

HKF 8180

Operating instructions

EN



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1 Important basic information

1.1 Limitation of liability

The contents of these operating instructions have been created in accordance with applicable laws and standards. The device has been developed in line with the state of the technological art.¹

The manufacturer accepts no liability for damage resulting from:

- ▶ Failure to observe / comply with the operating instructions
- ▶ Deliberate misuse
- ▶ Incorrect use
- ▶ Use of untrained specialist personnel (for maintenance and repair work, etc.)
- ▶ Technical modifications to the device that have not been discussed with the manufacturer
- ▶ Use of spare parts that have not been approved by the manufacturer

1.2 Operator's responsibilities

The safety, accident prevention and environmental protection regulations applicable to the domain of the device's use must be complied with.

This particularly includes:

- ▶ The operator must ensure that these operating instructions are available throughout the HKF 8180's lifetime.
- ▶ The operator must ensure that the maintenance intervals described in these operating instructions are complied with.
- ▶ The operator must regularly arrange a check of the functionality and intactness of all safety equipment.

NOTE



Installation and operation of the HKF 8180 must comply with country-specific standards and guidelines.

1.3 Documentation

1.3.1 Content and structure

These operating instructions are part of this device. They contain instructions and information regarding the safe use of the device and must be made available to all users for the device's entire life cycle.





These operating instructions are designed for use by trained professionals.




¹ We reserve the right to make technical changes!

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1.3.2 Notation concept used in the documentation

The following types of notification are used:

Type of notification	Illustration	Meaning
Acute danger of death	 DANGER	Dangerous situation that is certain to cause serious injury or death if it is not avoided
Danger of death and serious injury	 WARNING	Dangerous situation that could cause serious injury or death if it is not avoided
Danger of mild to moderate injury	 CAUTION	Dangerous situation that could cause mild to moderate injury if it is not avoided
Information, easier operation	 NOTE	Refers to information that does not relate to physical injury, e.g. reference to material damage

-  Alerts the user to an instruction regarding general safety
-  Alerts the user to an instruction regarding action to be taken
-  Alerts the user to the consequences of an action

1.4 Target group

These operating instructions are designed for use by trained professionals.

The operator of this device must ensure suitable and safe conditions in line with the requirements of these operating instructions.

Professionals – trained professionals who are aware of the dangers of the HKF 8180 and who are familiar with the technology used in the device. Professionals are trained and capable of installing, maintaining and repairing the device.

1.5 Replacing wear parts

Be aware that the HKF 8180 contains parts which, depending on how frequently and how much they are used, will be subject to technology-related wear and tear, even if they are cared for and maintained properly. This particularly relates to mechanical parts and parts that come into contact with hot water and steam, such as hoses, gaskets, valves, etc.

Wear-related defects naturally do not represent faulty workmanship and are therefore not covered by the warranty or any guarantee; regardless of this, faults and malfunctions must only ever be rectified by trained professionals. Contact your dealer for more information.

2 Safety

2.1 Important safety information

- ⚠ Read these operating instructions carefully before use.
- ⚠ Only connect the HKF 8180 to an energy supply with a suitable mains voltage.
- ⚠ The energy supply to the HKF 8180 must be disconnected before any maintenance, cleaning or repair work is carried out.
- ⚠ Maintenance, cleaning and repair work must only be carried by trained professionals.
- ⚠ In the event of damage to the HKF 8180 or if its function becomes impaired, the HKF 8180 must no longer be used. In this instance, contact your dealer immediately.
- ⚠ Note the maintenance instructions and intervals.
- ⚠ Protect the HKF 8180 against the effects of weather.
- ⚠ Never use the HKF 8180 outdoors.
- ⚠ For your own safety and to ensure the HKF 8180's long service life, only use original spare parts.
- ⚠ The device must only be used in accordance with the descriptions set out in the section entitled Correct use.

2.2 Correct use

2.2.1 Area of use

The HKF 8180 has been built in accordance with the state of the technological art and in line with recognised safety technology regulations. No liability is accepted for any damage caused by misuse, incorrect use, incorrect connections or inadequate maintenance / repair not carried out by trained professionals. All warranty services will also be rendered null and void in such situations.

The HKF 8180 is used to distribute hot water in heating systems.

HKF 8180 is fully pre-assembled and designed for wall-mounting.

The HKF 8180 is not intended for use by individuals (including children) who have limited physical, sensory or mental capacities or who lack the technical knowledge and/or experience to do so.

2.2.2 Safety-related environmental conditions

- The HKF 8180 must not be installed and operated outdoors.
- The components are not UV resistant.
- The installation site of the HKF 8180 must be chosen so that maintenance and repair work can be carried out when required.

2.3 Compliance with the operating instructions

NOTE



Read the operating instructions carefully before use.

In addition to the instructions contained in these operating instructions, regional requirements (e.g. accident prevention guidelines) also apply to the safe operation of this device. The operator of the device must make this information available.

2.4 Residual hazards and safety measures

DANGER



Electrical energy!

Danger of death by electric shock!

- Do not touch any voltage-carrying cables or components with wet hands.
- When handling electrical current, always comply with accident prevention guidelines.

WARNING



Hot water!

Severe scalding possible.

- Allow the HKF 8180 to cool down first before carrying out any maintenance, cleaning or repair work.
- When flushing, filling and draining the HKF 8180, do not touch the hot water.

WARNING



Hot surfaces!

Severe scalding possible.

- Do not touch any pipes or components during operation.
- Allow the HKF 8180 to cool down first before carrying out any maintenance, cleaning or repair work.
- Wear heat-resistant safety gloves when carrying out work on hot components.

