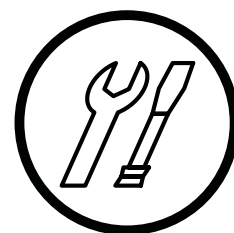


2nd circuit kit

UTW-KZS*E

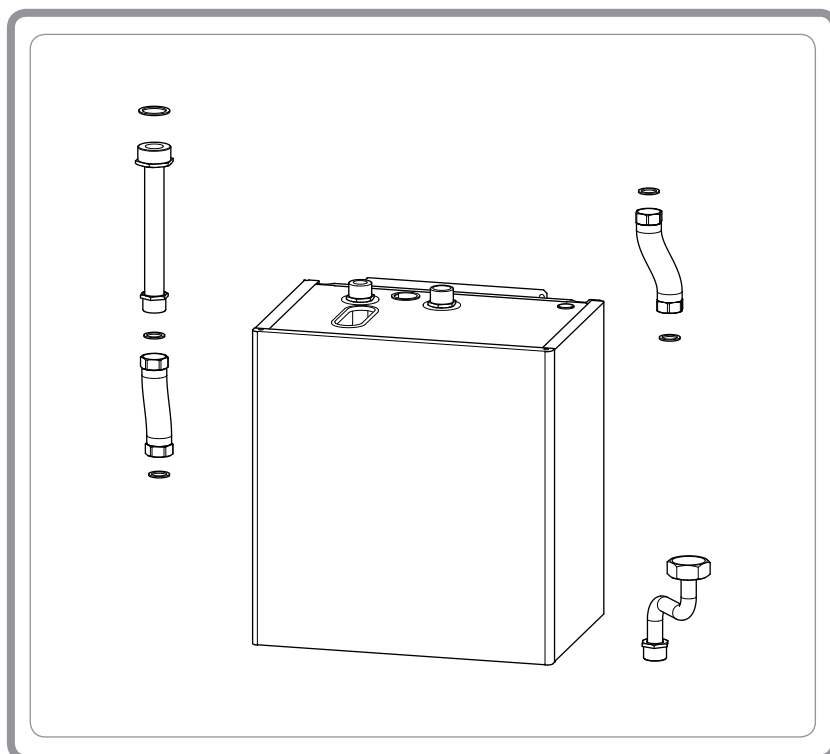
for heat pump, Split 1 service



Installation instructions

intended for the
professional technician

these must be kept safe
for subsequent consultation



☞ This manual primarily concerns the installation and connection of the second circuit kit.
To install and configure the heat pump, please refer to the heat pump's technical instructions manuals.

Fujitsu General (Euro) GmbH
Wertstrasse 20
40549 Düsseldorf - Germany

Subject to modifications without notice.
Non contractual document.

1 Description of the equipment

1.1 Package

- **1 package:** 2nd circuit kit.

On reception, before you fit anything, it is essential that you check the parts received and search for any damage caused during transport.

1.2 Scope of application

The control of 2 heating circuits requires the installation of the 2nd circuit and Regulation extension kit (code UTW-KRE*D).

This corresponds to the preset configurations **2** and **4** on the heat pump's hydraulic unit's regulator (line 5700).

1.3 Expansion vessel

Reminder : The expansion vessel volume must be calculated (it depending of the total volume installation). Add an expansion vessel can be necessary.

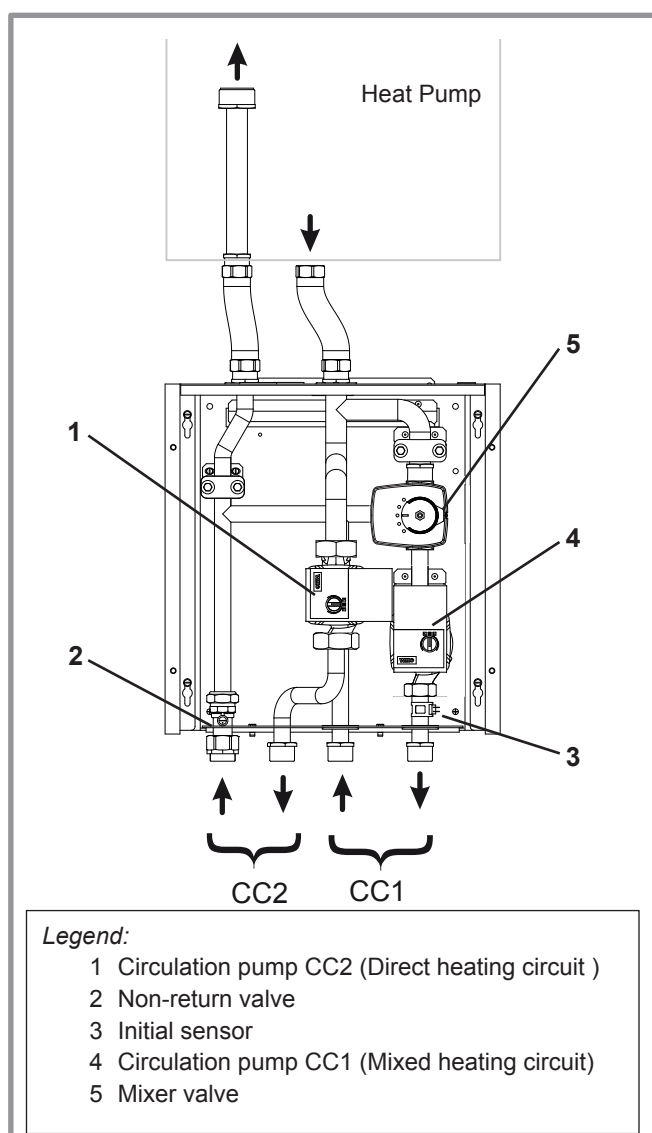


figure 1 - Appliance devices

1.4 Specifications

Power absorbed	126 W
Maximum operating pressure	3 bar
Supply voltage	230V - 50Hz
Flow/return diameter (male)	26 x 34 mm

Servomotor:

- Travel: 90°.
- Operating time for completely opening or closing the valve: 4 min.

3 way mixing valve:

- Nominal diameter: 26x34 mm.
- KV type: 6.

