Dalrada TECHNOLOGY

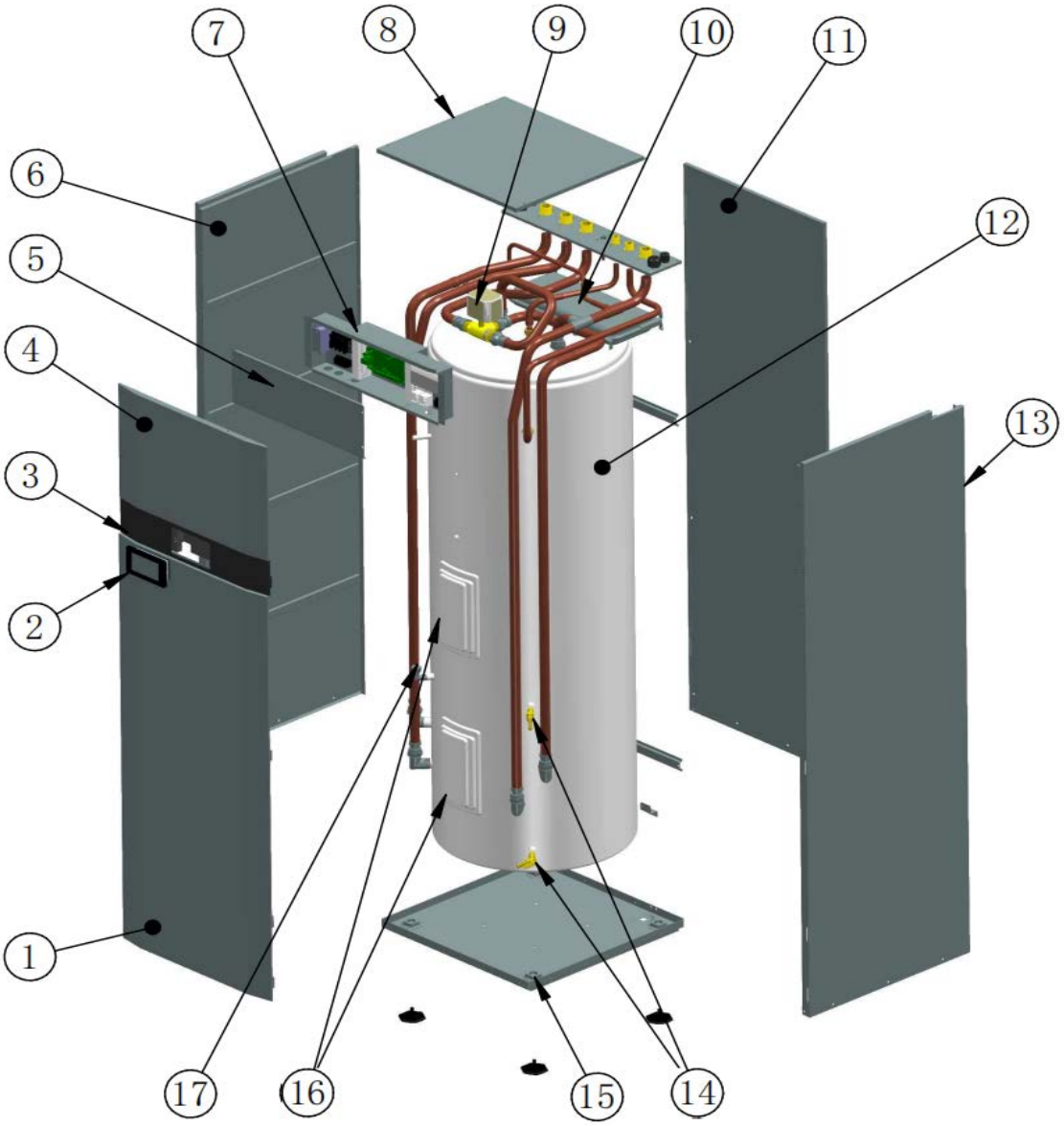
INTEGRAL HYDRONIC TANK

INSTALLATION GUIDE

Contents

1 Integral Hydronic Tank Structure 3
2 Installation Diagram 4
2.1 Single Temperature Zone Installation Diagram 4
2.2 Dual Temperature Zone Installation Diagram 5
3 Heat Pump and Integral Hydronic Tank Wiring 6
3.1 Heat Pump and Integral Hydronic Tank Wiring Diagram 6
3.2 Heat Pump and Integral Hydronic Tank Wiring Steps 7
4 Integral Hydronic Tank Wiring 8
4.1 Integral Hydronic Tank Interval Wiring 8
4.2 Election and Wiring of Three-way Mixing Valve 9
4.3 Control Line Wiring 10
5 Parameter Settings 11
6 Precautions 13

