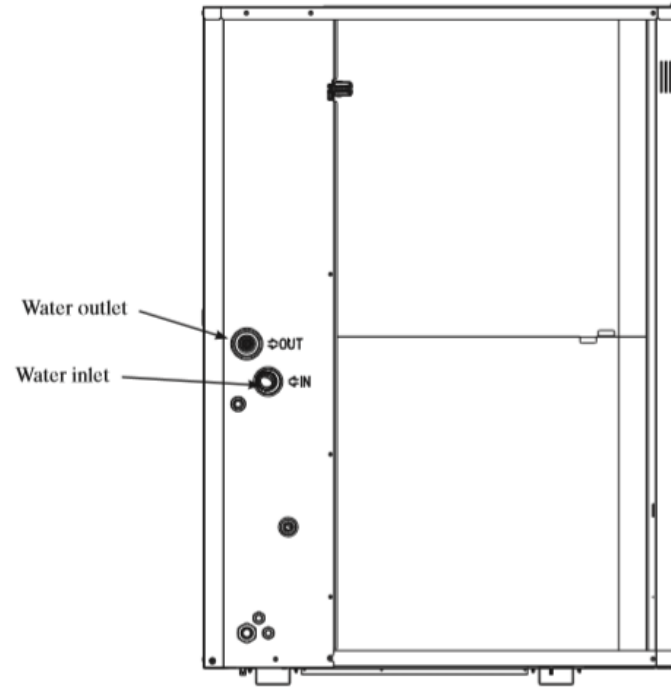
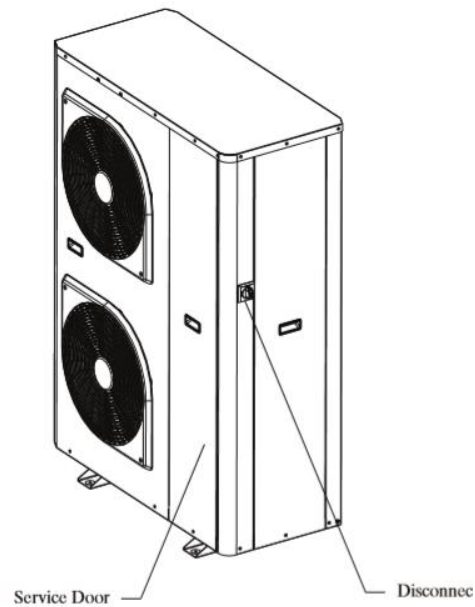


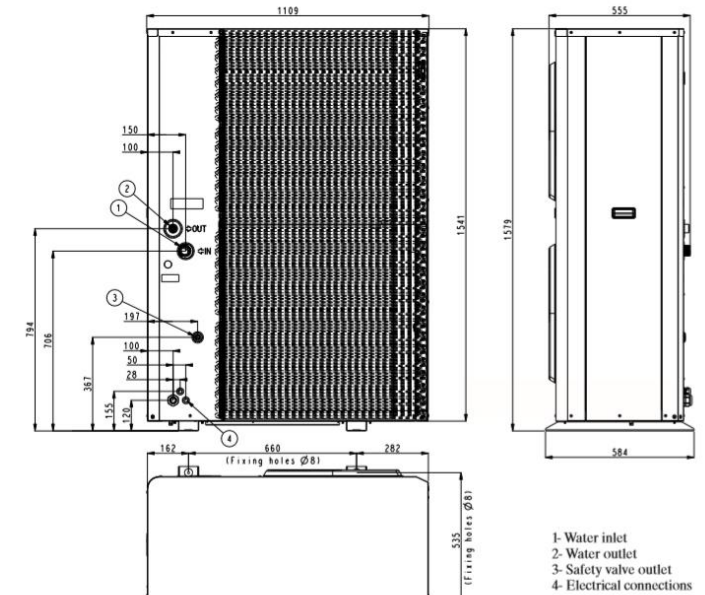
Size 17 to 21 – inverter reversible air-to-water heat pumps