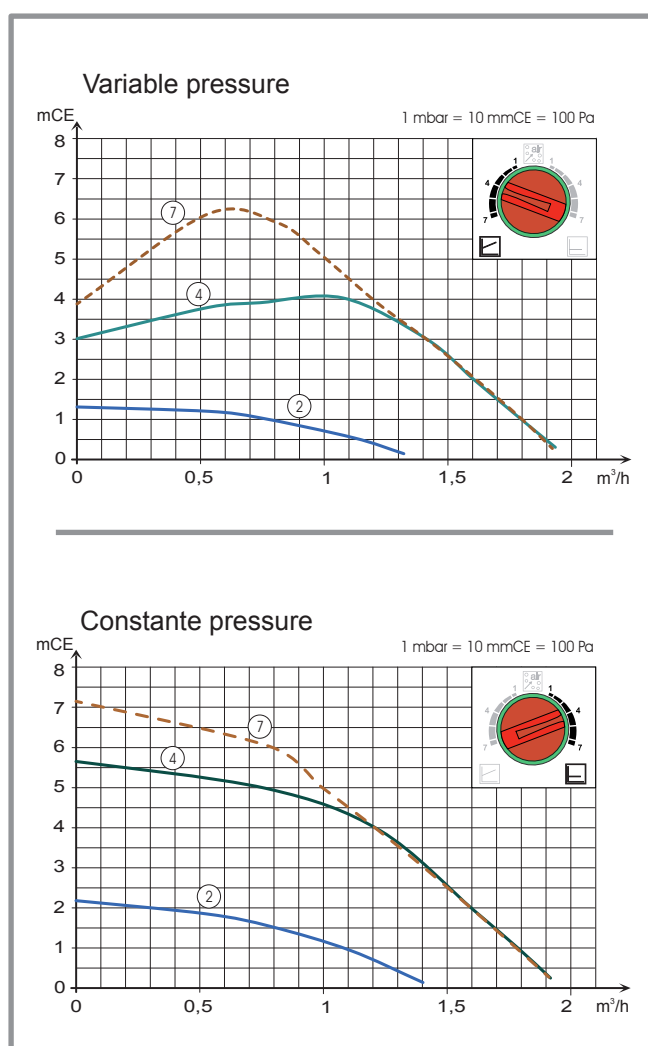


figure 2 - Hydraulic pressures and flow rates available (Hydraulic unit + 2nd circuit kit)

2 Installation instructions

2.1 Fixing the second circuit

- Fix the support solidly to a flat, hard-wearing wall (not a light partition) ensuring that it is correctly levelled.
- Attaching the kit to its bracket.

2.2 Hydraulic connections

The connection must comply with good trade practice according to local building regulations.

Tightening torque: 15 to 35 Nm.

The appliance must be connected to the installation with union connectors and shut-off valves to facilitate its removal.

Reminder: Seal everything when fitting in accordance with prevailing trade practice for plumbing work:

- Use suitable seals (fibre seals, o-rings).
- Use Teflon tape or hemp.
- Use sealing paste (synthetic depending on the case).

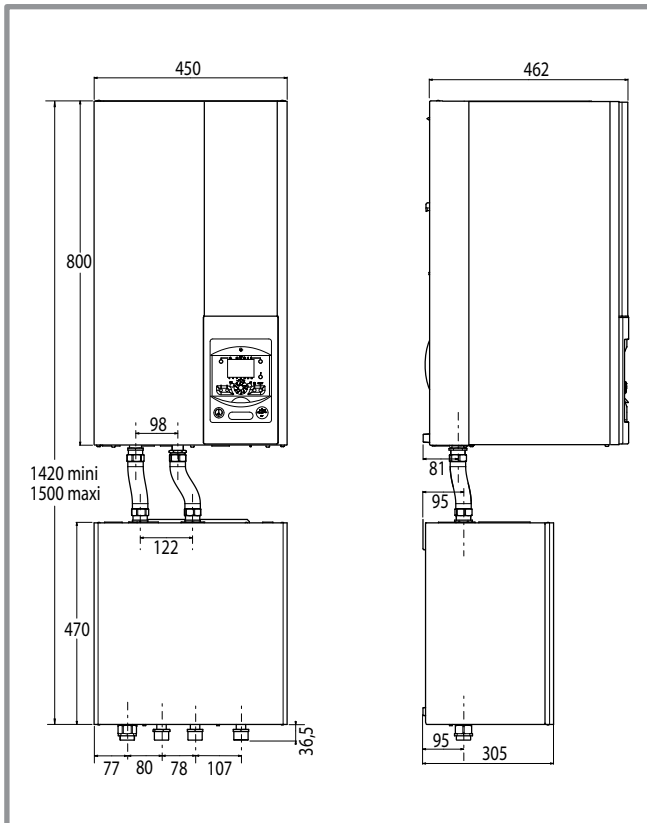


figure 3 - Dimensions in mm
(Hydraulic unit + 2nd circuit kit)

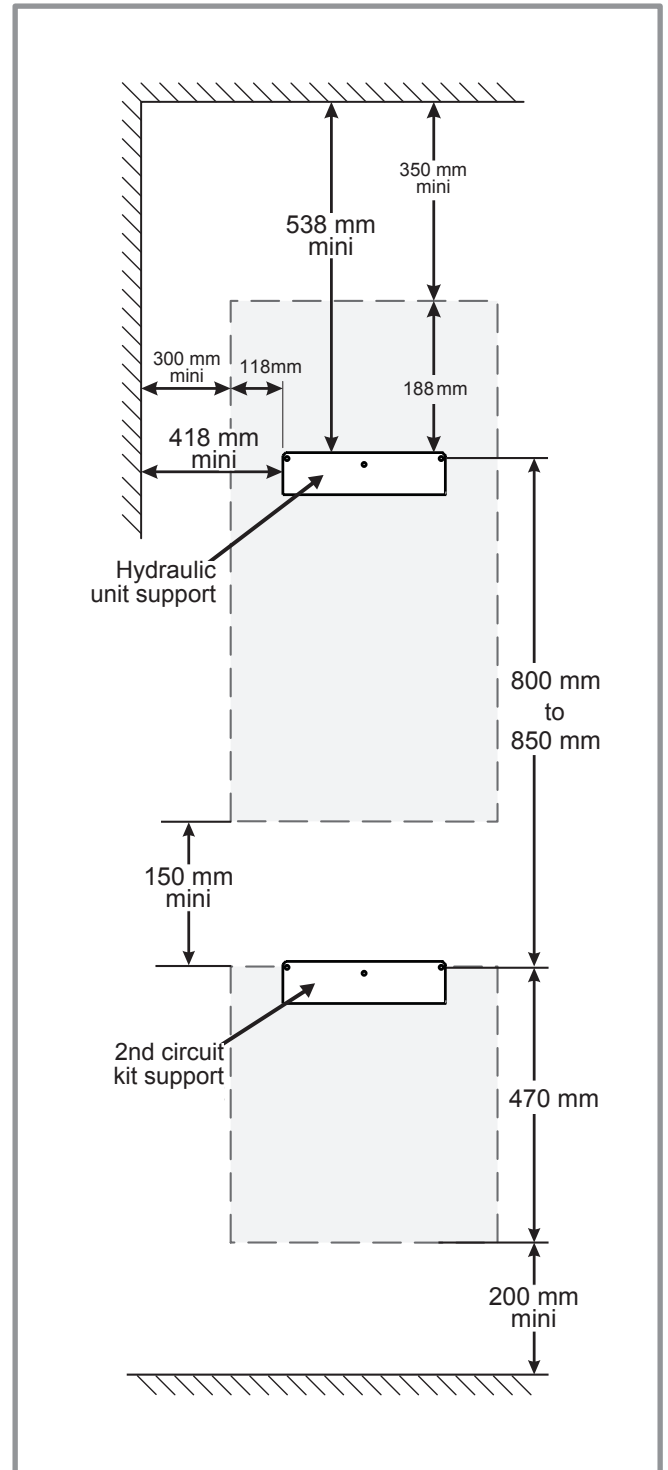


figure 4 - Fixing the casing (Optional 2nd circuit kit)

2.3 Installing the 2-circuit kit

- Carry out the installation as shown on the following figures:

(figure 5: only HP ; figure 6: HP + Boiler connection)

- **1** - Unplug the heating circulation pump. Remove the heating circulation pump from the HP.
- **2** - Remove the heating return pipe.
- **3** - Install the heating return tube in the HP.
- **4** - Install the connecting hoses.
- **5** - Install the CC2 heating circulation pump (direct circuit).
- **6** - Install the new heating flow pipe.

