



English

## Installation and Operation Instructions

### HeatBloC® K31 - DN 20



Item no. 9932013x-mub-en – Version V12 – Issued 2020/04

Translation of the original instructions

We reserve the right to make technical changes without notice!

Printed in Germany – Copyright by PAW GmbH & Co. KG

PAW GmbH & Co. KG

Böcklerstraße 11

31789 Hameln - Germany

## Contents

<b>1</b>	<b>General information .....</b>	<b>4</b>
1.1	Scope of these instructions .....	4
1.2	Designated use .....	4
<b>2</b>	<b>Safety instructions .....</b>	<b>5</b>
<b>3</b>	<b>Product description.....</b>	<b>6</b>
3.1	Equipment.....	6
3.2	Function .....	7
3.2.1	Check valve .....	8
<b>4</b>	<b>Assembly and installation [specialist].....</b>	<b>9</b>
4.1	Installation of the modular distribution manifold / wall bracket with mounting plate .....	9
4.2	Installation of the HeatBloC® and commissioning .....	10
4.3	Accessories: compression fitting (not included in delivery) .....	12
<b>5</b>	<b>Scope of delivery [specialist].....</b>	<b>13</b>
<b>6</b>	<b>Technical data.....</b>	<b>15</b>
6.1	Pressure drop and pump characteristic curves.....	16
<b>7</b>	<b>Disposal .....</b>	<b>17</b>

## 1 General information



Carefully read these instructions before installation and commissioning.

Save these instructions in the vicinity of the installation for future reference.

### 1.1 Scope of these instructions

These instructions describe the function, installation, commissioning and operation of the unmixed HeatBloC® K31. For other components of the installation, such as pumps, controllers or the distribution manifold, see the manufacturers' instructions. The chapters called [specialist] are intended for specialists only.

### 1.2 Designated use

The HeatBloC® may only be used in heating circuits taking into consideration the technical limit values indicated in these instructions.

The HeatBloC® must **not** be used in drinking water applications.

Improper usage excludes any liability claims.

Only use PAW accessories with the HeatBloC®.


The wrapping materials are made of recyclable materials and can be disposed of with recyclable materials.

## 2 Safety instructions

The installation and commissioning as well as the connection of electrical components require technical knowledge commensurate with a recognised vocational qualification as a fitter for plumbing, heating and air conditioning technology, or a profession requiring a comparable level of knowledge [specialist].

The following must be observed during installation and commissioning:

- relevant local and national regulations
- accident prevention regulations of the professional association
- instructions and safety instructions mentioned in this manual

	<div style="background-color: yellow; padding: 5px;"><b>CAUTION</b></div> <p><b>Personal injury and damage to property!</b></p> <p>The HeatBloC® must only be used in heating circuits filled with heating water according to VDI 2035 / Ö-Norm H 5195-1.</p> <p>The HeatBloC® must <b>not</b> be used in drinking water applications.</p>
--	--

### NOTICE

#### Material damage due to mineral oils!

Mineral oil products cause lasting damage to seals made of EPDM, whereby the sealant properties get lost. We do not assume liability nor provide warranty for damage to property resulting from sealants damaged in this way.

