

EN

INSTALLATION

2nd circuit kit

Code 074725

For heat pump, Split 1 service



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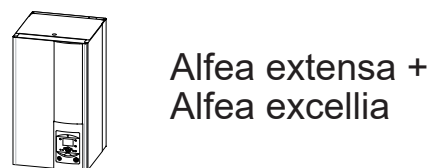
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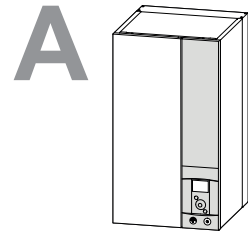


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Q Description of the equipment



Alfa extensa A.I.
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► Package

- **2 packages:** 2nd circuit kit + controller extension kit.

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

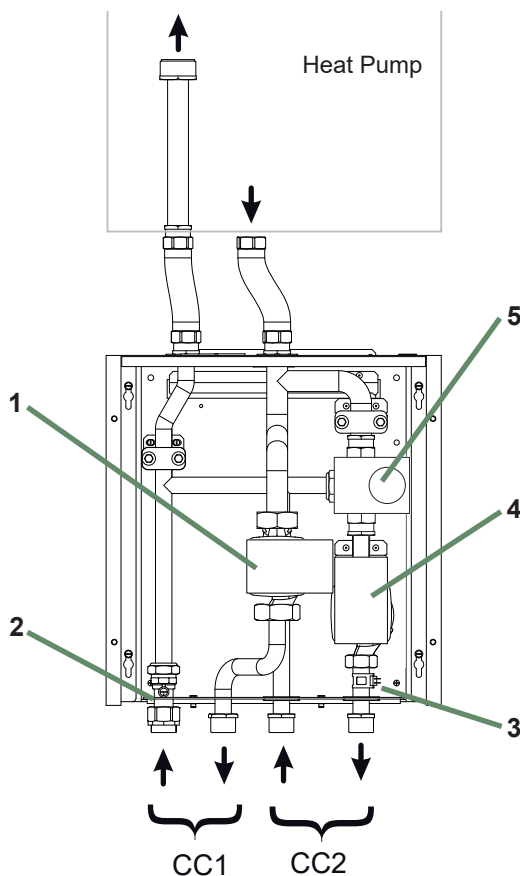
► Scope of application

The control of 2 heating circuits requires the installation of the 2nd circuit.

This corresponds to the **2nd circuit kit** configuration (**Easy Start** or **Installed options**) on the heat pump's user interface

► Expansion vessel

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



Legend:

- 1 Circulation pump CC1 (Direct heating circuit)
- 2 Non-return valve
- 3 Initial sensor
- 4 Circulation pump CC2 (Mixed heating circuit)
- 5 Mixer valve

► Specifications

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

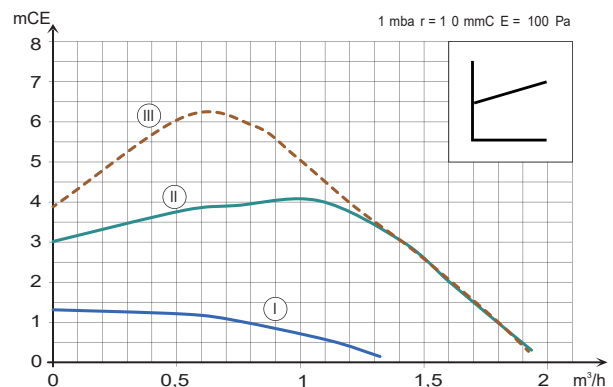
Servomotor:

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

3 way mixing valve:

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

Variable pressure



Constante pressure

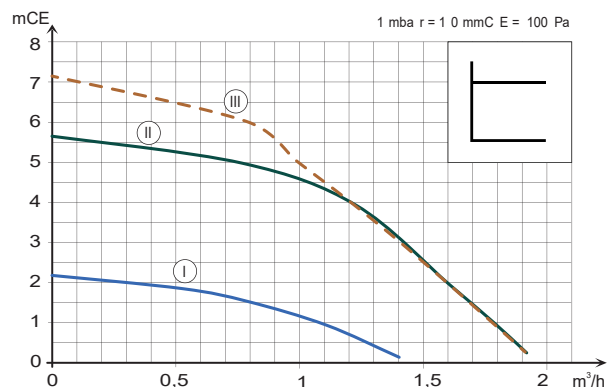


fig. 2 - Hydraulic pressures and flow rates available (Hydraulic unit + 2nd circuit kit)

fig. 1 - Appliance devices

Installation instructions

► 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.

► 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).

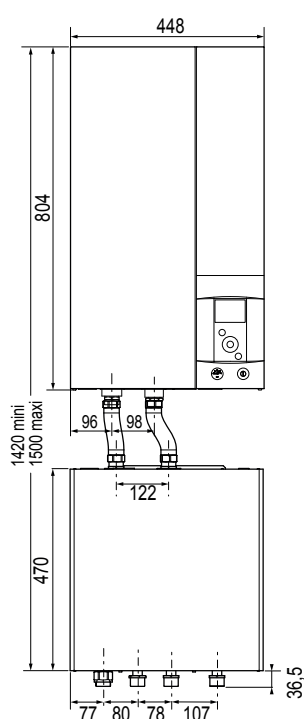


fig. 3 - Dimensions in mm
(Hydraulic unit + 2nd circuit kit)

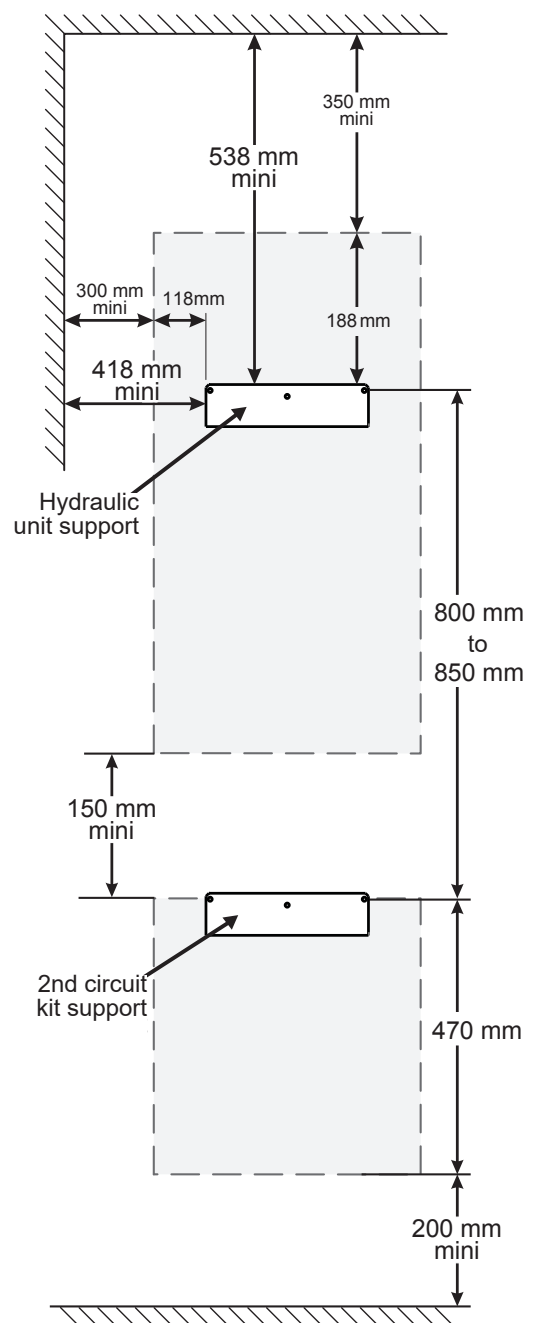


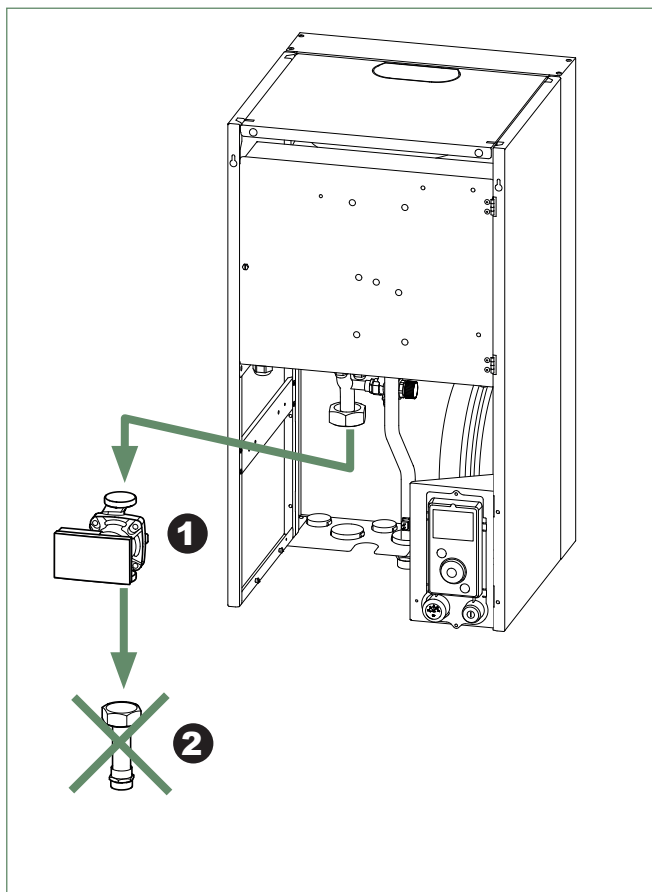
fig. 4 - Fixing the casing (Optional 2nd circuit kit)

► 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 CC1 heating circulation pump (direct circuit).
- **6** - Install the new heating flow pipe.



With the 2-circuit kit, the circulation pump of the hydraulic unit (CC) **1** should be positioned and installed in the box of the 2-circuit kit (CC1) **5**.

The hoses can be stretched **4** to adapt their length.

