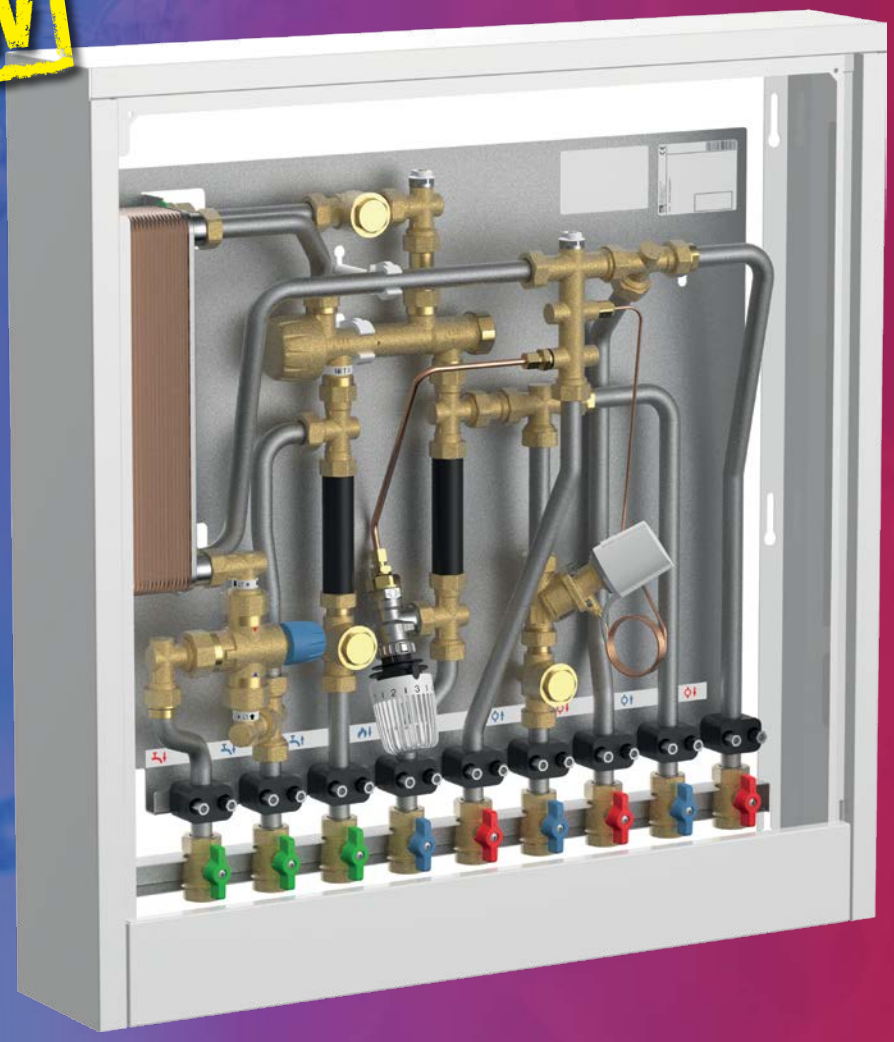
NEW



PAW Flat stations – HomeBloC

Technical data and product information

Choose your individual station!

Flat stations – refined versatility
Our newly developed flat stations are specifically designed for the optimal distribution of engergy for heating as well as the concurrent or dedicated hot water preparation. They provide hygienic domestic hot water or heat for everyday use according to your need. By retrofitting a cold water and heat flowmeter, it is possible to bill each flat proportionally to their consumption.

Flat stations – flexible and individual
The PAW flat stations are designed as modular systems. This way, the station can be adapted to your individual needs.
The dimensioning of the station is realized on the basis of the required ambient conditions. We can flexibly meet your needs in this regard. Of course, we will work together to fine-tune your flat station to your needs. Please contact us.

The construction depth of 110 mm allows you to install the station in partition walls using a flush-mounted cupboard. This way, the station can be integrated perfectly into your living ambient.
A combination with a radiant floor circuit system is easily possible. For this, the two components can be positioned on top of each other. You save space and no additional assembly surface is necessary.

This provides you with a lot of flexibility in planning and dimensioning.

Flat stations – installation and comfort
Due to the system concept, it is possible to mount the flat station quickly and easily inside or in front of the wall. The station, aside from the cupboard, is completely premounted and pressure tested. On top of that, mounting additional energy meters is easily possible due to the great accessibility. This makes for an easy installation on site, meaning less overall cost and a competitive advantage.