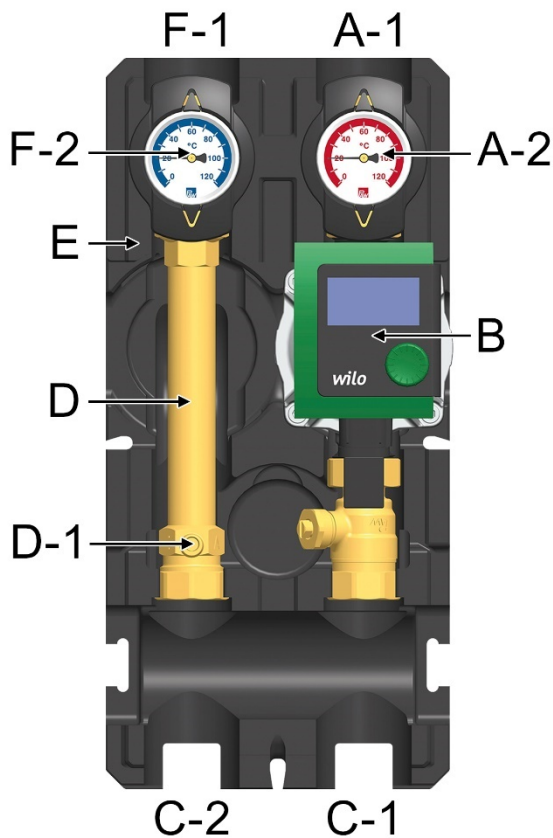
- It is imperative to avoid that EPDM gets in contact with substances containing mineral oils.
- Use a lubricant based on silicone or polyalkylene and free of mineral oils, such as Unisilikon L250L and Syntheso Glep 1 of the Klüber company or a silicone spray.

### 3 Product description

The HeatBloC® K31 is a preassembled group of fittings for heating circuits. The integrated pump can be isolated by means of ball valves and can thus be maintained without draining of the system.

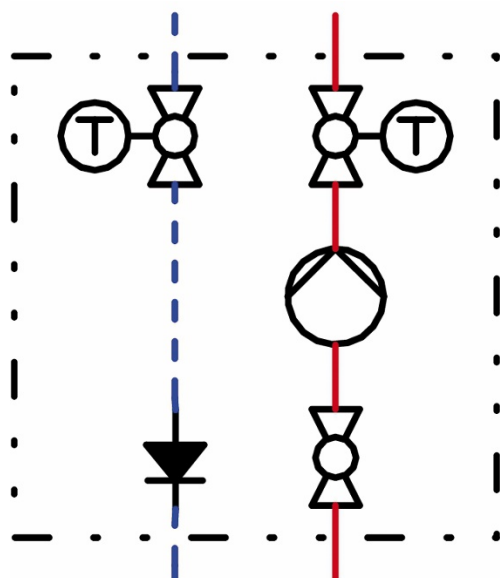
The PAW HeatBloC® is designed such that it can be directly mounted onto a PAW distribution manifold or a mounting plate with thread connections. With adaptor connections, PAW HeatBloC®s can also be installed on PAW distribution manifolds of other dimensions.

#### 3.1 Equipment



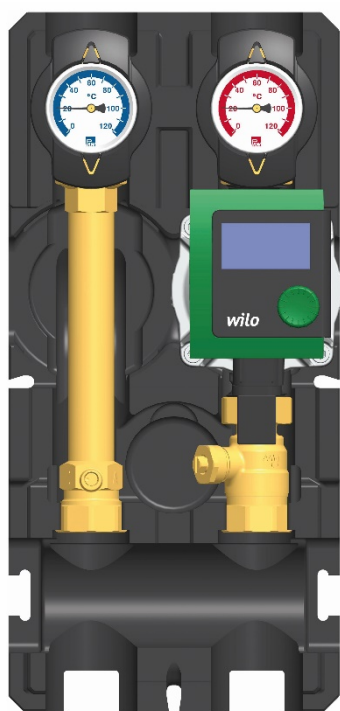
- A-1 Flow (consumer circuit)
- A-2 Full metal thermometer with immersion sleeve integrated in the ball valve (flow)
- B Heating pump
- C-1 Flow (boiler)
- C-2 Return (boiler)
- D-1 Check valve, can be opened
- D Return pipe
- E Design insulation with optimised function
- F-2 Full metal thermometer with immersion sleeve integrated in the ball valve (return)
- F-1 Return (consumer circuit)

### 3.2 Function



#### K31 – unmixed HeatBloC®

In the unmixed HeatBloC®, the flow from the boiler is directly pumped through the module.