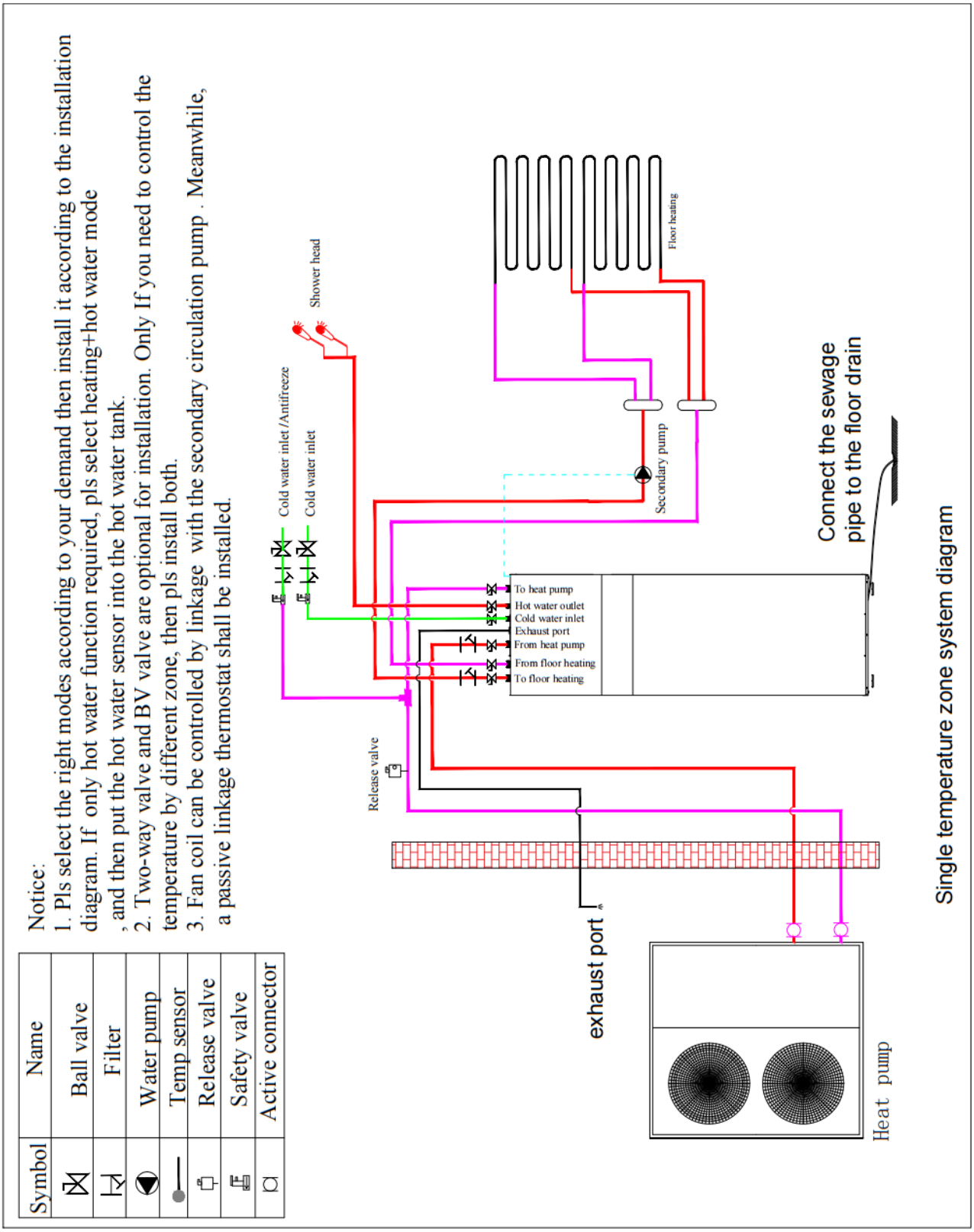
1 Integral Hydronic Tank Structure



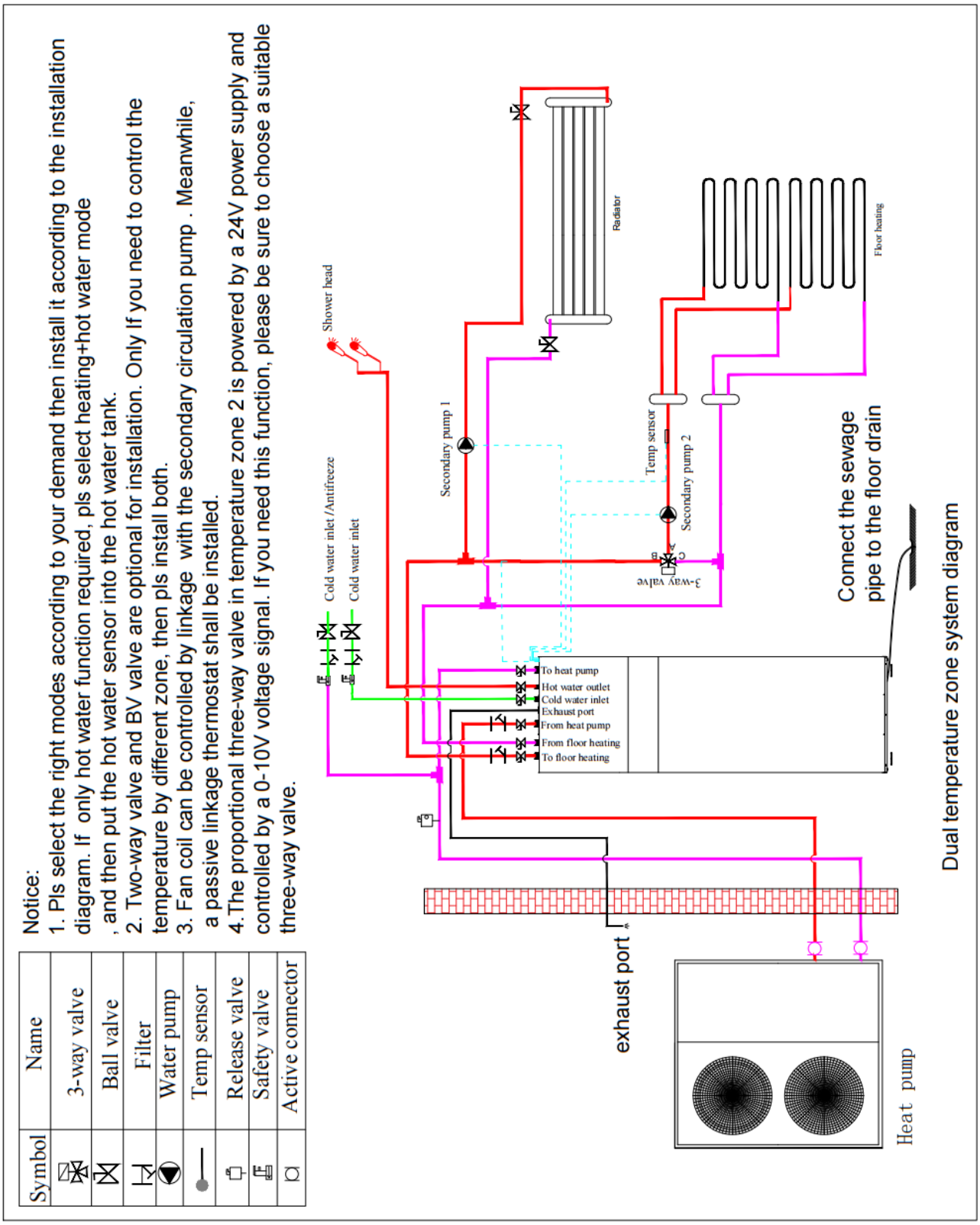
No.	Component	No.	Component
1	Lower Fron Panel	10	Expansion Tank
2	Control Panel	11	Back Panel
3	Front Middle Panel	12	Double Bile Water Tank
4	Front Upper Panel	13	Right Panel
5	Electric Box Cover	14	Blowdown Valves
6	Left Panel	15	Chassis
7	Electrical Box	16	Electric Heat Cover
8	Top Cover	17	Automatic Exhaust Valve
9	Three-way Valve	18	