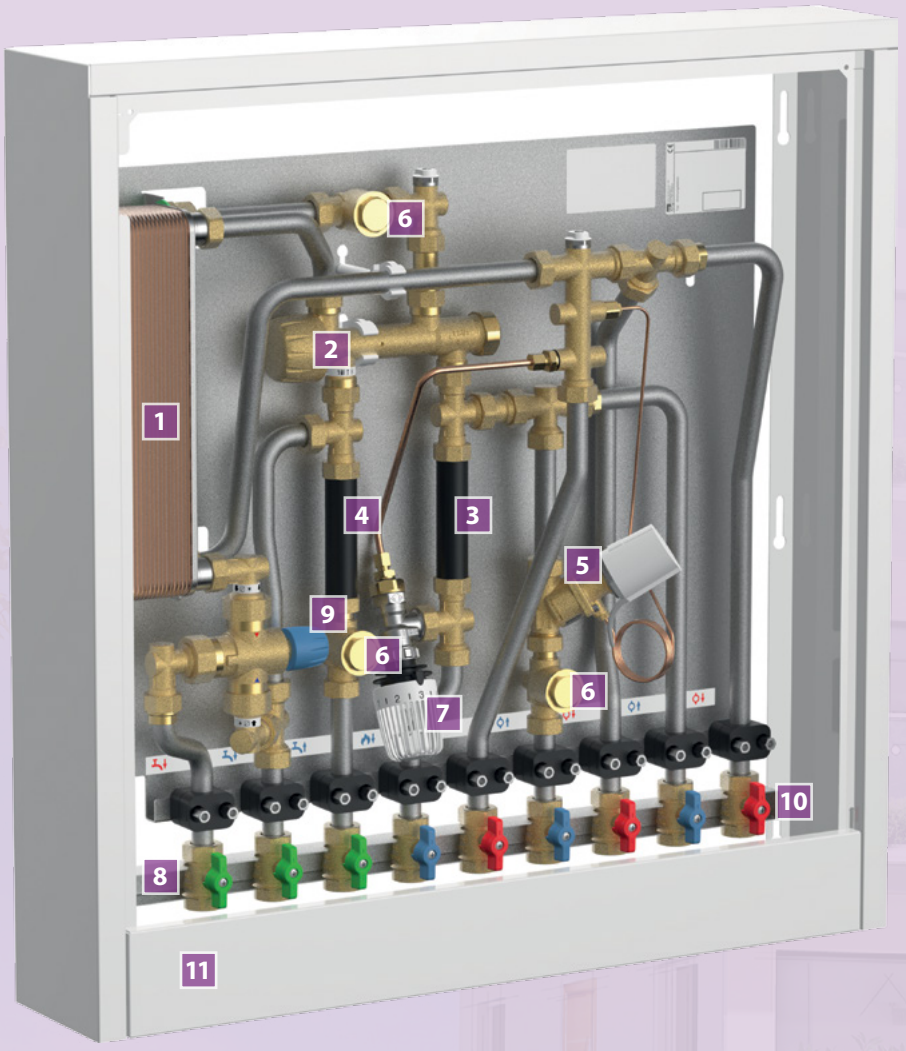
HomeBloC

Characteristics PAW flat station HomeBloC:

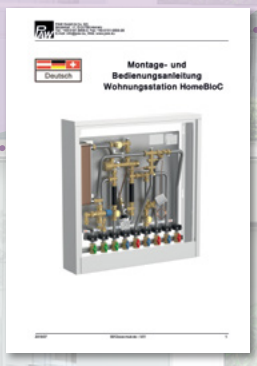
- ✓ Optimal energy utilisation thanks to powerful heat exchangers
- ✓ For low-temperature systems, f. ex. heat pumps
- ✓ Large withdrawal flow rate
- ✓ Minimal pressure losses
- ✓ Compact design
- ✓ Premounted and pressure tested unit
- ✓ Connection for a second heating circuit (f. ex. radiant floor circuit)
- ✓ Shut-off components for maintenance are indicated in colour
- ✓ Possibility to mount an actuator for the connection of a room control
- ✓ Installation depth (110 mm when flush-mounted), ideally suitable for the installation in partition walls
- ✓ Easy access of the components (heat flowmeter and cold water meter)
- ✓ Fully equipped for connecting measurement technology
- ✓ Comfortable and fast installation
- ✓ High-quality material, according to the UBA list
- ✓ Low maintenance cost
- ✓ For new building or restructuring
- ✓ Individual adjustment to your demands is possible
- ✓ Ideal for combination with a PAW HeaBloC® MCom

Flat station: For decentralised domestic hot water preparation and comfortable heat supply

HomeBloC



12



All flat stations offer the following features:

1 Plate heat exchanger
Depending on the application, a variety of plate heat exchangers are available. Specifically designed for the desired application in order to achieve an optimal energy consumption.

2 Proportional quantity controller
for optimal control of domestic hot water preparation without auxiliary energy

3 Fitting for heat flowmeter
suitable for retrofitting a heat flowmeter with 2x G¾" external thread, 110 mm length made of plastic, alternatively in stainless steel, independent of manufacturer

4 Fitting for cold water meter
suitable for retrofitting a cold water meter with 2x G¾" external thread, 110 mm length made of plastic, alternatively in stainless steel, independent of manufacturer

5 Differential pressure controller
for hydraulic balancing in the heating circuit, EnEV-compliant shut-off, mounting a static radiator thermostatic valve is possible

6 Strainer
3 strainers (cold water inlet, heating circuit return and primary heat exchanger return) to protect valves and fittings, filter unit can be demounted and cleaned, if necessary

7 Thermal heat retaining
For quick domestic hot water supply and comfortable use during summer as well

8 Shutoff valves
to shut off the lines during commissioning and maintenance. Marked in colour for easy assignment, DVGW approved, connection side G¾" internal thread.

9 Service water mixing valve
for monitoring domestic hot water temperature, preset temperature range, adjustable according to your individual need

10 Connection for a second heating circuit
for individual extension of heat distribution, for example for a radiant floor heating

11 Wall- or flush-mounted cupboard
for mounting the station, power-coated in RAL 9016, coin-operated lock for opening the cover, flush-mounted version with 110 mm installation depth, height-adjustable, ideal for partition walls

