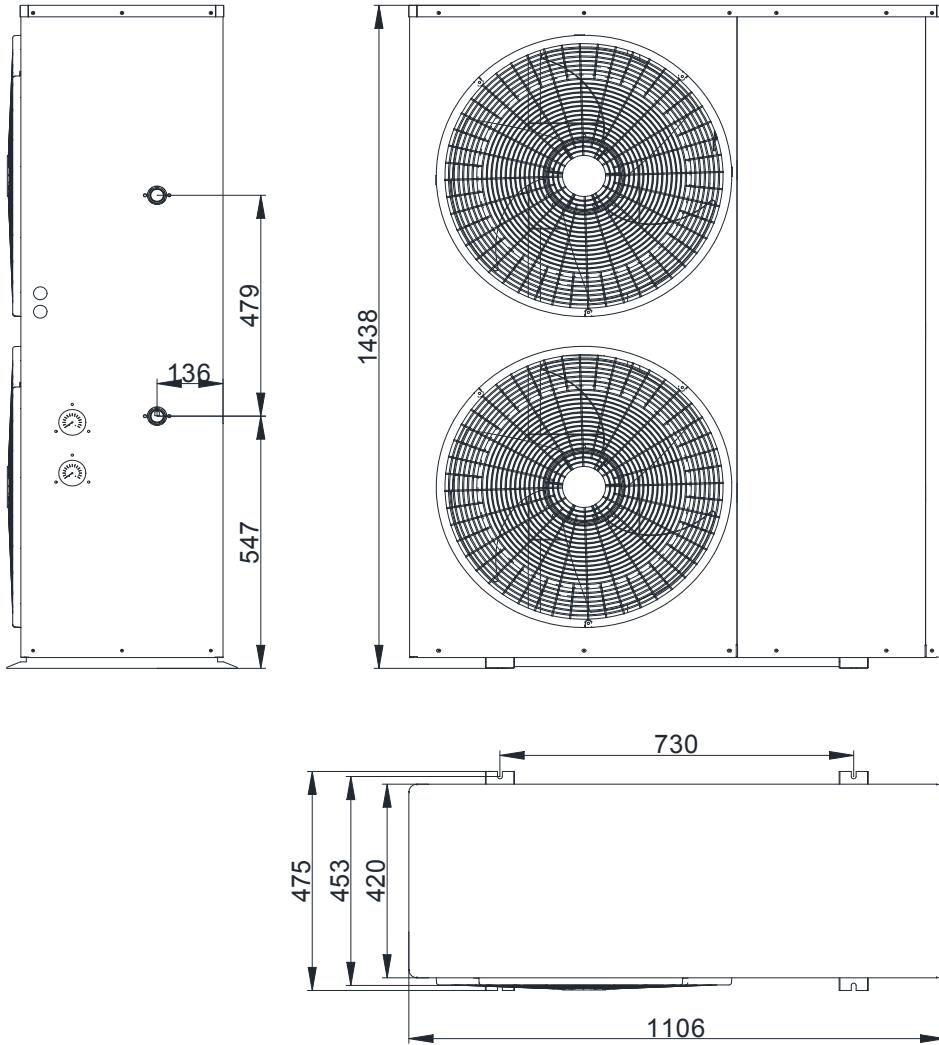
CGK040V2、CGK-040V2

Heat pump size



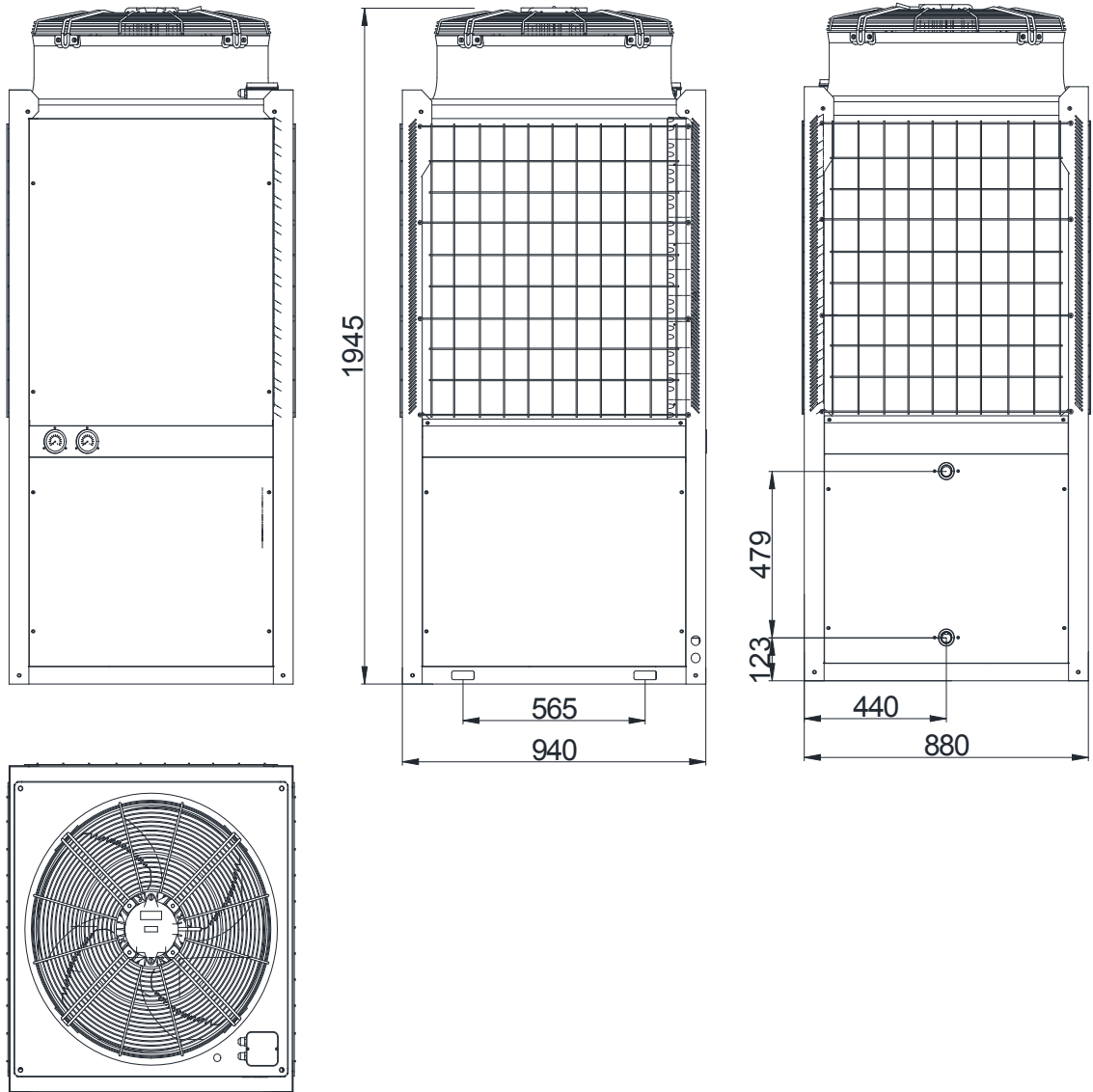
CGK050V2、CGK-050V2、CGK060V2、CGK-060V2

Heat pump size



CGK-080V2

Heat pump size



CGK-100V2

Installation diagram

Primary circulation system

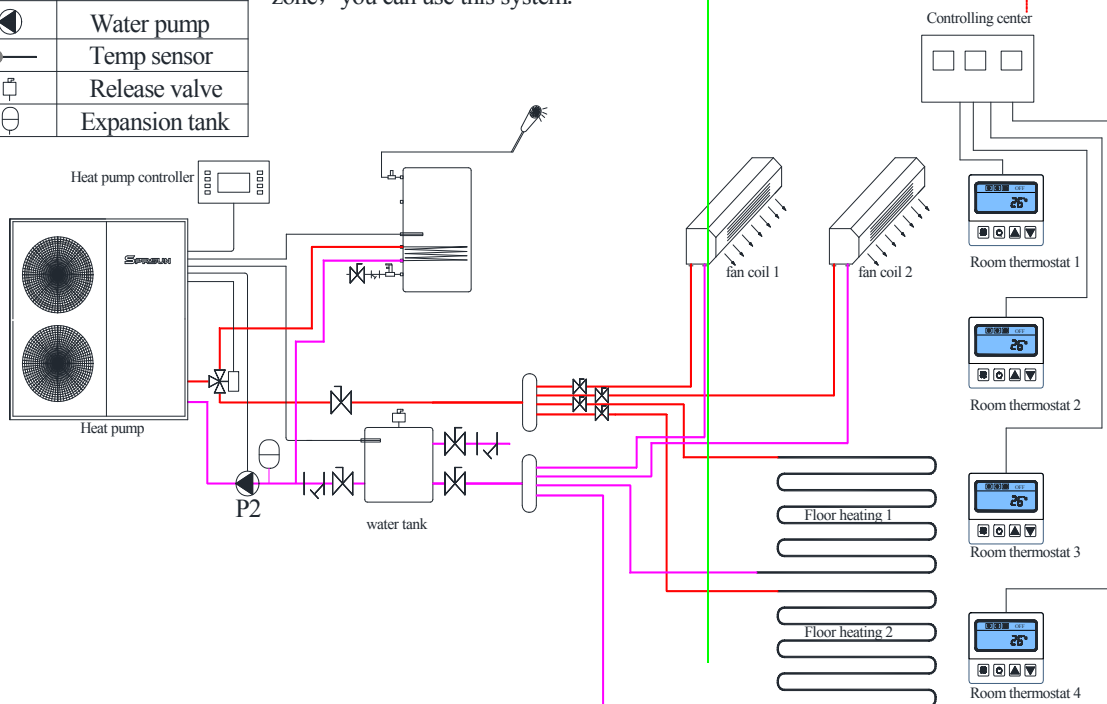
Symbol	Name
	3-way valve
	2-way valve
	Ball valve
	Non-return valve
	Filter
	Water pump
	Temp sensor
	Release valve
	Expansion tank

Notice:

1. Pls select the right modes according to your demand then install it according to the installation diagram. If only hot water function required, pls select heating+hot water mode , and then put the hot water sensor into the hot water tank.

Fan coil can be controlled by linkage with the secondary circulation pump . Meanwhile, a passive linkage thermostat shall be installed.

3. This is primary circulation system, If you not need to control the temperature by different zone, you can use this system.