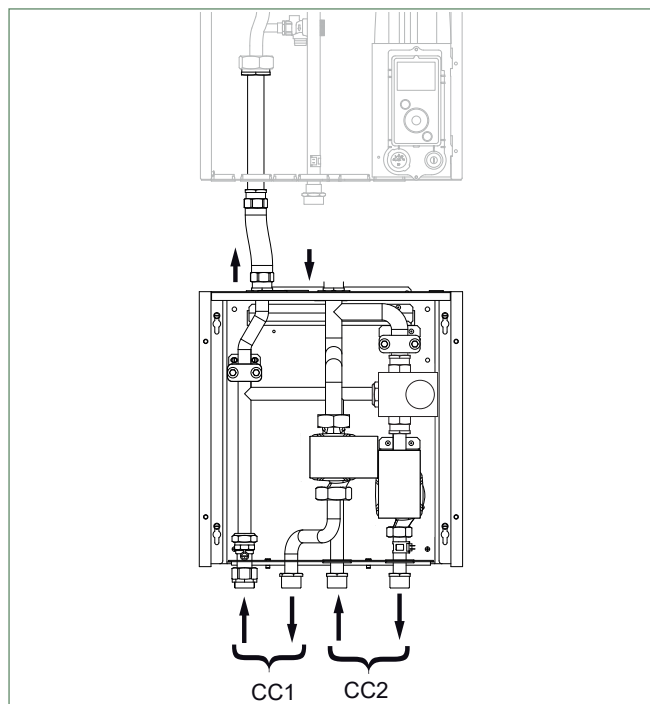
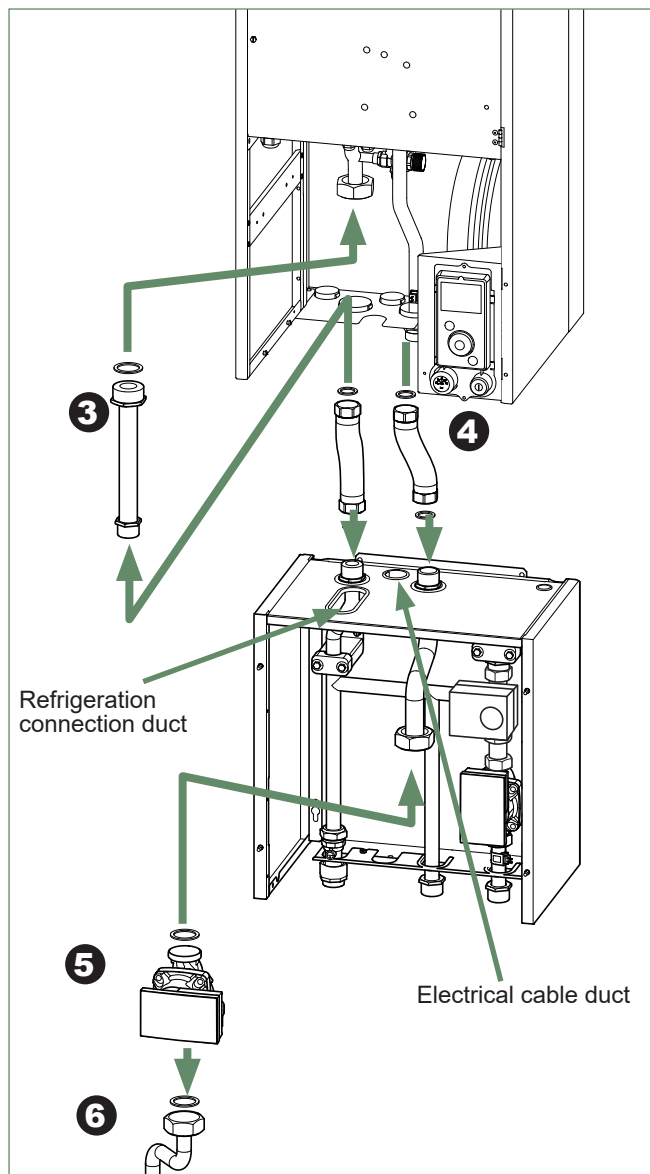
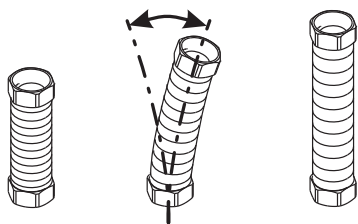
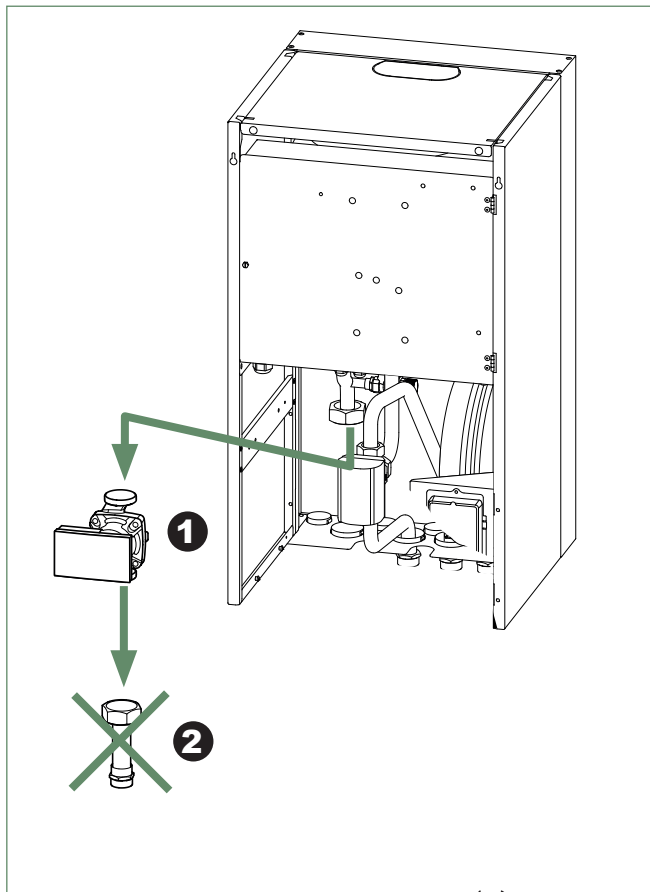


fig. 5 - Installing the 2-circuit kit



With the 2-circuit kit, the circulation pump of the hydraulic unit (CC) **1** should be positioned and installed in the box of the 2-circuit kit (CC1) **5** .
 The hoses can be stretched **4** to adapt their length.

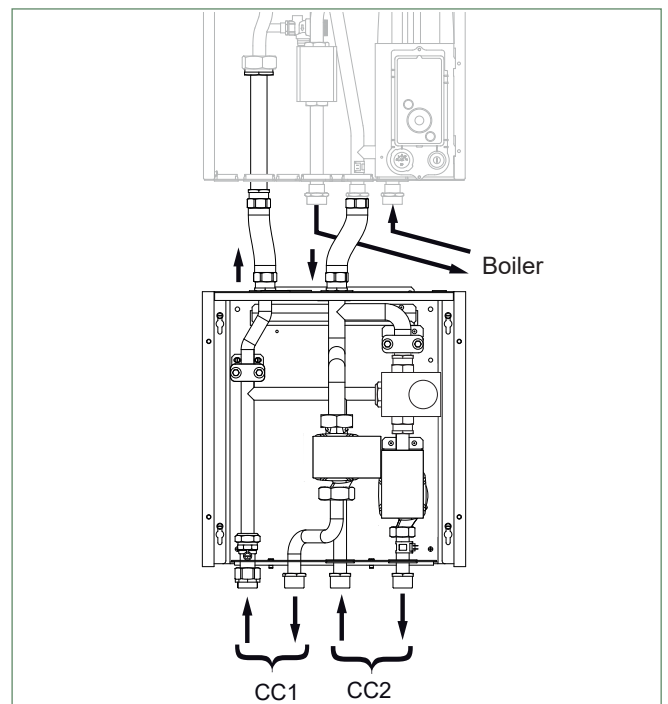
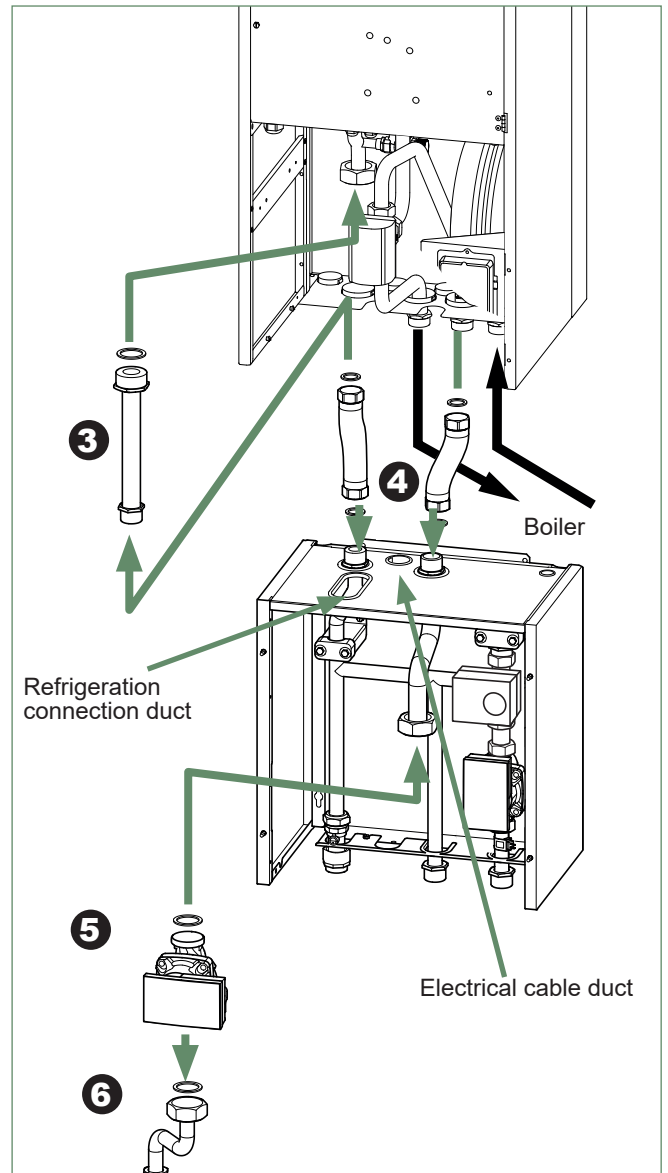
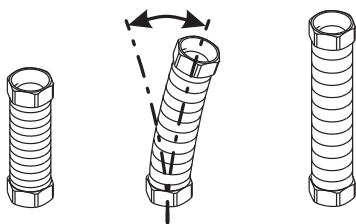


fig. 6 - Installing the 2-circuit kit (HP + Boiler connection kit)

► 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 - CC2: Mixed circuit, X12 - CC1: Direct circuit).