12 Detailed and illustrated operation instructions
Available in the following languages:

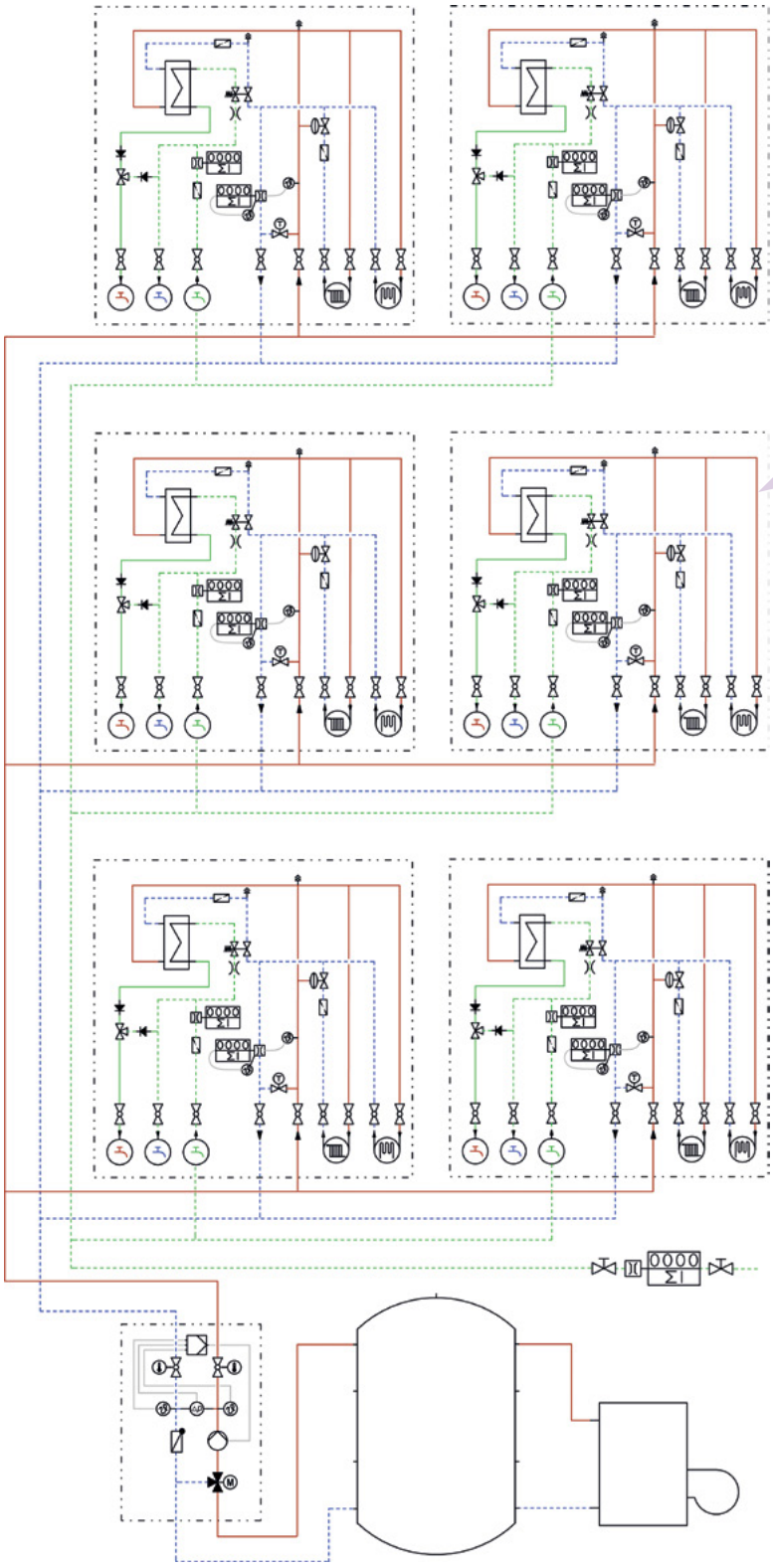
Further languages are available on request.

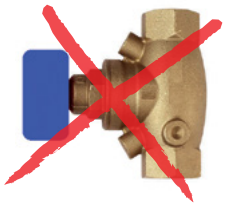
HeatBloC® MCom – connection to the HomeBloC

Hydraulic scheme of an entire system

The HeatBloC® MCom conbines high-quality and durable components of a PAW standard heating circuit with the latest sensor technology, actuator technology and control technology. In doing so, numerous installation values are immediately provided and must not be additionally integrated.

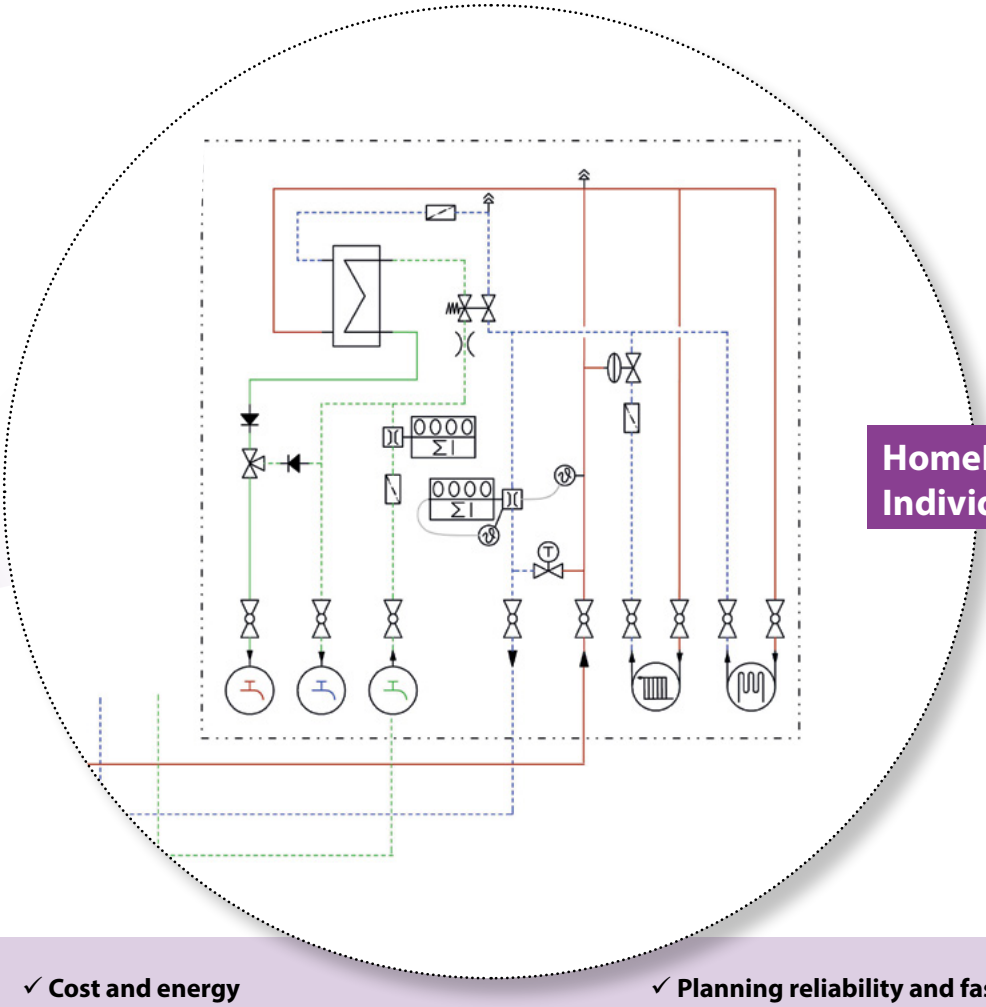
The HeatBloC® MCom automatically adapts to any operating condition thanks to the data gathered, thus guaranteeing easy commissioning and high reliability for high comfort demands.