SPRSUN DC inverter air source heat pump

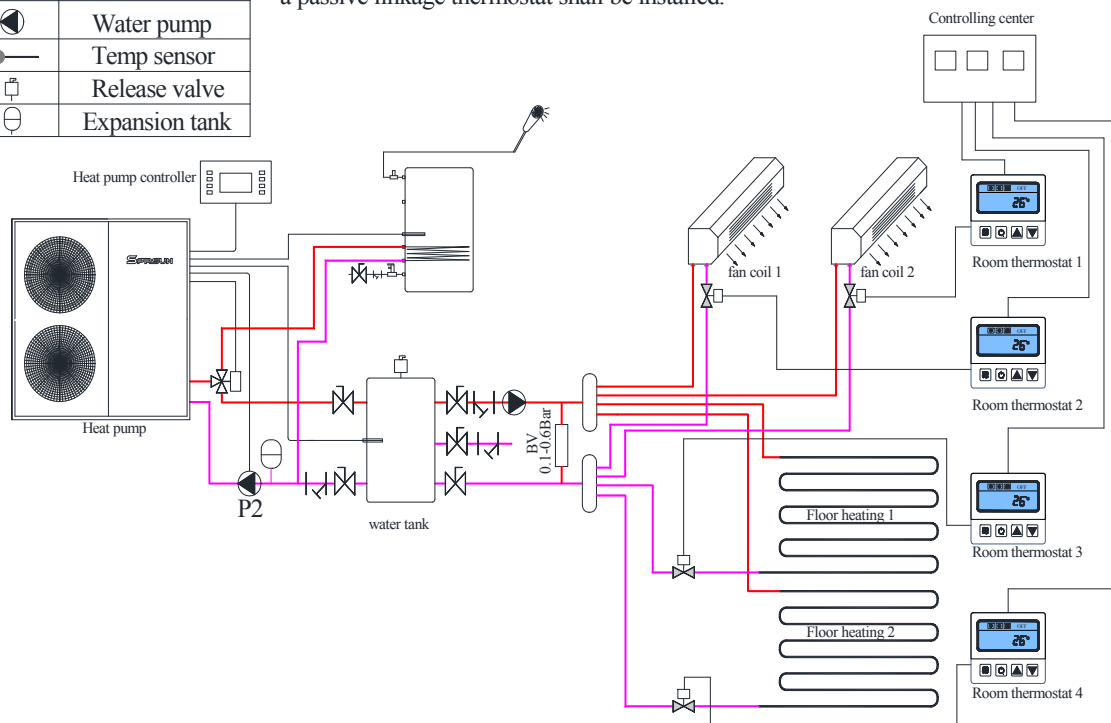
Installation diagram

Secondary circulation system

Symbol	Name
	3-way valve
	2-way valve
	Ball valve
	Non-return valve
	Filter
	Water pump
	Temp sensor
	Release valve
	Expansion tank

Notice:

1. Pls select the right modes according to your demand then install it according to the installation diagram. If only hot water function required, pls select heating+hot