2 Installation Diagram

2.1 Single Temperature Zone Installation Diagram

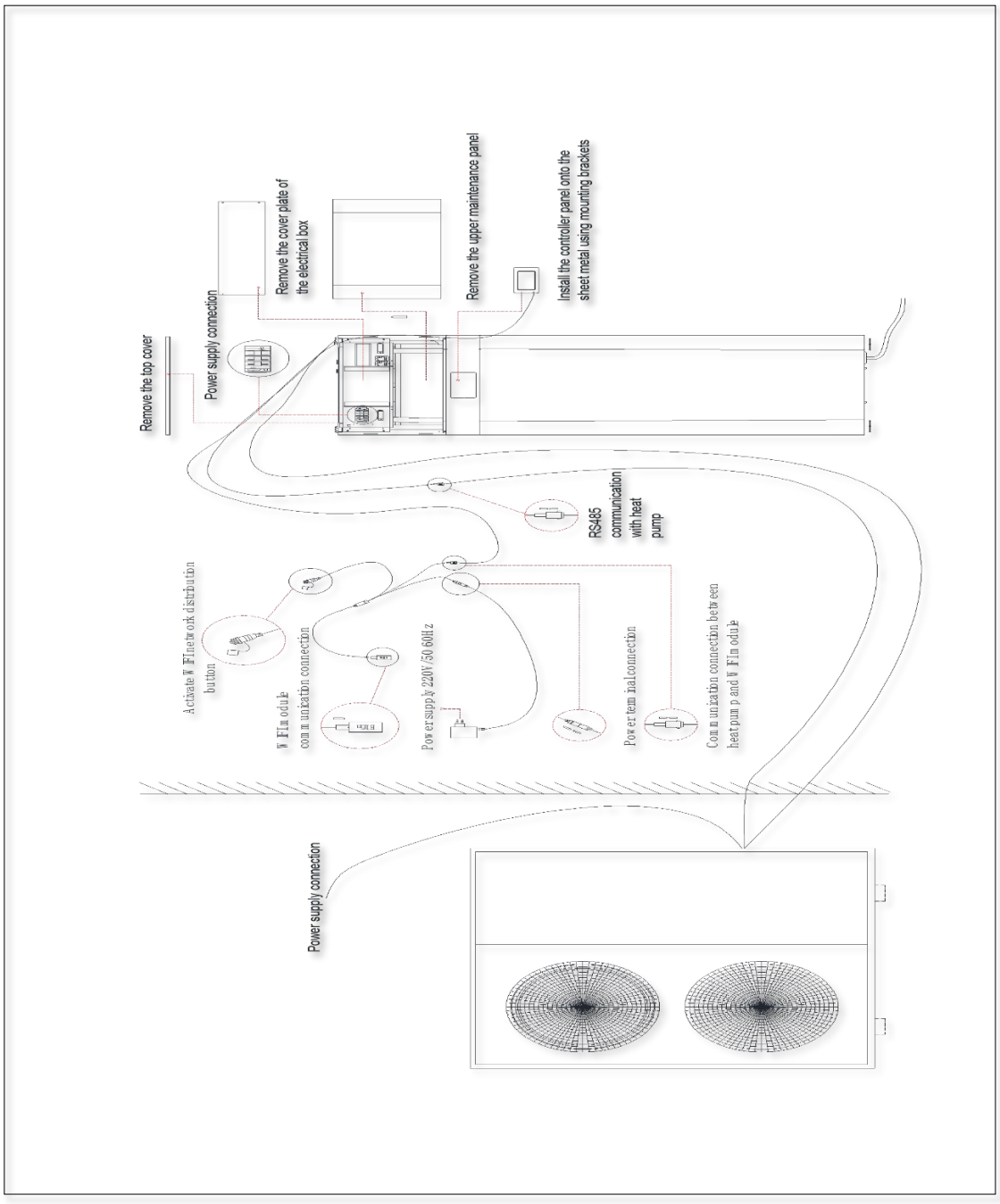


2.2 Dual Temperature Zone Installation Diagram

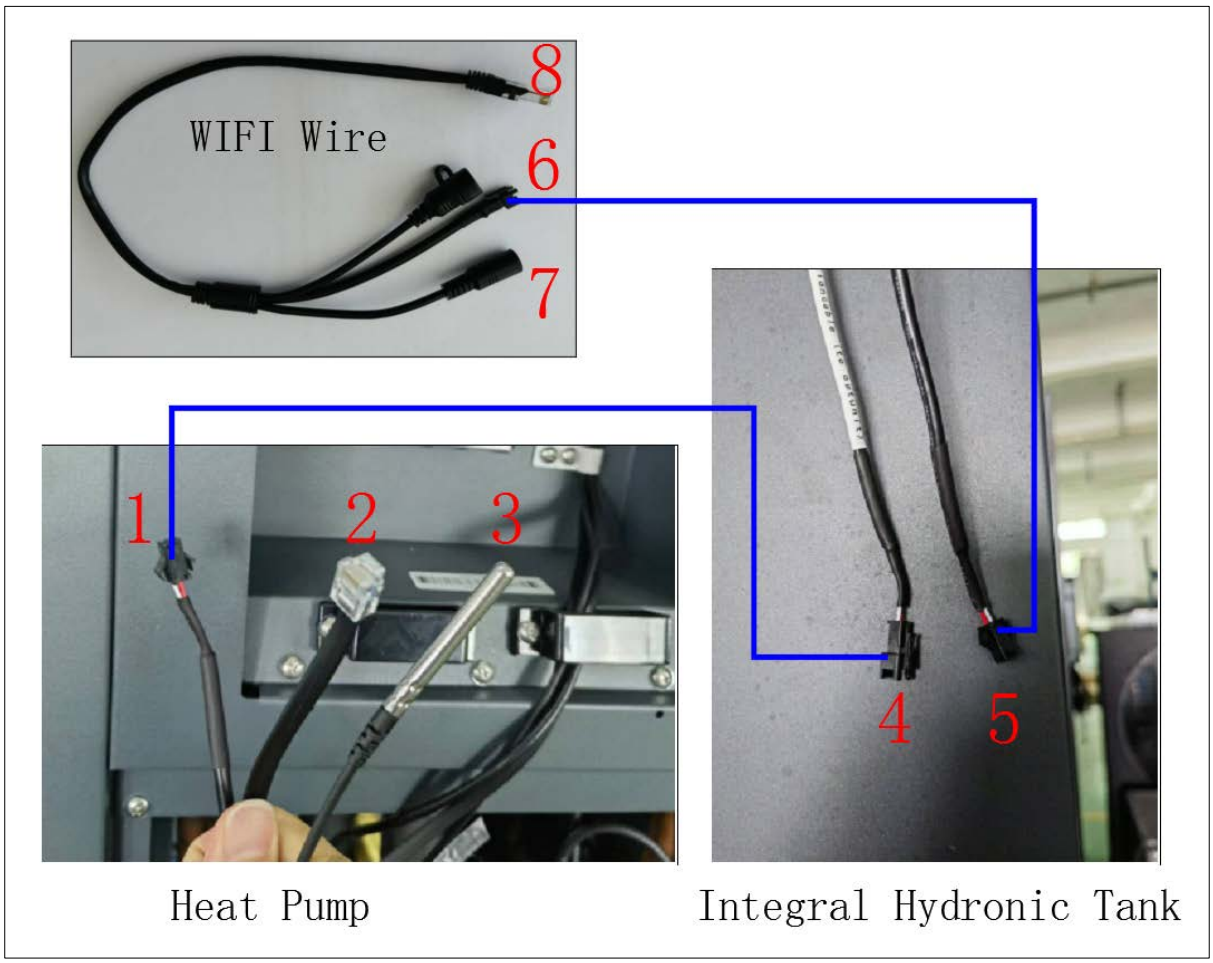


3 Heat Pump and Integral Hydronic Tank Wiring

3.1 Heat Pump and Integral Hydronic Tank Wiring Diagram



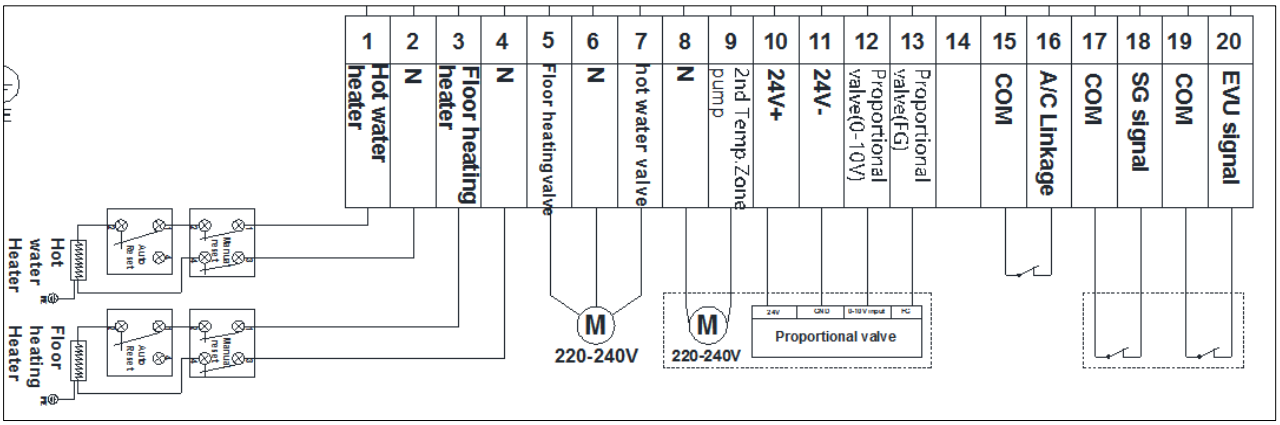
3.2 Heat Pump and Integral Hydronic Tank Wiring Steps



- The heat pump power line should be selected according to the actual load and must be grounded.
- **Line 1** of the heat pump is the communication line for the indoor and outdoor units, with a length of 7 meters. It needs to be pulled indoors and plugged into **Line 4** of the Integral Hydronic Tank.
- **Line 2** of the heat pump is the communication line of the touch screen, with a length of 6 meters. It needs to be pulled indoors, connected to the touch screen, and the touch screen is installed on the Integral Hydronic Tank.
- **Line 3** of the heat pump is the water tank probe, which can be used as a spare probe . The Integral Hydronic Tank has installed the water tank probe.
- The WIFI module lines of the system with Integral Hydronic Tank are all connected indoors. **Line 6** of the WIFI line is the WIFI module communication line, which needs to be plugged into **Line 5** of the Integral Hydronic Tank, **Line 7** is connected to the module power supply, and **Line 8** is connected to the WIFI module.