Figure 6: Water connection on unit

1.4.2 - Main switch

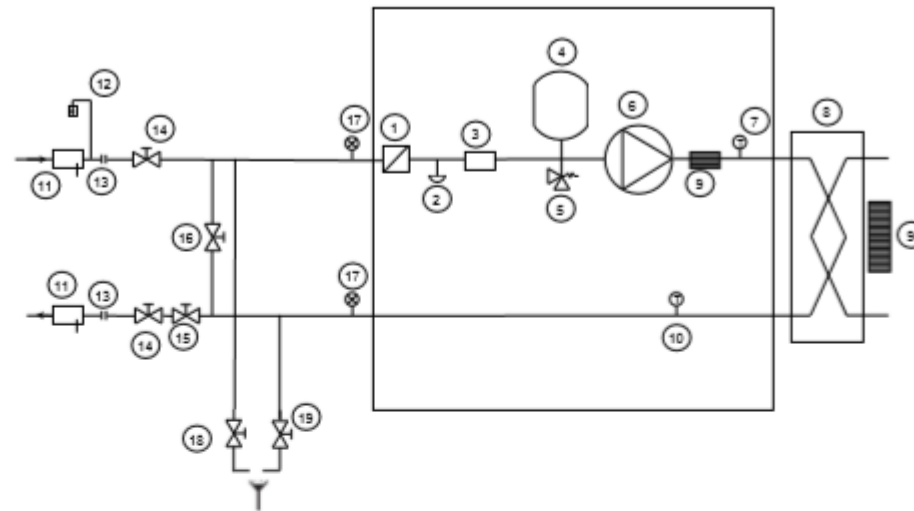


1.4.1 - Dimensions and location of hydronic connections



Size 17 to 21 – inverter reversible air-to-water heat pumps

Figure 7: Typical diagram of the hydronic circuit with the hydronic module 17-21 kW



Legend:

HYDRONIC COMPONENTS

- 1 Mesh filter
- 2 Water drain valve
- 3 Paddle flow switch
- 4 Expansion tank
- 5 Safety valve
- 6 Pump
- 7 Temperature sensor
- 8 Brazed Plate Heat Exchanger
- 9 Anti-freeze electric heater
- 10 Temperature sensor
- 11 Pocket for temperature sensor
- 12 Air purge

SYSTEM COMPONENTS

- 13 Flexible connections
- 14 On/off valve
- 15 Water flow control valve (factory supplied but to be installed on site)
- 16 Bypass valve for anti-freeze protection (when, in winter, on/off valve are closed)
- 17 Pressure gauge
- 18 Water drain valve from the plant
- 19 Water drain valve from refrigerant – water exchanger

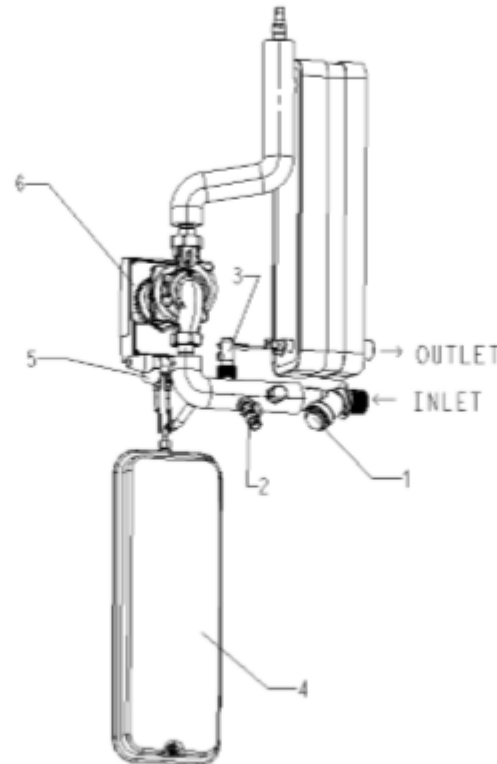
— Components provided with unit

Note: The unit must be protected against frost

CAUTION: The use of the hydronic module on open loop is prohibited.

Size 17 to 21 – inverter reversible air-to-water heat pumps

Figure 8: Hydraulic module equipped with variable speed single pump with expansion tank