water mode , and then put the hot water sensor into the hot water tank.
2. Two-way valve and BV valve are optional for installation. Only If you need to control the temperature by different zone, then pls install both.
3. Fan coil can be controlled by linkage with the secondary circulation pump . Meanwhile, a passive linkage thermostat shall be installed.

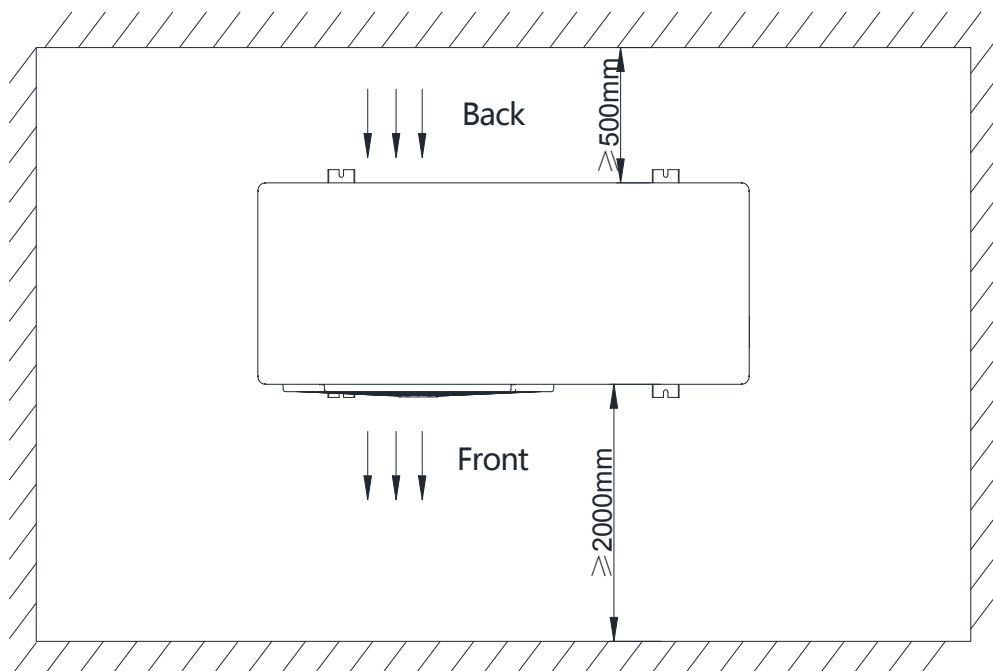
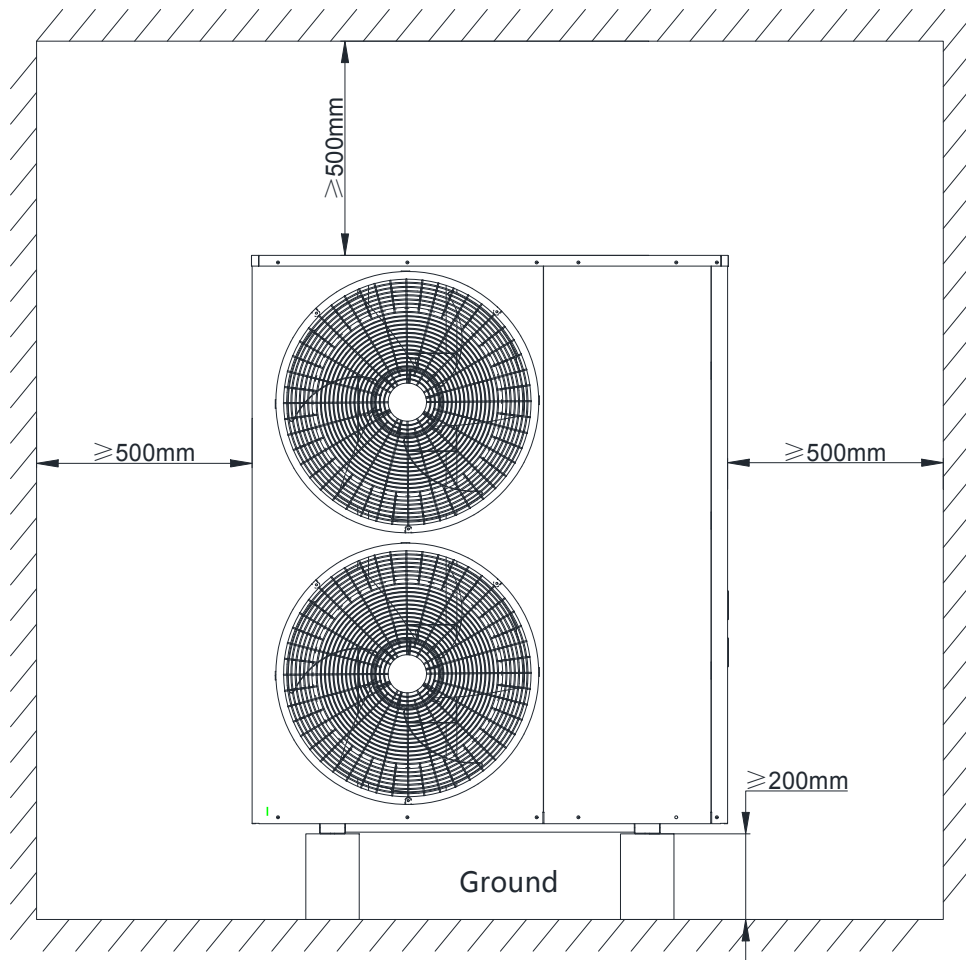