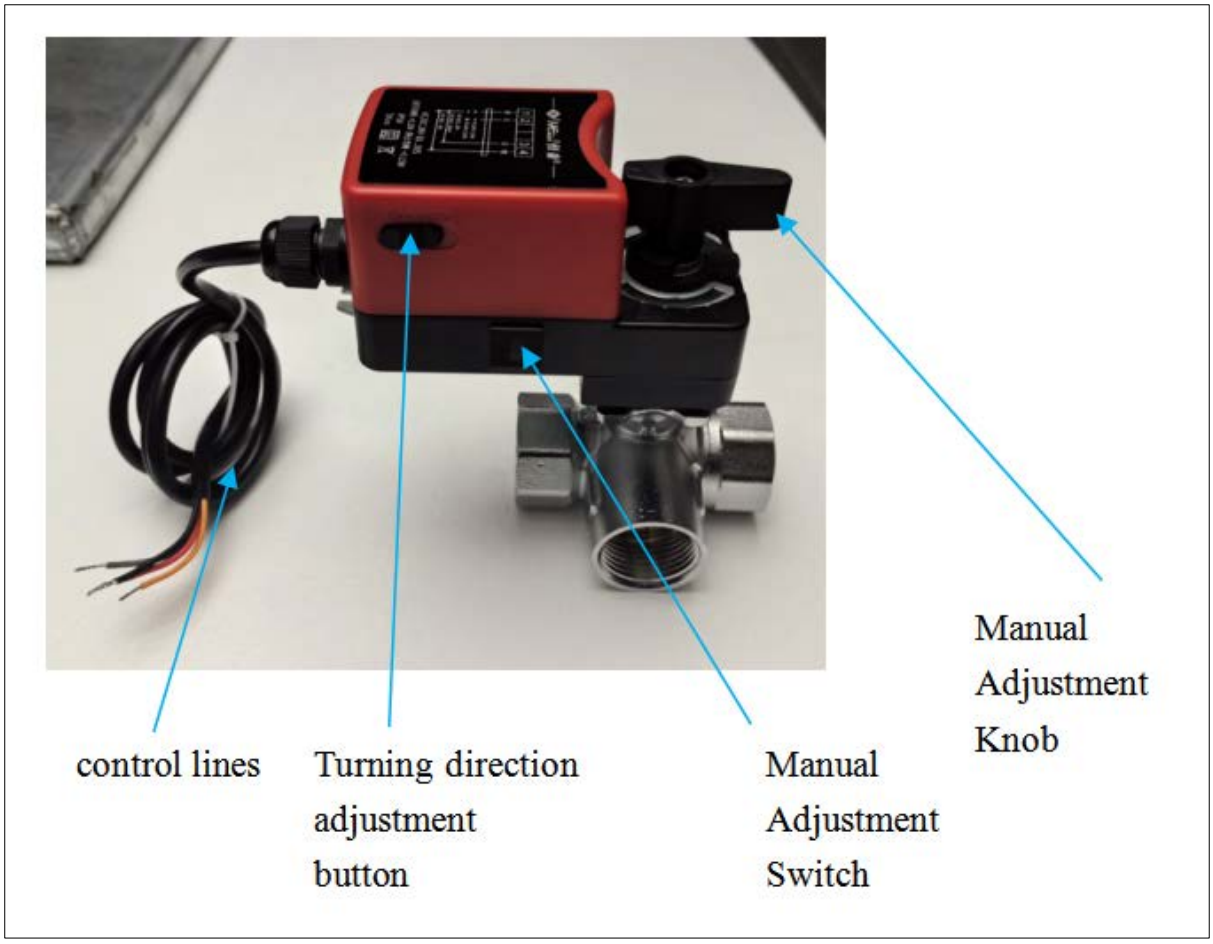
4 Integral Hydronic Tank Wiring

4.1 Integral Hydronic Tank Interval Wiring



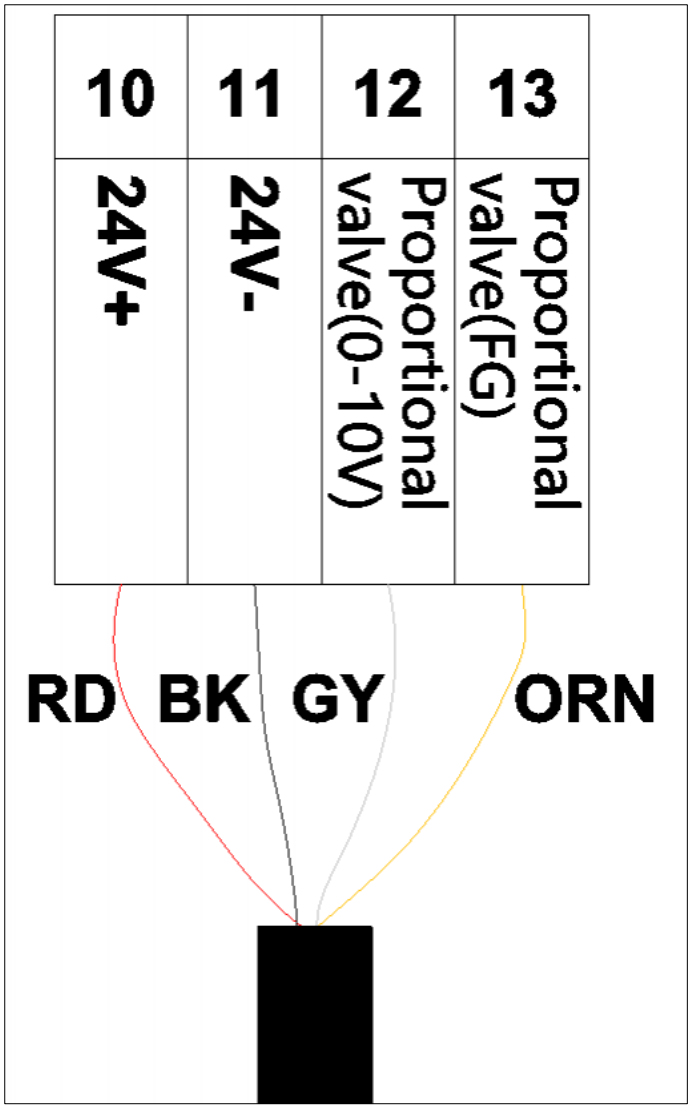
- **8 and 9** are the power output points of the terminal water pump or dual-temperature zone water pump,
- **10 and 11** are the power output points of the dual-temperature zone three-way mixing valve, **12 and 13** are the 0-10V control lines of the three-way mixing valve, and the single temperature zone does not need to be connected.
- **18 and 20** are SG control lines, and the SG line does not need to be connected to the outdoor unit (heat pump).