Legende

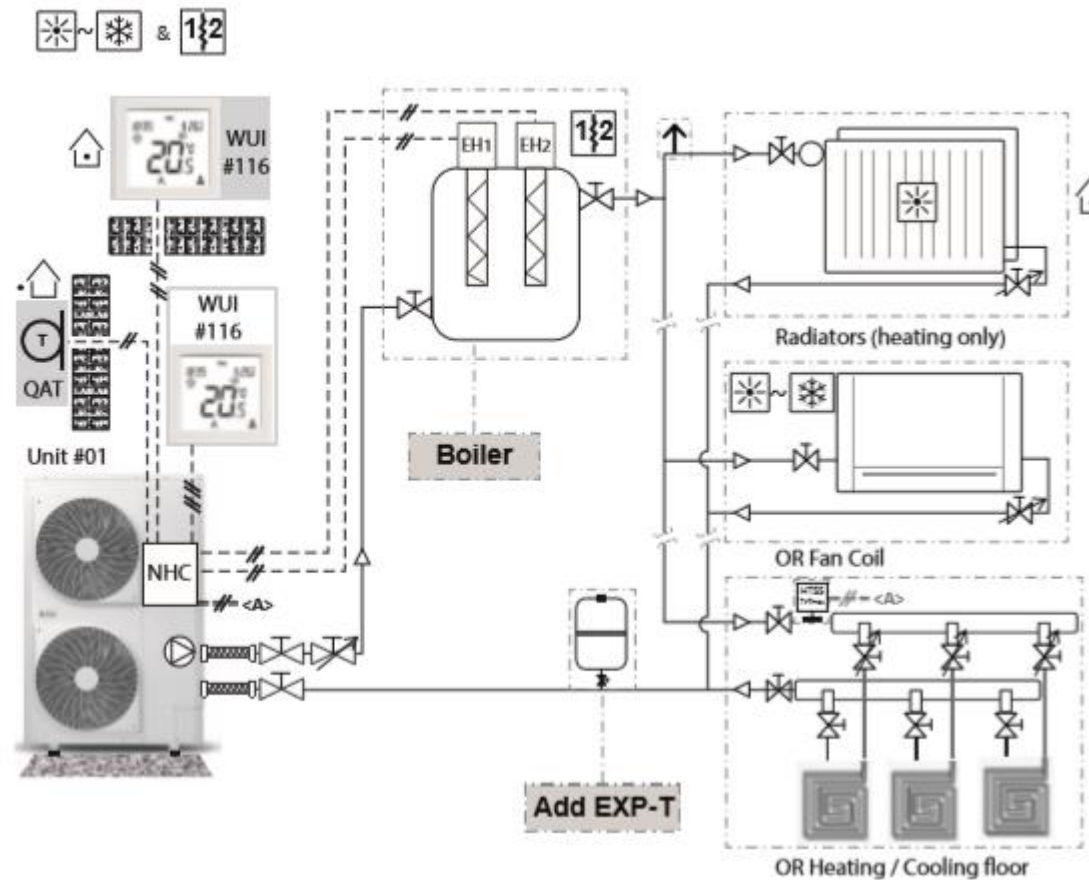
- 1 Mesh filter
- 2 Water drain valve
- 3 Paddle flow switch
- 4 Expansion tank
- 5 Safety valve
- 6 Pump

Minimum and maximum pressures necessary in the hydraulic circuit for correct operation of the units.

Hydraulic circuit	Minimum pressure at the suction of the pump to avoid the cavitation phenomena.	Maximum pressure at the suction of the pump before the opening of the water relief valve*
Variable speed hydronic module	40 kPa (0.4 bar)	300 kPa(3 bar).