When using a HeatBloC® MCom no differential pressure valve in front of the flat station is required.

02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu



HomeBloC Individual station

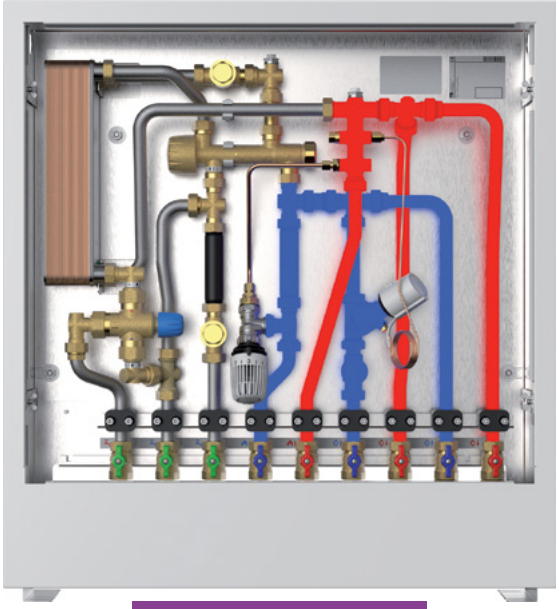
- ✓ **Cost and energy**
- ✓ **Optimal operation of the installation**
- ✓ **Gain in comfort, supply of each heating zone**
- ✓ **No whistling noises**
- ✓ **Intelligent system monitoring**
- ✓ **Possibility to obtain governmental subsidies**
- ✓ **Overall system solution for different application ranges (single- / multi-family house etc.)**
- ✓ **Planning reliability and fast project settlement**
- ✓ **Easy commissioning of the system**
- ✓ **EnEV-compliant hydraulic balancing**
- ✓ **No under- or oversupply of individual heating circuits**
- ✓ **Easy system monitoring via free app**
- ✓ **Cost monitoring via app**

Advantages HomeBloC combined with HeatBloC® MCom

- **Supply reliability:**
  No mutual influence of the HomeBloCs due to differential pressure control. Central control of the flow temperature for the individual stations.
- **System monitoring:**
  Easy integration of the system into building control systems and SmartHome solutions
- **Cost saving:**
  Smaller investment costs because no differential pressure valves are necessary. Smaller mounting costs due to Plug & Play solution.
- **Time saving:**
  Less effort for calculation, dimensioning and adjustment

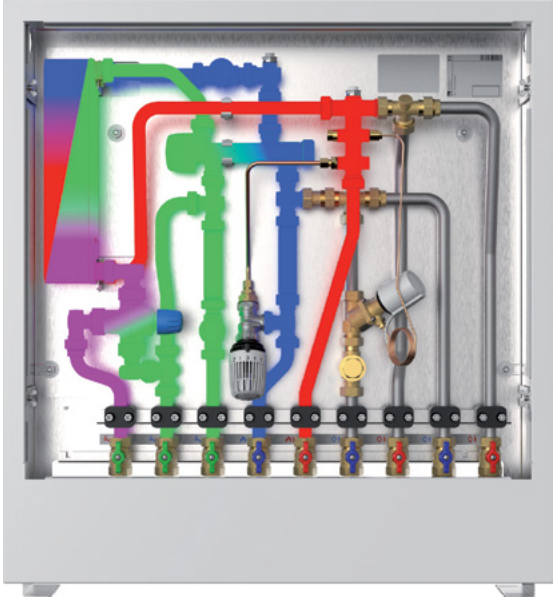
02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Description of function HomeBloC



Heating operation

During **heating operation**, the heat supply of the flat for the radiator circuit or the radiant floor circuit is ensured. The heating fluid (displayed in red here) flows through the heating flow and into the station.
The heating fluid is transferred to the radiator or radiant floor circuit by means of a distribution manifold.
The cooled off fluid flows through the radiator return, passing the heat flowmeter, and into the heating return.
The flow is restricted by a differential pressure control valve in the heating return, thus ensuring an EnEV-compliant shut-off. A heat flowmeter can easily be installed on site.



Domestic hot water preparation

During the **domestic hot water preparation**, the comsumers are supplied with domestic hot water.
The heating fluid (displayed in red here) flows through the heating flow and into the station and is transferred to the primary circuit of the plate heat exchanger by means of a distribution manifold. The heating fluid then heats the cold water (displayed in green here) of the secondary circuit, which in case of a withdrawal flows into the plate heat exchanger by means of a proportional quantity controler. The heated water (displayed in violet here) is transferred to the consumer through a thermal protection (service water mixing valve). Afterwards, the cooled off fluid is transferred from the plate heat exchanger (displayed in blue here) back into the heating return. A cold water meter can easily be installed in the cold water inlet line on site.

EnEV-compliant shut-off
Reduced primary energy demand for heating an domestic hot water preparation

02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Technical data HomeBloC

Operating data:	Operating pressure: Domestic hot water	10 bars
	Operating temperature: Domestic hot water	95 °C
	Operating pressure: Heating system	2.5 bars
	Operating temperature: Heating system	110 °C
Outputs:	Output capacity (10 -> 45 °C)	12 l/min (equates to 30 kW)
		16 l/min (equates to 40 kW)
		20 l/min (equates to 50 kW)
	Heating capacity	8.5 kW (when ΔT = 15 K)
Connections:	Domestic hot water preparation	3 x ¾" internal thread, (flat-sealing and self-sealing)
	Heat supply	2 x ¾" internal thread, (flat-sealing and self-sealing)
	Heating circuit outlets	2 x / 4 x ¾" internal thread, (flat-sealing and self-sealing)
Dimensions:	Base plate station	W = 660 mm, H = 555 mm, D = 100 mm
	Flush-mounted cupboard	W = 750 mm, D = 110 mm
	Cover frames (flush-mounted cupboard)	W = 750 mm, H = 685 mm, D = 10 mm
	Wall-mounted cupboard	W = 750 mm, D = 150 mm
	Adjustment range of the base	0 – 80 mm
	Packaging dimensions: Individual station	W = 770 mm, H = 860 mm, D = 160 mm
	Packaging dimensions: Radiant floor circuit	W = 585 mm, H = 310 mm, D = 200 mm
Materials:	Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet
	Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)
	Ball valves, fittings, domestic hot water circuit	Brass, approved for potable water
	Ball valves, fittings, heating circuits	Brass, approved for potable water
	Pipes	Stainless steel, approved for potable water (1.4404)
	Gaskets	Fibre composite / EPDM / Teflon
	Heat exchanger	Standard: Stainless steel plates, copper solder *for more heat exchanger designs see chapter "Heat exchanger"*

PAW flat station HomeBloC
combined with heating distribution manifold for radiant floor heating

Flat station HomeBloC

Heating distribution manifold for radiant floor heating

If no radiator circuit is selected, no differential pressure controller is required.