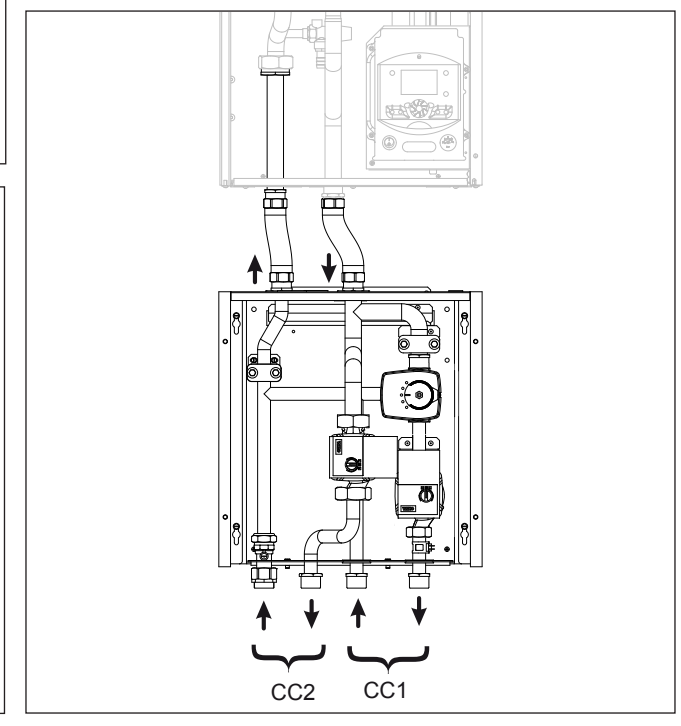
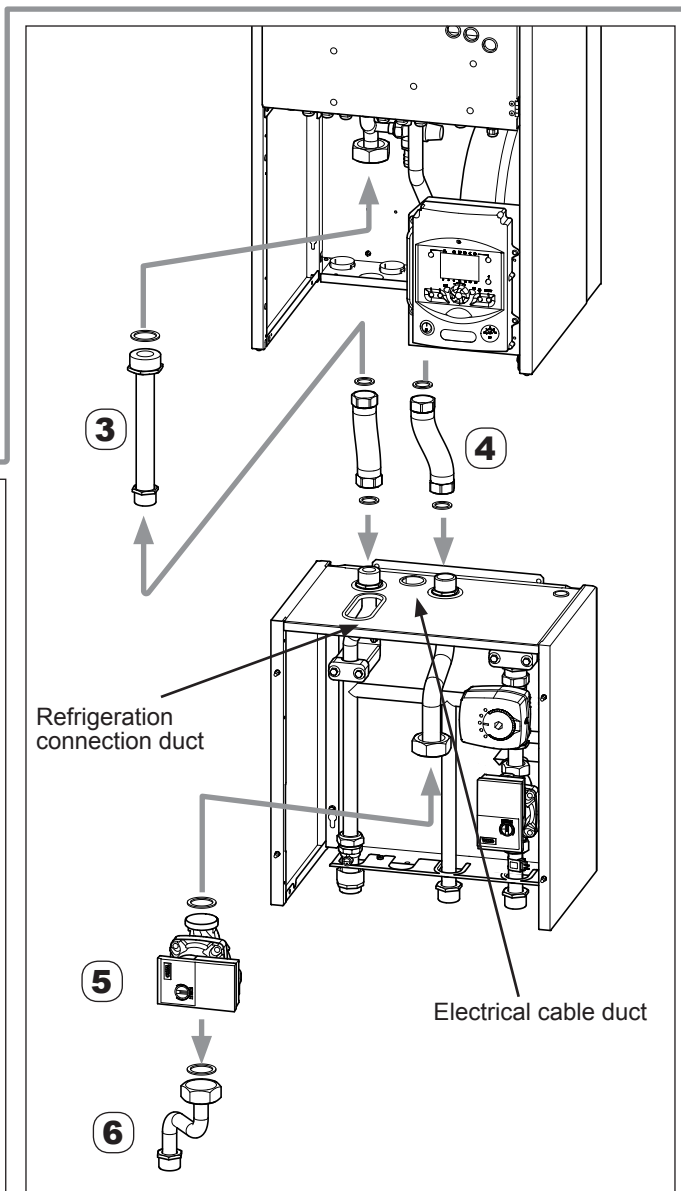
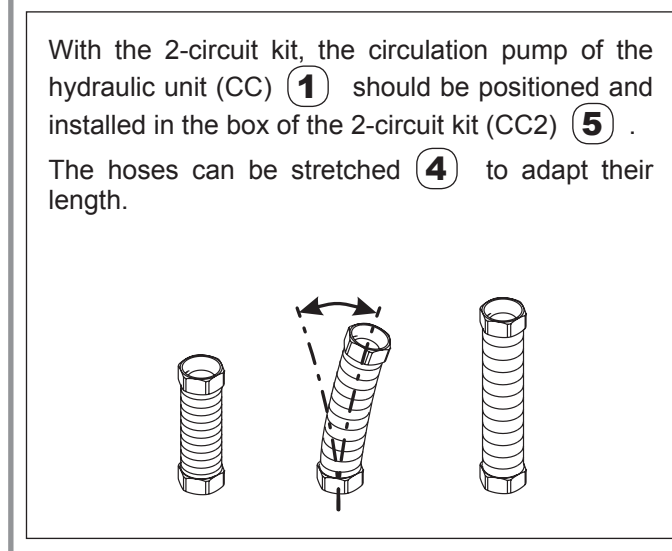
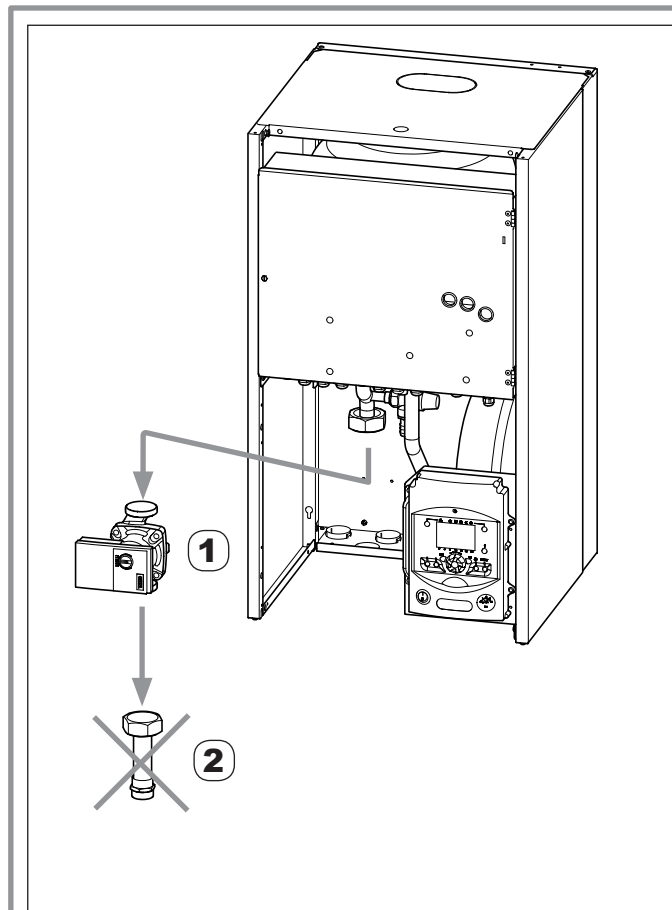


