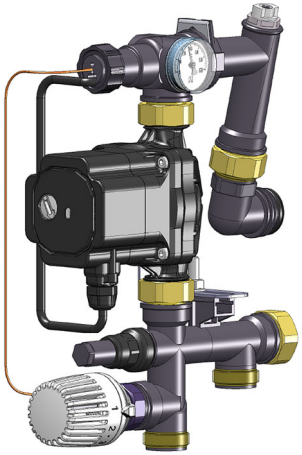
AFRISO

EN

Technik für Umweltschutz

Messen. Regeln. Überwachen.

Operating instructions



Manifold pump assembly

PrimoFloor CC K 130TP TK

Lindenstraße 20
74363 Güglingen
Telephone +49 7135 102-0
Service +49 7135 102-211
Telefax +49 7135 102-147
info@afriso.com
www.afriso.com

Version: 01.2025.0
ID: 900.000.1125

1 About these operating instructions

These operating instructions describe the manifold pump assembly PrimoFloor CC K 130 (also referred to as "product" in these operating instructions). These operating instructions are part of the product.

- You may only use the product if you have fully read and understood these operating instructions.
- Verify that these operating instructions are always accessible for any type of work performed on or with the product.
- Pass these operating instructions as well as all other product-related documents on to all owners of the product.
- If you feel that these operating instructions contain errors, inconsistencies, ambiguities or other issues, contact the manufacturer prior to using the product.

The manufacturer shall not be liable in any form whatsoever for direct or consequential damage resulting from failure to observe these operating instructions or from failure to comply with directives, regulations and standards and any other statutory requirements applicable at the installation site of the product.

2 Information on safety

2.1 Safety messages and hazard categories

These operating instructions contain safety messages to alert you to potential hazards and risks. In addition to the instructions provided in these operating instructions, you must comply with all directives, standards and safety regulations applicable at the installation site of the product. Verify that you are familiar with all directives, standards and safety regulations and ensure compliance with them prior to using the product.

Safety messages in these operating instructions are highlighted with warning symbols and warning words. Depending on the severity of a hazard, the safety messages are classified according to different hazard categories.

DANGER

DANGER indicates a hazardous situation, which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a potentially hazardous situation, which, if not avoided, can result in serious injury or equipment damage.

NOTICE

NOTICE indicates a hazardous situation, which, if not avoided, can result in equipment damage.

In addition, the following symbols are used in these operating instructions:

This is the general safety alert symbol. It alerts to injury hazards or equipment damage. Comply with all safety instructions in conjunction with this symbol to help avoid possible death, injury or equipment damage.

This symbol alerts to hazardous electrical voltage. If this symbol is used in a safety message, there is a hazard of electric shock.

2.2 Intended use

This product may only be used for constant temperature control of underfloor heating systems or wall radiators in building and in conjunction with the following media:

- Heating circuit water as per VDI 2035
- Water/glycol mixtures with a maximum admixture of 50 %

Any use other than the application explicitly permitted in these operating instructions is not permitted and causes hazards.

Verify that the product is suitable for the application planned by you prior to using the product. In doing so, take into account at least the following:

- All directives, standards and safety regulations applicable at the installation site of the product
- All conditions and data specified for the product
- The conditions of the planned application

In addition, perform a risk assessment in view of the planned application, according to an approved risk assessment method, and implement the appropriate safety measures, based on the results of the risk assessment. Take into account the consequences of installing or integrating the product into a system or a plant.

When using the product, perform all work and all other activities in conjunction with the product in compliance with the conditions specified in the operating instructions and on the nameplate, as well as with all directives, standards and safety regulations applicable at the installation site of the product.

2.3 Predictable incorrect application

The product must never be used in the following cases and for the following purposes:

- Operation as drinking water circulation system
- Use with adherent, corrosive or flammable fluids
- Operation in solar systems
- Hazardous area
  - If the product is operated in hazardous areas, sparks may cause deflagrations, fires or explosions.