Injection-type circuit in the heating distribution manifold for radiant floor heating

An injection-type circuit is preceeding the heating distribution manifold. The injection valve, which can be equipped with a thermostatic valve or an electric drive, injects hot fluid from the primary circuit into the radiant floor heating.

The pump transfers the fluid into the flow circuit (lower distribution beam) of the radiant floor heating in order to provide a comfortable climate in the flat.

Through the return (upper distribution beam), the cooled off fluid is transferred back to the boiler. The desired temperature in the individual floor heating circuits is reached by adjusting injection valve accordingly.

02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Heating distribution manifold for radiant floor heating

The PAW heating distribution manifold for radiant floor heating ensures a steady and comfortable heat distribution in the flat.
In the flow line and return line, the individual radiant floor circuits are joined. The injection-type circuit provides an optimal distribution of heat energy.
Flow indicators are mounted in the flow, automatic flow controllers are mounted in the return. These can be mounted with any standard thermostatic head or actuator (M30 x 1.5) in order to fine-tune any heating circuit to achieve optimal results. Filling, draining and venting is easily possible. The heating distribution manifold can be mounted in a flush-mounted or a wall-mounted cupboard.

The injection valve can be supplemented using a drive. It can be connected via a room control.

It is also possible to connect a temperature sensor and a pressure gauge to the system.

Technical data

Dimensions:	Total height Flat station including heating distribution manifold	H = 1470 mm
	Total width	W = 750 mm
	Construction depth (flush-mounted)	110 mm
	Number radiant floor circuit	2, 4 or 8 *(more on request)*
	Connection thread for filling	¾" external thread
	Connection thread for drives	M30 x 1.5
	Connection thread FL, RET	¾" external thread

02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Dimensioning tables heat exchangers

Innovative surface sealing of coated heat exchangers: Sealix

If the metal surface of a heat exchanger comes into contact with water, it can lead to a number of problems, such as corrosion, formation of deposit and calcification. This leads to a less efficient heat transfer. The effect is reflected in the cost of the eventual failure, replacement and consequential losses.
To avoid this, all surfaces that come into contact with potable water receive a special sealing that remains mechanically and thermally stable, preventing the formation of deposits. This sealing, a silicon-based thin film coating, specifically for domestic hot water, increases the resistance, leading to a longer service life and a more reliable operation, which also lowers the maintenance cost. The heat exchanger is tested and subjected to a quality control to ensure a reliable long-term use.

Heat exchanger		Number of plates	Flow	Return	DHW flow	DHW return	output	Output capacity	ΔP1	ΔP2
			°C	°C	°C	°C	kW	l/min	kPa	kPa
Type: • Stainless steel, copper solder	E8ASW-N	20	70	27	10	45	52	21	9	35
			65	27			45	19	9	26
			60	28			37	17	8	18
			55	28			29	12	8	12
			50	30			20	9	7	6
		32	70	22	10	45	58	24	4	17
			65	23			51	21	4	14
			60	24			43	18	4	10
			55	25			34	14	4	6
			50	27			24	10	3	3
Possible Versions: • Stainless steel, copper solder • Full stainless steel	XB05X	36	70	25	10	45	55	23	8	15
			65	25			55	23	10	15
			60	26			48	20	11	11
			55	24			43	18	10	10
			50	21			39	16	10	10
		50	70	21	10	45	60	25	8	18
			65	22			55	23	9	15
			60	24			46	20	12	15
			55	25			41	17	10	10
			50	26			29	12	10	5

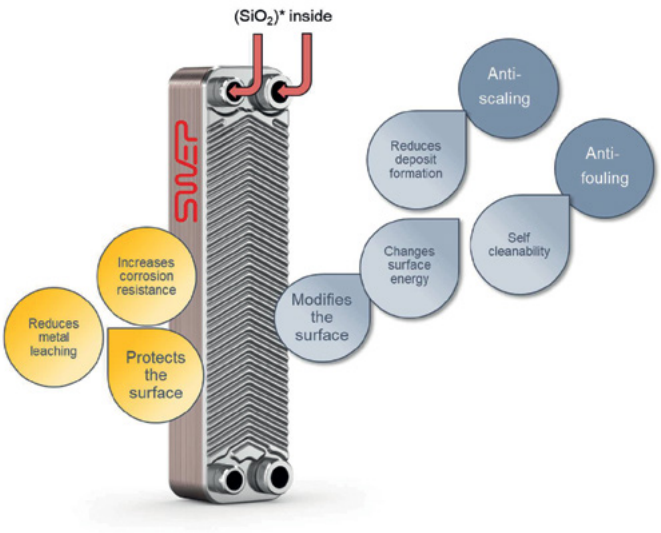
Table values: For max. 20 kPa and 19 l/min flow rate