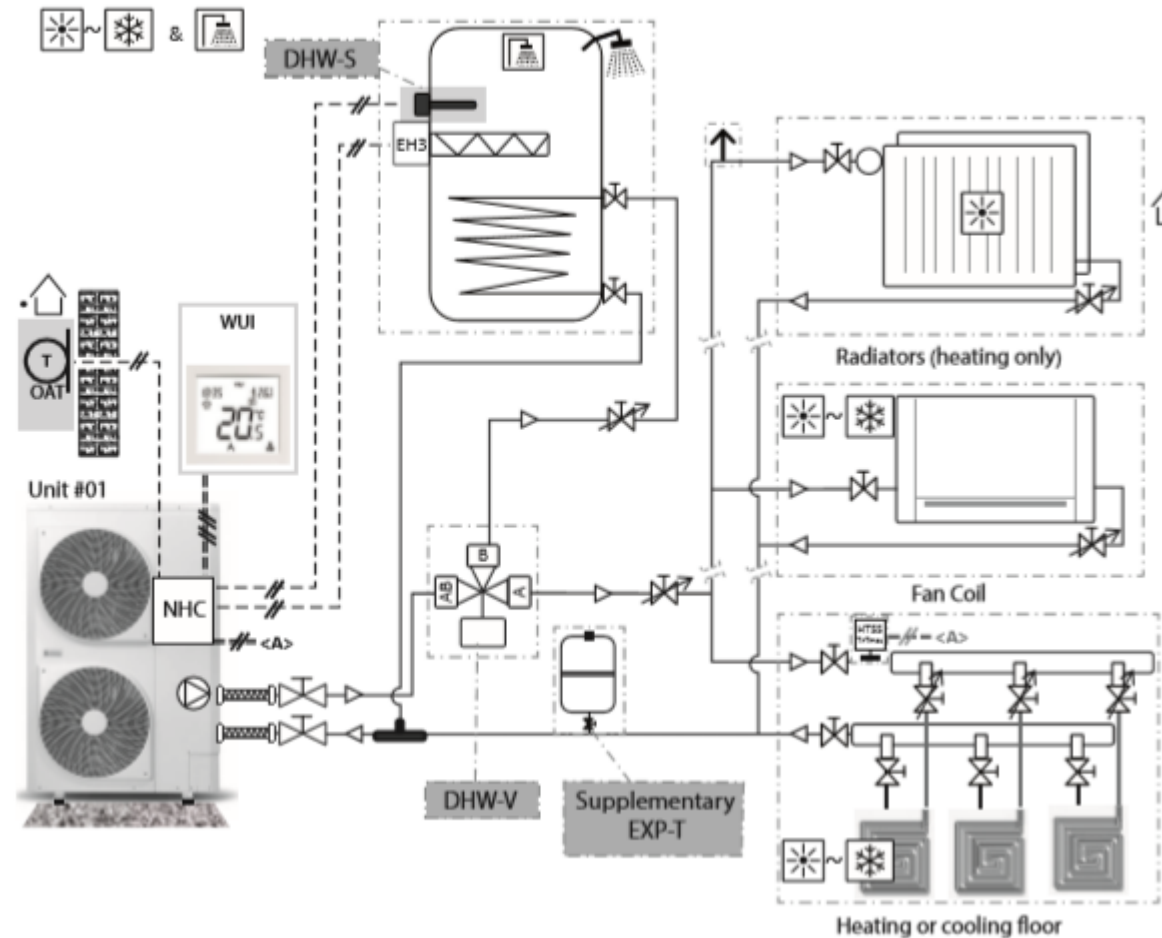
Size 17 to 21 – inverter reversible air-to-water heat pumps

Figure 12: Standard installation with booster electric heaters



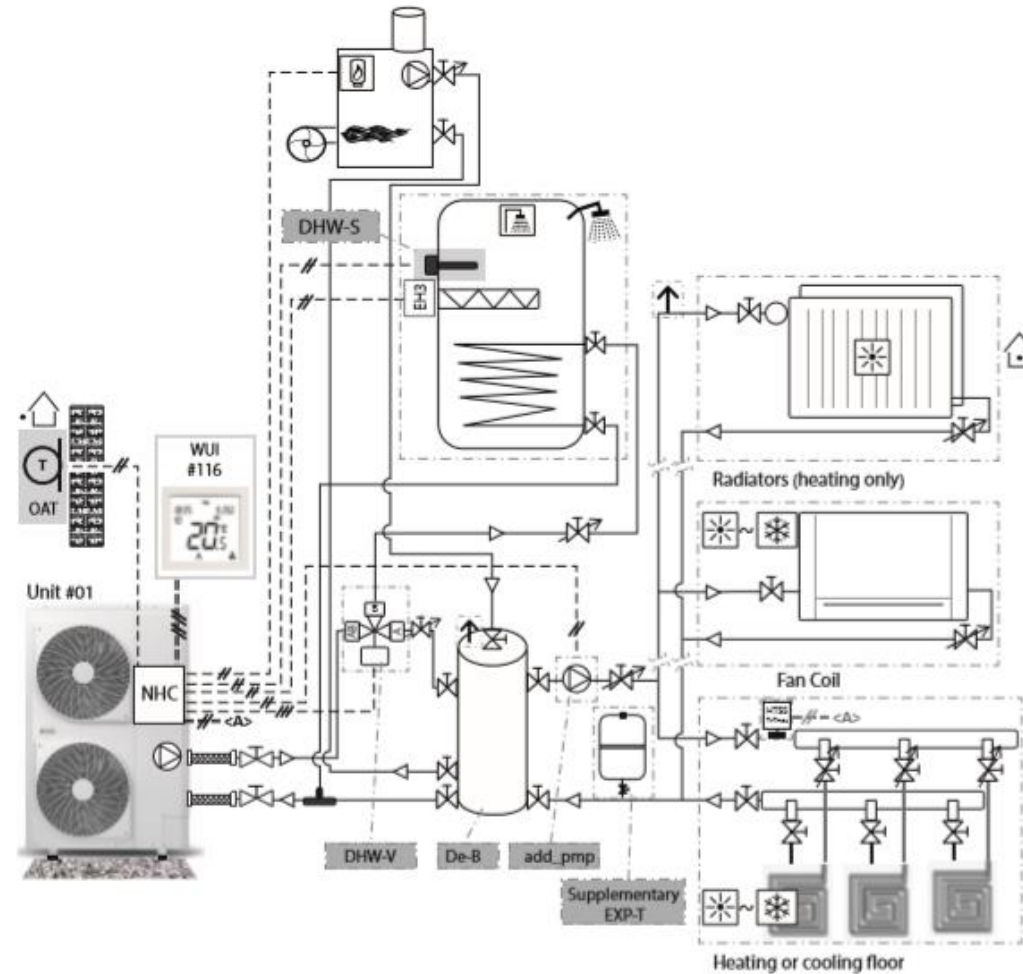
Size 17 to 21 – inverter reversible air-to-water heat pumps