figure 5 - Installing the 2-circuit kit

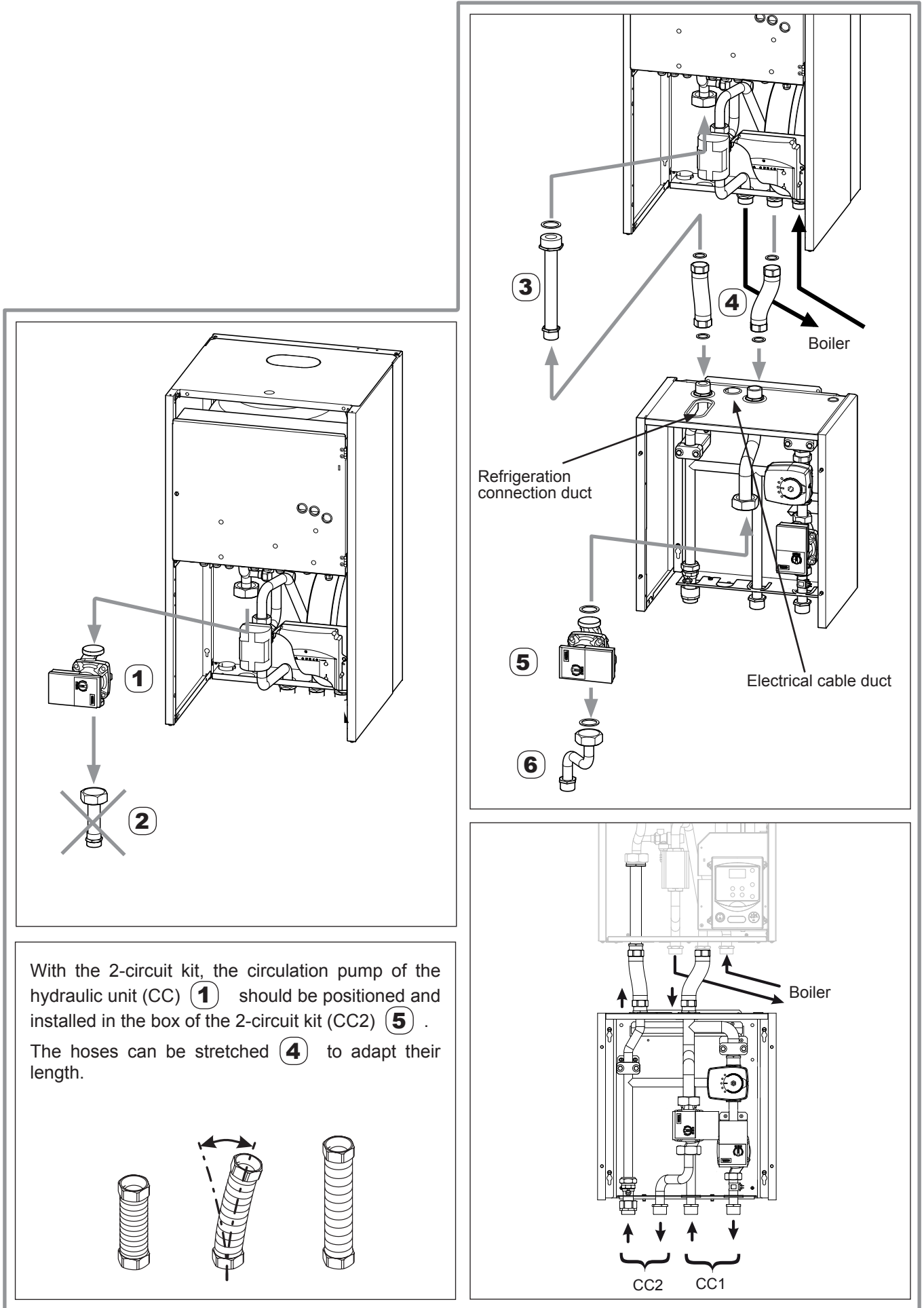


figure 6 - Installing the 2-circuit kit (HP + Boiler connection kit)

2.4 Installing the extension board

- Please refer to the instructions for the extension regulation kit (code UTW-KRE*D).

2.5 Electrical connections

Ensure that the general electrical power supply has been cut off before starting any repair work.

The electrical installation must be conducted in accordance with the prevailing regulations.

The electrical connections must only be made when all the other fitting operations have been completed (fixing, assembly, etc.).

Remark: In the case of a heated floor, connect the floor heating safety device into the connector of the floor heating pump (X110 - CC1: Mixed circuit, X12 - CC2: Direct circuit).

- Make the following connections:

- Reconnect the heating circulation pump CC2 (Direct circuit) (X12 / RVS board).
- **7** - Circulation pump CC1 (Mixed circuit).
- **8** - Mixer valve.
- **9** - Initial sensor.
- **10** - Shunt on "M".
- **11** - Interconnection between RVS and AVS.
- **12** - Power supply AVS regulation board. Remove the insulator of the AVS board's power connector. Connect the power connector to the AVS board. Please refer to the instructions for the extension regulation kit.
- **13** - Room thermostat or Room control unit.
- **()** - Apply the kit's label on the inside of the hydraulic unit's front plate, over the wiring label.

2.6 Pre-utilization check

- Configure the parameter **5700** on a configuration **2** or **4**.
- Please refer to the manual provided with the HP.