- Make the following connections:

- Reconnect the heating circulation pump CC1 (Direct circuit) (X12 / RVS board).
- **7** - Circulation pump CC2 (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.

► Pre-utilization check

- Configure the **2nd circuit kit configuration** (*Easy Start* or *Installed options*) on the heat pump's user interface
- Please refer to the manual provided with the HP.

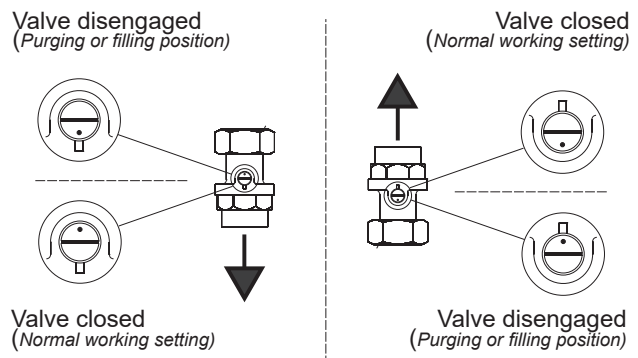


fig. 7 - Non-return valves

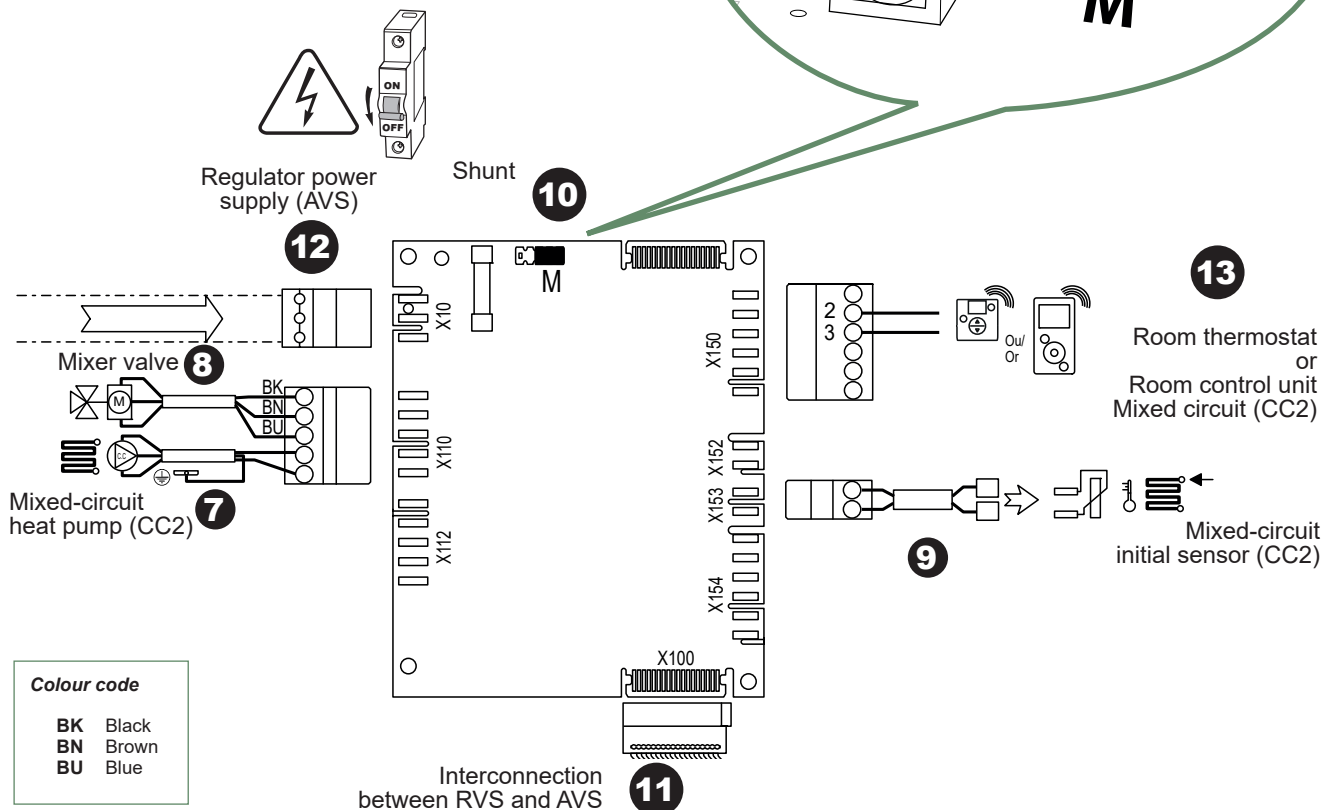
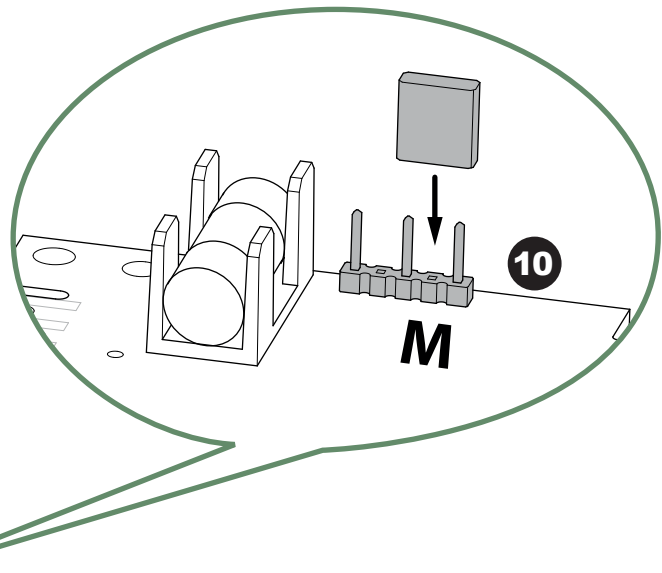
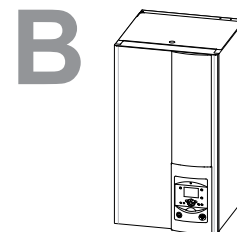


fig. 8 - Electrical connection on AVS 55 extension board



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Q Description of the equipment



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Alfea excellia

► 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.

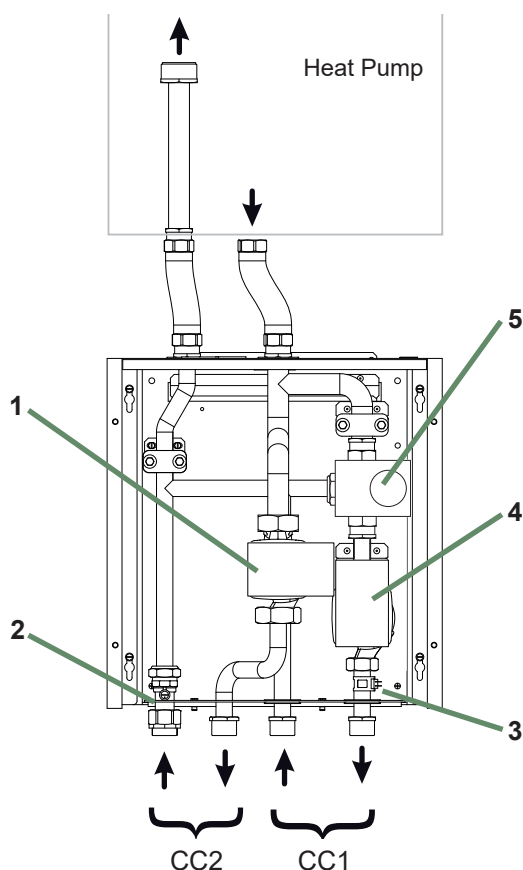
► Scope of application

The control of 2 heating circuits requires the installation of the 2nd circuit and Regulation extension kit (code 075311).

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

► Expansion vessel

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



Legend:

- 1 Circulation pump CC2 (Direct heating circuit)
- 2 Non-return valve
- 3 Initial sensor
- 4 Circulation pump CC1 (Mixed heating circuit)
- 5 Mixer valve

► Specifications

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

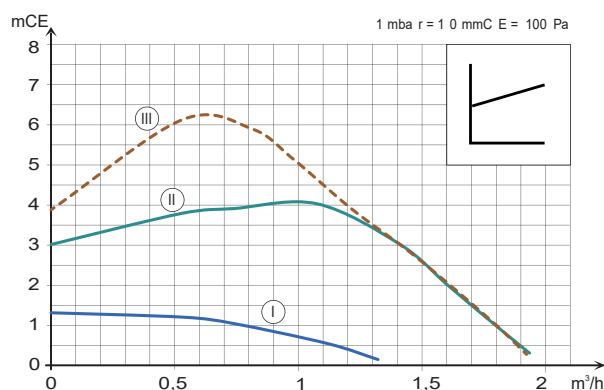
Servomotor:

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

3 way mixing valve:

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

Variable pressure



Constante pressure

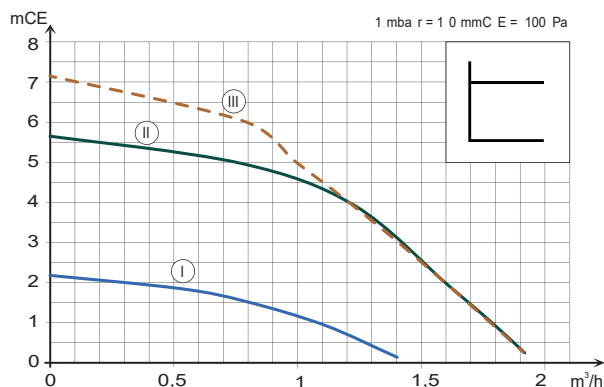


fig. 10 - Hydraulic pressures and flow rates available
(Hydraulic unit + 2nd circuit kit)

fig. 9 - Appliance devices

Installation instructions

► 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.