2.4 Qualification of personnel

Only skilled, qualified persons with relevant education and experience to enable him or her to perceive risks and to avoid hazards which electricity can create are authorised to mount, commission, maintain and decommission this product.

Only appropriately trained persons who are familiar with and understand the contents of these operating instructions and all other pertinent product documentation are authorized to work on and with this product.

These persons must have sufficient technical training, knowledge and experience and be able to foresee and detect potential hazards that may be caused by using the product.

All persons working on and with the product must be fully familiar with all directives, standards and safety regulations that must be observed for performing such work.

2.5 Personal protective equipment

Always wear the required personal protective equipment. When performing work on and with the product, take into account that hazards may be present at the installation site which do not directly result from the product itself.

2.6 Modifications to the product

Only perform work on and with the product which is explicitly described in these operating instructions. Do not make any modifications to the product which are not described in these operating instructions.

3 Transport and storage

The product may be damaged as a result of improper transport or storage.

NOTICE

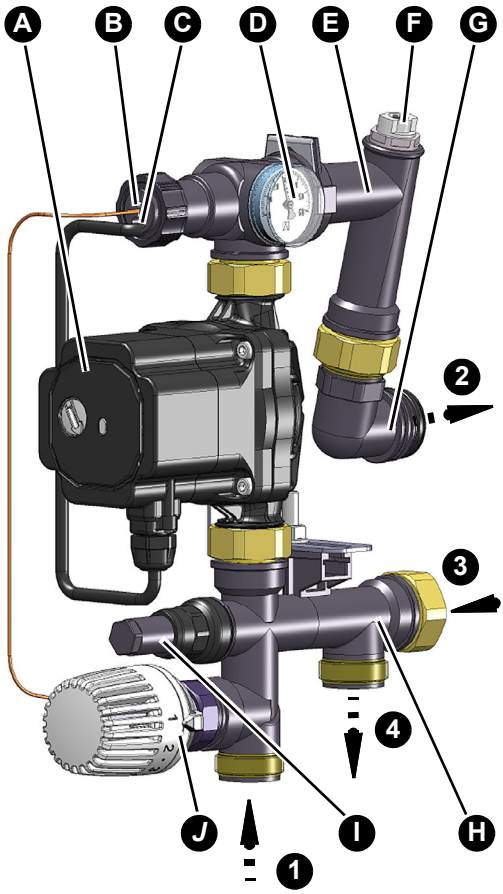
INCORRECT HANDLING

- Verify compliance with the specified ambient conditions during transport or storage of the product.
- Use the original packaging when transporting the product.
- Store the product in a clean and dry environment.
- Verify that the product is protected against shocks and impact during transport and storage.

Failure to follow these instructions can result in equipment damage.

4 Product description

4.1 Overview



A. Circulation pump
B. Capillary tube temperature probe
C. Safety temperature switch of the circulation pump
D. Thermometer
E. Angular connection piece
F. Vent valve $G^1/_2$
G. Plug-in elbow G1e
H. Base housing G1e
I. Balancing valve
J. Thermostat control head with thermostat valve