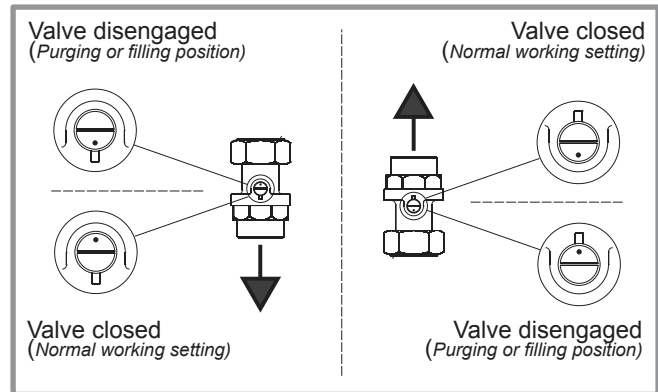


figure 7 - Non-return valves

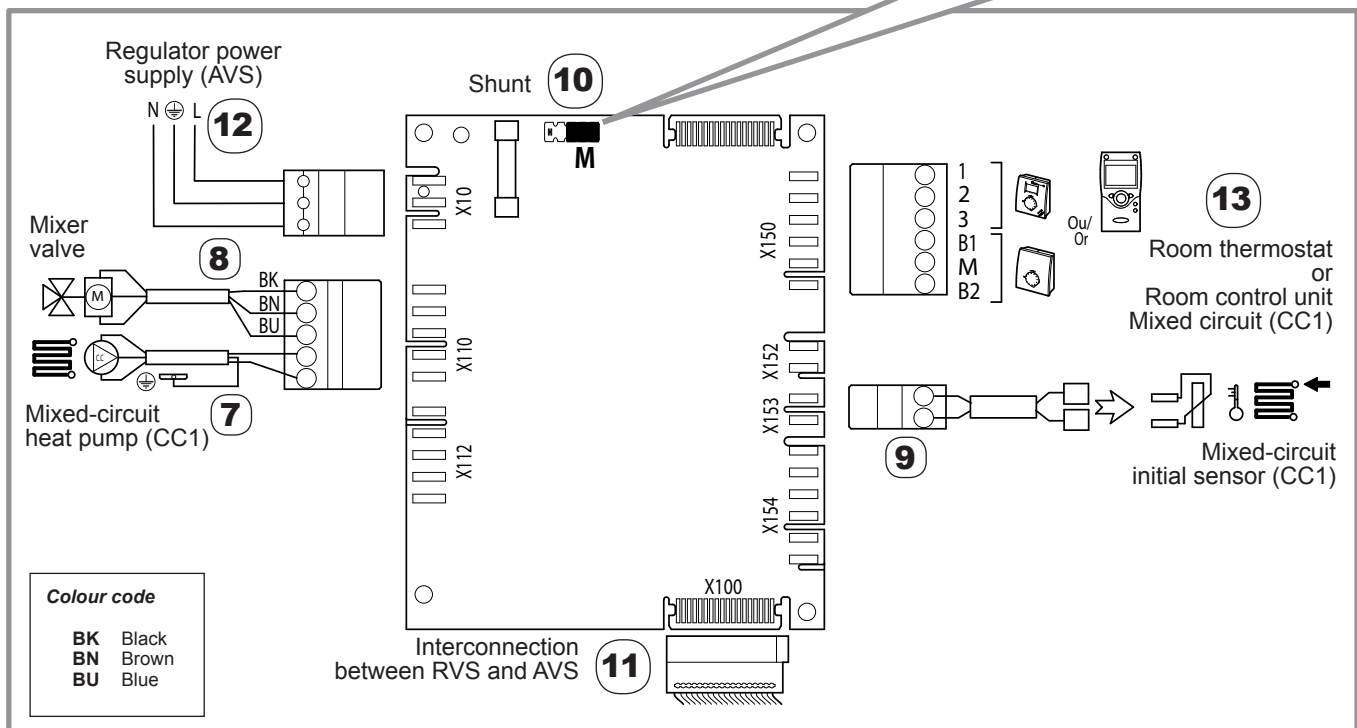
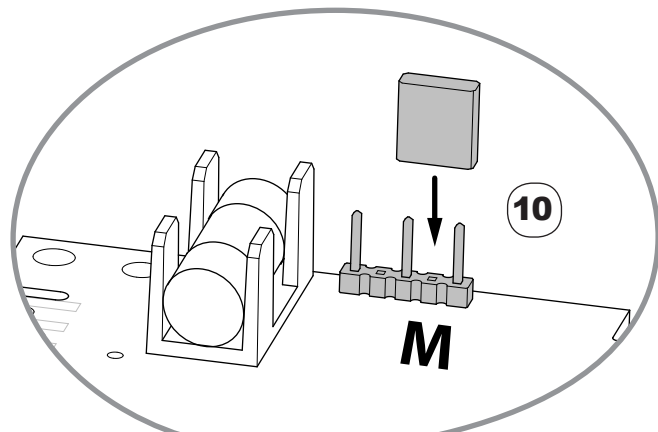
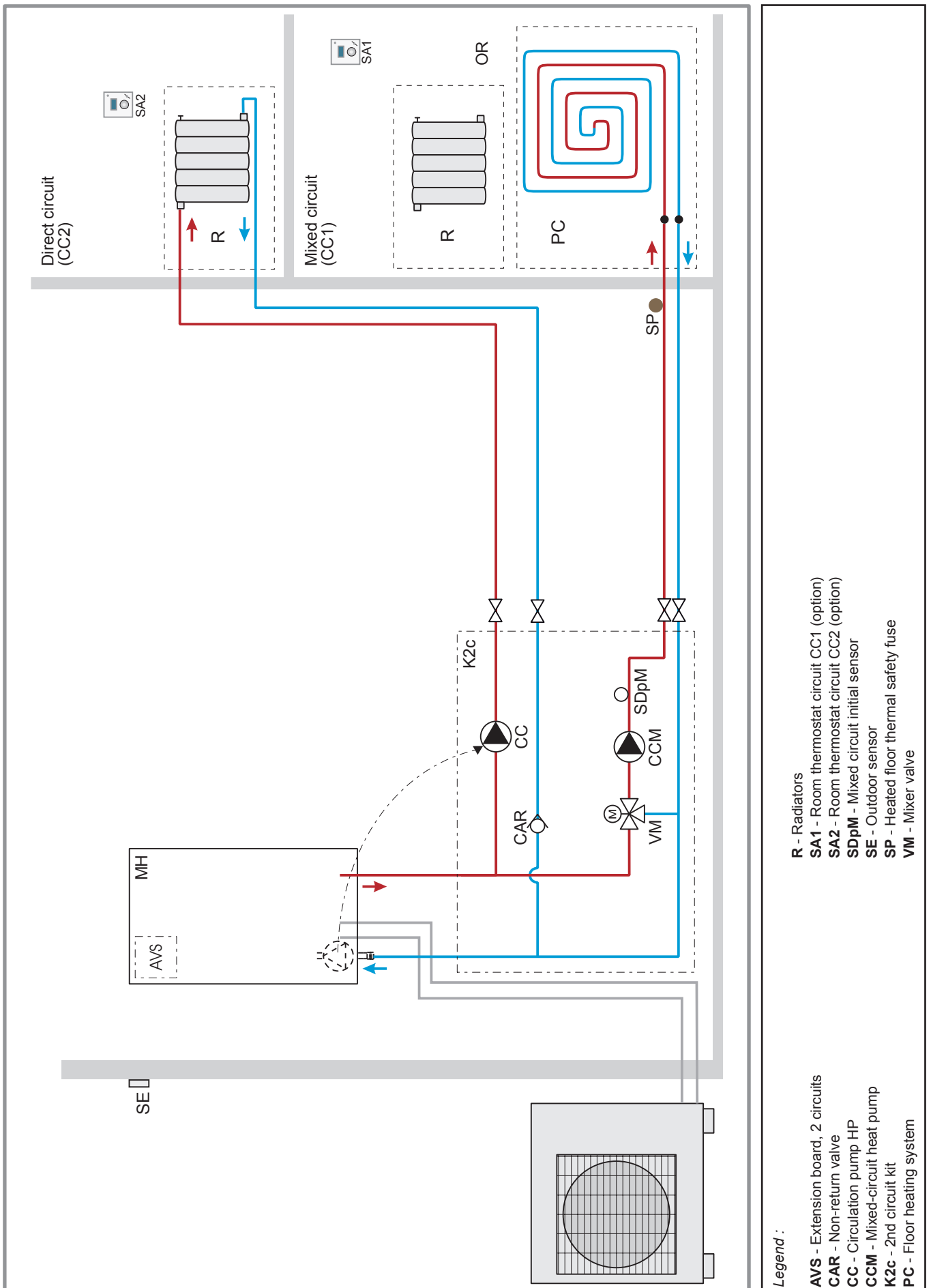