► 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).

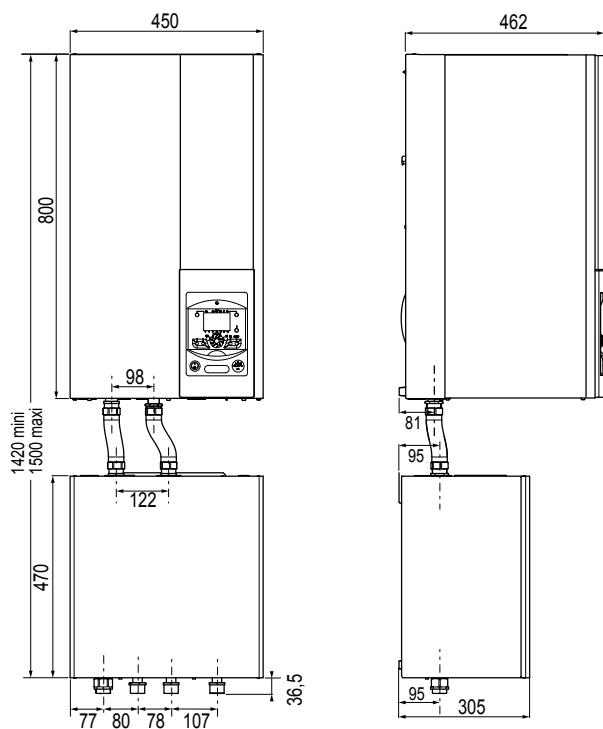


fig. 11 - Dimensions in mm
(Hydraulic unit + 2nd circuit kit)

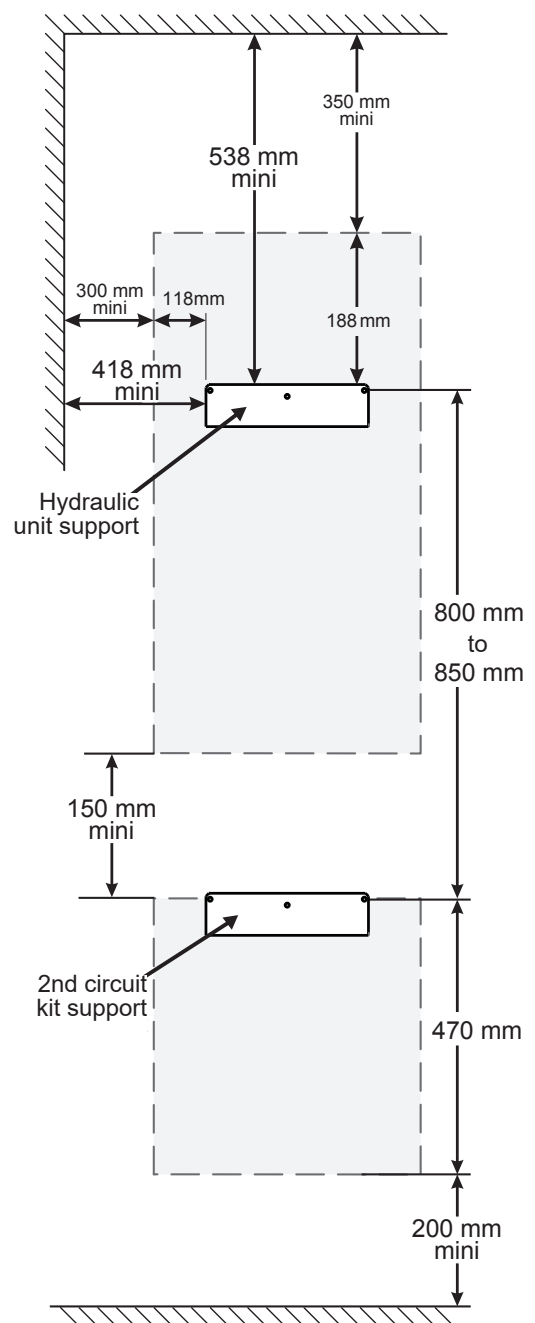


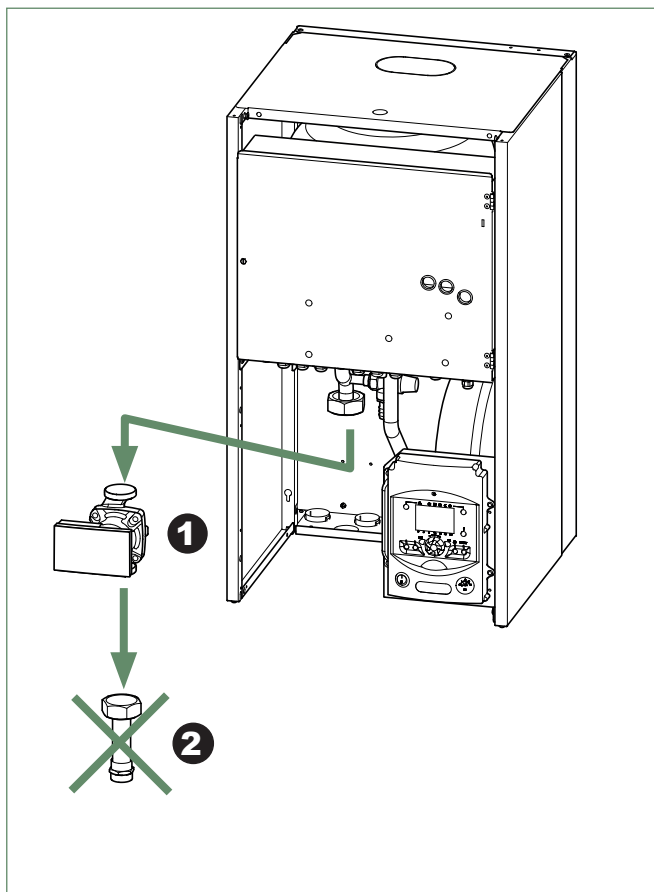
fig. 12 - Fixing the casing (Optional 2nd circuit kit)

► Installing the 2-circuit kit

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

(figure 13: only HP ; figure 13: 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.



With the 2-circuit kit, the circulation pump of the hydraulic unit (CC) **1** should be positioned and installed in the box of the 2-circuit kit (CC2) **5**.

The hoses can be stretched **4** to adapt their length.

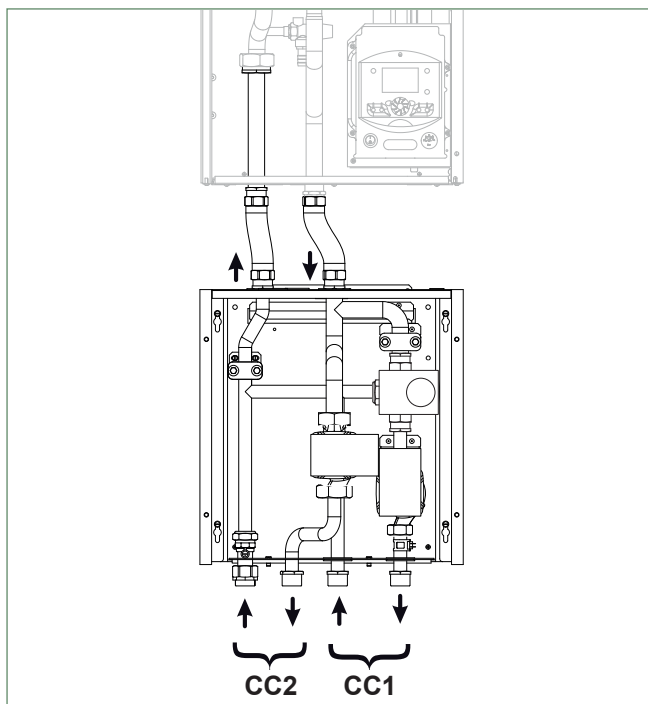
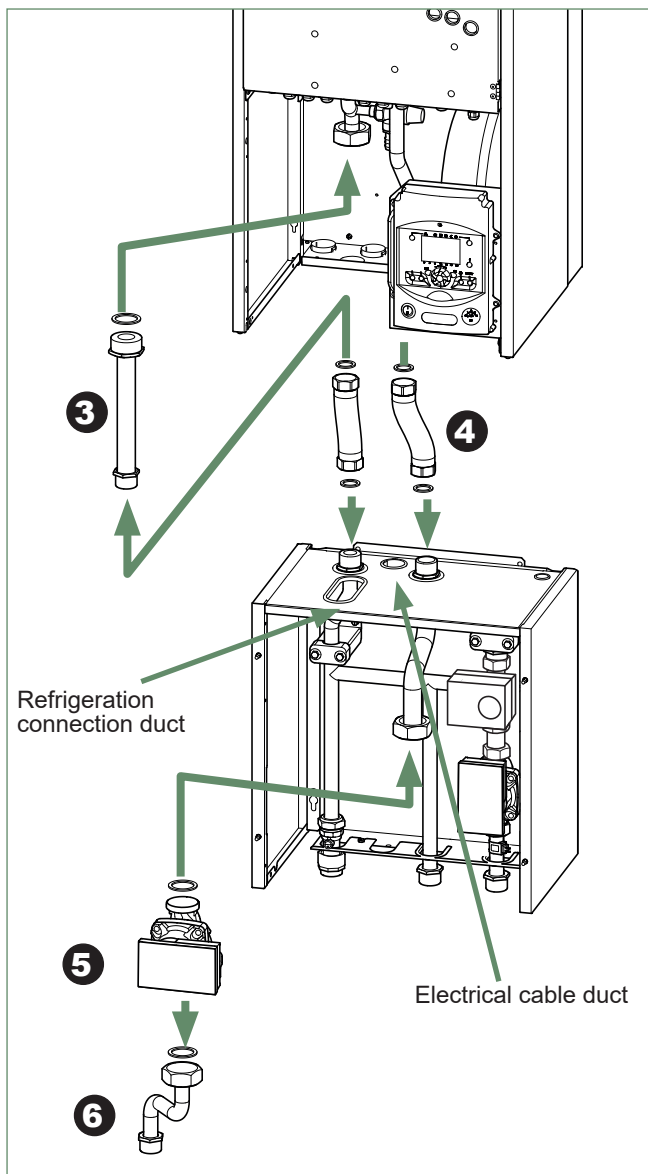
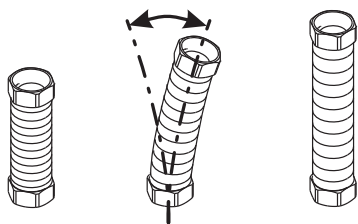
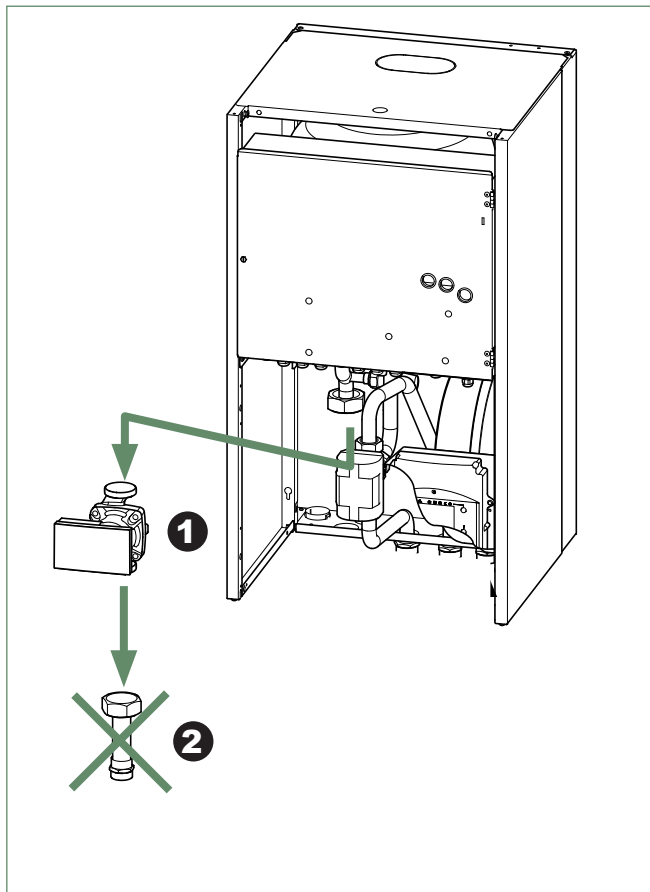