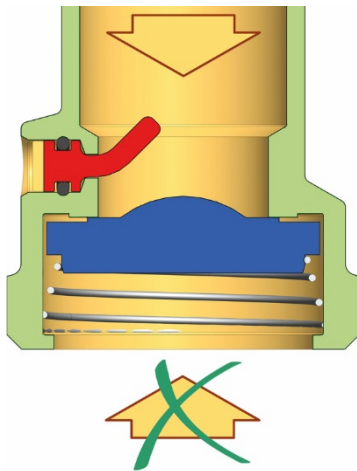
#### Application ranges:

- Boiler charging
- Storage tank charging and discharging

### 3.2.1 Check valve

The HeatBloC® is equipped with a check valve (D-1) in the return pipe. The check valve can be opened manually

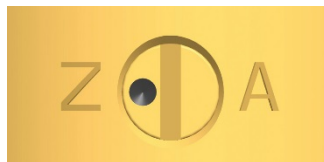
#### Operation



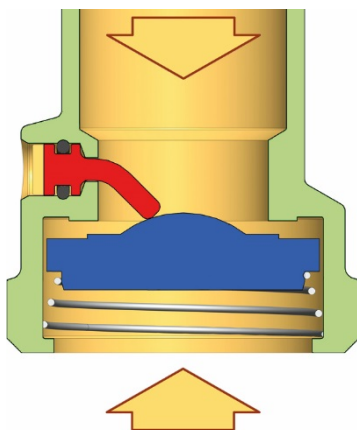
During operation, the mark must be directed to "Z".

→ The check valve is closed.

→ Flow only in the direction of the arrow.



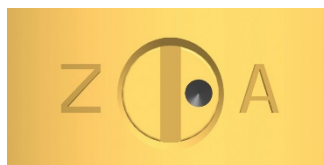
#### Filling, draining, venting



For filling, draining and venting, the mark must be directed to "A".

→ The check valve is open.

→ Flow in both directions.





## 4 Assembly and installation [specialist]

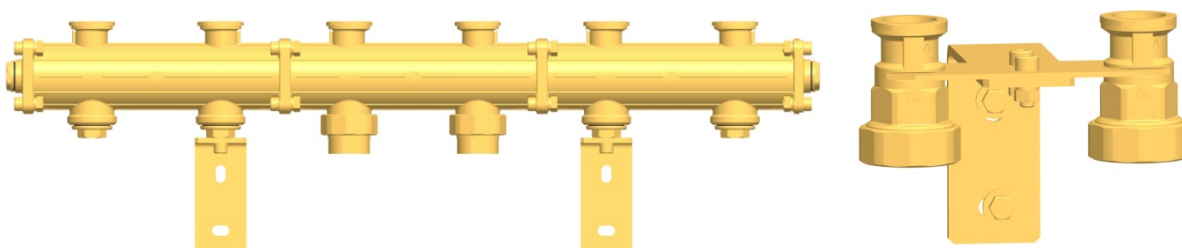
The HeatBloC® K31 must be either installed on a PAW modular distribution manifold or a set of wall bracket and mounting plate. The modular distribution manifold, the wall bracket and the mounting plate are not included in delivery.

### NOTICE

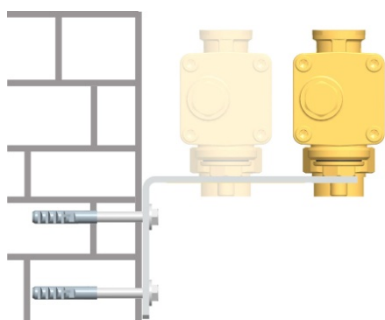
#### Damage to property!

The location of installation must be dry, load-carrying, frost-proof and protected against ultraviolet radiation to prevent material damage to the installation.

#### 4.1 Installation of the modular distribution manifold / wall bracket with mounting plate



Mount the modular distribution manifold or the wall bracket with mounting plate as described in the separate instructions.