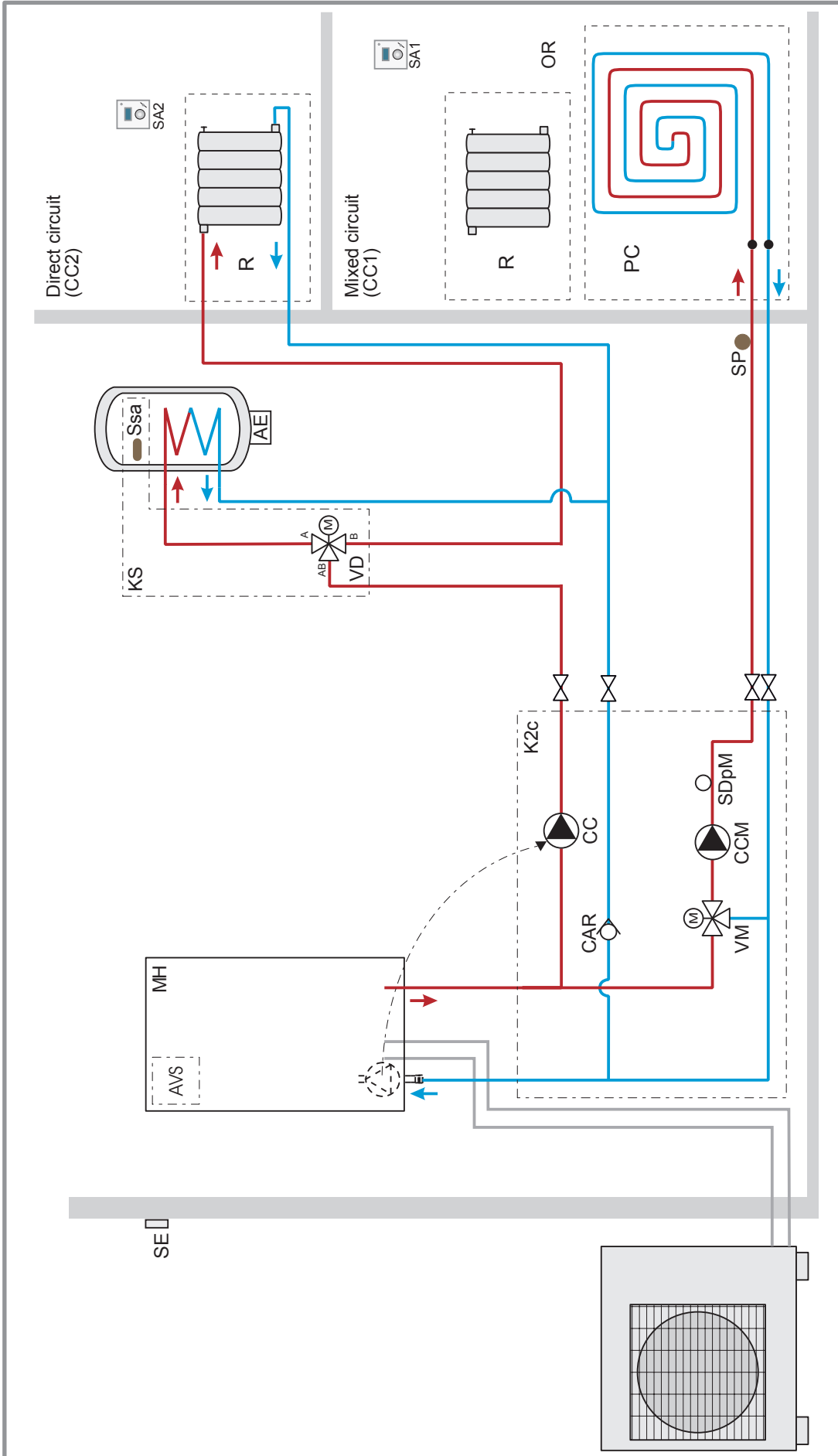
figure 8 - Electrical connection on AVS 55 extension board