fig. 13 - Installing the 2-circuit kit



With the 2-circuit kit, the circulation pump of the hydraulic unit (CC) **1** should be positioned and installed in the box of the 2-circuit kit (CC2) **5** .
 The hoses can be stretched **4** to adapt their length.

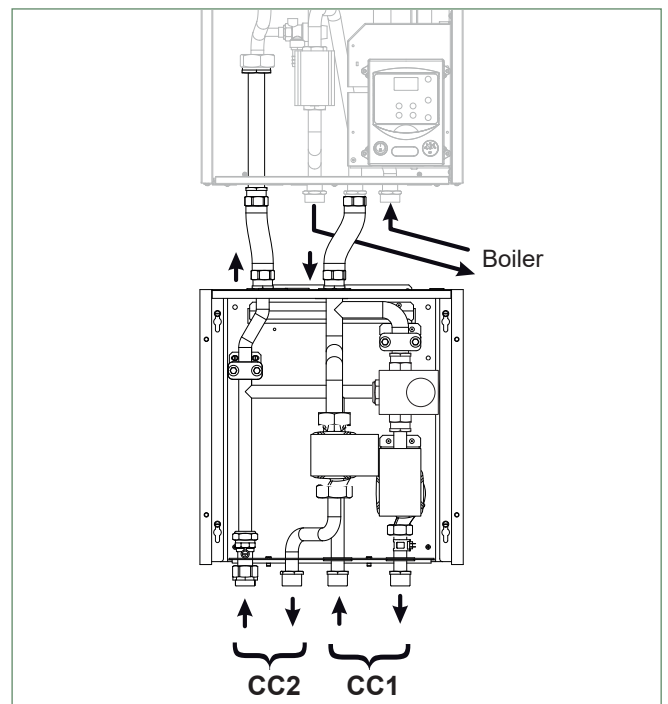
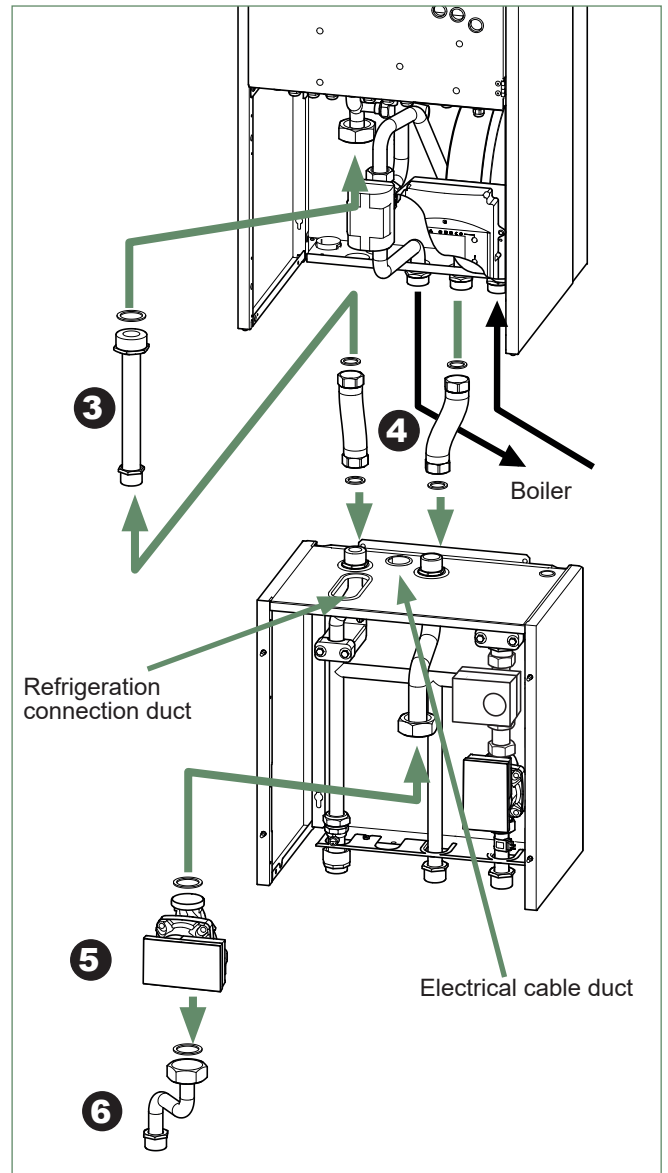
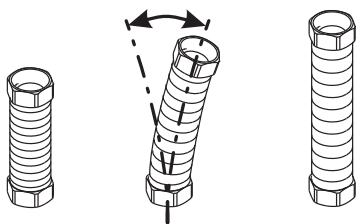


fig. 14 - Installing the 2-circuit kit (HP + Boiler connection kit)

► Installing the extension board

- Please refer to the instructions for the extension regulation kit (code 075311).

► 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.

► Pre-utilization check

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

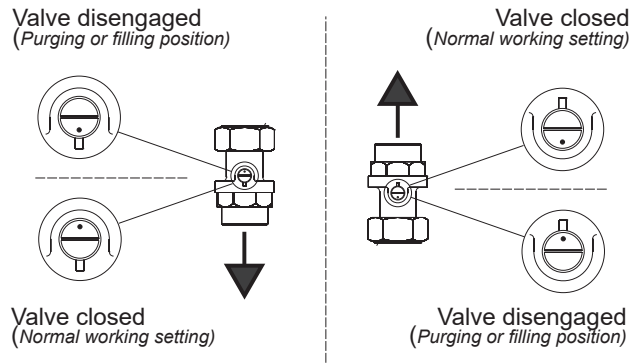


fig. 16 - Non-return valves

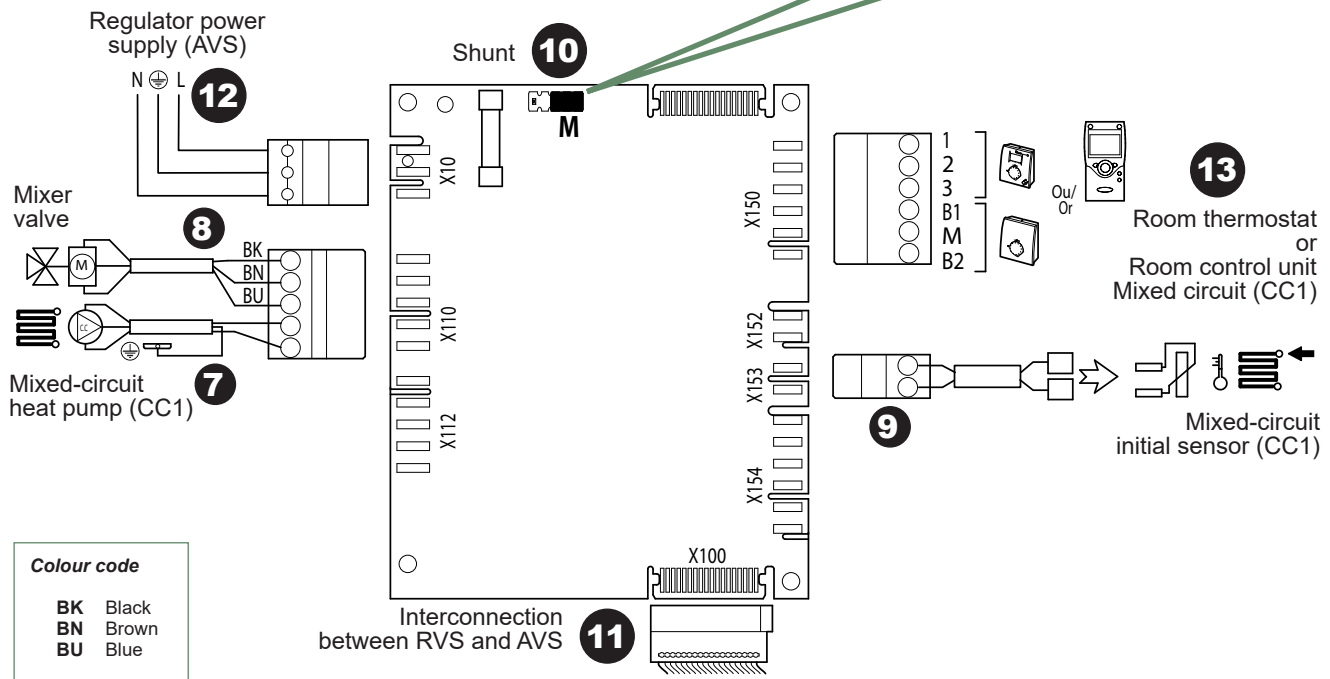
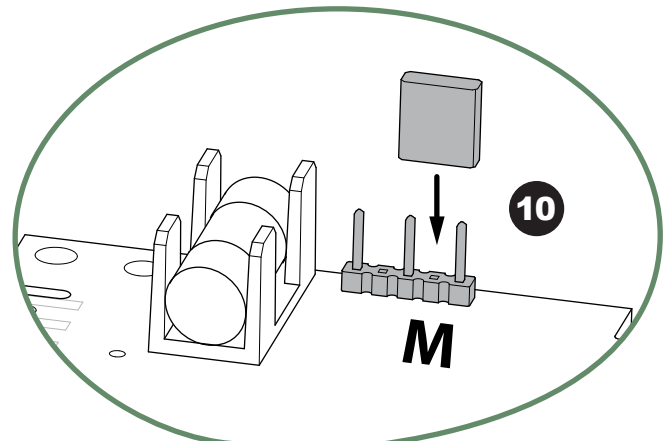


