

Catalogue 04 | 2025

Smart systems for modern heating technology,
domestic hot water technology, solar thermal systems & flat stations

Valid for the EU

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PRODUCTION

at the head office in Hamelin



Plant I

Administration / development department / product exhibition

Main warehouse

Block storage / fixture construction / laboratory / production / steel components



Plant II

Domestic hot water modules

Flat stations

Solar transfer stations for large systems

Heat pump post-heating module



Plant III

Heating circuits

Heating and cooling circuits

Solar stations



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COMPETENCE
ALL OVER THE WORLD

PAW HEAD OFFICE AND PLANT

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

PAW SUBSIDIARY:

PAW VertriebsGmbH
Badgasse 413
8962 Gröbming
Austria
✆ +43-3685-23189-3
🖷 +43-3685-23189-4
@ office@paw.eu

PAW SUBSIDIARY WITH WAREHOUSE:

PAW sarl
67c, rue de la gare
67240 Oberhoffen sur Moder
France
✆ +33-388-064-973
🖷 +33-388-064-993
📱 +33-610-251-174
@ fh@paw.eu

PAW SUBSIDIARY:

PAW VertriebsGmbH
German Office
Berg 26a
83527 Kirchdorf
Germany
✆ +49-8072-958732
🖷 +49-8072-958734
@ office@paw.eu

PAW SUBSIDIARY:

PAW Polska
ul. Minkusa 17
46-300 Olesno
Poland
✆ +48-535-149-404
@ jacek.bak@paw.eu



PAW CONNECTIVITY
YOUR CONNECTION TO SMART HOME

Open to the world
All installation data at a glance



CONNECT YOUR BUSINESS | **SET UP** YOUR INSTALLATIONS | **CONTROL** YOUR SYSTEMS | **MAINTENANCE** ORGANISED | **SERVICE** SIMPLIFIED



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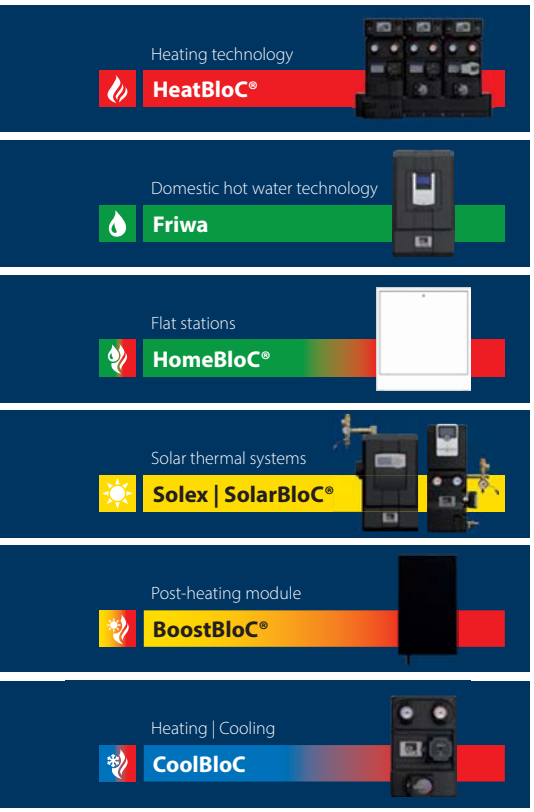
PAW CONNECT APP
YOUR CONTROL OF PAW PRODUCTS

PAW Connect App –
all information available at any time



Heating technology – HeatBloC®

- distribution manifold and radiator balancing: Hydraulic balancing of distribution manifold and radiator valves is easy and convenient!
- eligible for BAFA and KFW subsidies: Certificate directly from the app!
- efficient heating control
- quick installation without IT knowledge
- no time-consuming calculations required!

Domestic hot water technology – Friwa

- display and adjustment of all installation parameters in the app: domestic hot water nominal temperature, circulation times, data logger, ECO and comfort operation

Flat stations – HomeBloC®

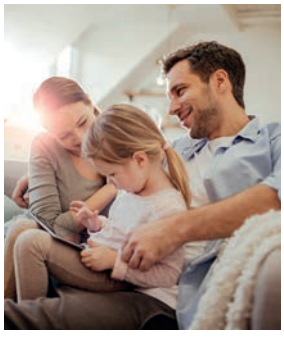
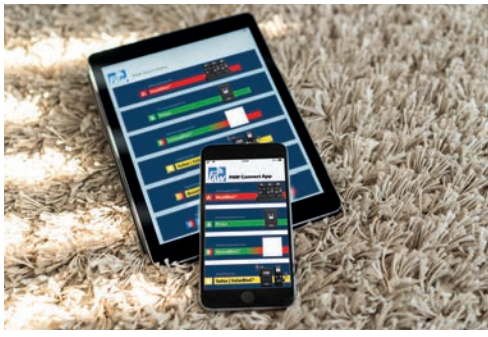
- display and adjustment of all installation parameters in the app: domestic hot water nominal temperature, circulation times, data logger, ECO and comfort operation
- supply station: Line balancing with certificate (dependent on the station)
- radiator balancing with certificate

Solar thermal systems – Solex | SolarBloC®

- display and adjustment of all installation parameters in the app: operation parameters, switching thresholds, data logger
- linking to the overview of the installation data

Download the PAW Connect App:



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OUR **APPLICATION RANGES**

CONNECT
YOUR BUSINESS

SET UP
YOUR INSTALLATIONS

CONTROL
YOUR SYSTEMS



Heating & Cooling

Domestic hot water technology





Heat pump post-heating module

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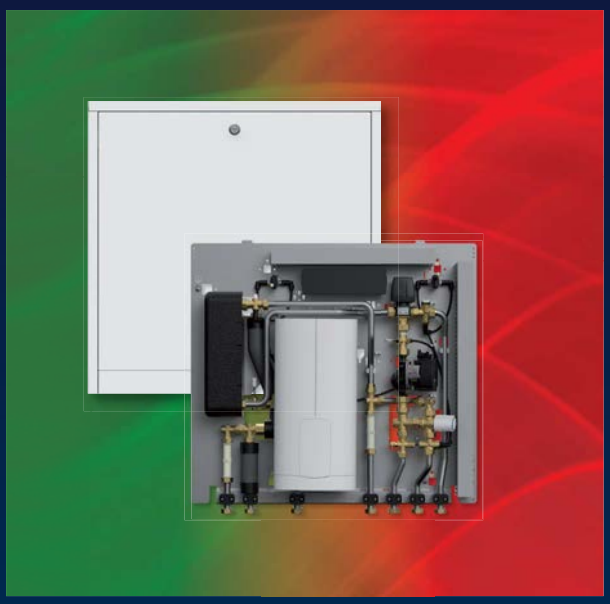
MAINTENANCE
ORGANISED

SERVICE
SIMPLIFIED



Solar thermal systems

Flat stations



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PAW heating systems - Dimensioning tables
HeatBloC® MCom series

Max. output / application range HeatBloC® MCom series

MC41
direct



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		50 kW	65 kW	150 kW	250 kW
10 K		25 kW	32.5 kW	75 kW	125 kW
7.5 K		19 kW	24.5 kW	56 kW	94 kW
5 K		13 kW	16 kW	37.5 kW	62.5 kW

MC42
3-way mixing valve



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		40 kW	51 kW	125 kW	230 kW
10 K		20 kW	25.5 kW	62.5 kW	115 kW
7.5 K		15 kW	19 kW	47 kW	86 kW
5 K		10 kW	13 kW	31 kW	57.5 kW