SPRSUN DC inverter air source heat pump

Heat pump installation notes

- 1) The heat pump must be installed in open space. Normally is installed on the roof of house.
- 2) The unit should be placed in dry and well-ventilated environment. If the environment is humid, electronic components may get corroded or short circuit.
- 3) Heat pump mustn't be installed in the environment where corrosive, volatile, or flammable liquid or gas exists.
- 4) Because of the noise is a little loud, please don't install the heat pump near bedroom or living room or meeting room.
- 5) The bottom of the heat pump should be at least 200cm higher than ground, because rain water, snow may enter inside if the installation is on ground. Heat pump can be installed on concrete basic or steel support.
- 6) Please install a shed for the heat pump, otherwise, rain water can reduce the lifetime of the shell, and snow may cover the air outlet.
- 7) Water drainage ditch should be set around the heat pump, when heat pump is working, there is condensing water flow down, or when defrosting, there are plenty of water flow down too.
- 8) Heat pump should far away from kitchen exhaust, because the finned tube is not easy to clean if there is oil on it.

Distances to barrier and ground



Basic of installation

- 1) Heat pump must be installed on flat concrete blocks or a raised concrete platform, or steel bracket.
- 2) Between heat pump and basic or bracket, at least 4 pcs anti-shock pads should be placed