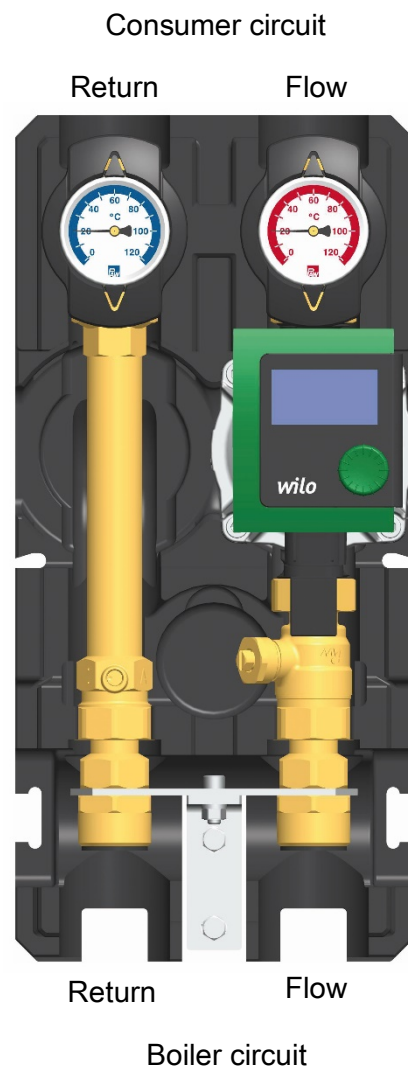


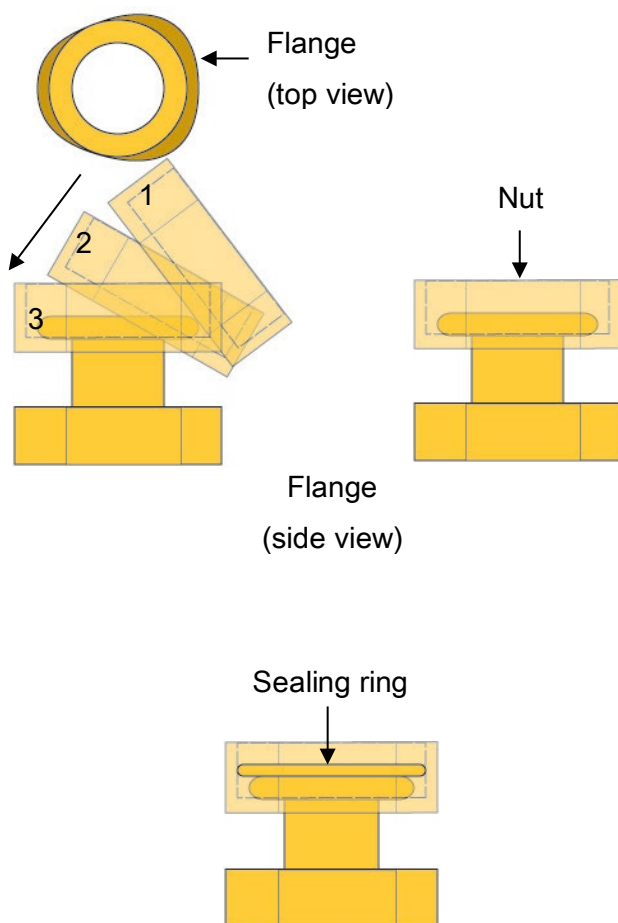
If possible, choose the largest distance to the wall.  
It is thus easier to mount the insulation of the distribution manifold.