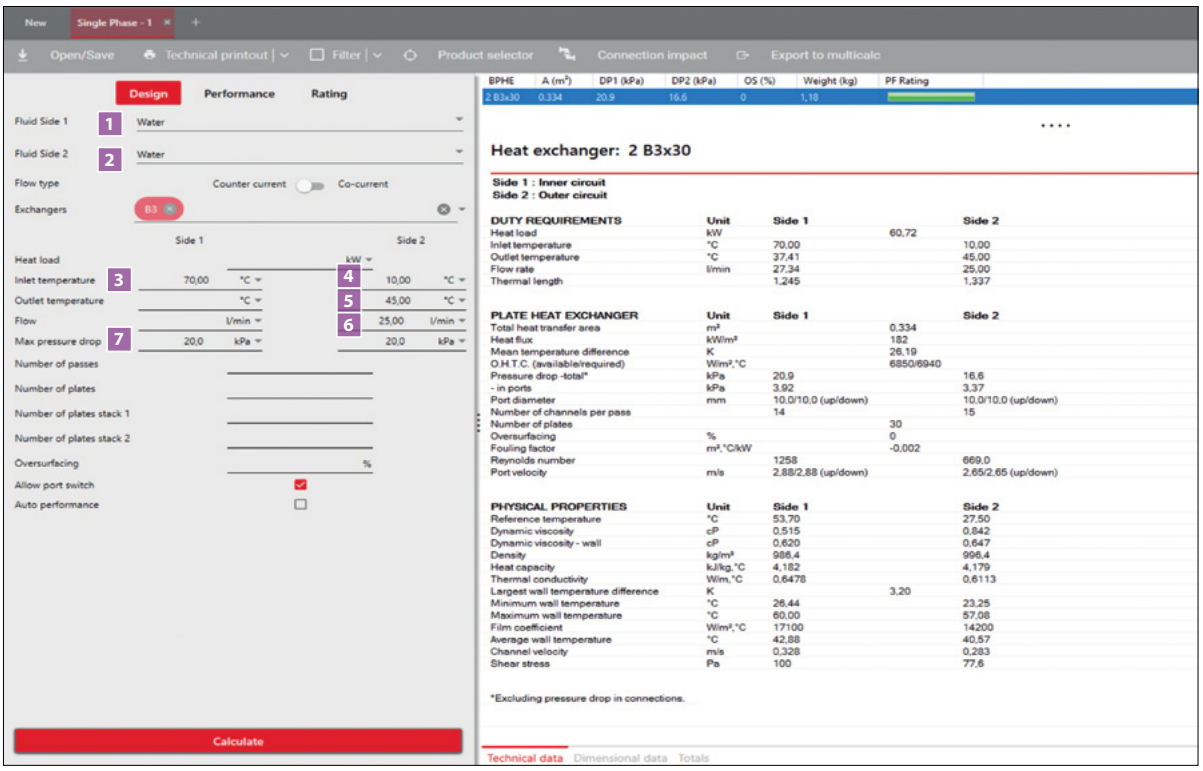
02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Dimensioning of a plate heat exchanger and calculation example

For calculating a plate heat exchanger, the following conditions need to be met:

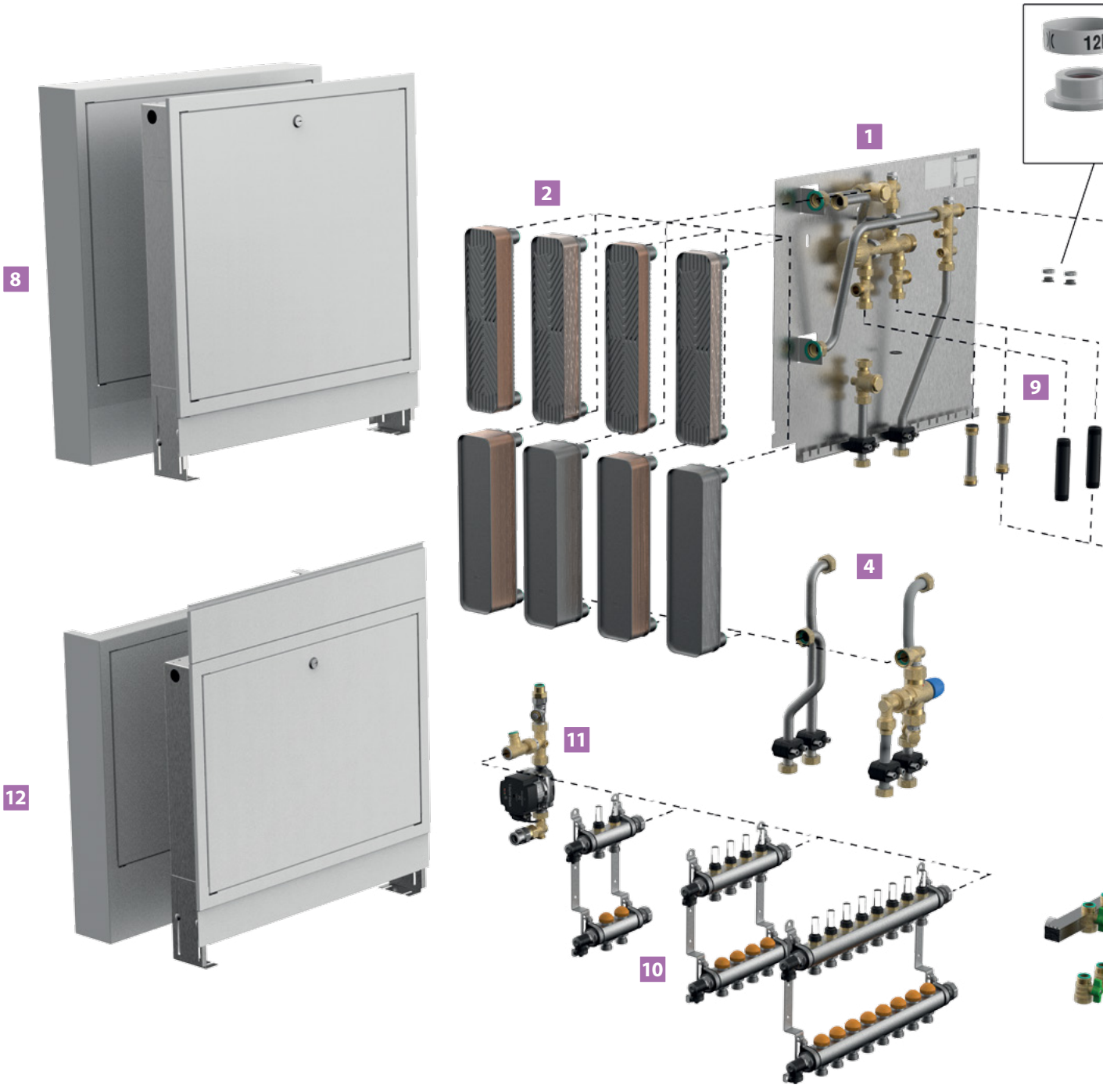
1. Selection of the respective fluids on the primary and secondary side
2. The desired series of the heat exchanger
3. The boiler flow temperature
4. The cold water flow temperature
5. The desired domestic hot water temperature
6. The necessary domestic hot water flow
7. The max. pressure drop of the heat exchanger