MC43
3-way mixing valve with bypass



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		45.5 kW	64 kW	125 kW	
10 K		23 kW	32 kW	62.5 kW	
7.5 K		17 kW	24 kW	47 kW	
5 K		12 kW	16 kW	31 kW	

MC44
3-way mixing valve with bypass



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		45.5 kW	64 kW		
10 K		23 kW	32 kW		
7.5 K		17 kW	24 kW		
5 K		12 kW	16 kW		

MC45
3-temperature mixing valve



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		32.5 kW			
10 K		16 kW			
7.5 K		12 kW			
5 K		8 kW			

MC46 - Boiler charging set
with 3-way mixing valve



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		45.5 kW	64 kW	125 kW	
10 K		23 kW	32 kW	62.5 kW	
7.5 K		17 kW	24 kW	47 kW	
5 K		12 kW	16 kW	31 kW	

MV
Modular distribution manifold



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		80 kW	150 kW	250 kW	400 kW
10 K		40 kW	75 kW	125 kW	200 kW
7.5 K		30 kW	56.3 kW	93.8 kW	150 kW
5 K		20 kW	37.5 kW	62.5 kW	100 kW

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PAW heating systems - Dimensioning tables
CoolBloC series

Max. output / application range CoolBloC series

C31
direct



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		46.5 kW	50 kW		
10 K		23 kW	25 kW		
7.5 K		17 kW	19 kW		
5 K		11.5 kW	12.5 kW		

C34
3-way mixing valve



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		43 kW	48 kW		
10 K		21.5 kW	24 kW		
7.5 K		16.5 kW	18 kW		
5 K		10 kW	12 kW		

MV
Modular distribution manifold



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		80 kW	150 kW		
10 K		40 kW	75 kW		
7.5 K		30 kW	56.3 kW		
5 K		20 kW	37.5 kW		

PAW heating systems - Dimensioning tables
HeatBloC® - Standard series

Max. output / application range HeatBloC® standard series

K31
direct



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K	30 kW	50 kW	65 kW	150 kW	250 kW
10 K	15 kW	25 kW	32 kW	75 kW	125 kW
7.5 K	11 kW	18.5 kW	24 kW	56 kW	93.5 kW
5 K	7.5 kW	12.5 kW	16 kW	37.5 kW	62.5 kW

K32
3-way mixing valve



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K	21 kW	3.5 kW	51 kW	125 kW	230 kW
10 K	10.5 kW	15.5 kW	25.5 kW	62.5 kW	115 kW
7.5 K	7.5 kW	12 kW	19 kW	46.5 kW	86 kW
5 K	5 kW	8 kW	12.5 kW	31 kW	57.5 kW

K33 - Controlled circuit with constant value



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K	10 kW	20 kW			
10 K	5 kW	10 kW			
7.5 K	3.5 kW	7.5 kW			
5 K	2,5 kW	5 kW			

K33R - Controlled circuit with constant value



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		45.5 kW	64 kW		
10 K		22.5 kW	32 kW		
7.5 K		17 kW	24 kW		
5 K		11 kW	16 kW		

K34
3-way mixing valve with bypass



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K	21 kW	45.5 kW	64 kW		
10 K	10.5 kW	22.5 kW	32 kW		
7.5 K	7.5 kW	17 kW	24 kW		
5 K	5 kW	11 kW	16 kW		

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PAW heating systems - Dimensioning tables
HeatBloC® - Standard series

Max. output / application range HeatBloC® standard series

K35
3-temperature mixing valve



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		32.5 kW			
10 K		16 kW			
7.5 K		12 kW			
5 K		8 kW			

K36(E) - Boiler charging set with 3-way mixing valve



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K	20 kW	40 kW	60 kW		
10 K	10 kW	20 kW	30 kW		
7.5 K	7.5 kW	15 kW	22.5 kW		
5 K	5 kW	10 kW	15 kW		

K38
4-way mixing valve



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		33 kW	52 kW		
10 K		16.5 kW	26 kW		
7.5 K		12 kW	19.5 kW		
5 K		8 kW	13 kW		

System separation

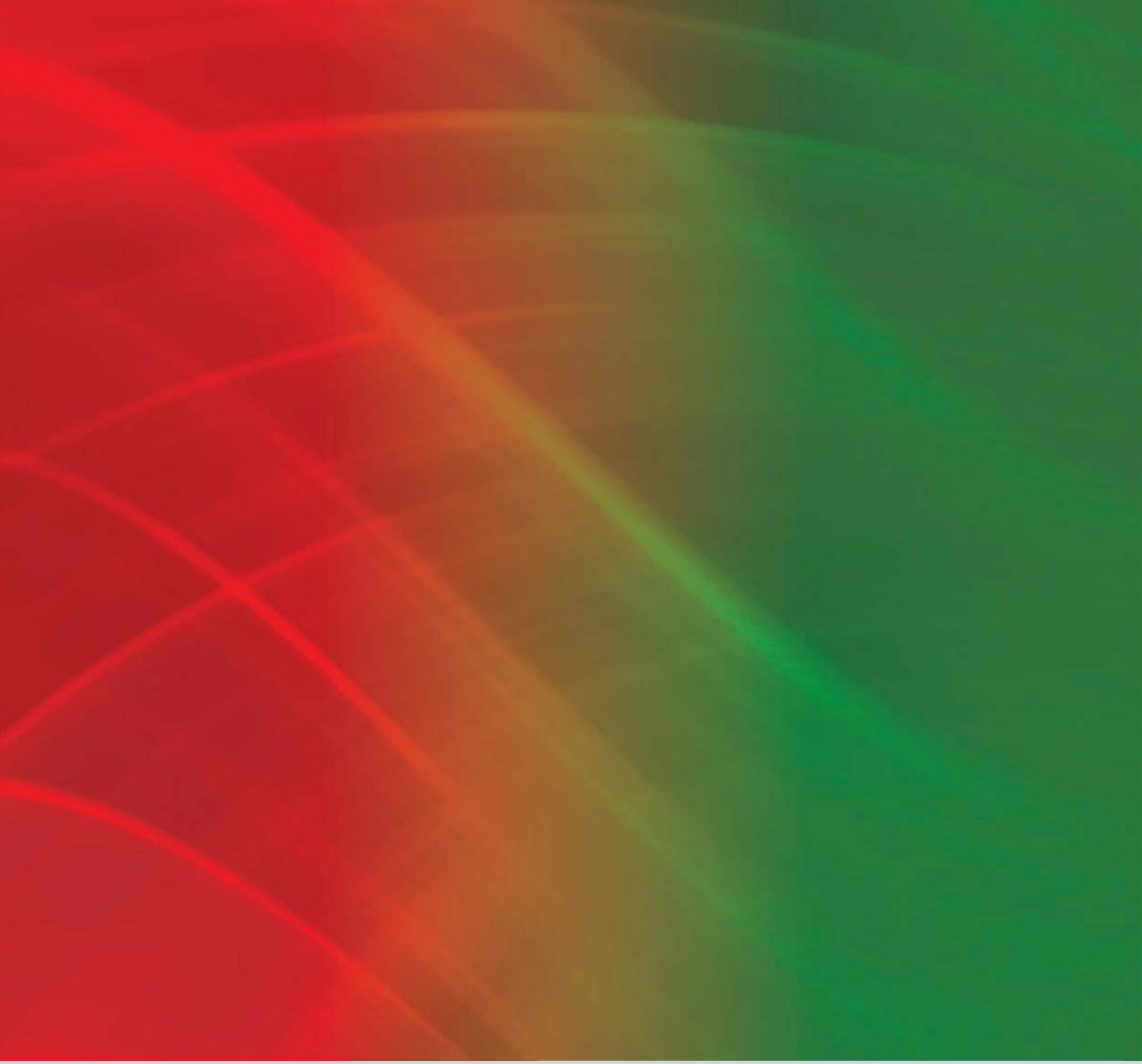


Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K		25 kW			
10 K		12.5 kW			
7.5 K		9 kW			
5 K		6 kW			