## 4.2 Installation of the HeatBloC® and commissioning

The HeatBloC® can be installed

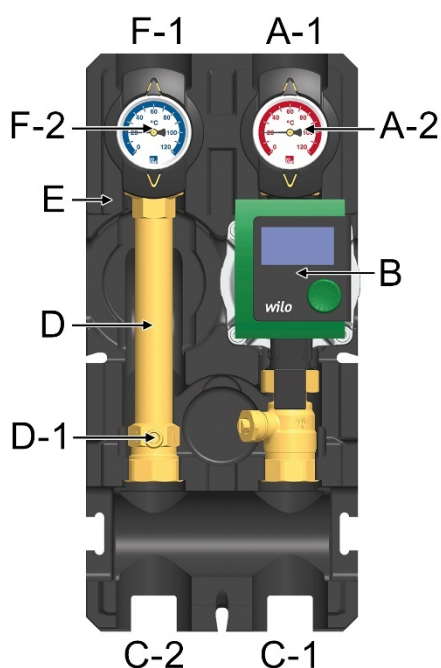
- **Option 1:**  
on a PAW modular distribution manifold.
- **Option 2:**  
on a mounting plate with thread connections.





1. Take off the thermometer handles (A-2, F-2) and remove the insulating front shell of the HeatBloC®.
2. Unscrew the nuts on the lower connections of the HeatBloC® and take out the sealing rings.
3. Flip the two nuts over the flanges.

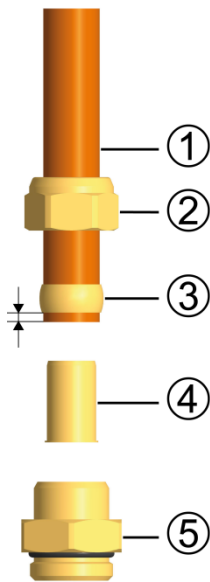
4. Insert the sealing rings into the nuts.
5. Put the HeatBloC® onto the two nuts.
6. Tighten the nuts. Take care that the nuts do not get jammed and that the sealing rings do not slip.



7. Connect the HeatBloC® to the installation. The installation to the piping must be carried out without any tension.
8. Connect the pump.
9. Carry out a pressure test and check all thread connections.
10. Mount the insulating front shell and the thermometer handles (A-2, F-2).

### 4.3 Accessories: compression fitting (not included in delivery)

The connection to the heating installation can be carried out fast, pressure-proof and without soldering when you use the optionally available compression fittings.



Not included in  
the scope of delivery!