2.7 Overall hydraulic layout

• Configuration 2: 2 heating circuits



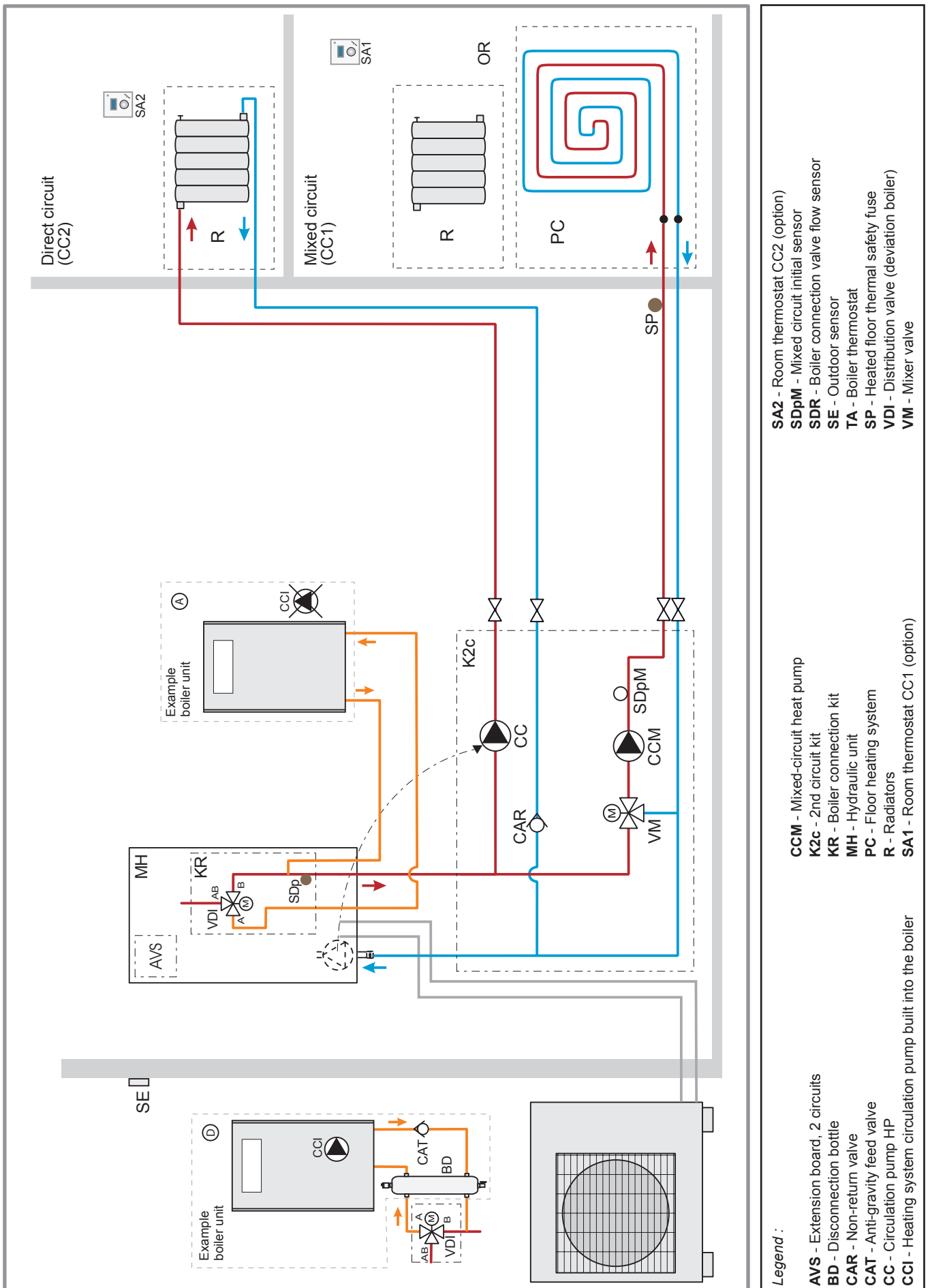
• Configuration 2: 2 heating circuits & DHW tank



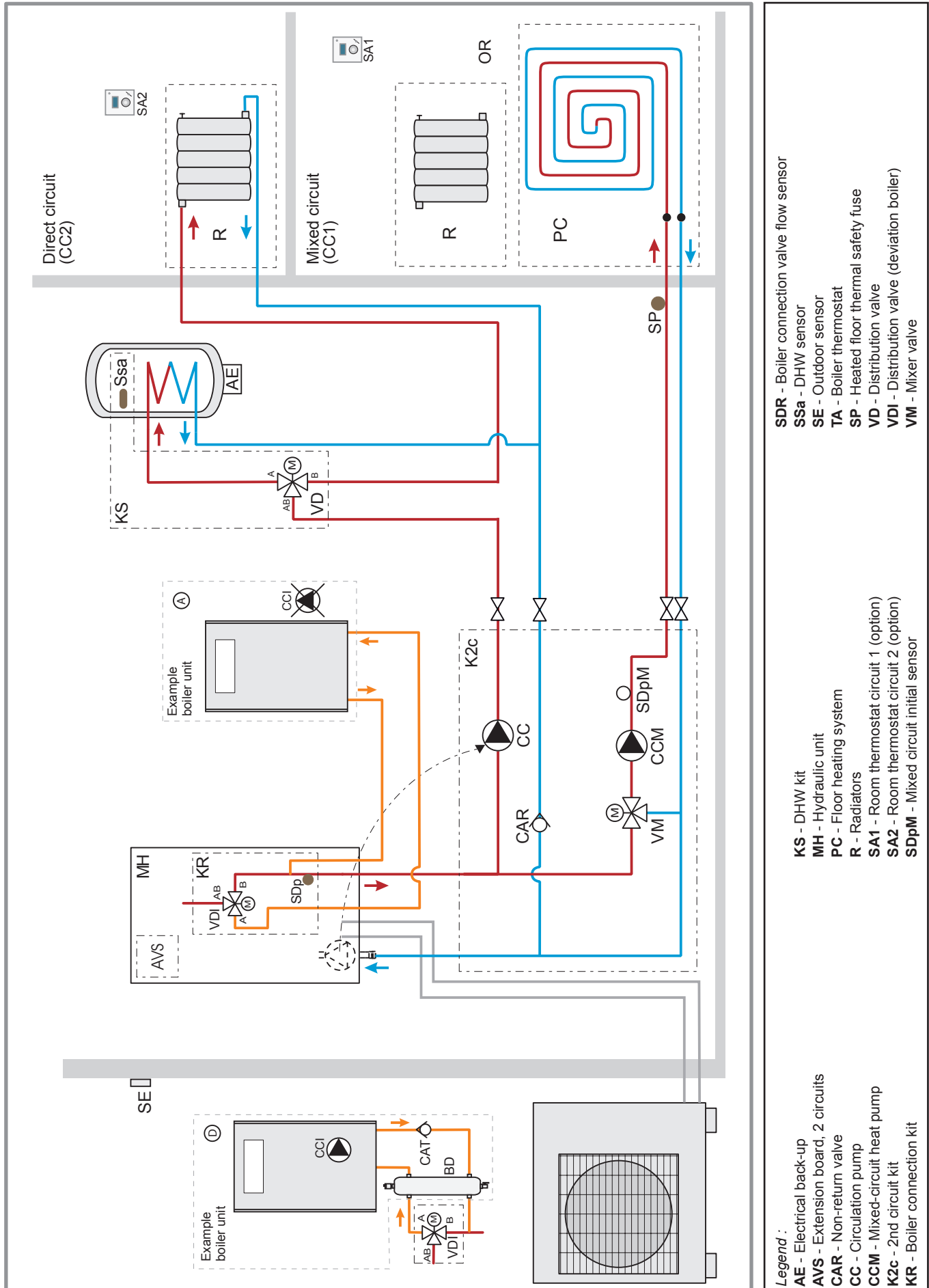
Legend :

- AE** - Electrical back-up
- AVS** - Extension board, 2 circuits
- CAR** - Non-return valve
- CC** - Circulation pump
- CCM** - Mixed-circuit heat pump
- K2c** - 2nd circuit kit
- KR** - Boiler connection kit
- KS** - DHW kit
- MH** - Hydraulic unit
- PC** - Floor heating system
- R** - Radiators
- SA1** - Room thermostat circuit 1 (option)
- SA2** - Room thermostat circuit 2 (option)
- SDpM** - Mixed circuit initial sensor
- SSa** - DHW sensor
- SE** - Outdoor sensor
- TA** - Boiler thermostat
- SP** - Heated floor thermal safety fuse
- VD** - Distribution valve
- VDI** - Distribution valve (deviation boiler)
- VM** - Mixer valve