MV
Modular distribution manifold



Δ t	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
20 K	50 kW	80 kW	150 kW	250 kW	400 kW
10 K	25 kW	40 kW	75 kW	125 kW	200 kW
7.5 K	18.5 kW	30 kW	56 kW	94 kW	150 kW
5 K	12.5 kW	20 kW	37.5 kW	62.5 kW	100 kW



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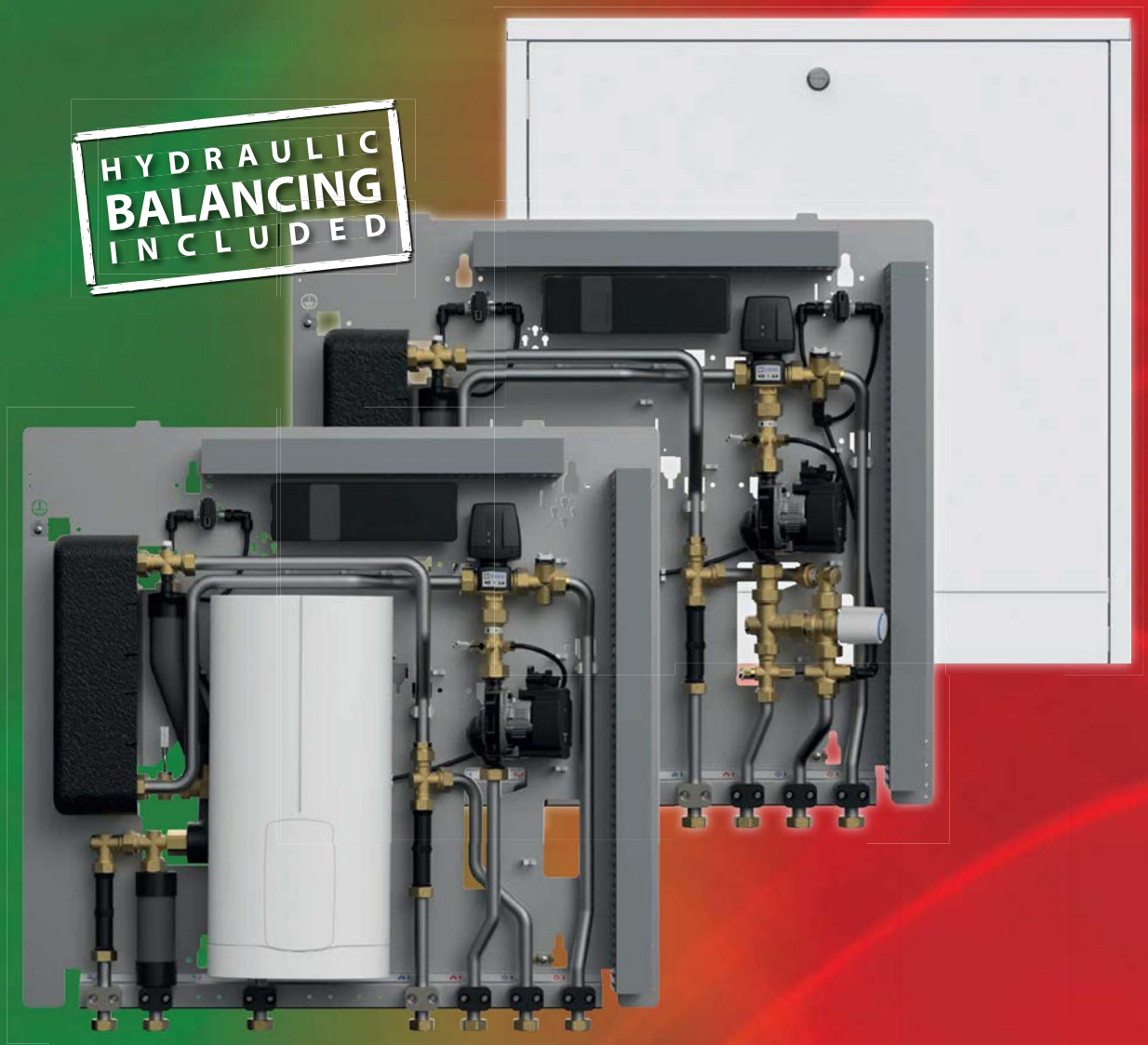

PAW-Flat stations HomeBloC® Digital

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Fully electronic flat stations - Efficiency redefined

Valid for the EU

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Discover the HomeBloC® Digital – the future of flat stations

The innovative solution for

- effective power
- minimum planning effort
- highest living comfort

HomeBloC® Digital



INVEST IN THE **FUTURE OF LIVING** FOR YOUR CUSTOMERS

Advantages HomeBloC® Digital:

Energy-optimised operation
State-of-the-art technology with integrated automatic hydraulic balancing – completely without components that cause pressure loss, the system ensures optimum operation

Minimised maintenance effort
Thanks to comprehensive data availability (BMS connection), maintenance work is extremely efficient. Predictive maintenance can be realised effortlessly.

Maximum comfort
The electronically tuned system of the HomeBloC® Digital ensures even heat distribution.

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Demand-led consumption
Integrated balancing of the floor distribution manifold, no supply pump with high power consumption required.

Maximum customer satisfaction
The continuously developed and proven PAW domestic hot water control system is designed for optimum convenience. No waiting times thanks to intelligent heat retention.

Minimised planning effort
Adaptive and self-learning, which makes planning much easier. No line balancing/differential pressure valves required!

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Save energy conveniently now!

The PAW HomeBloC® Digital is a highly efficient, fully electronically controlled home transfer station for decentralised domestic hot water heating and heat supply.

The integrated differential pressure control in conjunction with a speed-controlled pump enables energy-optimised and hydraulically balanced operation. Components that cause pressure loss, such as differential pressure controllers, are no longer required.
Domestic hot water is heated as required in the high-performance heat exchanger in the station. The temperature is regulated to the exact degree. The generously dimensioned heat exchangers enable operation with an extremely low primary flow temperature. The HomeBloC® Digital is therefore ideally suited for optimum operation with a heat pump.

As in the PAW domestic hot water stations, domestic hot water is heated using the instantaneous water heater principle. No energy is stored in the drinking water, which ensures fast, efficient and above all hygienic heating of drinking water.
The self-learning control algorithm specially developed by PAW ensures fast and degree-accurate domestic hot water heating. Here, too, no pressure loss-causing components are required, which means that high output capacities of up to 25 l/min can be achieved.

Adjustable time programmes and operation modes (e.g. holiday, party etc) allow a very individual and optimally adapted operation.

The controller is operated and set via one or more room control units and/or an app.

The room control unit is available in both wired and wireless versions. The controller can conveniently control five independent zones.