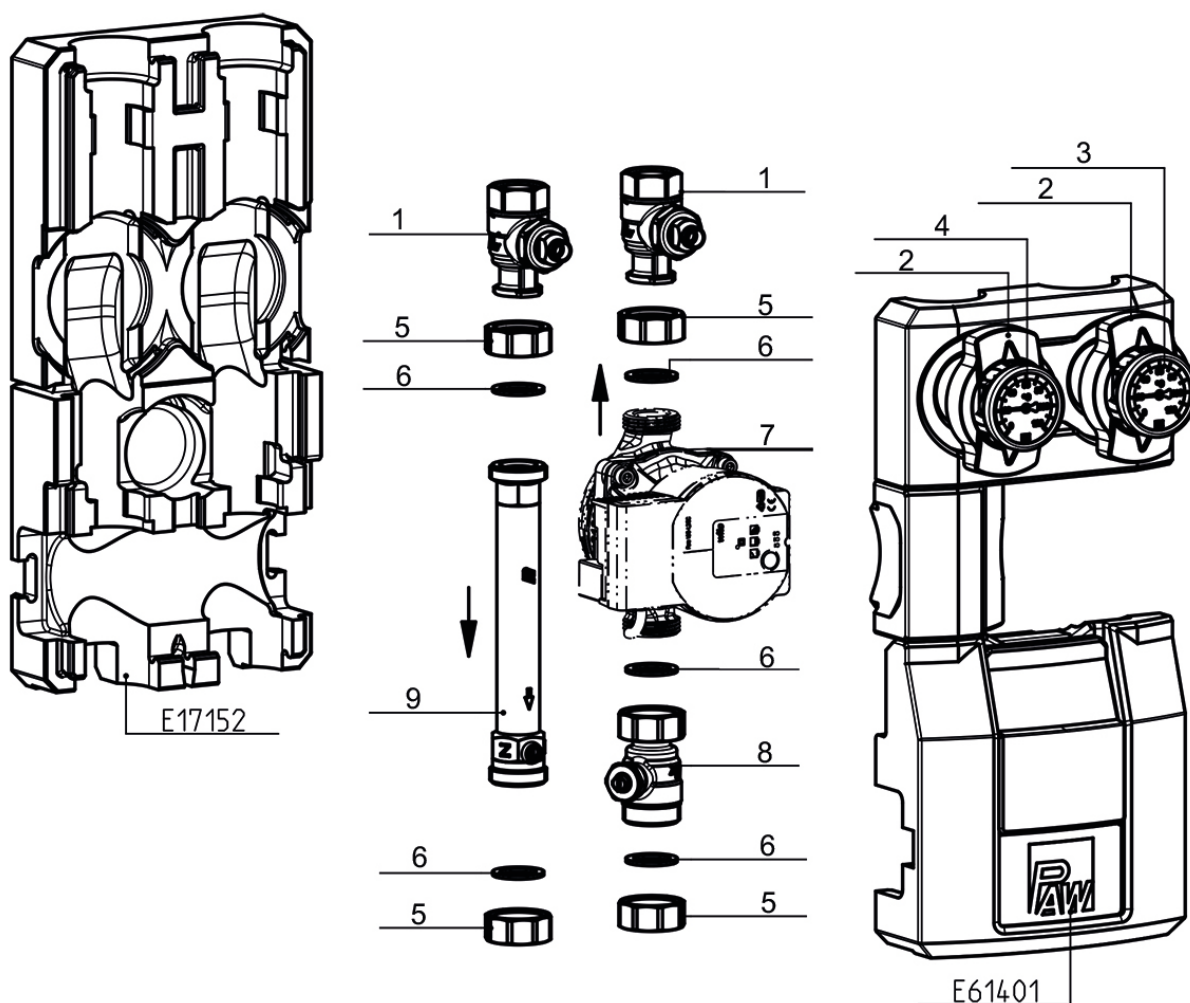
1. Push the union nut ② and the cutting ring ③ onto the copper pipe ①. The pipe must protrude at least 3 mm from the cutting ring in order to ensure the force transmission and the sealing.
2. Insert the support sleeve ④ into the copper pipe.
3. Insert the copper pipe with the plugged-on individual parts (②, ③ and ④) all the way into the housing of the compression fitting ⑤.
4. First screw the union nut ② manually.
5. Tighten the union nut ② by rotating one full turn. Secure the housing of the compression fitting ⑤ against distort in order to avoid damaging the sealing ring.

## 5 Scope of delivery [specialist]

### NOTICE

Complaints and requests/orders of spare parts will only be processed with information on the serial number!

The serial number is placed on the return pipe of the heating circuit.