fig. 15 - Electrical connection on AVS 55 extension board



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Heating circulation pump speed settings

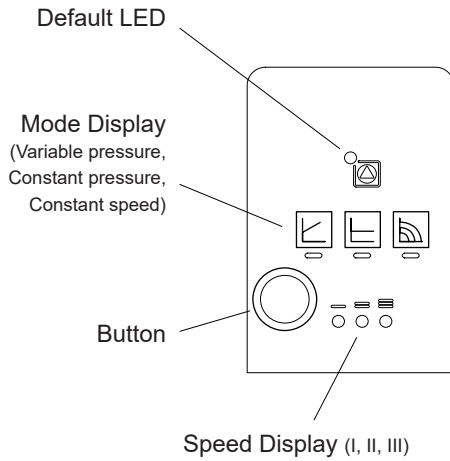


fig. 17 - Display on the pump housing

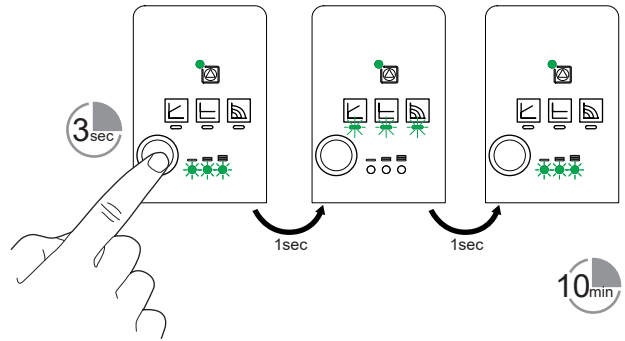


fig. 19 - Gas venting mode

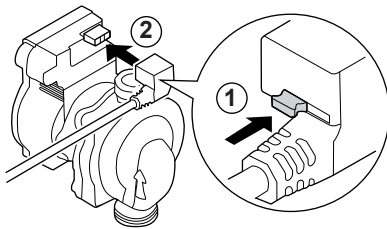


fig. 18 - Pump connection

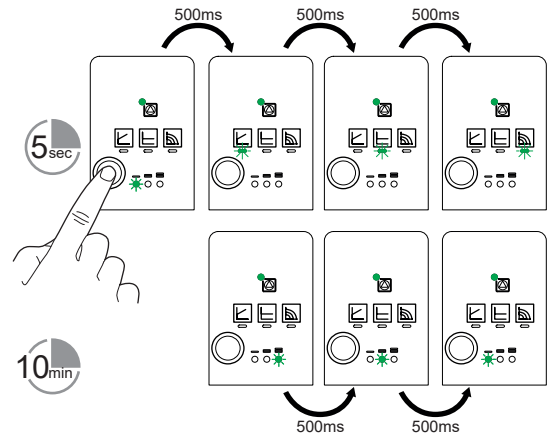


fig. 20 - Manual restart of the pump

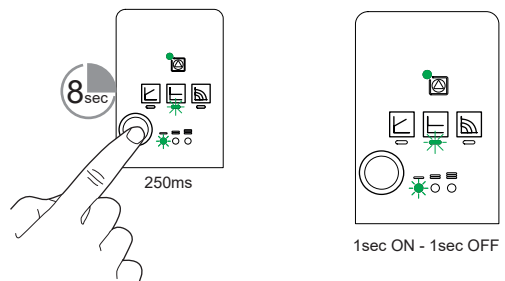
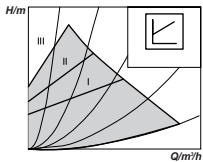


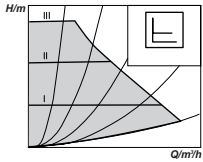
fig. 21 - Locking & unlocking pump settings



Variable pressure

The circulation pump varies the water pressure depending on the flow rate.

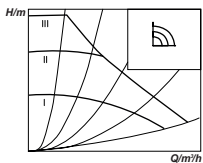
Recommended for an installation fitted with **radiators** (particularly any system with thermostatic valves or zone solenoids).



Constant pressure

The circulation pump maintains a constant water pressure whatever the flow rate.

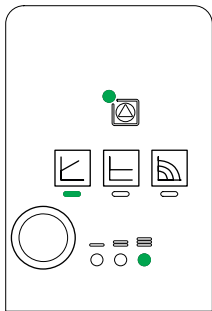
Recommended for an installation with constant pressure drops such as **an underfloor heating system**.



Constant speed

The circulation pump maintains a constant water pressure whatever the flow rate.

Recommended for an installation with constant pressure drops such as **an underfloor heating system**.



Default setting

Variable pressure ; speed III

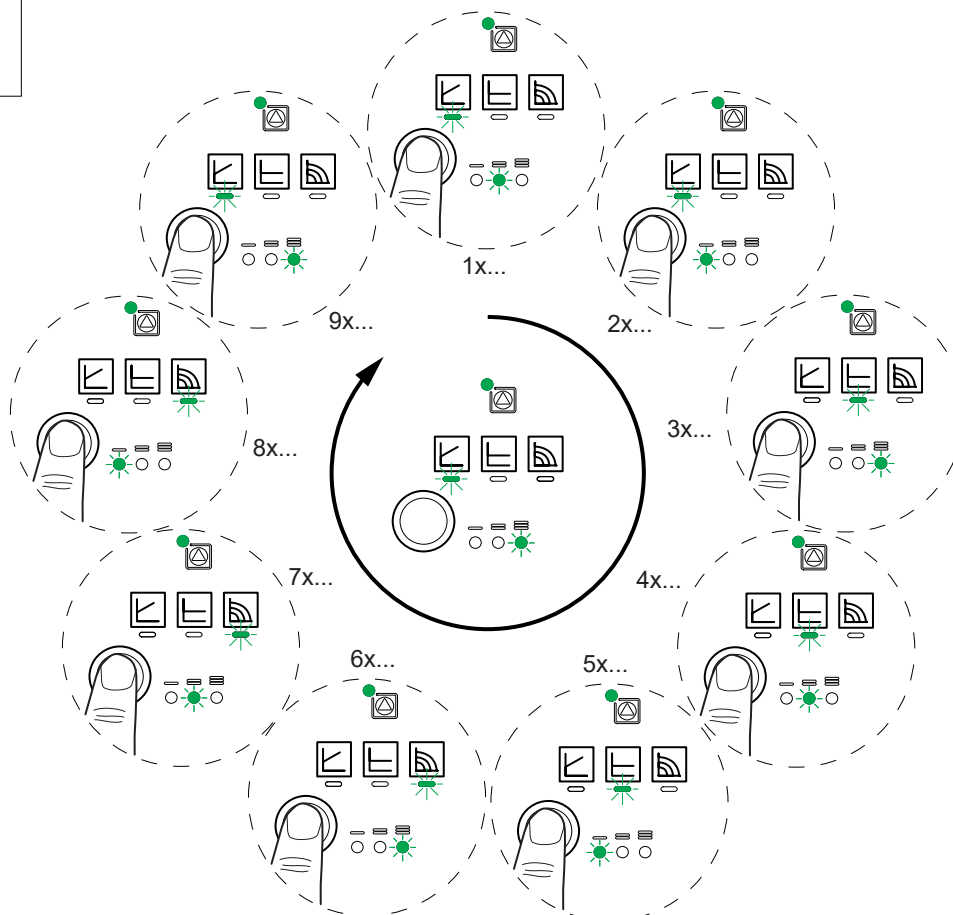
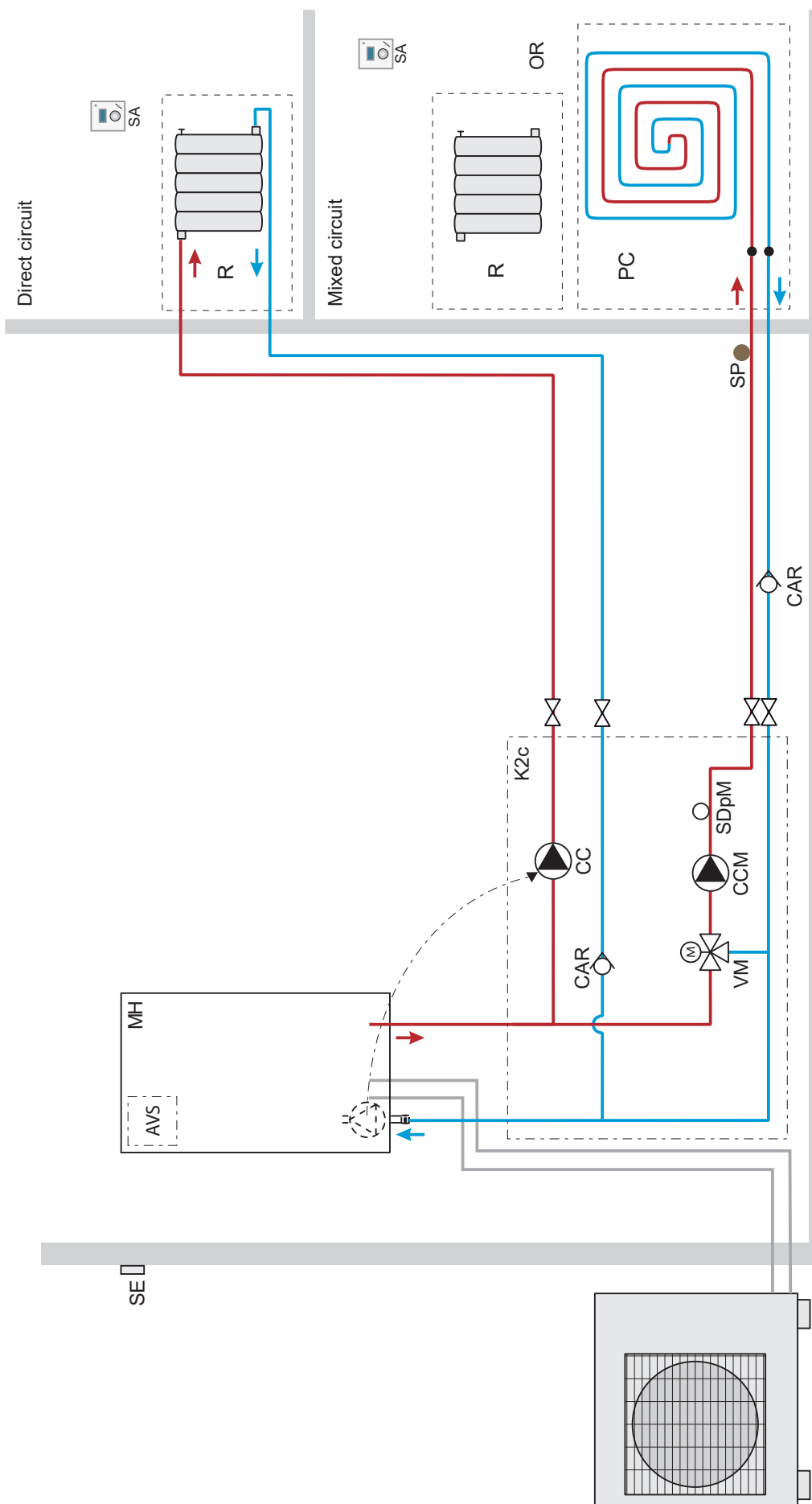