Various standard interfaces/protocols are already available in the basic controller for simple integration into a building management system. An appropriate parametrisation leads to a minimisation of standstill losses and a decrease of heating-up times, which has a positive influence on the energy performance level of the building.

All messages, operating times, parameters and statistics can be retrieved so that a possibly required maintenance assignment on site can be prepared accordingly. Predictive maintenance is also possible thanks to the information available. Heat quantity and cold water meters with an installation length of 110 mm can be easily integrated into the installation sections provided for this purpose.

The PAW HomeBloC® Digital is available in the three basic versions WR, WF and WRF-E which mainly differ in the equipment features of the heating circuits to be supplied. **WR** stands for hot water and radiator circuit, **WF** for hot water and radiant floor circuit and **WRF-E** is a combination of hot water, radiator und radiant floor circuit.

**What are you waiting for?
Start saving energy now without sacrificing the comfort you are used to.**

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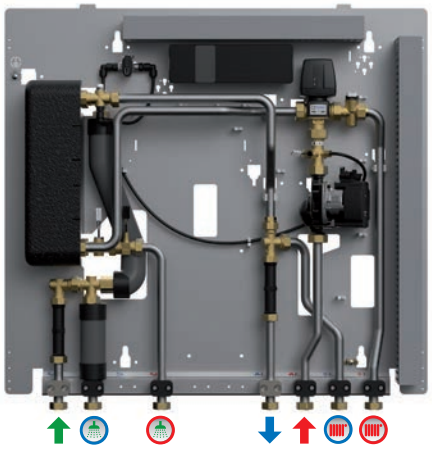
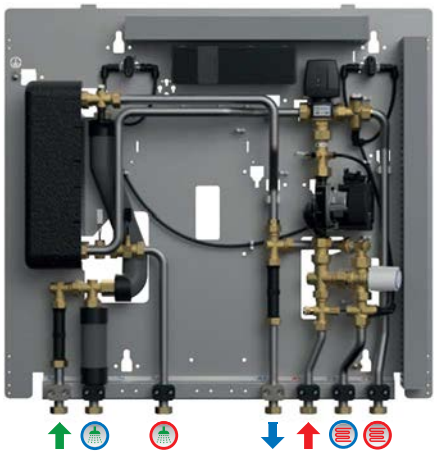
HomeBloC® Digital WR

- drinking water heater
- radiator connection



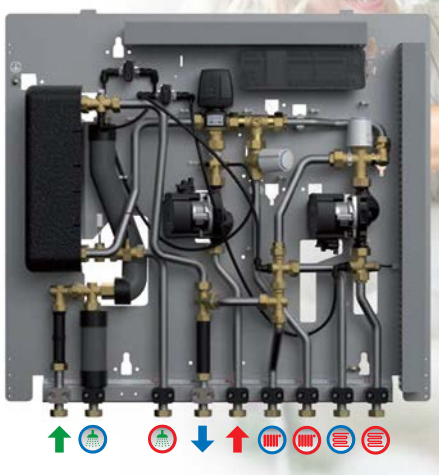
HomeBloC® Digital WF

- drinking water heater
- connection floor distribution manifold



HomeBloC® Digital WRF-E

- drinking water heater
- radiator connection and connection floor distribution manifold
- injection-type circuit





Legend for versions:

W: hot water preparation, controlled according to demand, fully electronically regulated with degree accuracy

F: fully electronic and differential pressure controlled connection for radiant floor / panel heating circuits incl. mixing unit

R: fully electronic and differential pressure controlled radiator connection

Legend for connections:

- **Cold water inlet**
- **Domestic cold water**
- **Domestic hot water**
- **Heat generation return**
- **Heat generation flow**
- **Radiator circuit return**
- **Radiator circuit flow**
- **Radiant floor circuit return**
- **Radiant floor circuit flow**

Improve the efficiency of your overall system even further - with a DHW postheating system!

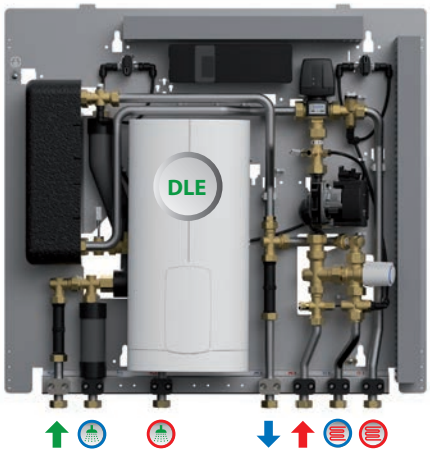
The PAW HomeBloC® Digital with instantaneous water heater (DLE) unlocks additional potential for system optimisation.

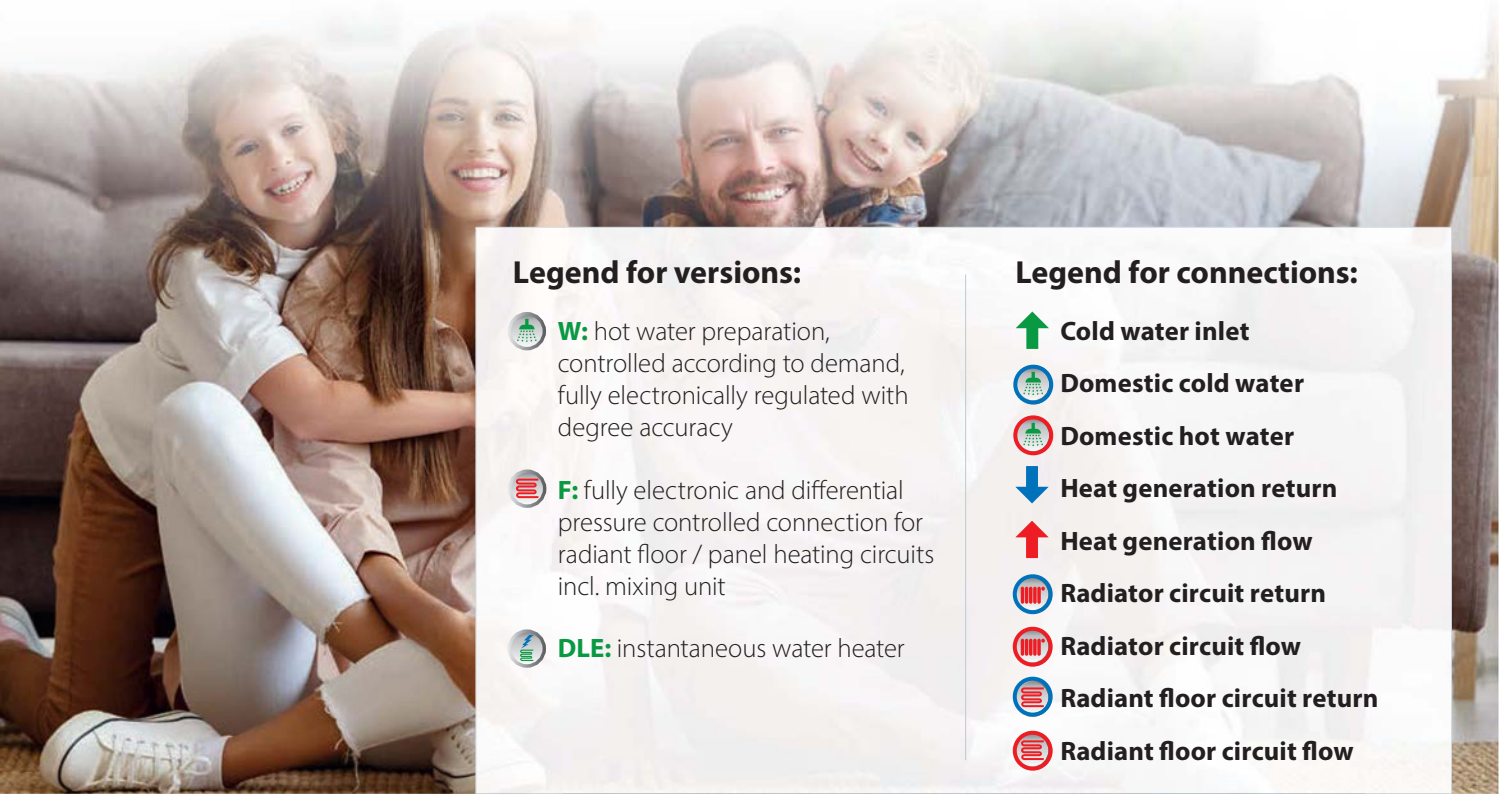
The drinking water is preheated in the high-performance heat exchanger and reheated to the desired outlet temperature to the exact degree with the help of the instantaneous water heater.
The integrated instantaneous water heater enables extremely low heating flow temperatures, which would not be sufficient for domestic hot water heating.