Concrete basic

Anti-shock pad



Steel bracket

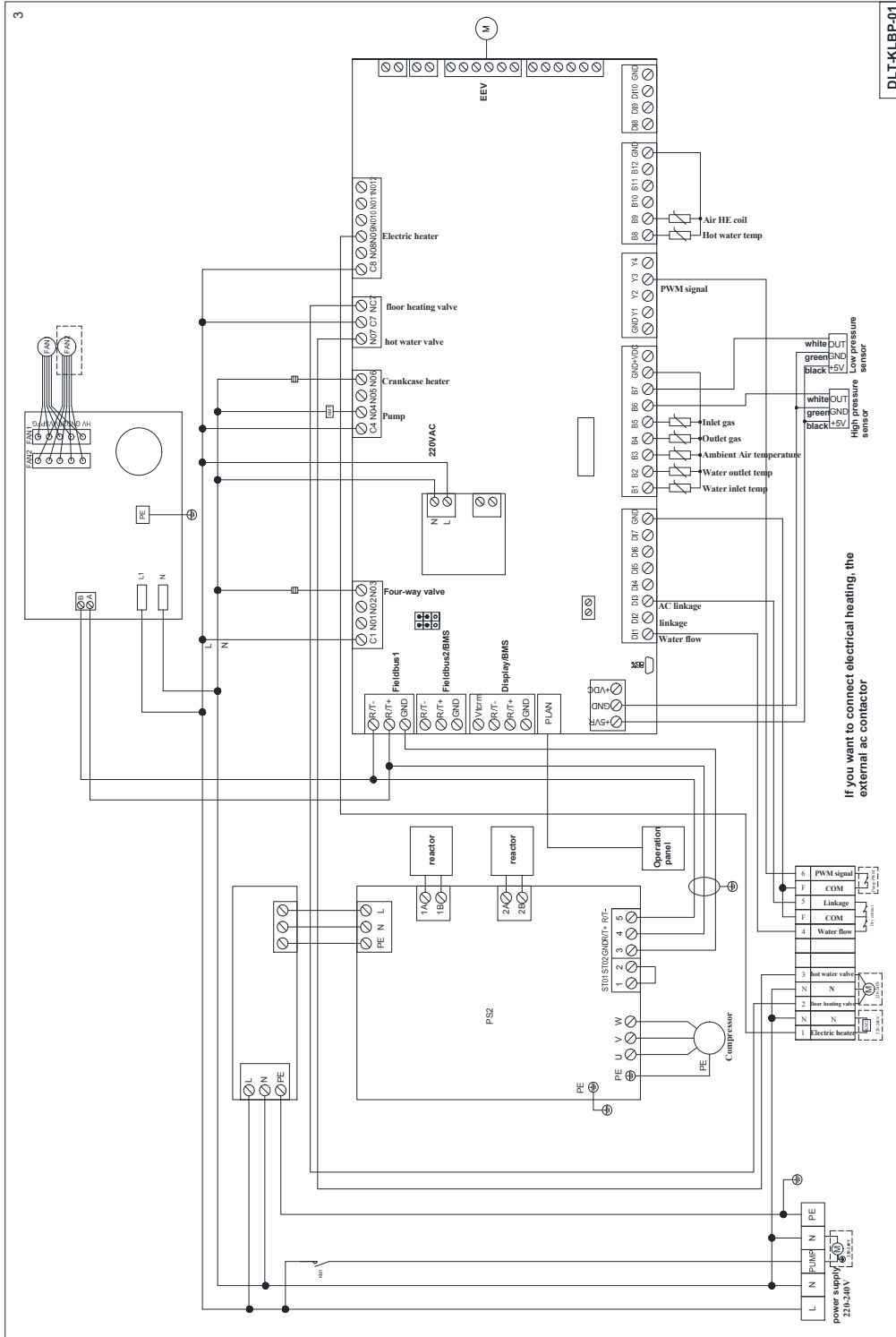


Expansion bolt

- 3) Before make basic or bracket, please check heat pump dimension
- 4) Before fix heat pump on basic, please confirm heat pump direction according to project design.
- 5) Normally use expansion bolt to fix heat pump on concrete basic.
- 6) Make sure circulating water pipe must be \geq DN25 (or PPR32), and pipes must be insulated.
- 7) When install water temp sensor on pipe or in water tank, make sure temp sensor will not touch water directly, best through a sensor tube. Like below picture.