Figure 14: Standard installation with DHW production



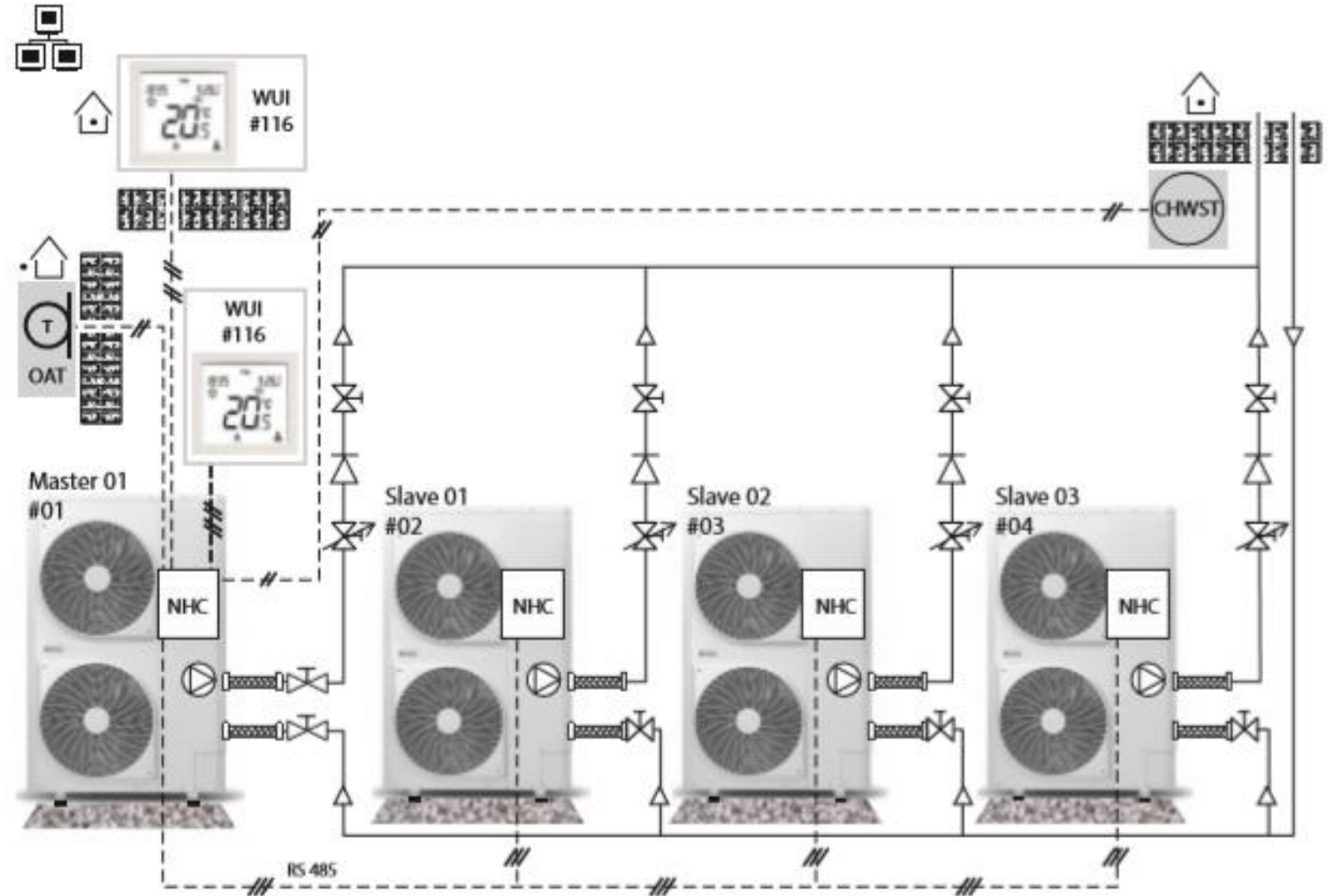
Size 17 to 21 – inverter reversible air-to-water heat pumps