The principle of DHW postheating using the electric instantaneous water heater enables resource-saving operation of a heat pump. Optimised COP values can be achieved.

HomeBloC® Digital WF + DLE

- drinking water heater
- connection floor distribution manifold
- instantaneous water heater





Legend for versions:

- **W:** hot water preparation, controlled according to demand, fully electronically regulated with degree accuracy
- **F:** fully electronic and differential pressure controlled connection for radiant floor / panel heating circuits incl. mixing unit
- **DLE:** instantaneous water heater

Legend for connections:

- Cold water inlet
- Domestic cold water
- Domestic hot water
- Heat generation return
- Heat generation flow
- Radiator circuit return
- Radiator circuit flow
- Radiant floor circuit return
- Radiant floor circuit flow

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Dimensions	
All connections	¾ " int. thread, flat sealing
Construction depth	110 mm possible, dependent on the equipment and the requirements
Height / width	dependent on the equipment and the requirements
Electrical connection	power supply 230 V~, 50 Hz
Power consumption controller	5 W
Maximum power consumption	specific to equipment

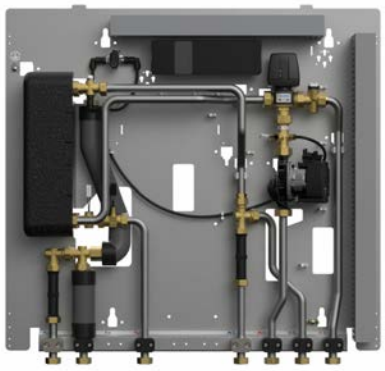
Materials	
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet
Cover frame, door, plinth panel	standard: steel sheets, powder-coated, white (RAL 9016), other colours or designs possible on request optional: plastic, solid-coloured or printed
Ball valves, fittings: domestic hot water circuit	brass, approved for drinking water
Ball valves, fittings: heating circuit	brass
Pipes	stainless steel (1.4401), approved for drinking water
Seals	fibre composite / EPDM / teflon
Heat exchanger	standard: plate heat exchanger, stainless steel plates soldered with copper optional: coated for corrosion protection or version in full stainless steel, dimensioning according to your needs

Operating temperature	
Operating pressure: domestic hot water	max. 10 bar
Operating pressure: heating system	max. 3 bar
Operating temperature: domestic hot water	max. 60 °C
Operating temperature: heating system	max. 70 °C

Outputs	
Output capacity (10 -> 45 °C)	up to 25 l/min (equates to 61 kW)
Heating capacity	up to 9 kW (when $\Delta T = 10$ K)

Instantaneous water heater	11 kW allows the decrease of the flow temperatures on the boiler side or the increase of the domestic hot water output

HomeBloC® Digital WR
Radiator circuit (unmixed)



Application range	**for residential properties with one or various radiator circuits**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 3 bar
Operating temperature	Operating temperature: domestic hot water	max. 60 °C
	Operating temperature: heating system	max. 70 °C
Output	Output capacity (10 ->45°C)	16 l/min; 20-25 l/min
	Heating capacity	up to 9 kW (at ΔT = 10 K)
Equipment	Pump	Grundfos UPM4 15-75

Technical data

Connections		**Dimensions**	
Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)	Base plate station	W = 670 mm, H = 750 mm, D = 105 mm; W = 806 mm, H = 758 mm, D = 150 mm
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)	Flush-mounted cupboard	W = 750 mm, H = 885 mm, D = 120 mm; W = 906 mm, H = 1.457 mm, D = 135-205 mm
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)	Cover frame (flush-mounted cupboard)	W = 906 mm, H = 927 mm, D = 120-190 mm
Materials		Wall-mounted cupboard	W = 880 mm, H = 973 mm, D = 130 mm
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet	Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1.440 mm
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)	Adjustment range of the base	0 - 80 mm
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water		
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water		
Pipes	Stainless steel (1.4401), approved for potable water		
Gaskets	Fibre composite / EPDM / Teflon		
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table		

PAW-HomeBloC® Digital WR - Radiator circuit (unmixed)

Heat exchanger	Volume flow limiter*	Item no.
50 plates, copper solder	**16 l/min**	**125437101**
70 plates, copper solder	**20-25 l/min**	**125537101**

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HomeBloC® Digital WR + DLE
Radiator circuit (unmixed)



Application range	**for residential properties with one or various radiator circuits**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 3 bar
Operating temperature	Operating temperature: domestic hot water	max. 60 °C
	Operating temperature: heating system	max. 70 °C
Output	Output capacity (10 ->45°C)	16 l/min; 20-25 l/min
	Heating capacity	up to 9 kW (at ΔT = 10 K)
Equipment	Pump	Grundfos UPM4 15-75

Technical data

Connections		**Dimensions**	
Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)	Base plate station	W = 670 mm, H = 750 mm, D = 135 mm; W = 806 mm, H = 1.333 mm, D = 150 mm
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)	Flush-mounted cupboard	W = 750 mm, H = 885 mm, D = 150 mm; W = 906 mm, H = 1.457 mm, D = 135-205 mm
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)	Cover frame (flush-mounted cupboard)	W = 906 mm, H = 927 mm, D = 120-190 mm
Materials		Wall-mounted cupboard	W = 880 mm, H = 973 mm, D = 130 mm
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet	Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1.440 mm
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)	Adjustment range of the base	0 - 80 mm
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water		
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water		
Pipes	Stainless steel (1.4401), approved for potable water		
Gaskets	Fibre composite / EPDM / Teflon		
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table		

PAW-HomeBloC® Digital WR + DLE - Radiator circuit (unmixed)

Heat exchanger	Volume flow limiter*	Item no.
50 plates, copper solder	**16 l/min**	**126417101**
70 plates, copper solder	**20-25 l/min**	**126517101**

HomeBloC® Digital WF
Radiant floor circuit (mixed)



Application range	**for residential properties with one or various radiant floor circuits**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 3 bar
Operating temperature	Operating temperature: domestic hot water	max. 60 °C
	Operating temperature: heating system	max. 70 °C
Output	Output capacity (10 ->45°C)	16 l/min; 20-25 l/min
	Heating capacity	up to 9 kW (at ΔT = 10 K)
Equipment	Pump	Grundfos UPM4 15-75