Wiring diagram

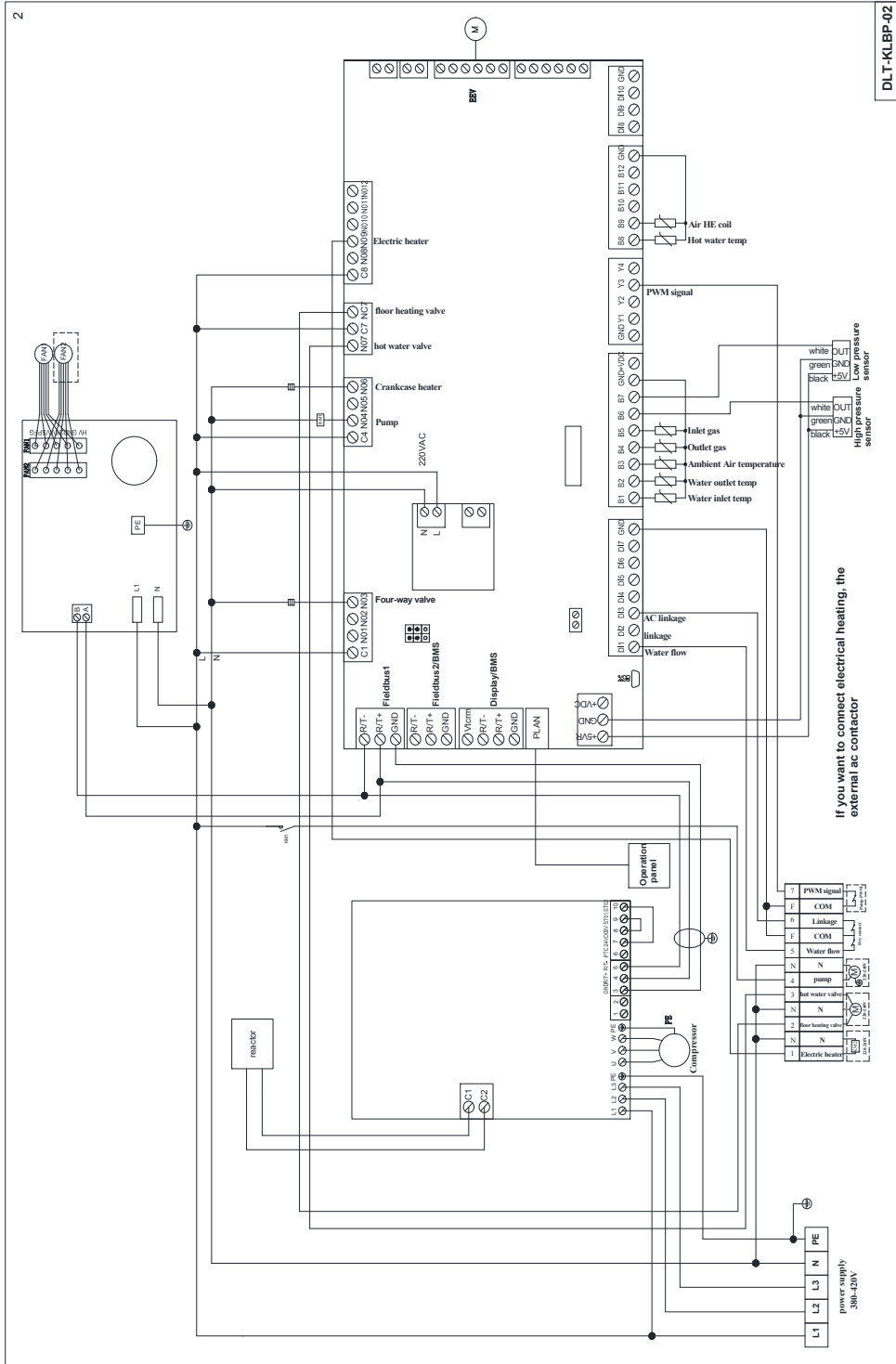
220V



Voltage: 220V ~ 240V/50Hz or 60 Hz/1Ph

Wiring diagram

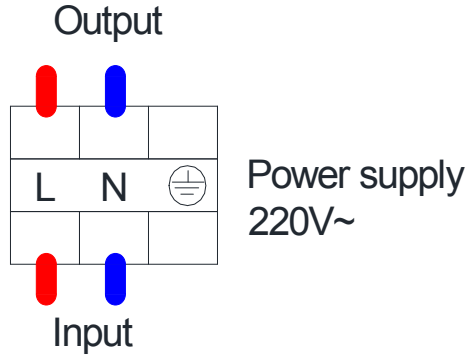
380V



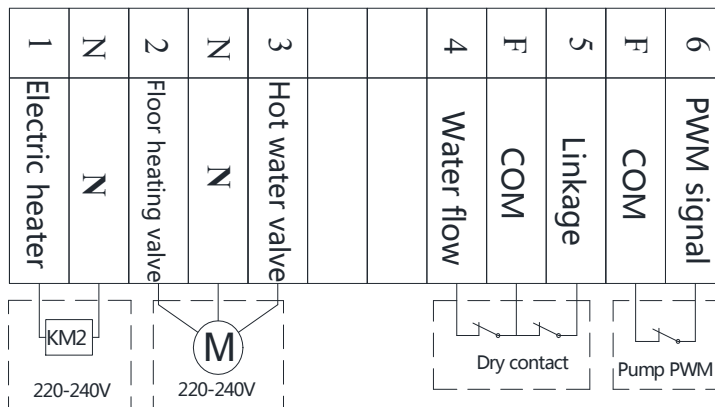
Voltage: 380V ~ 420V/50Hz or 60 Hz/3Ph

Terminals

220V

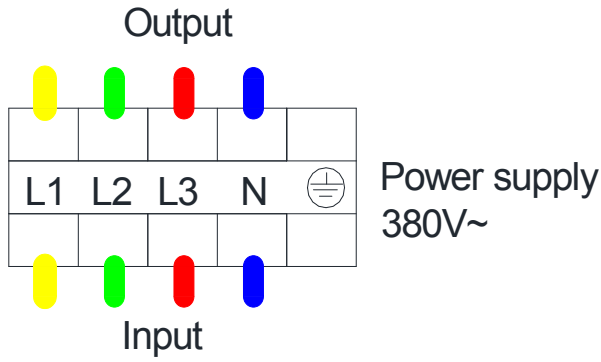


Model	Line(mm ²)	Max. Current(A)
CGK020V2	2.5	11.69
CGK030V2	4	14.81
CGK040V2	6	19.49
CGK050V2	6	25.55
CGK060V2	6	29.24

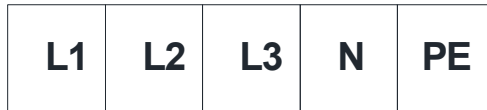


Terminals

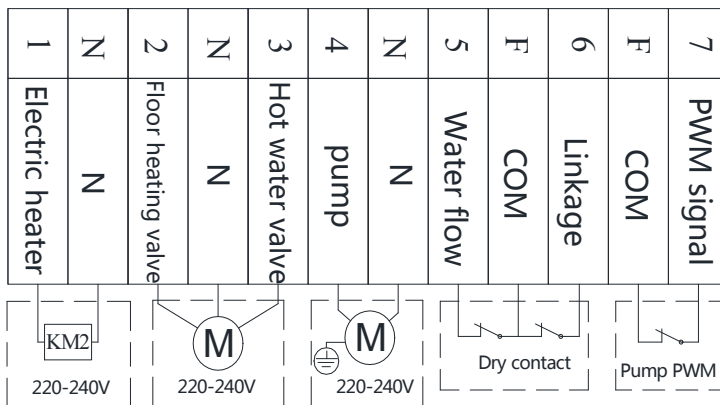
380V



Model	Line(mm ²)	Max. Current(A)
CGK-030V2	2.5	6.6
CGK-040V2	2.5	8.46
CGK-050V2	4	11.24
CGK-060V2	4	12.88
CGK-080V2	6	17.6
CGK-100V2	6	22.2



Power supply
380-420V



Warning

Air-water heat pump

1. Y-shape filter must be installed in front of water pump.
2. Water flow of cycle water pump for each 0.75kw(input power) $> 1\text{m}^3/\text{h}$
3. Pump lift according to job site.
A quarter bend water resistance ≥ 1 meters
4. Domestic hot water utilize national standards urban tap water.
5. Water sensor can't touch water directly, it must be put into the blind hole in water tank .
6. Installation must comply with above conditions, if non-compliance with any one, we do not afford any loss.
7. When air temperature is below 0C , please drain water in heat exchanger if blackout ,to avoid water ice up.
8. A 40-70 mesh filter needs to be added to the water path before entering the heat pump, and the water ion concentration must be less than 280 ppm.