1. Flow boiler
2. Flow surface heating system
3. Return surface heating system
4. Return boiler

Fig. 1: Overview

4.2 Dimensions and connections

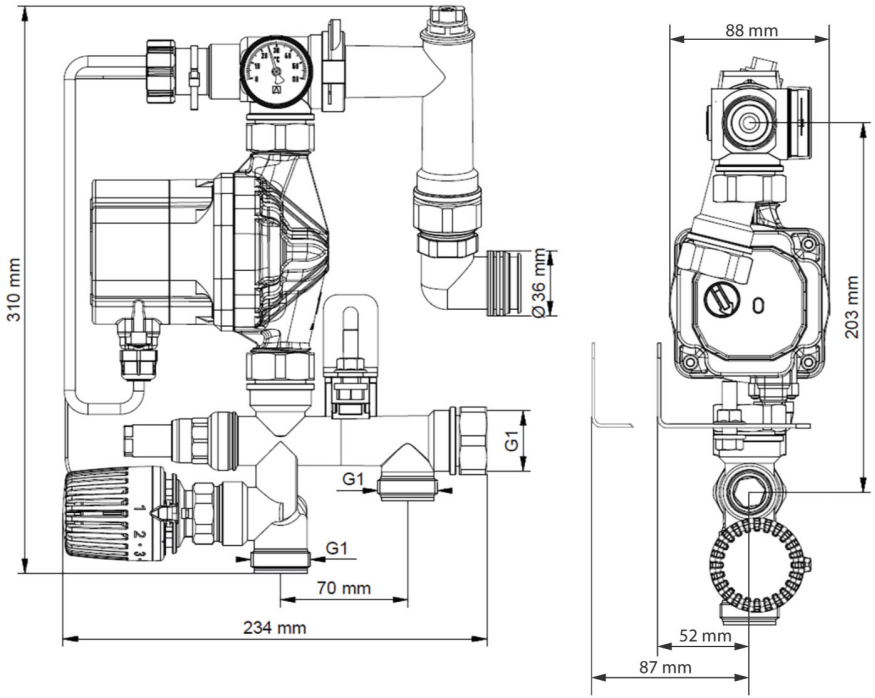
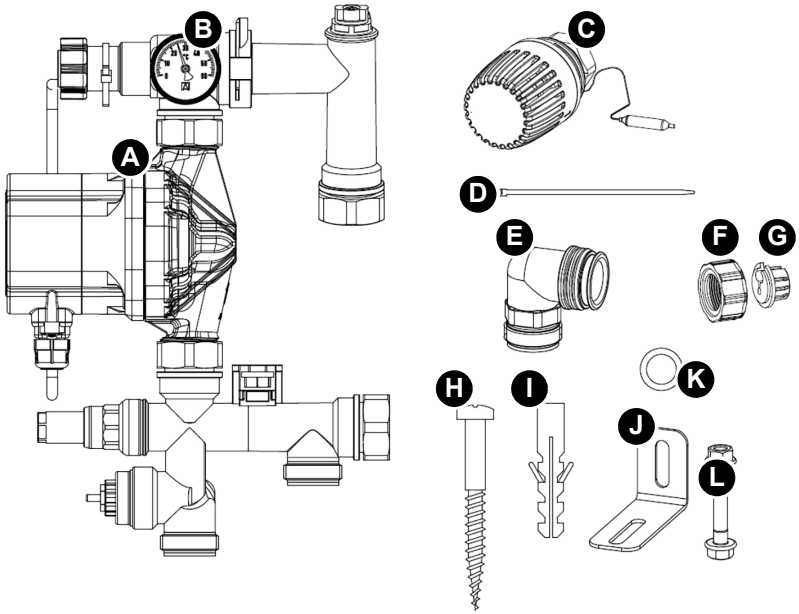


Fig. 2: Dimensions and connections

4.3 Scope of delivery

The scope of delivery includes:



A. Manifold pump assembly PrimoFloor CC K 130 (1 x)
B. Thermometer NG40 (1 x)
C. Thermostat control head (1 x)
D. Cable tie (1 x)
E. Plug-in elbow (1 x)
F. Nut M28 x 1.5 (1 x)
G. Gasket (1 x)
H. Screw ø 6 x 70 mm (1 x)
I. Dowel ø 8 x 51 mm (1 x)
J. Mounting bracket (1 x)
K. Flat gasket (1 x)
L. Hex screw M8 x 30 mm (1 x)

Operating instructions "Product" (1 x)

Operating instructions pump (1 x)

4.4 Function

The product controls the flow to the surface heating system.

If the flow temperature at the capillary tube temperature probe deviates from the target value set at the thermostatic control head, the thermostatic control head controls the amount of hot water supplied via the valve stroke of the thermostat valve.