Technical data

Connections		**Dimensions**	
Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)	Base plate station	W = 670 mm, H = 750 mm, D = 105 mm; W = 806 mm, H = 758 mm, D = 150 mm
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)	Flush-mounted cupboard	W = 750 mm, H = 885 mm, D = 120 mm; W = 906 mm, H = 1.457 mm, D = 135-205 mm
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)	Cover frame (flush-mounted cupboard)	W = 906 mm, H = 1457 mm, D = 135-205 mm
Materials		Wall-mounted cupboard	W = 880 mm, H = 1440 mm, D = 190 mm
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet	Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1.440 mm
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)	Adjustment range of the base	0 - 80 mm
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water		
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water		
Pipes	Stainless steel (1.4401), approved for potable water		
Gaskets	Fibre composite / EPDM / Teflon		
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table		

PAW-HomeBloC® Digital WF - Radiant floor circuit (mixed)

Heat exchanger	Volume flow limiter*	Item no.
50 plates, copper solder	**16 l/min**	**125439101**
70 plates, copper solder	**20-25 l/min**	**125539101**

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HomeBloC® Digital WF + DLE
Radiant floor circuit (mixed)



Application range	**for residential properties with one or various radiant floor circuits**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 3 bar
Operating temperature	Operating temperature: domestic hot water	max. 60 °C
	Operating temperature: heating system	max. 70 °C
Output	Output capacity (10 ->45°C)	16 l/min; 20-25 l/min
	Heating capacity	up to 9 kW (at ΔT = 10 K)
Equipment	Pump	Grundfos UPM4 15-75

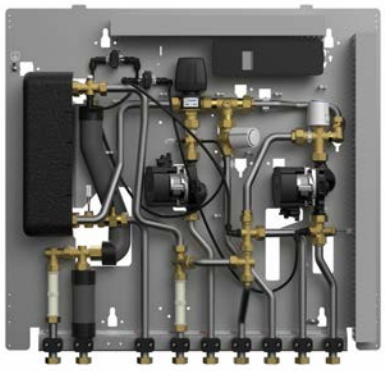
Technical data

Connections		**Dimensions**	
Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)	Base plate station	W = 806 mm, H = 758 mm, D = 150 mm; W = 806 mm, H = 1.333 mm, D = 150 mm
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)	Flush-mounted cupboard	W = 750 mm, H = 885 mm, D = 150 mm; W = 906 mm, H = 1.457 mm, D = 135-205 mm
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)	Cover frame (flush-mounted cupboard)	W = 906 mm, H = 1457 mm, D = 135-205 mm
Materials		Wall-mounted cupboard	W = 880 mm, H = 1440 mm, D = 190 mm
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet	Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1.440 mm
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)	Adjustment range of the base	0 - 80 mm
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water		
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water		
Pipes	Stainless steel (1.4401), approved for potable water		
Gaskets	Fibre composite / EPDM / Teflon		
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table		

PAW-HomeBloC® Digital WF + DLE - Radiant floor circuit (mixed)

Heat exchanger	Volume flow limiter*	Item no.
50 plates, copper solder	**16 l/min**	**126419101**
70 plates, copper solder	**20-25 l/min**	**126519101**

HomeBloC® Digital WRF-E
Radiator circuit and radiant floor circuit (mixed + unmixed)



Application range	**for residential properties with radiator circuits or the radiant floor circuits operated at the same time**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 3 bar
Operating temperature	Operating temperature: domestic hot water	max. 60 °C
	Operating temperature: heating system	max. 70 °C
Output	Output capacity (10 ->45°C)	16 l/min; 20-25 l/min
	Heating capacity	up to 9 kW (at ΔT = 10 K)
Equipment	Pump	Grundfos UPM4 15-75

Technical data

Connections

Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)

Materials

Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water
Pipes	Stainless steel (1.4401), approved for potable water
Gaskets	Fibre composite / EPDM / Teflon
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table

Dimensions

Base plate station	W = 806 mm, H = 758 mm, D = 150 mm
Flush-mounted cupboard	W = 906 mm, H = 1.457 mm, D = 135-205 mm
Cover frame (flush-mounted cupboard)	W = 906 mm, H = 1457 mm, D = 135-205 mm
Wall-mounted cupboard	W = 880 mm, H = 1440 mm, D = 190 mm
Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1.440 mm
Adjustment range of the base	0 - 80 mm

PAW-HomeBloC® Digital WRF-E - Radiator circuit and radiant floor circuit (mixed + unmixed)

Heat exchanger	Volume flow limiter*	Item no.
50 plates, copper solder	**16 l/min**	**125438102**
70 plates, copper solder	**20-25 l/min**	**125538102**

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HomeBloC® Digital WRF + DLE
Radiator circuit and radiant floor circuit (mixed + unmixed)



Application range	**for residential properties with radiator circuits or the radiant floor circuits operated at the same time**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 3 bar
Operating temperature	Operating temperature: domestic hot water	max. 60 °C
	Operating temperature: heating system	max. 70 °C
Output	Output capacity (10 ->45°C)	16 l/min; 20-25 l/min
	Heating capacity	up to 9 kW (at ΔT = 10 K)
Equipment	Pump	Grundfos UPM4 15-75

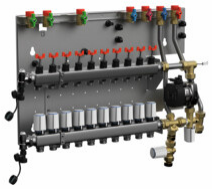
Technical data

Connections		**Dimensions**	
Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)	Base plate station	W = 670 mm, H = 1.340 mm, D = 135 mm; W = 806 mm, H = 1.333 mm, D = 150 mm
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)	Flush-mounted cupboard	W = 750 mm, H = 1.440 mm, D = 150 mm; W = 906 mm, H = 1.457 mm, D = 135-205 mm
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)	Cover frame (flush-mounted cupboard)	W = 906 mm, H = 1457 mm, D = 135-205 mm
Materials		Wall-mounted cupboard	W = 880 mm, H = 1440 mm, D = 190 mm
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet	Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1.440 mm
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)	Adjustment range of the base	0 - 80 mm
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water		
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water		
Pipes	Stainless steel (1.4401), approved for potable water		
Gaskets	Fibre composite / EPDM / Teflon		
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table		

PAW-HomeBloC® Digital WRF + DLE - Radiator circuit and radiant floor circuit (mixed + unmixed)

Heat exchanger	Volume flow limiter*	Item no.
50 plates, copper solder	**16 l/min**	**126418101**
70 plates, copper solder	**20-25 l/min**	**126518101**