fig. 22 - Pump Settings

Overall hydraulic layout

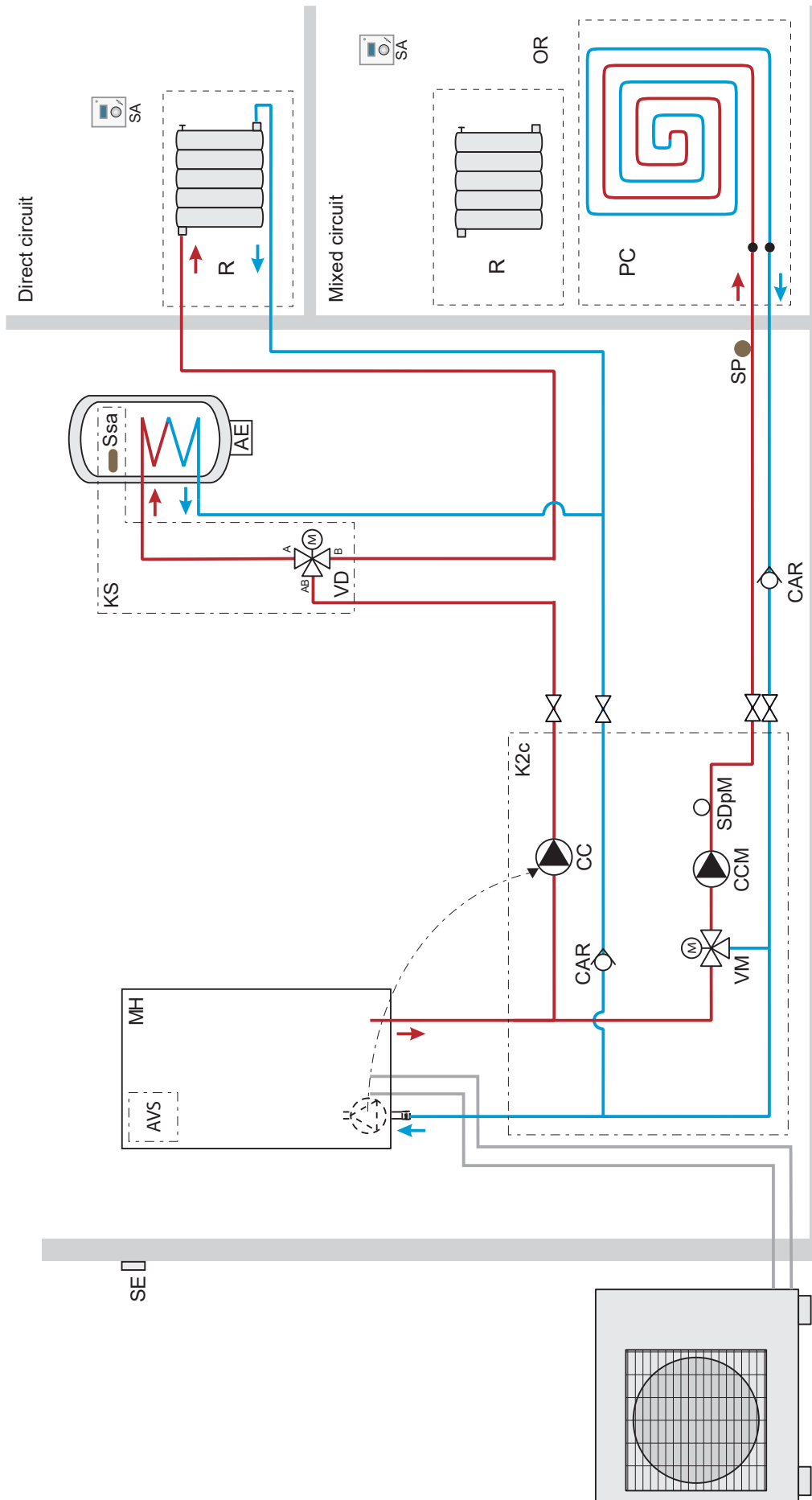
• Configuration 2: 2 heating circuits



Legend :

- AVS - Extension board, 2 circuits
- CAR - Non-return valve
- CC - Circulation pump HP
- CCM - Mixed-circuit heat pump
- K2c - 2nd circuit kit
- PC - Floor heating system
- R - Radiators
- SA - Room thermostat (option)
- SDpM - Mixed circuit initial sensor
- SE - Outdoor sensor
- SP - Heated floor thermal safety fuse
- VM - Mixer valve

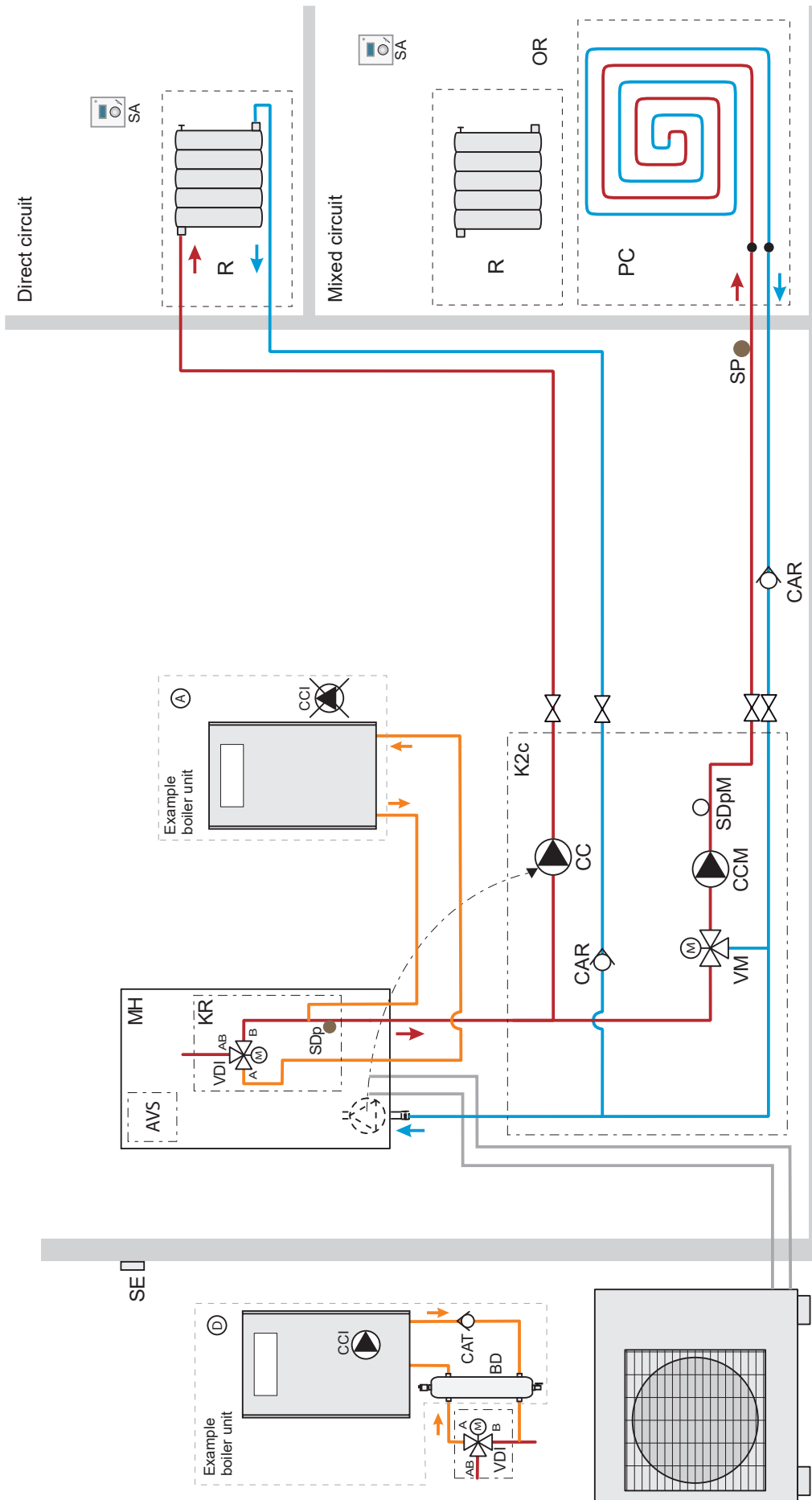
• Configuration 2: 2 heating circuits & DHW tank