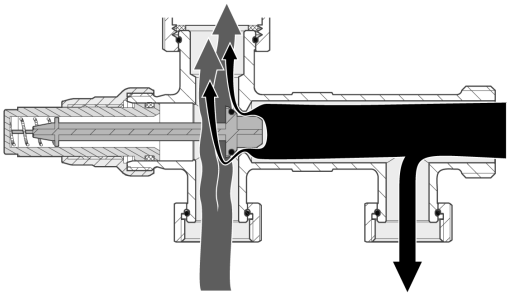


Fig. 3: Flow rate with balancing valve

With balancing valve

The installed balancing valve creates a minor differential pressure so that the hot water from the primary circuit is admixed with priority via the flow valve.

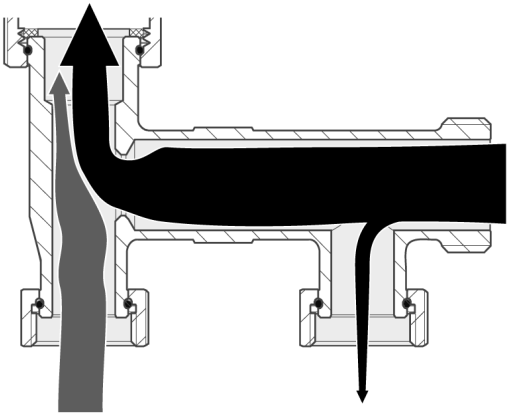


Fig. 4: Flow rate without balancing valve

Without balancing valve

Without balancing valve, the proportion of the return flow may be too high so that the adjusted temperature may not be reached.

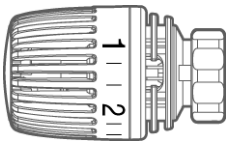
4.5 Approvals, conformities, certifications

See operating instructions of the manufacturer of the circulation pump for versions with circulation pump.

4.6 Technical specifications

Parameter	Value
General specifications	
Weight	2.2 kg
Material of fittings	Brass / plastic
System pressure	6 bar
Ambient conditions	
Ambient temperature operation	0 ... 60 °C
Temperature of the medium	Up to 95 °C
Pressure loss	
Thermostat valve	Flow coefficient Kvs = 4.0 m^3/h

4.6.1 Temperature table of the thermostat control head

Set value	1	2	3	4	5	6	7	8	9
Temperature in °C (approx.) 	20	25	30	34	38	42	46	50	55

4.7 Balancing valve setting chart

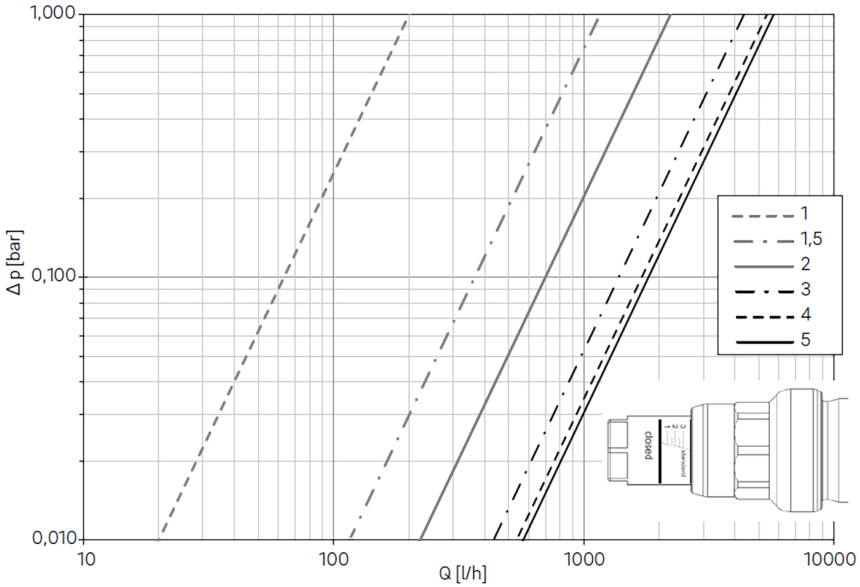


Fig. 5: Balancing valve setting chart

5 Mounting

WARNING

HOT LIQUID

Water in heating systems is under high pressure and can have temperatures of more than 100 °C.

