Installation manual

of

Air source heat pump

CGKS-7 220V/1N

(Product No: A10709)

PCB code: CG248021

Operating panel code: CG248024

To know the product

Checking work:

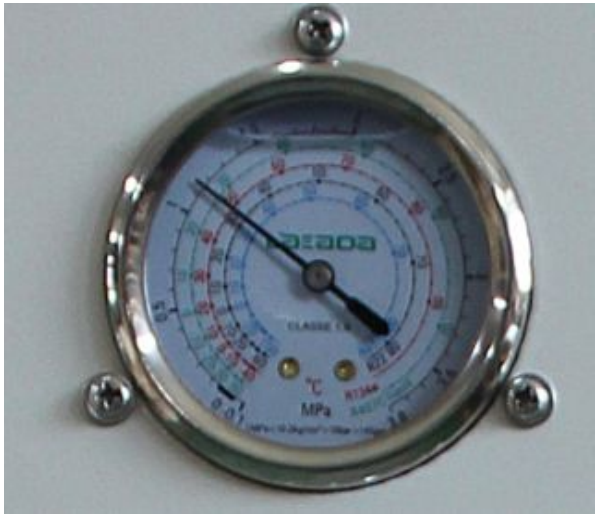
1. Check the nameplate:

1.1 Check if voltage is same as user's power supply

1.2 Check if gas type is correct

1.3 Check if heat pump model is correct

2. Check if gas pressure is normal



Check the gas pressure gauge display.

Table 1 is R410A gas temperature and pressure table. When heat pump is not work, the temperature is same as air temperature. According to ambient air temperature, to check If gas pressure is normal, if pressure is same as in the table, means gas is ok.

If gas pressure is lower than normal or 0Mpa, means gas is not enough or no gas.

Note: factory has released gas before departure if delivery is by air

Table 1:

T ℃	P Mpa	T ℃	P Mpa	T ℃	P Mpa
-25	0.334	5	0.937	35	2.13
-20	0.404	10	1.09	40	2.41
-15	0.483	15	1.25	45	2.71
-10	0.579	20	1.44	50	3.05
-5	0.682	25	1.64	55	3.4
0	0.803	30	1.88	60	3.78

Solve leaking and add or fill gas

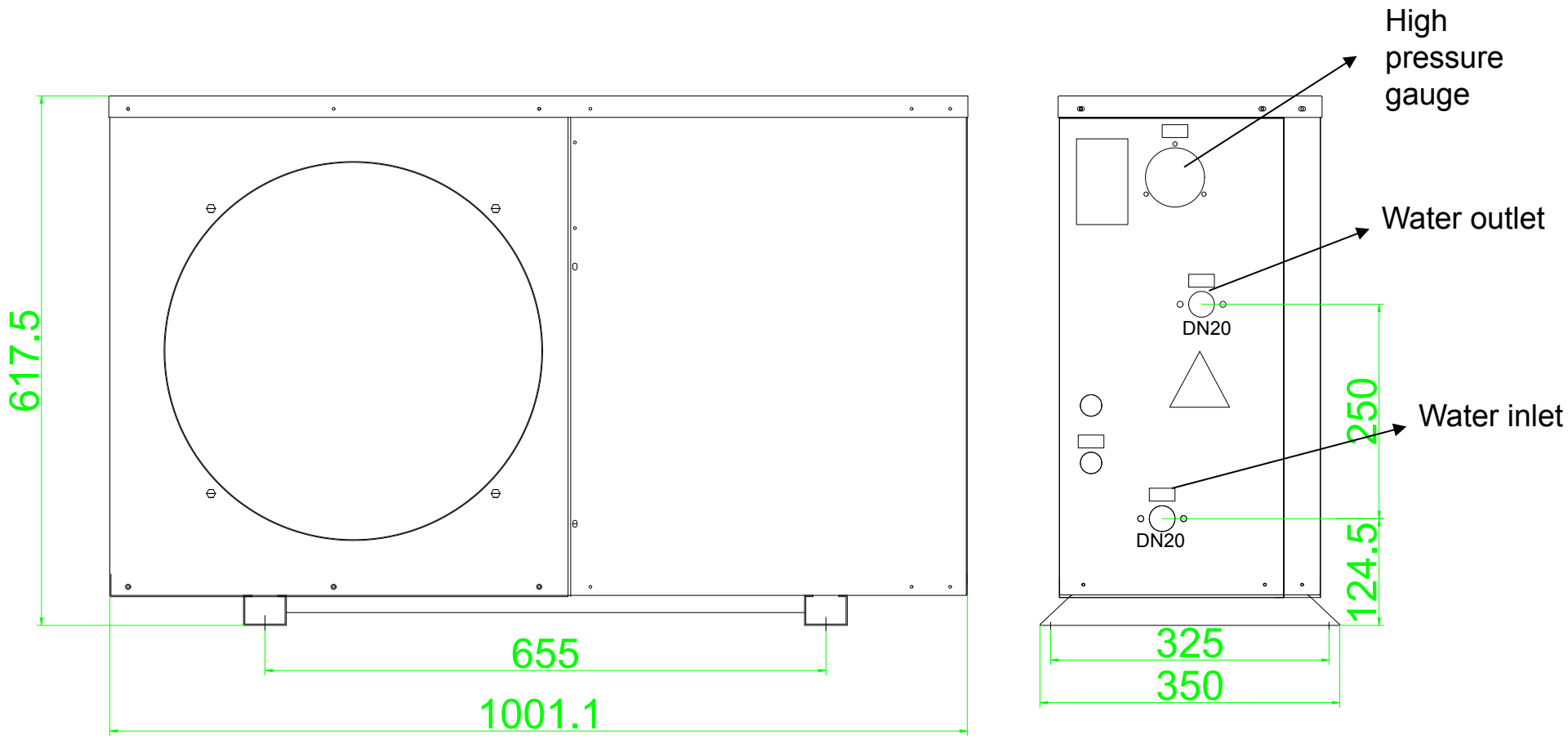
According to table 1, if pressure is abnormal, means gas is not enough or no gas inside.