CAUTION

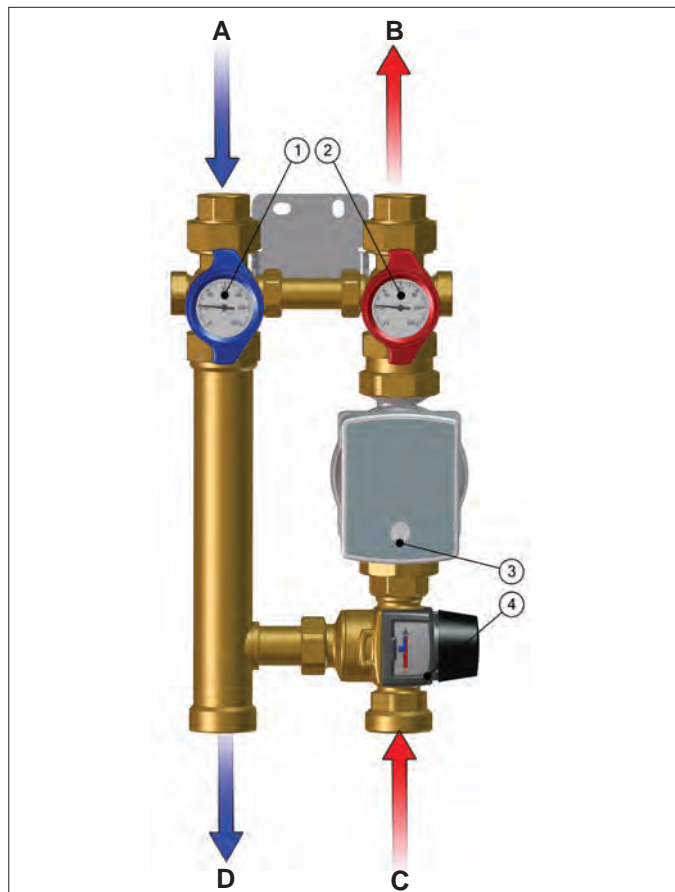


Working on the device by inadequately trained specialist personnel!

Potential physical and material damage.

- Maintenance, cleaning and repair work must only be carried by trained professionals.

3 Overview of components



- 1 Ball valve with thermometer (return) and gravity brake
- 2 Ball valve with thermometer (supply) and gravity brake
- 3 Circulating pump (wet-running circulating pump with integrated electronic differential pressure-managed power control).
- 4 Thermal mixer valve with temperature setting from 20 to 43 °C

- A Return inlet
 B Supply outlet
 C Supply inlet
 D Return outlet

Fig. 1: Overview of components – dimensions [mm]

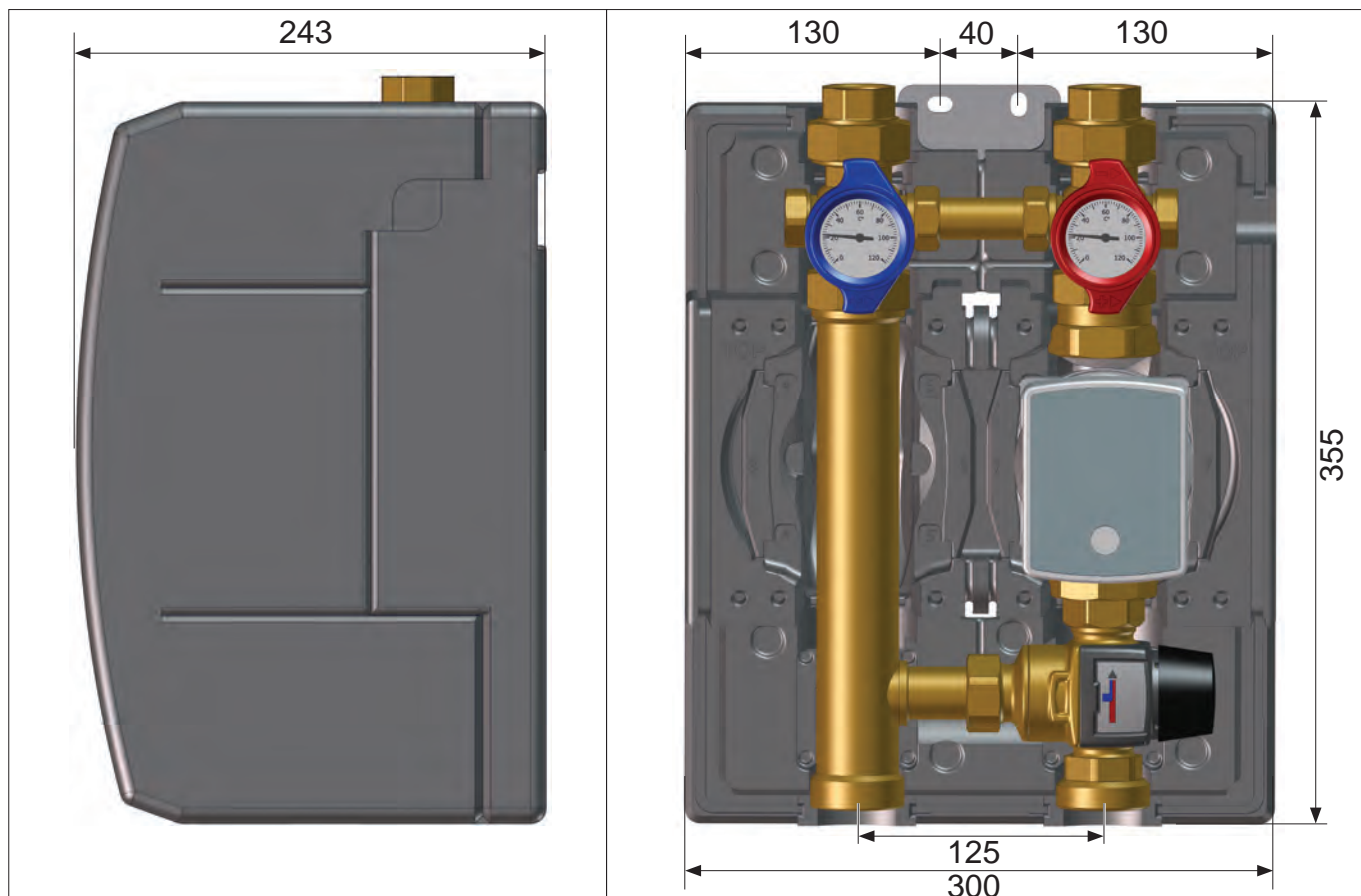


Fig. 2: Dimensions [mm]