Figure 16: Standard installation with DHW production and boiler



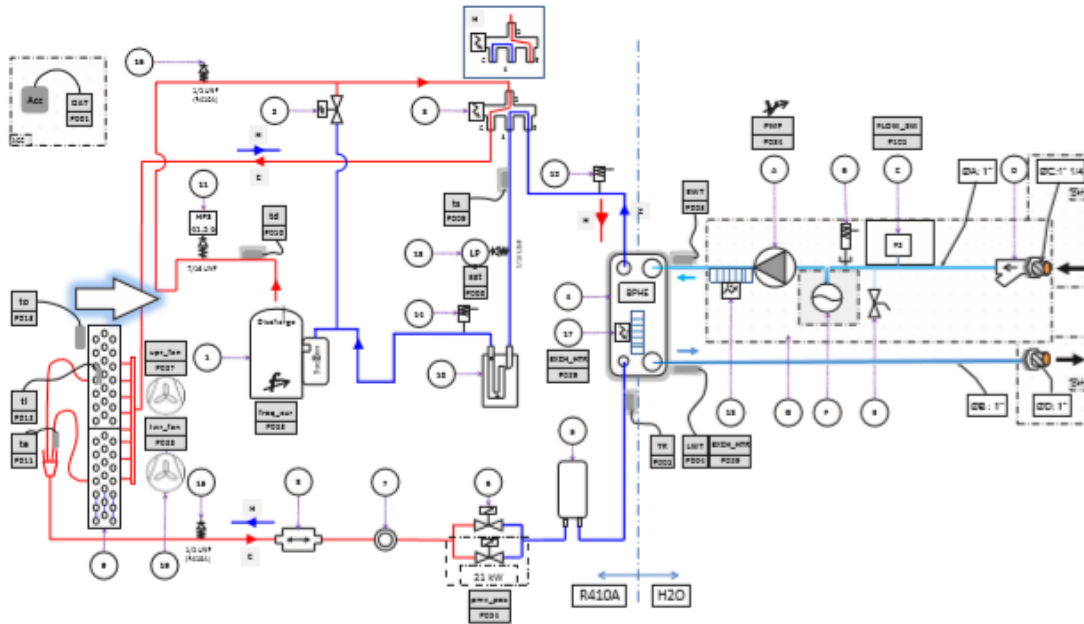
Size 17 to 21 – inverter reversible air-to-water heat pumps

Figure 18: Standard installation with Master / Slave (example with 3 slaves)



Size 17 to 21 – inverter reversible air-to-water heat pumps

4.3.1 - General – Refrigerant part



Water side legend

Label	Description
A	Water Pump -Main water pump -primary loop
B	Water High Pressure Safety Relief Valve (300 kPa)
C	Flow Switch (standard)
D	Water Filter (standard)
E	Drain valves
F	Expansion vessel
G	Hydronic module

Unit refrigeration circuit legend

Label	Description
1	Variable speed rotary compressor
2	2 way solenoid valve -CP Warm-up at start
3	Reverse 4 way valve (energized when in Heating mode)
4	Water exchanger - BPHE
5	Receiver
6	Expansion valve - pulse modulating valve (2x EXV for size 21)
7	Sight Glass
8	Filter Dryer
9	Air cooled Exchanger
10	Accumulator or anti-slugging bottle
11	High Pressure Switch (4 150 kPa ~ 41.5 b)
12	Pressure safety release valve @ suction on BPHE
13	Low Pressure transducer (mounted on Schrader valve)
14	Pressure safety release valve @ suction
15	Service Pressure AutomaticPort (Schrader) on LP side
16	Service Pressure AutomaticPort (Schrader) on HP side
17	Electrical Heater on BPHE: water anti-freeze protection
18	Electrical Heater on BPHE Inlet pipe, water anti-freeze protection
19	Upper & Lower fans
GAT	Software point
P001	Value read under «Parameter number»; ie: OAT value read@ parameter 001 'P001'