- The integral hydronic tank power supply selects the appropriate wire diameter according to the nameplate, and can directly draw power from the room.

4.2 Election and Wiring of Three-way Mixing Valve



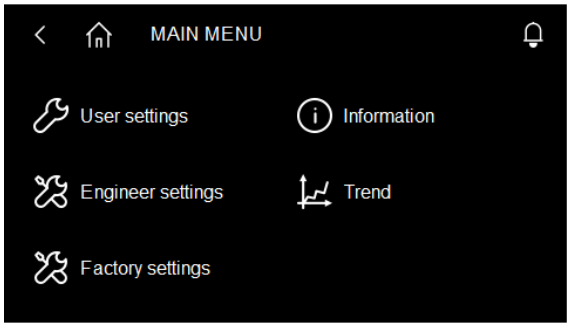
- Using instructions for proportional control valve at temp. zone 2（take DQF-B-225*DQQ-B3M-05-24AC for example）. Please note that the power supply of the three-way mixing valve is DC24V。

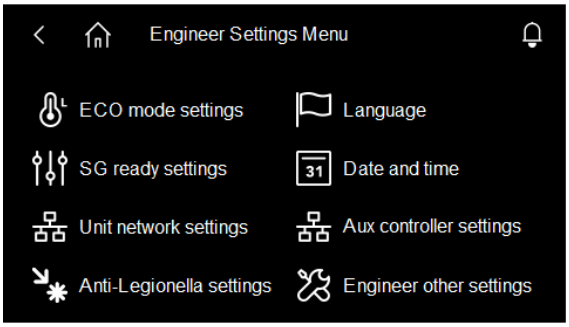
4.3 Control Line Wiring

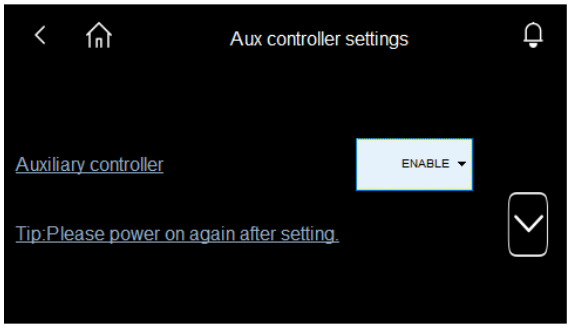


- Control line wiring: wiring according to the circuit diagram, as follows. Need to match the three-way mixing valve.