4 Functional description

Setting the supply temperature

While the HKF 8180 is operational, you can set the desired supply temperature using the hand wheel on the thermostatic valve. The target value is checked using the supply thermometer.

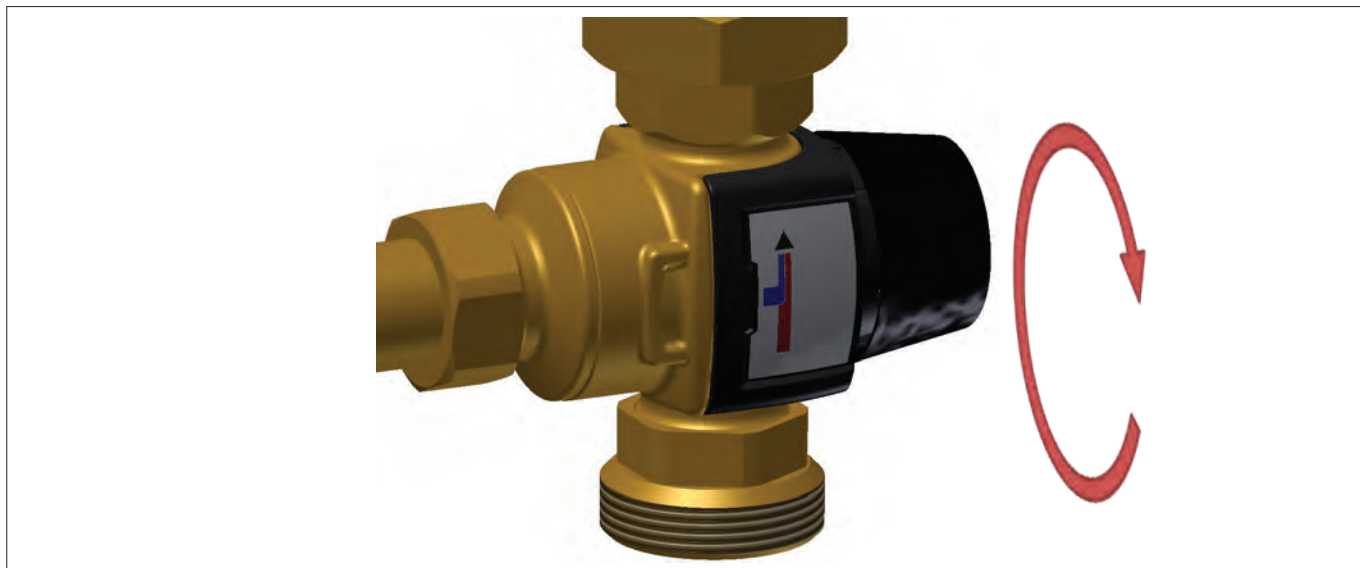







Fig. 3: Setting the supply temperature

5 Installation and first commissioning

5.1 Safety

DANGER	
	<p>Electrical energy!</p> <p>Danger of death by electric shock!</p> <ul style="list-style-type: none"> ➤ Do not touch any voltage-carrying cables or components with wet hands. ➤ When handling electrical current, always comply with accident prevention guidelines.
CAUTION	
	<p>Danger of material damage!</p> <p>The HKF 8180 is not spray- or drip-proof.</p> <ul style="list-style-type: none"> ➤ Only install the HKF 8180 in a dry location.
CAUTION	
	<p>Material damage caused by pressure shocks!</p> <p>Development of pressure shocks caused by opening the shut-off valves too quickly.</p> <ul style="list-style-type: none"> ➤ Always open the shut-off valves slowly and in a controlled manner.
NOTE	
	<p>HKF 8180 must only be installed and commissioned by a qualified professional.</p> <p>Installation and operation of the HKF 8180 must comply with country-specific standards and guidelines!</p> <p>Do not make any modifications to components (e.g. pumps, valves, etc.), supply or return lines and / or safety equipment that could impair the operational safety of the HKF 8180.</p> <p>Ensure that the HKF 8180's energy supply is always freely accessible.</p>
NOTE	
	<p>Wear personal safety equipment when carrying out maintenance, cleaning or repair work.</p>

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5.2 Installation

NOTE



Install the HKF 8180 so that it is positioned at eye level.

- Remove the front cover on the HKF 8180.