- Verify that the heating water has cooled down before mounting the product.

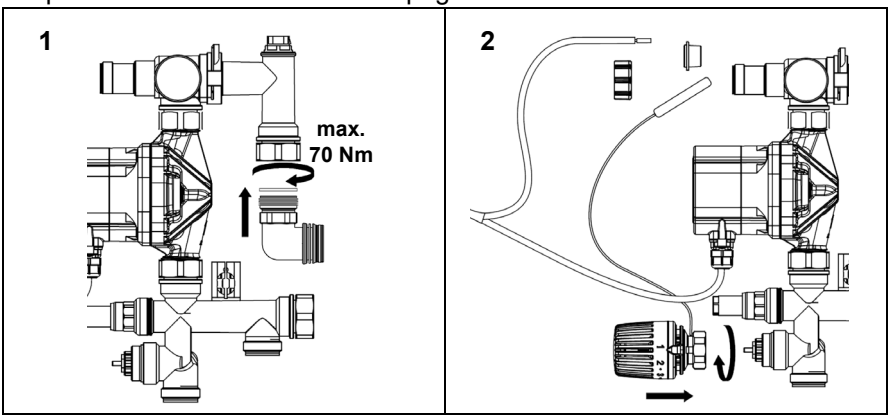
Failure to follow these instructions can result in death, serious injury or equipment damage.

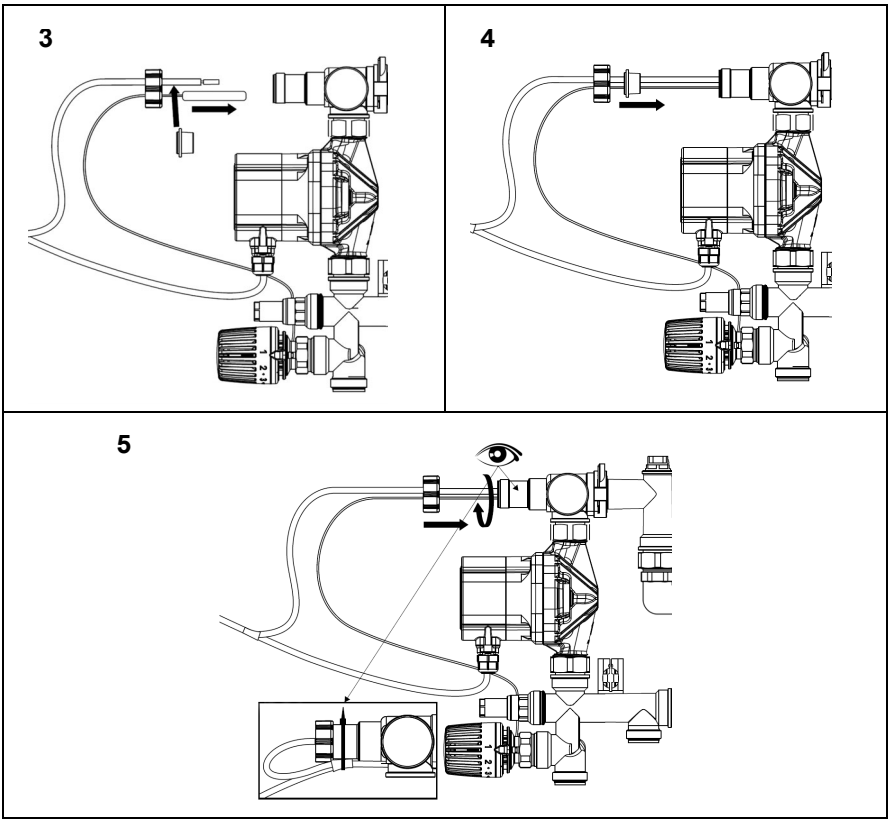
5.1 Preparing mounting

Only mount the product after having completed all pipe assembly work, all welding work and all soldering work.

- Flush the lines of the system before installing the product.

If you install the product in an existing system, observe the information in chapter “Electrical connection” on page 16.