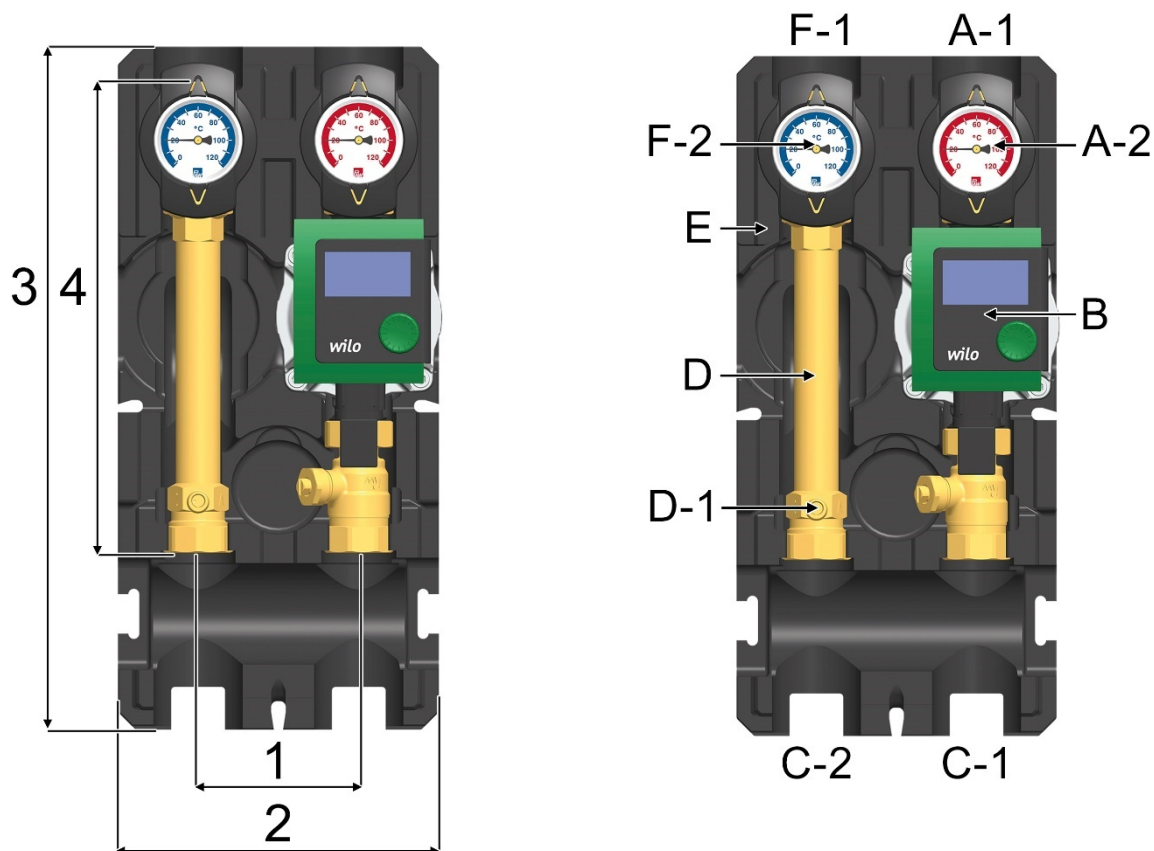


Position	Spare part	Item number
1	Thermometer ball valve DN 20, F ½" x ¾" int. thread	N00202
2	Thermometer handle for ball valve 1"	N00248
3	Dial thermometer, red scale, d=50 mm, 0-120 °C	N00242
4	Dial thermometer, blue scale, d=50 mm, 0-120 °C	N00243
5	Union nut G 1"	2055
6	Gasket ½", for threaded connection 1"	N00129
7	Pump see following table	
8	Ball valve DN 20, F ½" x 1" ext. thread	905003
9	Brass pipe DN 20, 2x 1" ext. thread, 188 mm with check valve	N00142

Item number heating circuit*	Pump	Item no.	EEl
32013WP6	Wilo Para 15/6-43	N00258	< 0.20
32013WH6	Wilo-Stratos PICO 15/1-6	E1239615	< 0.20
32013GM6	Grundfos UPM3 Auto L 15-70 PP3	E1212360	< 0.20
32013GH6	Grundfos Alpha2.1 15-60	E121221	< 0.17