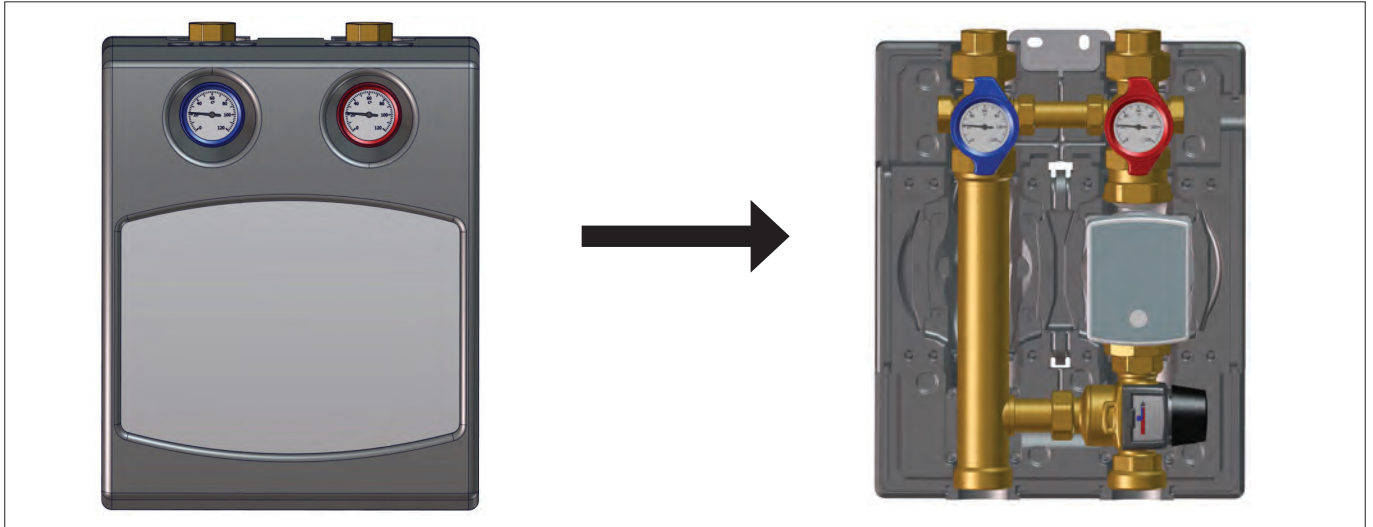


Fig. 4: Removing the front cover

- Draw on the drilling points for installing the HKF 8180.

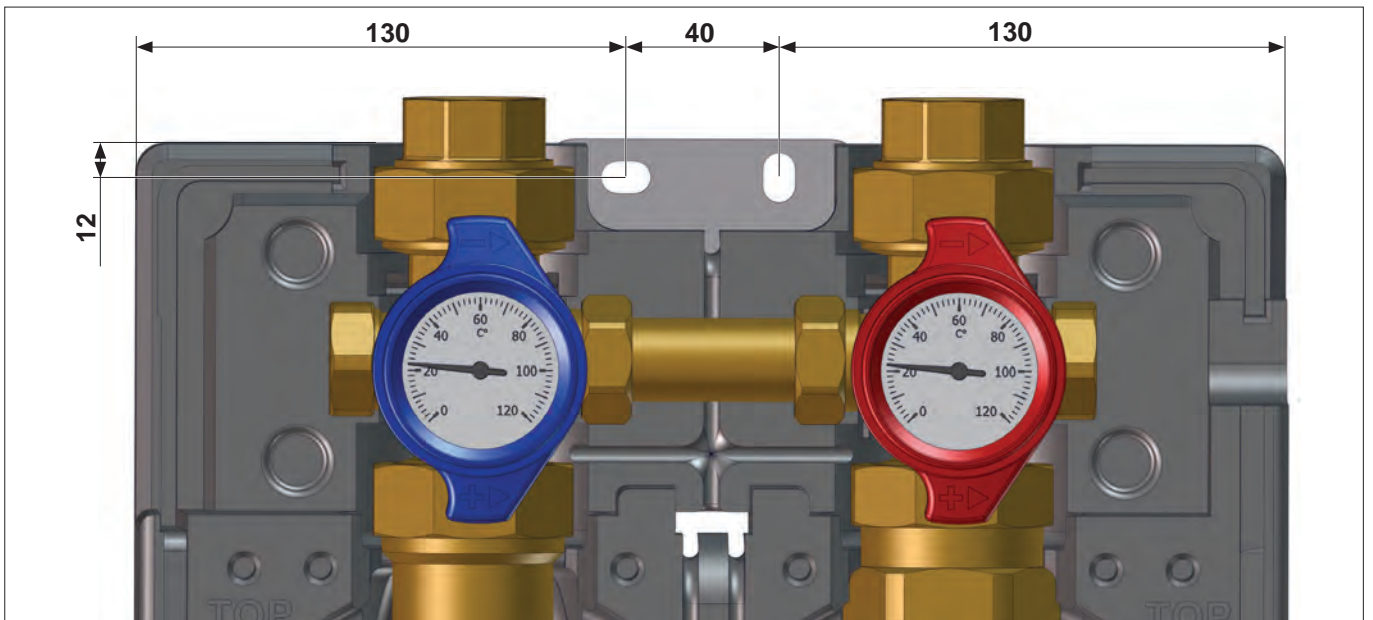


Fig. 5: Drilling dimensions [mm]

- Drill the holes in accordance with the screw and dowel size.
- Insert the dowels.
- Place the HKF 8180 on top.

- Screw the screws into the dowels.
- Attach the supply and return lines (system connections, see Fig. 1 on page 7).
- Check all screw connections to ensure they are secure.

5.3 First commissioning

Essential

- HKF 8180 is fully installed.

Connecting the energy supply

- Connect the HKF 8180's energy supply.

NOTE



The electrical installation of HKF 8180 must only be performed by a qualified professional.

⇒ *The HKF 8180 switches on automatically once the power supply has been connected.*

- Vent the heating system.

NOTE



Switch the circulating pump off during the venting process.

Thermometer handle settings



Fig. 6: Thermometer handle settings

- A Operation setting: gravity brake ready for operation; ball valve open
- B Drain setting: gravity break open
- C Service setting: ball valve closed

6 Maintenance

6.1 Safety

DANGER



Electrical energy!

Danger of death by electric shock!