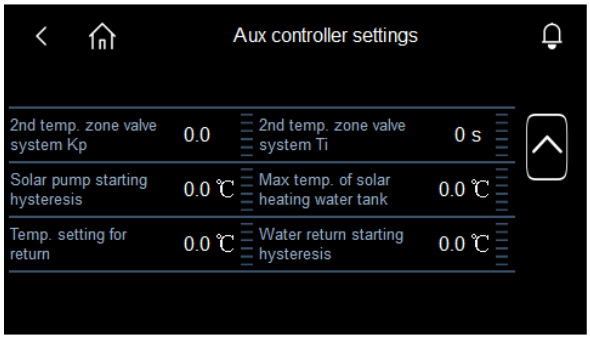
5 Parameter Settings







- step 1. Engineer settings Menu parameter setting： choose to enable or disable the auxiliary controller. The system default is "DISABLE". When the user uses this multi-function water box, please set this option to "ENABLE" and power on the host again to be effective.



- step 2. Aux controller settings parameter setting ：

2nd temp. zone valve system kp: The second temperature zone proportional valve PID adjusts the proportional coefficient.

2nd temp. zone valve system Ti: The second temperature zone proportional valve PID adjusts the integral coefficient.

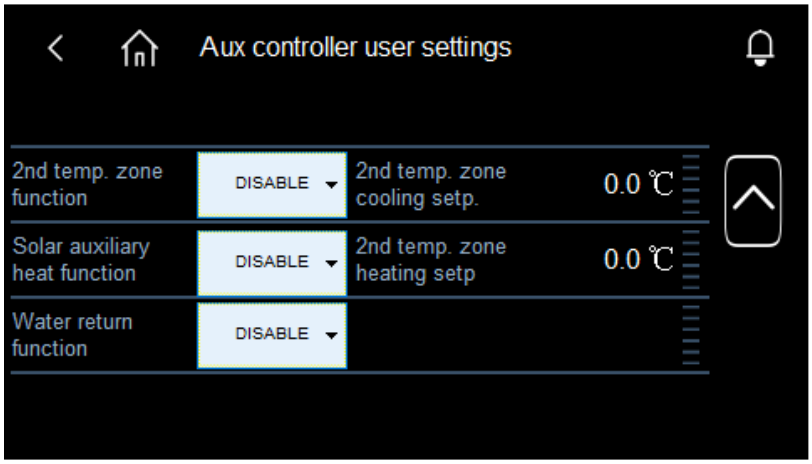
Solar pump starting hysteresis: Solar water pump start-up return difference， when the temperature of the solar sensor and hot water tank are greater than or equal to this hysteresis, the solar pump will start to heat the hot water tank.

Max temp. of solar heating water tank: set the upper limit of the hot water tank temperature

during solar heating. When the hot water tank temperature is higher than this value, the solar pump will stop running.

Temp.setting for return: domestic hot water return water temperature set point, When the actual return water temperature is equal to or greater than this value, the return water pump stops running.

Water return starting hysteresis: return water pump start-up return difference.



- step3. user settings parameter setting：

2nd temp. zone function: enable or disable the second temperature zone function.

2nd temp. Zone cooling setp: set the outlet water temperature of the second temperature zone in the cooling mode.

2nd temp. Zone heating setp: set the outlet water temperature of the second temperature zone in the heating mode.

Solar auxiliary heat function: enable or disable the solar auxiliary heat function.

Water return function: enable or disable the domestic hot water return function.

6 Precautions

- The inlet pipe needs to be installed with a filter, and the density of the filter screen is more than 60Mesh.
- The inlet pipe needs to be installed with a safety valve, which needs to be installed in accordance with the drawings, otherwise it will cause damage due to excessive pressure inside the water tank.
- The external pipeline all need insulation measures to prevent heat loss, condensation and icing.
- The water quality should be in line with the municipal tap water standards, prohibit the use of ground water and corrosive liquids.
- When using for the first time, please make sure that the hot water tank and buffer tank are full of water, the water outlets have water flow, and the system air is discharged before switching on and running.
- There is electric heater inside the unit, the power supply must be installed with residual current action protector to prevent electric shock.
- The exhaust port should be taken over and led to the outdoor, and regularly (3 months) to check whether there is any blockage or water.

[i]Version 1.1 – Feb 2026

[i]