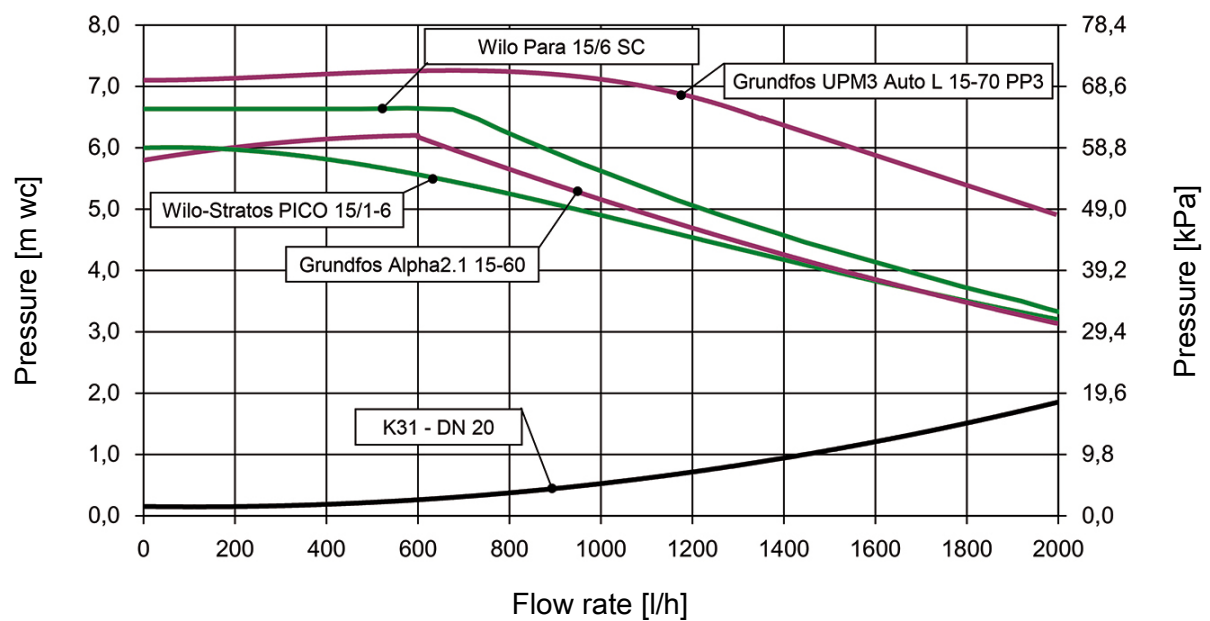
## 6 Technical data

K31	DN 20 (¾")
<b>Dimensions</b>	
Centre distance (1)	90 mm
Width insulation (2)	180 mm
Height insulation (3)	385 mm
Installation length (4)	255 mm
<b>Connections</b>	
Outlet (A-1, F-1)	¾" internal thread
Inlet (C-1, C-2)	1" external thread, flat sealing
<b>Technical data</b>	
Opening pressure check valve (D-1)	200 mm wc, can be opened
<b>Materials</b>	
Valves and fittings	Brass
Gaskets	EPDM / NBR
Insulation	EPP



K31	DN 20 (¾")
Hydraulics	
Maximum pressure	6 bars
Maximum temperature	110 °C
K <sub>VS</sub> value [m³/h]	4.7

## 6.1 Pressure drop and pump characteristic curves



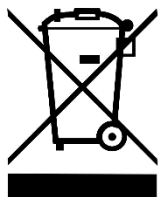


## 7 Disposal

### NOTICE

Electrical and electronic devices must not be disposed of in the household waste.

For your return, there are free collection points for electrical appliances and, if necessary, additional points of acceptance for the reuse of the devices in your area. The addresses can be obtained from your city or communal administration.



If the old electrical or electronic device contains personal data, you are responsible for deleting it before you return it.

Batteries and rechargeable batteries must be removed prior to the disposal of the product. Depending on the product equipment (partly with optional accessories), single components can also contain batteries and rechargeable batteries.

Please observe the disposal symbols on the components.





PAW GmbH & Co. KG  
Böcklerstraße 11  
31789 Hameln - Germany

[www.paw.eu](http://www.paw.eu)  
Phone: +49 (0) 5151 9856 - 0  
Fax: +49 (0) 5151 9856 - 98