5.2 Wall mounting

NOTICE

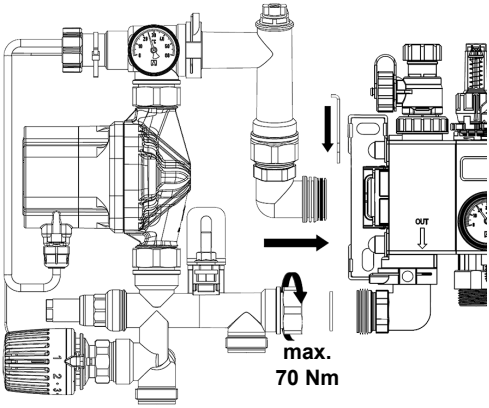
MECHANICAL LOADS AND STRESS

- Verify that the product is not subjected to mechanical loads and stress when mounting the product to the wall.

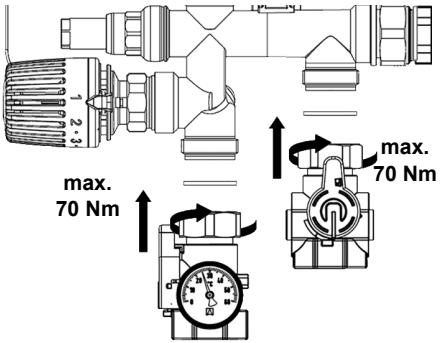
Failure to follow these instructions can result in equipment damage.

1. Mount the product in a cabinet or to the wall.
2. Mount the supply and the return line to the product.

5.3 Mounting the product to the heating circuit manifold.



1. Mount the product with the gaskets to the heating circuit manifold.



2. Mount the shut-off valves of the heating circuit manifold to the flow and return of the product.

5.4 Electrical connection

DANGER

ELECTRIC SHOCK

- Verify that the degree of protection against electric shock (protection class, double insulation) is not reduced by the type of electrical installation.

Failure to follow these instructions will result in death or serious injury.

DANGER

ELECTRIC SHOCK CAUSED BY LIVE PARTS

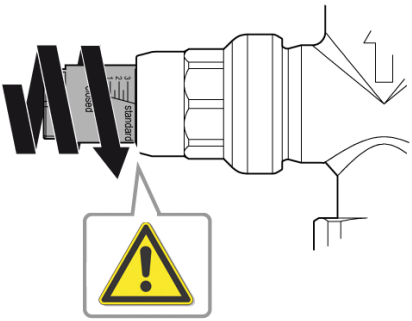
- Disconnect the mains voltage supply before performing the work and ensure that it cannot be switched on.
- Verify that no hazards can be caused by electrically conductive objects or media.

Failure to follow these instructions will result in death or serious injury.

1. Connect the circulation pump in accordance with the enclosed instructions.

6 Commissioning

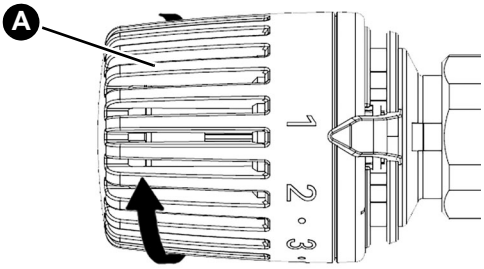
6.1 Commissioning the product



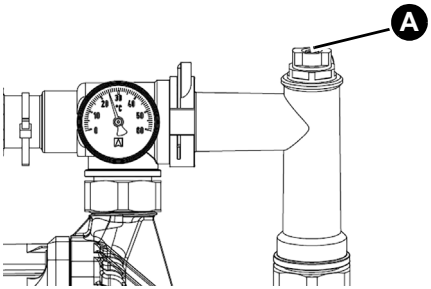
Filling, flushing and venting the system

⇨ Observe the operating instructions for the heating circuit manifold.

1. Connect the balancing valve with a maximum tightening torque of 3 Nm.



2. Open the thermostat valve (A).
3. Fill and flush the system according to the information in the operating instructions of the manufacturer of the heating circuit manifold.
4. Apply pressure to the system.