• Configuration 4: Boiler connection and 2 heating circuits



• Configuration 4: Boiler connection and 2 heating circuits & DHW tank



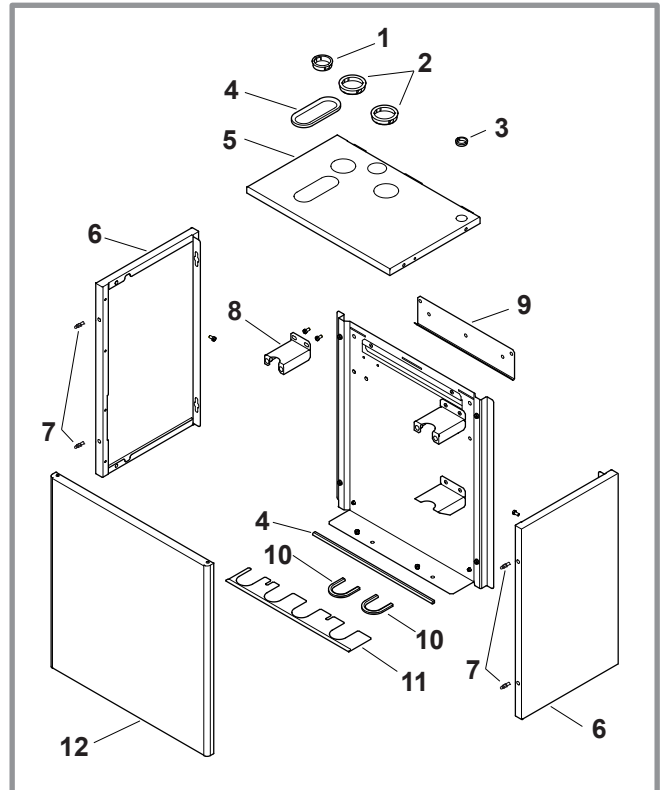
- Legend :**
- AE - Electrical back-up
 - AVS - Extension board, 2 circuits
 - CAR - Non-return valve
 - CC - Circulation pump
 - CCM - Mixed-circuit heat pump
 - K2c - 2nd circuit kit
 - KR - Boiler connection kit
 - KS - DHW kit
 - MH - Hydraulic unit
 - PC - Floor heating system
 - R - Radiators
 - SA1 - Room thermostat circuit 1 (option)
 - SA2 - Room thermostat circuit 2 (option)
 - SDpM - Mixed circuit initial sensor
 - SDR - Boiler connection valve flow sensor
 - SSa - DHW sensor
 - SE - Outdoor sensor
 - TA - Boiler thermostat
 - SP - Heated floor thermal safety fuse
 - VD - Distribution valve
 - VDI - Distribution valve (deviation boiler)
 - VM - Mixer valve

3 Spare parts

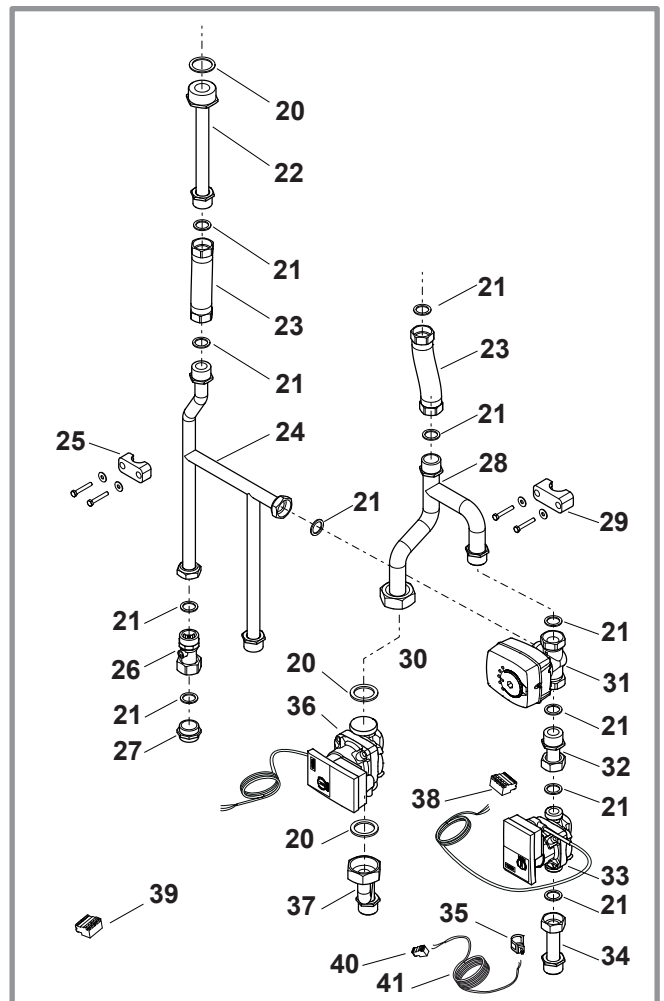
When ordering spare parts, specify the appliance type and serial number, the name of the part and the part number.

Qty = Total quantity on the appliance.

Nr	Code	Designation	Type	Qty
1	157312	Cable grommet		01
2	157326	Cable grommet		02
3	157311	Cable grommet		01
4	159200	Profile		0,62 m
5	252808	Cover		01
6	912464	Side panel		02
7	134503	Stud bolt		04
8	970103	Support		01
9	256119	Back frame		01
10	142303	Profile		0,26 m
11	205826	Supplementary back plate		01
12	937286	Front plate		01



20	142734	Gasket	.40x49	03
21	142735	Gasket	.26x34	10
22	184100	Return pipe		01
23	132232	Flexible		02
24	184101	Return pipe		01
25	110611	Collar		01
26	110047	Clapet		01
27	149001	Mamelon	.26x34	01
28	184078	Pipe of valve		01
29	110618	Collar		01
30	150307	Motor	ARA 671	01
31	988108	Mixing valve		01
32	184094	Flow pipe		01
33	909909	Circulation pump		01
34	184097	Flow pipe		01
35	198745	Flow sensor		01
36	909906	Circulation pump	(depending on the HP model)	01
36	909907	Circulation pump	(depending on the HP model)	01
37	184098	Flow pipe		01
38	110869	Connector	5 studs	01
39	110867	Connector	6 studs	01
40	110870	Connector	2 studs	01
41	109740	Sensor bundle		01





Complies with:
- Low voltage directive 2006/95/EC, under standard EN 60335-1.
- Electromagnetic compatibility Directive 2004/108/EC



This appliance is marked with this symbol. This means that electrical and electronic products shall not be mixed with general household waste. European Community countries(*), Norway, Iceland and Liechtenstein should have a dedicated collection system for these products. Do not try to dismantle the system yourself as this could have harmful effects on your health and on the environment. The dismantling and treatment of refrigerant, oil and other parts must be done by a qualified installer in accordance with relevant local and national regulations. This appliance must be treated at a specialized treatment facility for re-use, recycling and other forms of recovery and shall not be disposed of in the municipal waste stream. Please contact the installer or local authority for more information.
* subject to the national law of each member state

Date of installation :

Contact of your heating technician or your after-sales service.