Equipment HomeBloC® Digital

	**7 ball valves without mounting rail**	**1280107101**
	7 ball valves with mounting rail To shut off the lines during commissioning and maintenance. Marked in colour for easy assignment, DVGW approved, connection side G¾" internal thread. Including covering caps to avoid contamination of the ball valves until installation of the station. The ball valves can be ordered with or without mounting rail. When using the mounting rail, the ball valves are mounted to the wall even before the installation of the station. Thus all pipes can be connected and the system may be set under pressure - the station can be installed very quickly and easily.	**1280207201**
	**Floor distribution manifold for HomeBloC® Digital, type WRF + DLE, 4-fold**	**1285004102**
	Floor distribution manifold for HomeBloC® Digital, type WRF + DLE, 5-fold	**1285005102**
	Floor distribution manifold for HomeBloC® Digital, type WRF + DLE, 6-fold	**1285006102**
	Floor distribution manifold for HomeBloC® Digital, type WRF + DLE, 7-fold	**1285007102**
	Floor distribution manifold for HomeBloC® Digital, type WRF + DLE, 8-fold	**1285008102**
	Floor distribution manifold for HomeBloC® Digital, type WRF + DLE, 9-fold	**1285009102**
	Floor distribution manifold for HomeBloC® Digital, type WRF + DLE, 10-fold With injection-type circuit, allows the connection of a floor distribution manifold and a radiator circuit. Injection-type circuit complete with pump, injection valve and temperature sensor. The PAW heating distribution manifold for radiant floor heating ensures a steady and comfortable heat distribution in the home. Completely equipped with ball valve rail, piping and thermal drives, pre-mounted on a mounting plate for an easy and quick installation in wall-mounted or flush-mounted cupboards. Filling, draining and venting is easily possible. The complete set with floor distribution manifolds is available from a 4-fold version up to a 10-fold version. Connections: Ball valves: ¾" int. thread / ext. thread Floor distribution manifold: ¾" ext. thread Eurocone	**1285010102**
	**Floor distribution manifold, complete set for all HomeBloC® Digital types, except WRF + DLE, 4-fold**	**1285004103**
	Floor distribution manifold, complete set for all HomeBloC® Digital types, except WRF + DLE, 5-fold	**1285005103**
	Floor distribution manifold, complete set for all HomeBloC® Digital types, except WRF + DLE, 6-fold	**1285006103**
	Floor distribution manifold, complete set for all HomeBloC® Digital types, except WRF + DLE, 7-fold	**1285007103**
	Floor distribution manifold, complete set for all HomeBloC® Digital types, except WRF + DLE, 8-fold	**1285008103**
	Floor distribution manifold, complete set for all HomeBloC® Digital types, except WRF + DLE, 9-fold	**1285009103**
	Floor distribution manifold, complete set for all HomeBloC® Digital types, except WRF + DLE, 10-fold The PAW heating distribution manifold for radiant floor heating ensures a steady and comfortable heat distribution in the home. Completely equipped with ball valve rail, piping and thermal drives, pre-mounted on a mounting plate for an easy and quick installation in wall-mounted or flush-mounted cupboards. Filling, draining and venting is easily possible. The complete set with floor distribution manifolds is available from a 4-fold version up to a 10-fold version. Connections: Ball valves: ¾" int. thread / ext. thread Floor distribution manifold: ¾" ext. thread Eurocone	**1285010103**

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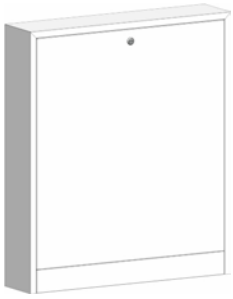
	**Thermoelectric actuator NC, 230 V, with connecting adapter for PAW injection-type circuit** Thermoelectric actuator NC, 230 V. The actuator is controlled by a 230 V standard room temperature controller with a 2-point output or a pulse width modulation.	**1288601105**
	**Flush-mounted cupboard, short, for stations WR, WF, WRF-E, WR + DLE and WF + DLE, without floor distribution manifolds** Suitable for stations of the type WR, WF, WRF-E, WR + DLE and WF + DLE, without floor distribution manifold Consisting of: • Built-in body made of zinc-galvanised sheet steel, installation dimensions W = 856 mm x H = 898 mm x D = 109-179 mm, with height-adjustable feet (can be extended up to 160 mm) • Plinth panel and cover frame made of zinc-galvanised sheet steel, white powder-coated (RAL9016), cover frame W x H x D 906 x 927 x 120-190 mm • Door to hang in, with rotary lock, made of zinc-galvanised sheet steel, white powder-coated (RAL9016), with ventilation slots Other colours or printing on request, Lock interchangeable	**1282002101**
	Flush-mounted cupboard, high, for stations AND floor distribution manifolds Suitable for stations AND floor distribution manifolds, also with instantaneous water heater consisting of: • Built-in body made of zinc-galvanised sheet steel, dimensions W = 885 mm x H = 1,432 mm x D = 124-192 mm, with height-adjustable feet (can be extended up to 160 mm) • Plinth panel and cover frame made of zinc-galvanised sheet steel, white powder-coated (RAL9016), cover frame W x H x D 907 x 1,457 x 135-205 mm • Door to hang in, with rotary lock, made of zinc-galvanised sheet steel, white powder-coated (RAL9016), with ventilation slots Other colours or printing on request, Lock interchangeable	**1282602101**

	**Wall-mounted cupboard, short, for stations WR, WF and WRF-E, without instantaneous water heater** Suitable for stations of the type WR, WF and WRF-E, without floor distribution manifold, without instantaneous water heater Consisting of: • Frame with plinth panel made of zinc-galvanised sheet steel, white powder-coated (RAL9016), dimensions: W = 880 mm x H = 973 mm x D = 130 mm • Door to hang in, with rotary lock, made of zinc-galvanised sheet steel, white powder-coated (RAL9016), with ventilation slots Other colours or printing on request, Lock interchangeable	**1282102101**
	Wall-mounted cupboard, short, for stations WR + DLE and WF + DLE, without floor distribution manifold Suitable for stations of the type WR + DLE and WF + DLE, without floor distribution manifold Consisting of: • Frame with plinth panel made of zinc-galvanised sheet steel, white powder-coated (RAL9016), dimensions: W = 880 mm x H = 972 mm x D = 190 mm • Door to hang in, with rotary lock, made of zinc-galvanised sheet steel, white powder-coated (RAL9016), with ventilation slots Other colours or printing on request, Lock interchangeable	**1282102102**
	Wall-mounted cupboard, high, for stations AND floor distribution manifold Suitable for stations AND floor distribution manifolds, also with instantaneous water heater Consisting of: • Frame with plinth panel made of zinc-galvanised sheet steel, white powder-coated (RAL9016), dimensions: W = 880 mm x H = 1440 mm x D = 190 mm • Door to hang in, with rotary lock, made of zinc-galvanised sheet steel, white powder-coated (RAL9016), with ventilation slots Other colours or printing on request, Lock interchangeable	**1282702101**
	**Supplementary set domestic water circulation** Including pipe set, connection fittings with ball valve and required sensor technology. Required for downstreamed hot water connection pipings with a content of more than 3 litres (according to DIN 1988-200) to the most distant withdrawal point or for an increased demand of comfort. During operation, it provides instantly available hot domestic water. ONLY SUITABLE FOR TYPES WR AND WF!	**1280817101**
	**Room control unit** For commissioning the station and setting the hot water nominal temperature. A room control unit is already included in the scope of delivery of the stations. Up to 4 additional room control units per station (controller) can be added.	**13676100**