- Do not touch any voltage-carrying cables or components with wet hands.
- When handling electrical current, always comply with accident prevention guidelines.
- Before carrying out any maintenance, cleaning or repair work, disconnect the energy supply to the HKF 8180 and ensure it cannot be switched back on.

WARNING



Hot water!

Severe scalding possible.

- Allow the HKF 8180 to cool down first before carrying out any maintenance, cleaning or repair work.
- When flushing, filling and draining the HKF 8180, do not touch the hot water.

WARNING



Hot surfaces!

Severe scalding possible.

- Do not touch any pipes or components during maintenance, cleaning or repair work.
- Allow the HKF 8180 to cool down first before carrying out any maintenance, cleaning or repair work.
- Wear heat-resistant safety gloves when carrying out work on hot components.

6.2 Recommended maintenance intervals

Task	Interval
Check the shut-off valve and ball valve for clearance	Annually
Check for noisy pump operation	Annually
Check HKF 8180 for leaks (visual inspection)	Annually
Check the hand wheel is functioning properly	Annually
Check the actuator is functioning properly	Annually

6.3 Maintenance work

6.3.1 Dismantling the circulating pump

- Disconnect the energy supply to the HKF 8180 and ensure it cannot be switched back on.

DANGER



Electrical energy!

Danger of death by electric shock!

- Do not touch any voltage-carrying cables or components with wet hands.
- When handling electrical current, always comply with accident prevention guidelines.
- Before carrying out any maintenance, cleaning or repair work, disconnect the energy supply to the HKF 8180 and ensure it cannot be switched back on.

- Remove the front cover on the HKF 8180 (see Fig. 4 on page 10).
- Close the ball valves (multi-function fittings, pos. A) by turning the thermometer handle (see “Thermometer handle settings” on page 11).
- Remove the lower insulation (pos. B), the supply and return thermometer handles (pos. A) and the upper insulation (pos. C) in that order.

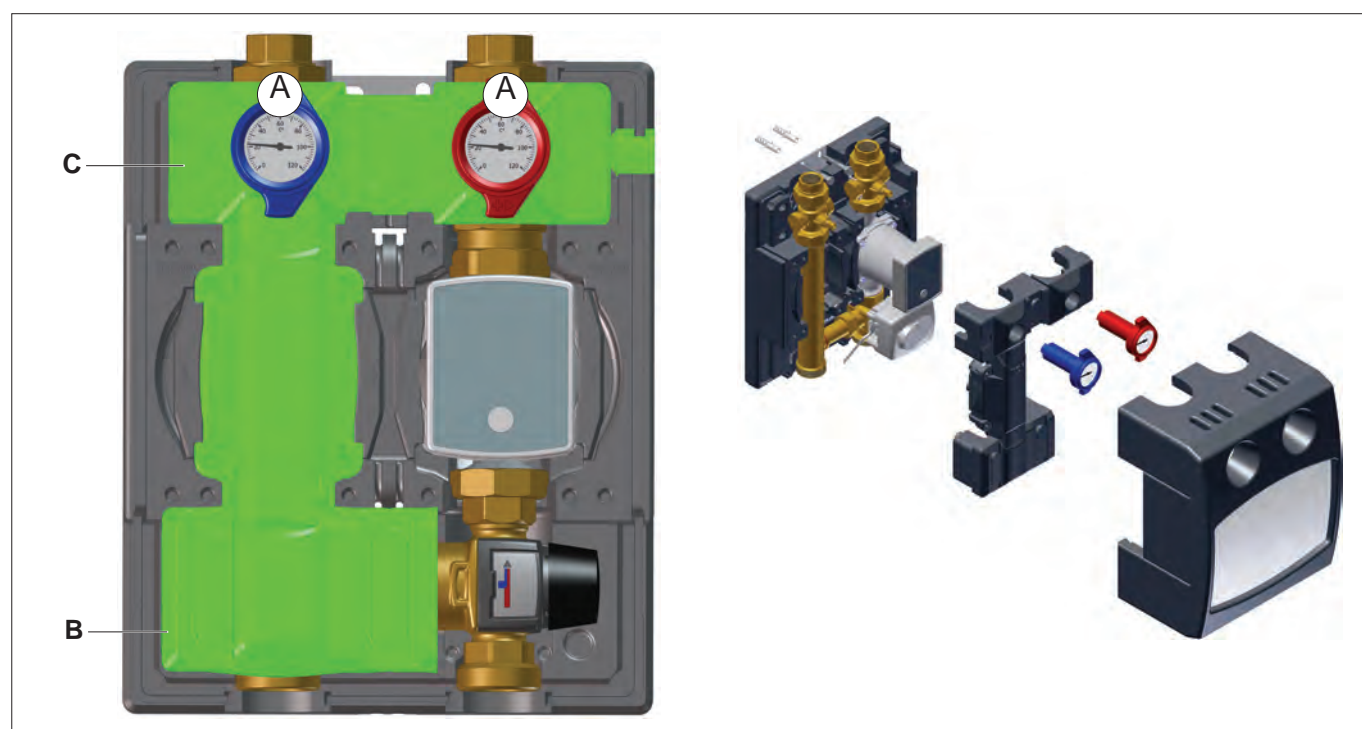


Fig. 7: Dismantling the insulation

- Disconnect the circulating pump's wiring.

HKF 8180

- Loosen the nuts (pos. A) and dismantle the circulating pump (pos. B).

WARNING



Hot water!

Severe scalding possible.

- ▶ Allow the HKF 8180 to cool down first before carrying out any maintenance, cleaning or repair work.
- ▶ When draining the HKF 8180, do not touch the hot water.