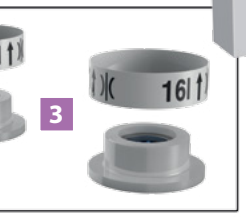


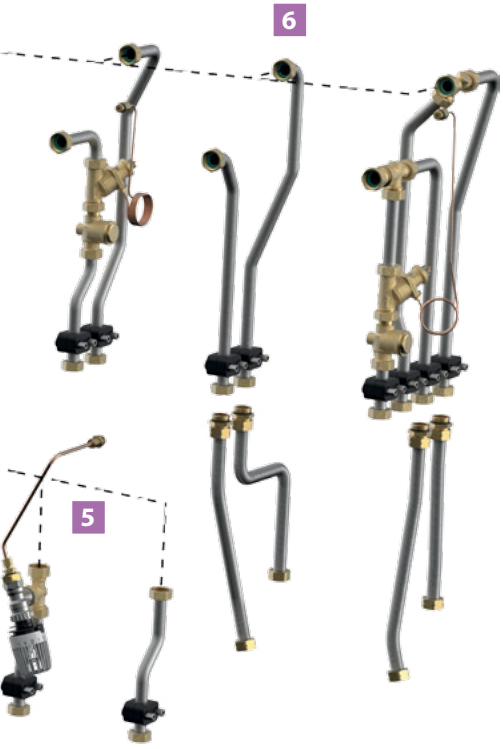
After the calculation, the corresponding data, such as output, the suggested heat exchanger, temperatures, flows, etc., is displayed (see figure above).

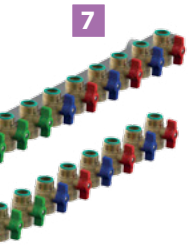
Offer specification PAW flat station HomeBloC



02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu







1 Base station

- [x] HomeBloC, hydromechanic-thermal control

2 Plate heat exchanger

- [ ] stainless steel, copper solder
- [ ] Sealix, coated
- [ ] 20 plates
- [ ] 32 plates
- [ ] stainless steel, copper solder
- [ ] full stainless steel
- [ ] 36 plates
- [ ] 50 plates

3 Volume flow limiter

- [ ] 12 l/min
- [ ] 16 l/min
- [ ] 20 l/min *(without volume flow limiter)*

4 Service water mixing valve

- [ ] with service water mixing valve
- [ ] without service water mixing valve

5 Thermal heat retaining

- [ ] with thermal heat retaining
- [ ] without thermal heat retaining

6 Heating circuit version

- [ ] radiant floor circuit
- [ ] radiator circuit
- [ ] radiator circuit and radiant floor circuit

7 Ball valves

- [ ] with mounting rail
- [ ] without mounting rail
- [ ] without ball valves

8 Metal sheet cupboard (station)

- [ ] station without cupboard
- [ ] flush-mounted cupboard
- [ ] wall-mounted cupboard

9 Fitting for cold water meter and heat flowmeter

- [ ] Plastic
- [ ] Stainless steel

10 Distribution manifold for radiant floor circuit (max. 8-fold)

- [ ] 2-fold
- [ ] 4-fold
- [ ] 8-fold
- [ ] _____ -fold
- [ ] without distribution manifold

11 Injection-type circuit for radiant floor circuit

- [ ] with injection-type circuit
- [ ] without injection-type circuit

12 Steel sheet cupboard (heating distribution manifold)

- [ ] heating distrib. manifolds without cupboard
- [ ] flush-mounted cupboard
- [ ] wall-mounted cupboard

13 Installation & Operation Instructions

- [ ] PAW standard instruction manual: with PAW logo, PAW address, PAW standard text
- [ ] Standard cust.-specific instruction manual: with customer logo, customer address, PAW standard text
- [ ] Special cust.-specific instruction manual: with cust. logo, cust. address, cust.-specific adaptation of the text and images
- [ ] Customer compiles the instruction manual

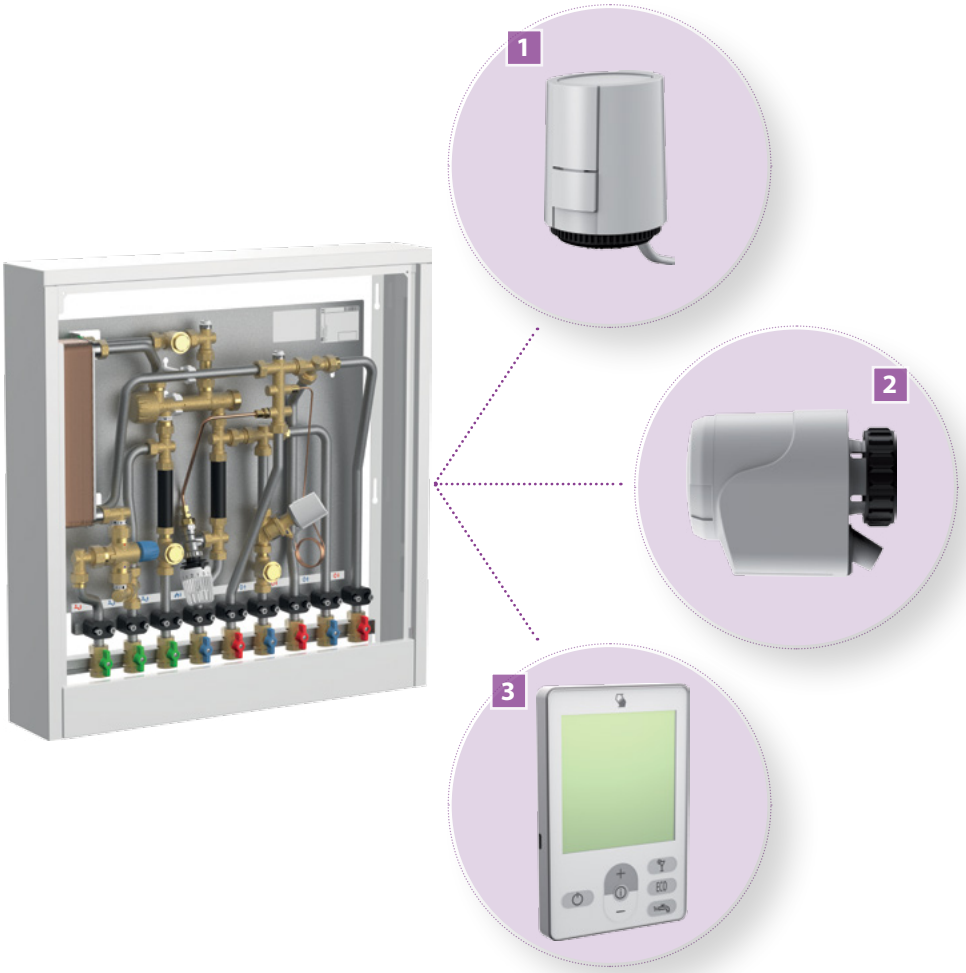
Languages:

- [ ] German
- [ ] English
- [ ] Italian
- [ ] Spanish
- [ ] French
- [ ] _____

Instruction manual provided by:

- [ ] PAW
- [ ] Customer

Offer specification – optional accessories: individual components



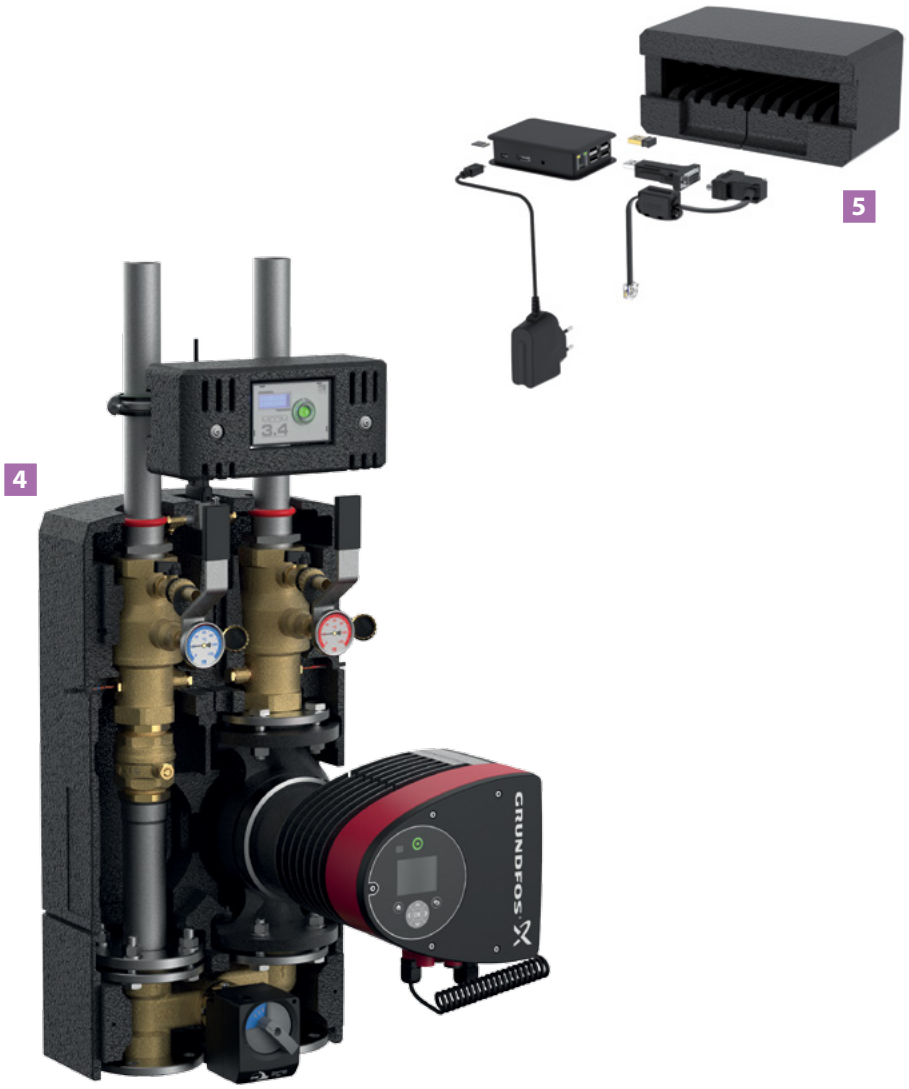
1	☐	Drive for differential pressure controller, including control cable
2	☐	Adjustment for injection-type circuit in the radiant floor heating
3	☐	Room control for radiant floor heating

☐ Invididual accessory wish: _____

02/2019 • Printed in Germany • We reserve the right to make technical changes without notice

PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Other accessories – combination options with the HeatBloC® MCom



4	☐	HeatBloC® MCom *(the nominal diameter will be determined for you by us)*
5	☐	MCom communication set for building control system connection

02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Offer specification – Your data

Company

Customer number

Street, no.

Phone

Postal code, town

E-mail

Country

Project

Batch size

Estimated annual order quantity

Stations

Notes on packaging and labels:

Notes on dispatch (maximum pallet height, maximum weight):

Your partner for thermal comfort and sustainability

Yesterday. Today. Tomorrow.

02/2019 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • D-31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

PAW GmbH & Co. KG
Böcklerstraße 11
D-31789 HAMELN
GERMANY
✆ +49-5151-9856-0
🖷 +49-5151-9856-98
@ info@paw.eu
🌐 www.paw.eu

991201xx-fly-en • Version: V03 - Issued: 02/2019
Printed in Germany • We reserve the right to make technical changes without notice!