Legend :

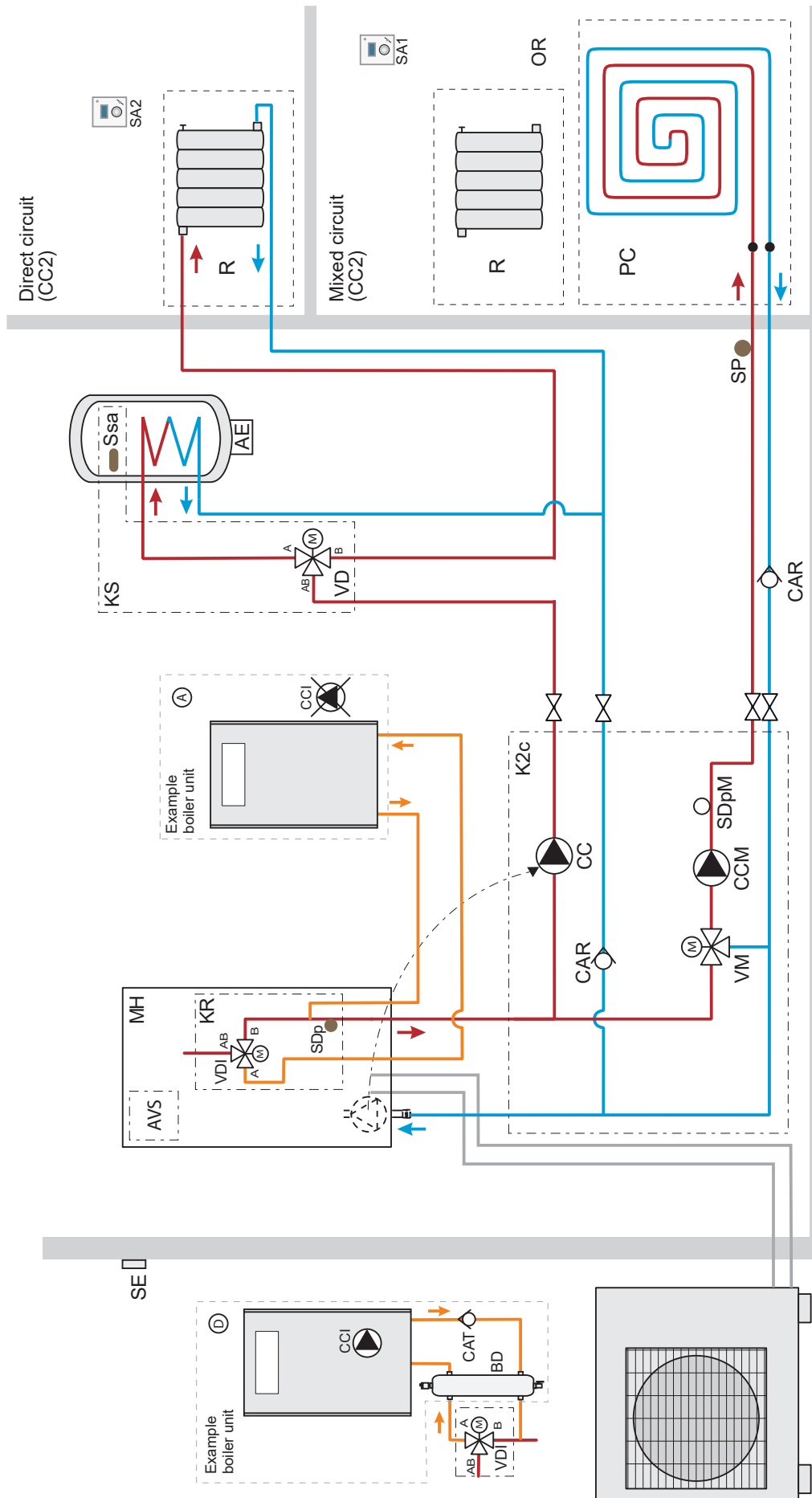
- AE - Electrical back-up
- AVS - Extension board, 2 circuits
- CAR - Non-return valve
- CC - Circulation pump
- CCM - Mixed-circuit heat pump
- K2c - 2nd circuit kit
- KR - Boiler connection kit
- KS - DHW kit
- MH - Hydraulic unit
- PC - Floor heating system
- R - Radiators
- SA - Room thermostat (option)
- SDpM - Mixed circuit initial sensor
- Ssa - DHW sensor
- SE - Outdoor sensor
- 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



- Legend :**
- AVS - Extension board, 2 circuits
 - BD - Disconnection bottle
 - CAR - Non-return valve
 - CAT - Anti-gravity feed valve
 - CC - Circulation pump HP
 - CCI - Heating system circulation pump built into the boiler
 - CCM - Mixed-circuit heat pump
 - K2c - 2nd circuit kit
 - KR - Boiler connection kit
 - MH - Hydraulic unit
 - PC - Floor heating system
 - R - Radiators
 - SA - Room thermostat (option)
 - SDpM - Mixed circuit initial sensor
 - SDR - Boiler connection valve flow sensor
 - SE - Outdoor sensor
 - TA - Boiler thermostat
 - SP - Heated floor thermal safety fuse
 - VDI - Distribution valve (deviation boiler)
 - VM - Mixer valve

• 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

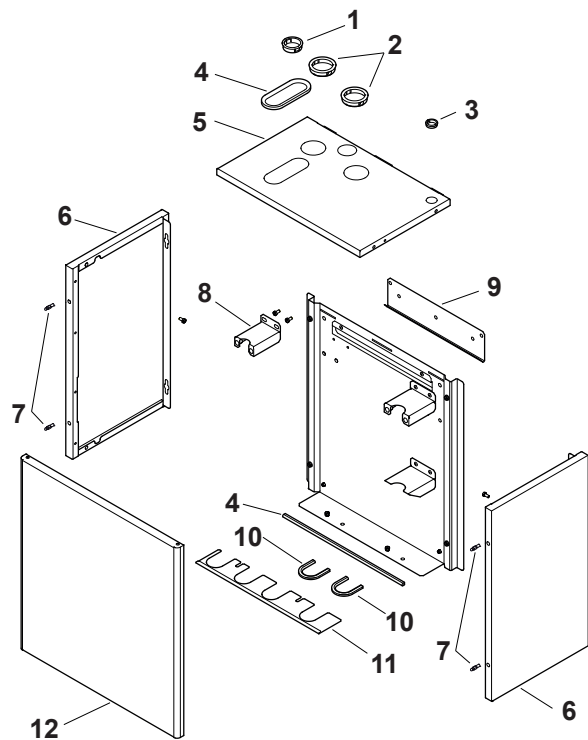
- KR - Boiler connection kit
- KS - DHW kit
- MH - Hydraulic unit
- PC - Floor heating system
- R - Radiators
- SA - Room thermostat (option)
- SDpM - Mixed circuit initial sensor

- 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

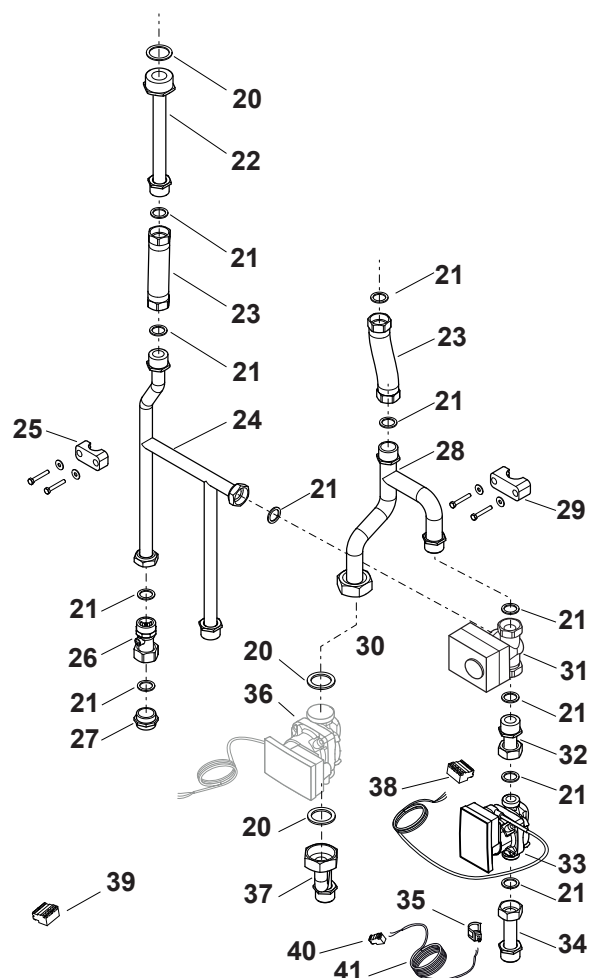
⇌ Spare parts

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



Nr	Code	Designation	Type	Qty
20142734		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
31	188294	Mixing valve		01
32	184094	Flow pipe		01
33	909909	Circulation pump		01
34	184097	Flow pipe		01
35	909205	Flow sensor		01
36	xxxxxx	Circulation pump.....(See the HP manual)		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





A series of horizontal dotted lines spanning the width of the page, providing a guide for handwriting practice.



Complies with:

- Low voltage directive 2014/35/UE, under standard NF EN 60335-1 et NF EN 60335-2-102.
- Electromagnetic compatibility Directive 2014/30/UE.



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.