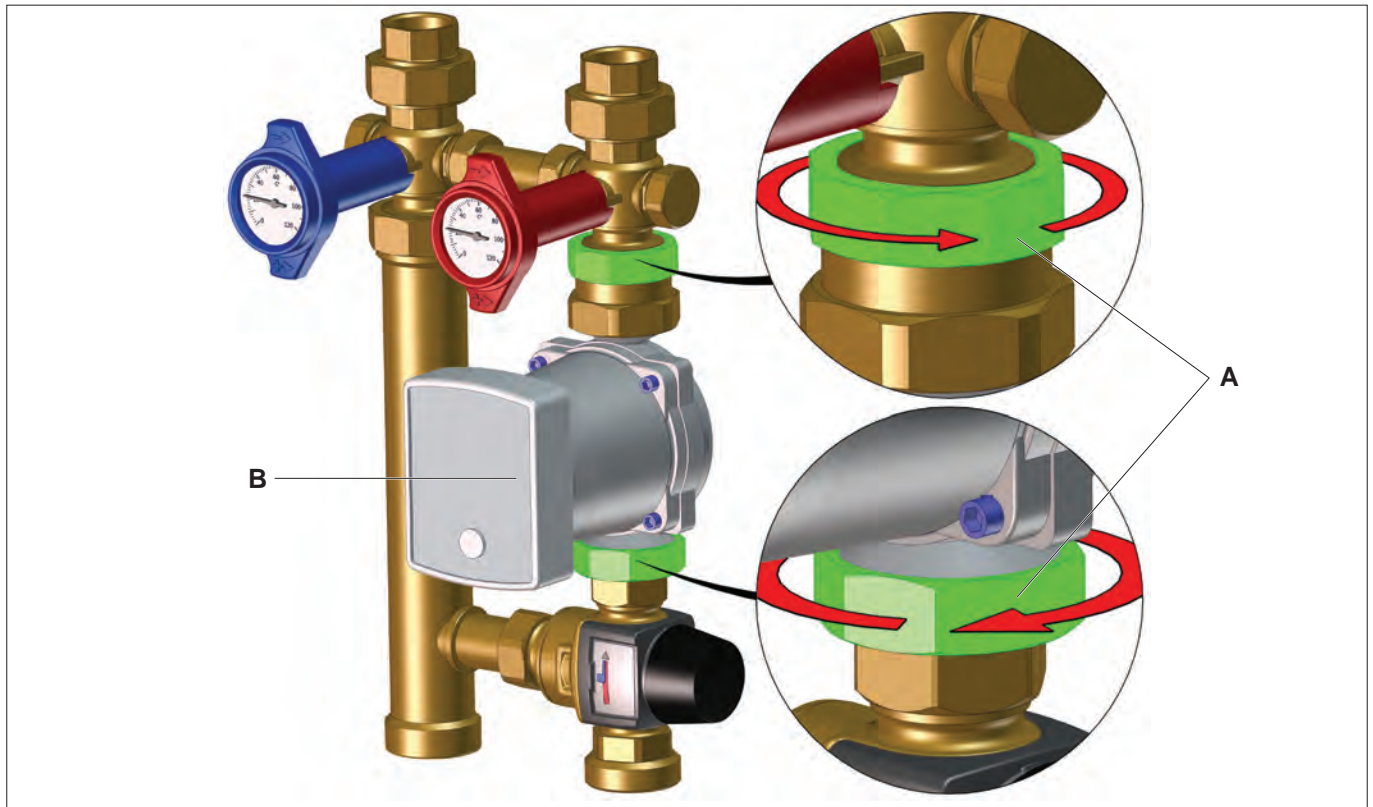


Fig. 8: Dismantling the circulating pump

6.3.2 Fitting the circulating pump

- Replace damaged or faulty gaskets if necessary.
- Insert the circulating pump and tighten the nuts (for tightening torques, see “Technical data” on page 18).
- Connect the wiring to the circulating pump as per the electrical wiring diagram.
- Slowly** open the ball valves (multi-function fittings, pos. A, Fig. 9 on page 15) by turning the thermometer handle (see “Thermometer handle settings” on page 11).
- Prime the HKF 8180 **slowly** with pressure and vent the system, if necessary.

NOTE



Switch the circulating pump off during the venting process.

- Check the HKF 8180 to ensure there are no leaks.
- Restore the energy supply to the HKF 8180.
- Dismantle the thermometer handles.
- Fit the interim insulation, the thermometer handles and the front cover.

6.3.3 Dismantling the thermal mixer valve with temperature setting

- Disconnect the energy supply to the HKF 8180 and ensure it cannot be switched back on.

DANGER



Electrical energy!

Danger of death by electric shock!

- Do not touch any voltage-carrying cables or components with wet hands.
- When handling electrical current, always comply with accident prevention guidelines.
- Before carrying out any maintenance, cleaning or repair work, disconnect the energy supply to the HKF 8180 and ensure it cannot be switched back on.

- Remove the front cover on the HKF 8180 (see Fig. 4 on page 10).
- Close the ball valves (multi-function fittings, pos. A) by turning the thermometer handle (see “Thermometer handle settings” on page 11).
- Dismantle the lower insulation (see pos. B, Fig. 7 on page 13).
- Dismantle the thermal mixer valve with temperature setting (pos. A) by loosening the union nuts (pos. B).