If gas is not released by factory, this problem should be caused by leaking.

Let professional people find the leaking point, and repair.

Then vacuum the gas system and fill gas in, the gas type and weight is shown on the nameplate of heat pump.

CGKS-7 drawing

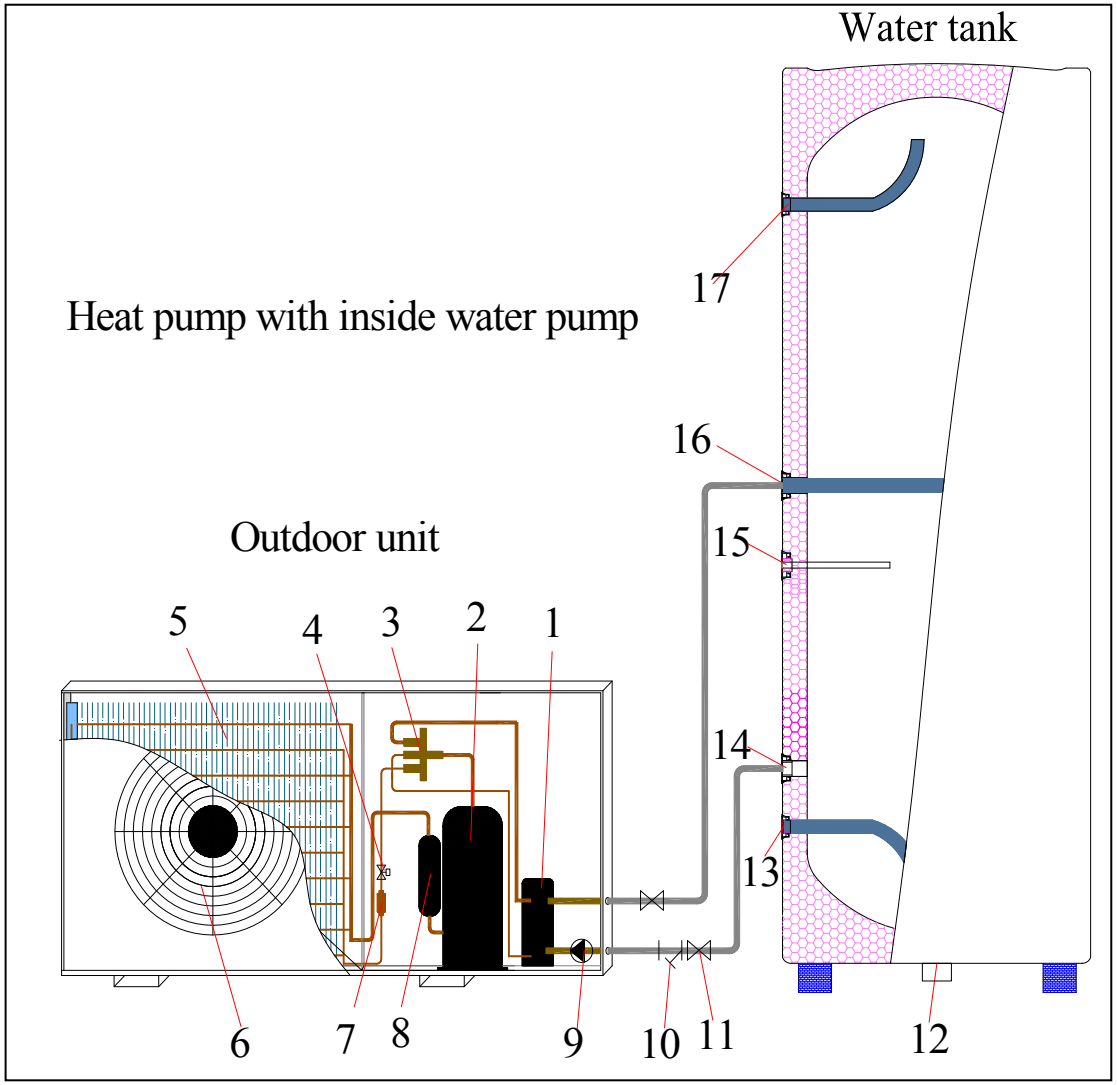


Heat pump installation basic and place:

1. Heat pump can be installed on concrete basic or steel bracket, the location can be outdoor wall or on ground or on house top
2. Anti-shock pad must be installed under heat pump legs
3. Heat pump must be fixed firmly by screw
4. Bracket of heat pump can be made according to the distance of heat pump two legs and heat pump size
5. Heat pump must be installed in good ventilating space (best installed outdoor)
6. Heat pump must be installed at the place where there are not oil or dust
7. There should not be barrier 2meters front air outlet of heat pump
8. The distance between wall and air inlet of heat pump should be ≥30CM

Installation diagram

1.Condenser
2.Compressor
3. Four-way valve
4. Expansion valve
5. Evaporator
6. Fan motor
7. Gas Filter
8. Gas-liquid separator
9. Water pump
10. Water filter
11. Gate valve
12. Drain water pipe
13. Compensating cool water pipe
14. Water outlet of water tank
15. Temp sensor tube
16. Water inlet of water tank
17. Hot water outlet



About water pipe system:

Please check the water pipe connector side. There are two water pipe connectors in total.

1. Water inlet (lower one) 2. Water outlet (upper one)

1. Water pipe connector size: DN20 (internal thread)
2. Water pipe material/size: PPR pipe Ø25
3. Water pipe must be insulated, insulation thickness should be at lest 2cm
4. Outside parts needed: 1. Y type filter, 2. gate valves, 3.loose joint.