5. Open the vent valve (A) at the product.
6. Close the vent valve (A) as soon as medium escapes.

7. Perform a pressure test with 6 bar.

⇨ The system pressure must remain constant for at least two hours (maximum pressure drop 0.2 bar).

8. Check all screwed pipe connections and connections for tightness.
9. Perform a leak test after the two hours have passed.
10. Fill the system with water until the operating pressure is reached.

7 Operation

7.1 Adjusting the temperature

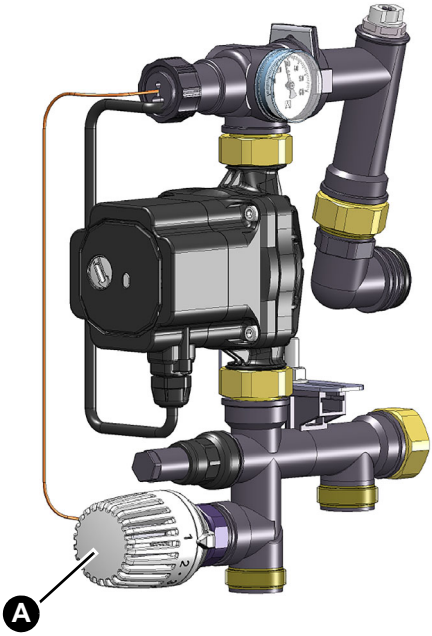


Fig. 6: Adjusting the temperature

1. Adjust the desired temperature at the thermostat control head (A) (see chapter "Temperature table of the thermostat control head").

8 Maintenance

8.1 Maintenance activities

At the beginning of the heating period and at regular intervals during the heating period, the product must be checked for tightness and correct operation.

1. Verify correct operation of the circulation pump.
2. Verify correct control behaviour of the product:
   - Verify that the temperature displayed by the thermometer matches the setting at the thermostat control head.

9 Troubleshooting

Any malfunctions that cannot be removed by means of the measures described in this chapter may only be repaired by the manufacturer.

Problem	Possible reason	Repair
Noise in the system	Air in the system	Vent the system
	Pump capacity too high	Correct the pump capacity
Insufficient heat supply through the surface heating system	Pumping capacity is insufficient	Correct the pump capacity
	Thermostat control head set too low	Increase the setting at the thermostat control head
	Balancing valve fully open	Correct the setting of the balancing valve
	Temperature of primary circuit too low	Correct the boiler settings
Excessive heat supply through the surface heating system	Thermostat control head set too high	Reduce the setting at the thermostat control head
	Thermostat control head or thermostat valve defective	Replace the defective component

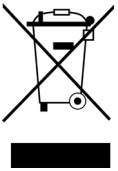
Problem	Possible reason	Repair
Noise in the circulation pump	Air in the circulation pump	Let the pump run. Vent the pump manually (see operating instructions of the pump)
	System pressure too low	Increase the system pressure. Check the gas volume in the expansion vessel
Circulation pump does not start	Pump is clogged	Remove pollution
	Circulation pump is defective	Replace the circulation pump
	No power supply	Apply mains voltage
Other malfunctions	-	Contact the AFRISO service hotline

10 Decommissioning, disposal

Do not dispose of the product together with household waste.

Dispose of the product in compliance with all applicable directives, standards and safety regulations.

Dispose of the product at an associated waste collection point or return it to the manufacturer's or distributor's collection point.



1. Disconnect the product from the supply voltage.
2. Dismount the product (see chapter "Mounting", reverse sequence of steps).
3. Dispose of the product.

11 Returning the device

Get in touch with us before returning your product (service@afriso.de).

12 Warranty

See our terms and conditions at www.afriso.com or your purchase contract for information on warranty.

13 Spare parts and accessories

NOTICE

UNSUITABLE PARTS

- Only use genuine spare parts and accessories provided by the manufacturer.

Failure to follow these instructions can result in equipment damage.

Product

Product designation	Part no.	Figure
PrimoFloor CC K 130TP TK	77487