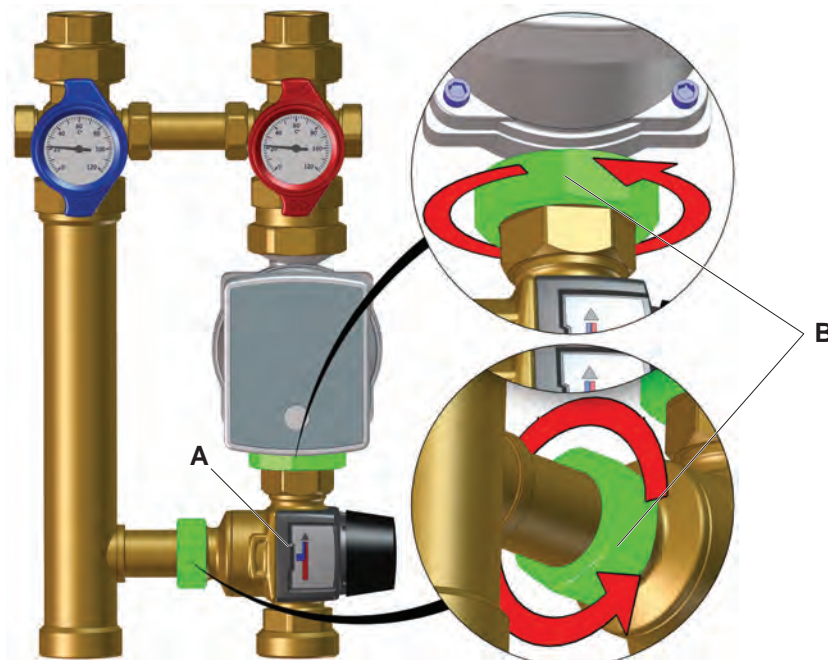


Fig. 9: Dismantling the thermal mixer valve with temperature setting

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6.3.4 Fitting the thermal mixer valve with temperature setting

- Replace the seals on the screw connections.
- Insert the thermal mixer valve and tighten the nuts (pos. B, Fig. 9 on page 15) (for tightening torques, see “Technical data” on page 18).

NOTE



When installing the control valve, check that it is installed in the correct position.

- **Slowly** open the shut-off valves on the supply and return lines.
- Prime the heating system slowly with pressure and vent it, if necessary.

NOTE



Switch the circulating pump off during the venting process.

- Check the HKF 8180 to ensure there are no leaks.
- Restore the energy supply to the HKF 8180.
- Fit the lower insulation and the front cover.

6.3.5 Swapping the supply and return lines

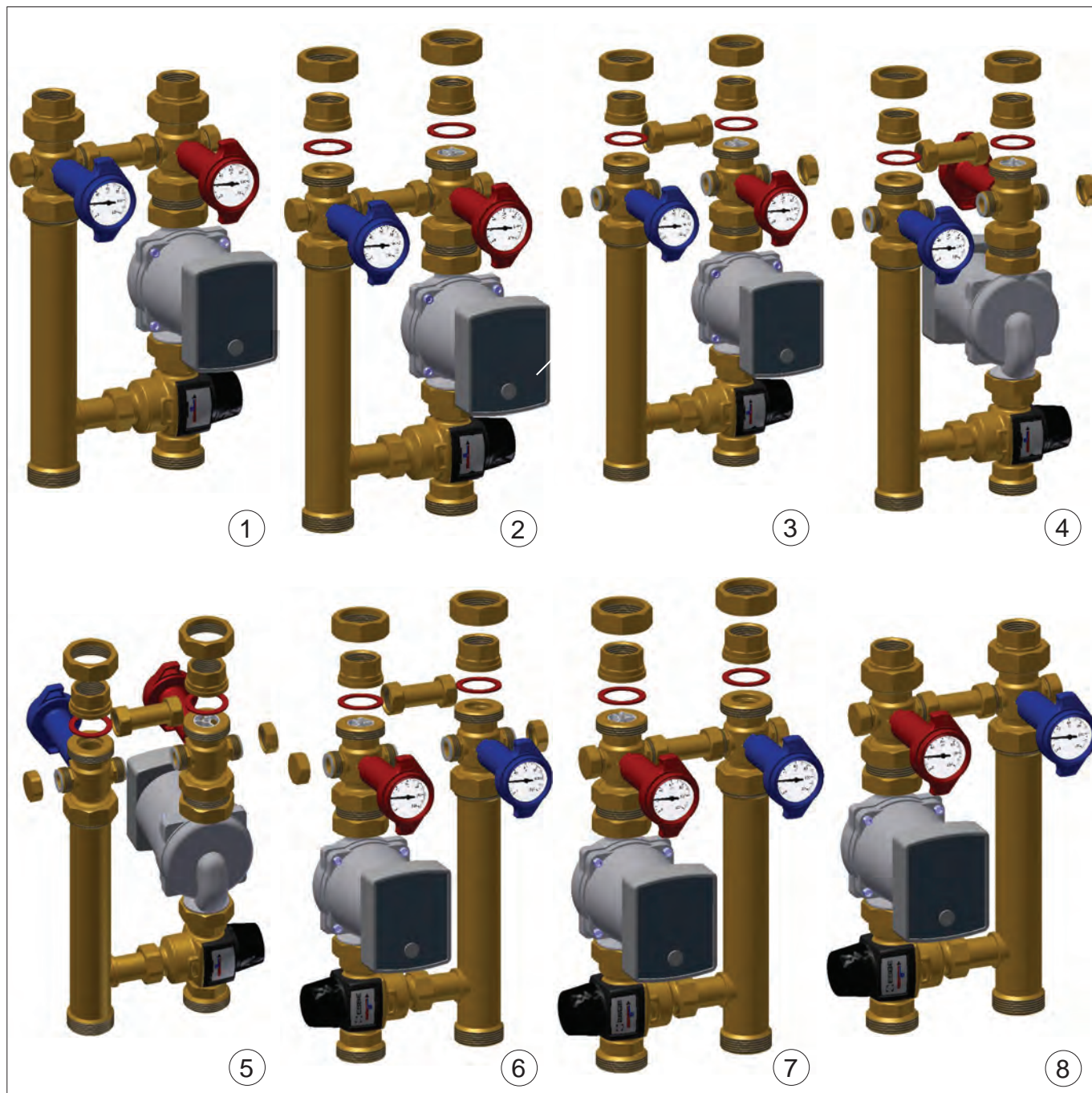


Fig. 10: Swapping the supply and return lines

7 Technical data

General	
Dimensions (W x H x D)	300 x 355 x 243 mm
Weight	8.5 kg
Maximum operating pressure	10 bar
Maximum permissible operating temperature	90 °C (note pump specification)