5. According to local water quality, installer decide if through a heat exchanger in hot water tank to transfer heat for hot water. And the coil heat exchanger exchanging area should be big enough.

Drain water pipe:

The drawing water pipe connector is on the bottom sheet of heat pump. Installer should connect a soft pipe on it, condensed water should be drained to a suitable place.

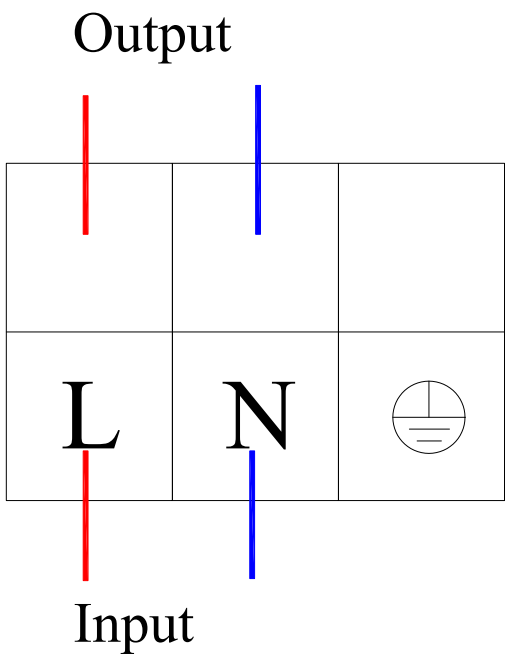
Drain air from water system:

1. If heat pump connect to inside coil heat exchanger of hot water tank, should install a valve at the highest point of the closed cycle, and release air by the valve.

2. When fill water to hot water tank, open the cool water inlet valve and hot water outlet valve at the same time, when water is full, there will water go out from the hot water pipe, let the water go out for a while, make sure air has come out already, then close the hot water outlet valve.

3. best to install a T/P valve on the hot water outlet pipe of hot water tank, avoid explosion..

Power supply wire line



Power Supply

Voltage: 220V～240V/50Hz/1Phm

Max working current: 12A

Circuit breaker: 25A

Size of power supply line: 4mm^2

Water tank temperature sensor is in electric controlling box, please insert it to hot water tank temp sensor tube. Temp sensor can't touch water directly, should put it in a temp sensor tube, normally water tank supplier has installed the temp sensor tube in tank already.

Final checking before heat pump

1. Water leaking test: Start circulating water pump only, to check if there is any water leak in the whole system.
2. Water tanks must have full of water already.
3. Check all wiring lines connecting place, check if any wire has loose.
4. After both water system and wire system no problem, then can start heat pump.

Working temperature and setting temperature