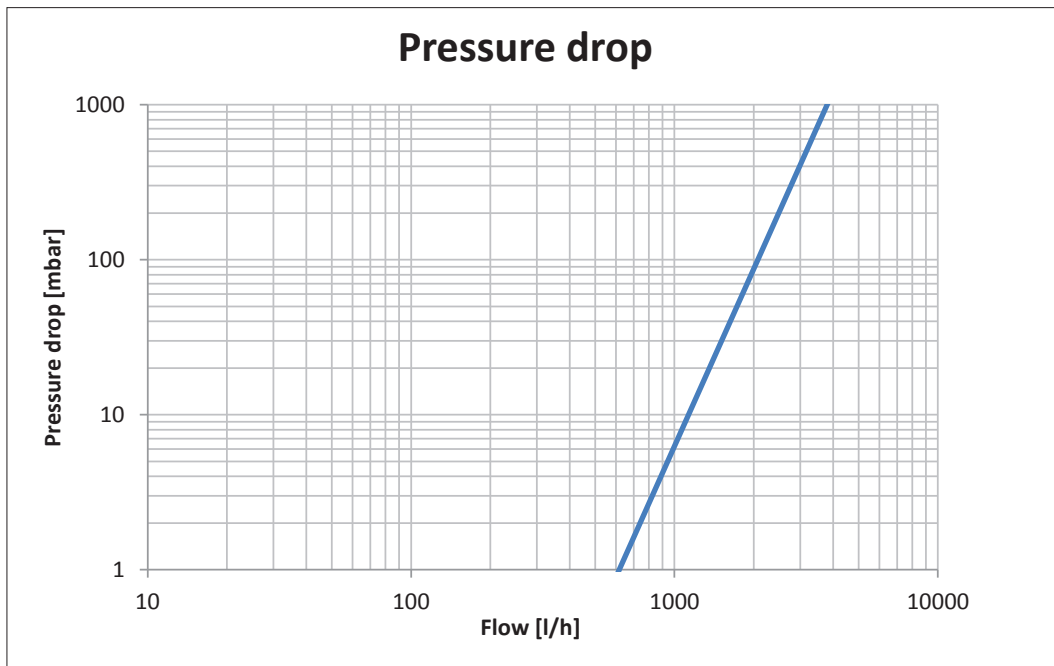
Circulating pump
The technical data for the circulating pumps can be found in the respective pump documentation.

Mixer valve	
Model (type)	Thermal mixer valve
Function	Thermostatic
Temperature range	20–43 °C
Kvs value	4.2

Materials	
Fittings	Brass Ms 58 (CW614N)
Pipe components	Steel pipe, coated
Plastics	Impact- and temperature-resistant
Flat gaskets	AFM 34 or EPDM
O-rings	EPDM

Tightening torque for screw connections with Reinz AFM 34 seals	
$\frac{3}{4}$ "	35 Nm
1"	55 Nm
1 $\frac{1}{4}$ "	90 Nm
1 $\frac{1}{2}$ "	130 Nm
2"	190 Nm


Characteristic curves



8 Decommissioning, recommissioning

8.1 Decommissioning


- Disconnect the energy supply to the HKF 8180 and ensure it cannot be switched back on.

DANGER	
	<p>Electrical energy!</p> <p>Danger of death by electric shock!</p> <ul style="list-style-type: none">➤ Do not touch any voltage-carrying cables or components with wet hands.➤ When handling electrical current, always comply with accident prevention guidelines.➤ Before carrying out any maintenance, cleaning or repair work, disconnect the energy supply to the HKF 8180 and ensure it cannot be switched back on.

- Remove the front cover on the HKF 8180 (see Fig. 4 on page 10).
- Close all of the shut-off valves on the water connections.

For longer periods of decommissioning:

- Depressurise the HKF 8180 (for example by opening a bleeder screw).

NOTE	
	<p>During the depressurisation of the HKF 8180, water can leak out.</p>

8.2 Recommissioning

- **Slowly** open all of the shut-off valves on the water connections.
- Prime the HKF 8180 **slowly** with pressure and vent it, if necessary.
- Restore the energy supply to the HKF 8180.
- Fit the front cover on the pump assembly.
- Separate the components of the HKF 8180 into recyclable materials, hazardous materials and operating materials.
- Dispose of the HKF 8180 components or recycle them.

9 Dismantling

Dismantling can be performed for two reasons:

- In order to reassemble the device elsewhere.
- In order to dispose of the device.

NOTE



If the HKF 8180 is to be reassembled elsewhere, the dismantling process must be prepared properly. All installation and fastening parts must be carefully dismantled, labelled and, if necessary, packaged for transportation. This will ensure that, upon reassembly, all the parts can be correctly assigned and fitted back in the appropriate place.

10 Disposal

10.1 Safety

WARNING



Incorrect disposal pollutes the environment and the groundwater!

- When disposing of system parts and operating materials, the regulations and guidelines set down by the legislator of the respective country must be observed.

10.2 Disposal

- Separate the components of the HKF 8180 into recyclable materials, hazardous materials and operating materials.
- Dispose of the HKF 8180 components or recycle them.