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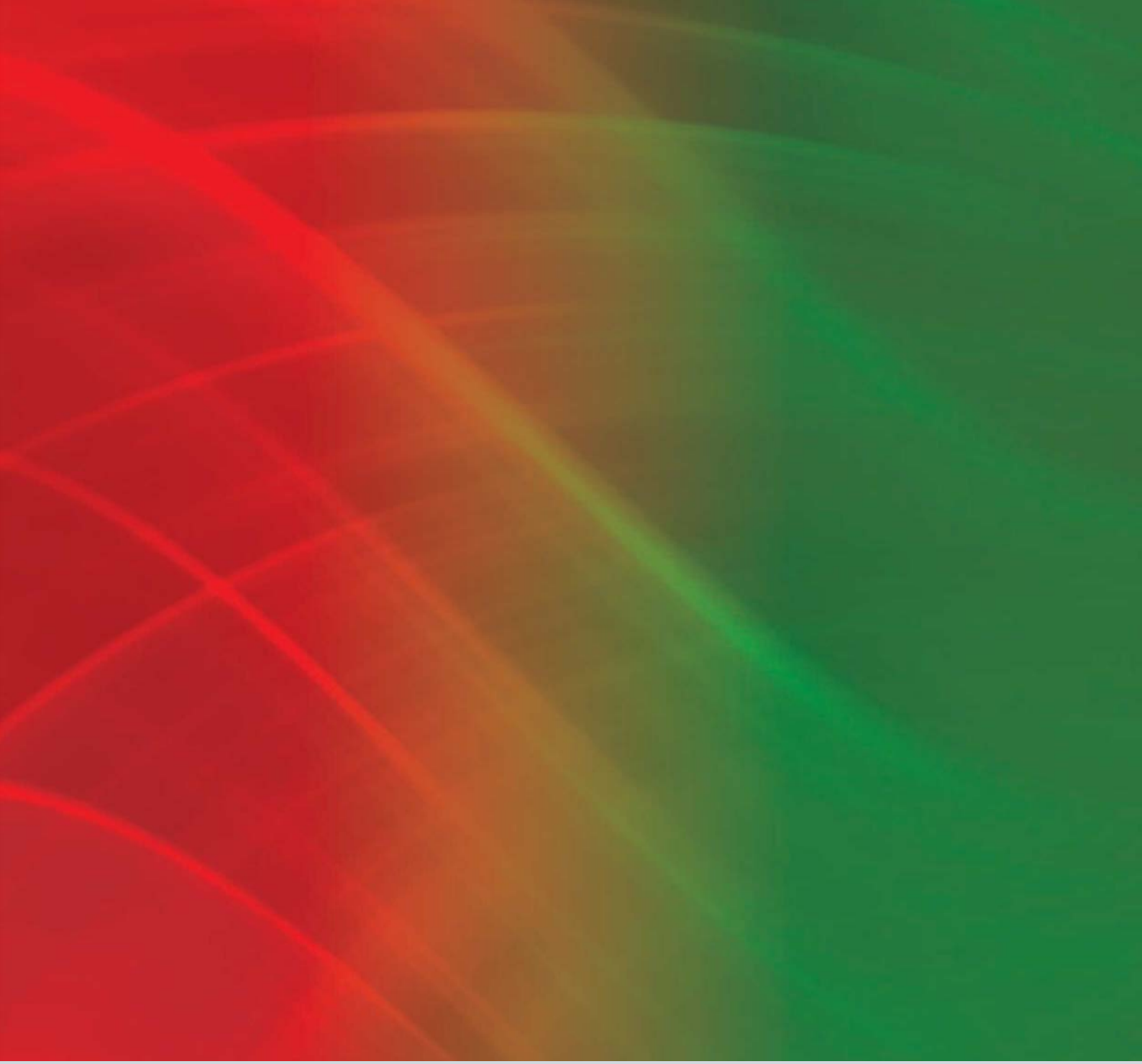

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PAW flat stations HomeBloC® Basic

Catalogue 04/2025

Decentralised domestic hot water preparation
and comfortable heat supply

Valid for the EU

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Flat stations for decentralised domestic hot water preparation and comfortable heat supply

Choose your individual station!

Flat stations - refined versatility

- For optimal distribution of energy for heating
- Concurrent or dedicated hot water preparation and/or heat according to your need
- Billing proportional to the consumption of each flat due to installation of your cold water and heat flowmeter

Flat stations - flexible and individual

- Modular system allows you to make adjustments to the station according to need
- Flexibility in planning and dimensioning
- Flat station fine-tuned to your needs
- Perfect integration into your living ambience

Flat stations - installation and comfort

- Completely premounted and pressure tested station
- Can be mounted quickly and with minimal effort
- Low costs due to quick and error-free mounting on site



Special features flat stations:

- ✓ Optimal energy utilisation due to powerful heat exchangers
- ✓ For low-temperature systems, e.g. heat pumps
- ✓ Large withdrawal flow rate
- ✓ Minimal pressure losses
- ✓ Premounted and pressure tested unit
- ✓ Construction depth (110 mm) ideally suitable for the installation in partition walls
- ✓ Fully equipped for connecting measurement technology
- ✓ Comfortable and fast installation
- ✓ For new building or restructuring
- ✓ Individual adjustment to your demands is possible!
- ✓ Optimally combined with a PAW HeatBloC® MCom

comfortable compact

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Or simply scan the code!



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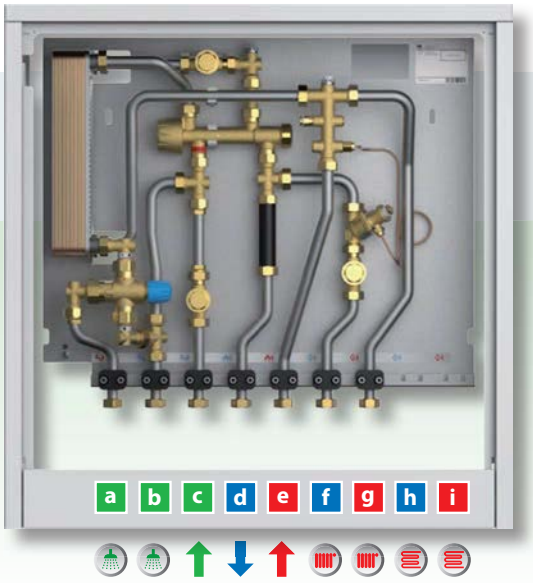
PAW flat stations HomeBloC® Basic – great diversity according to your needs

The PAW HomeBloC® Basic is offered in **three basic versions WR, WF and WRF** which differ in their equipment features for the heating circuits to supply. **WR** stands for hot water and radiator circuit, **WF** stands for hot water and floor heating and **WRF** combines hot water, radiator and floor heating.
You may find a corresponding symbol for each version on the corresponding page and in the legend (see below).
All stations are operated with a hydromechanical-thermal control by means of a proportional quantity controller.
The DHW temperature can be reduced via a service water mixing valve to a user-defined temperature. Each module can be adjusted either to the version of the heat exchanger or to the heating and output capacity.



HomeBloC® Basic WR: Radiator circuit (unmixed)

The HomeBloC® Basic version **WR** is designed to supply an unmixed circuit.
The temperature in the flow is heated via the mixed heating circuit in the basement to the desired level and directly provided to the circuit of the HomeBloC® Basic.
This temperature can be directly used for space heating without being reduced by the flat station.
A differential pressure valve avoids whistling noises and hydraulic problems.

Application example:
A property has one or various radiator circuits. The HomeBloC® Basic **WR** version suits perfectly for this application. The flow temperature can be provided directly from the radiator to the space heating. Improper differential pressure for thermostatic valves can be reduced easily by means of the differential pressure valve.

Connection example full equipment:

- a **Domestic hot water**
- b **Domestic cold water**
- c **Cold water inlet**
- d **Heating water return**
- e **Heating water flow**
- f **Radiator circuit return**
- g **Radiator circuit flow**
- h **Radiant floor circuit return (opt.)**
- i **Radiant floor circuit flow (opt.)**

Legend:

WR: Hot water + radiator circuit

WF: Hot water + radiant floor circuit

WRF: Hot water + radiator and radiant floor circuit

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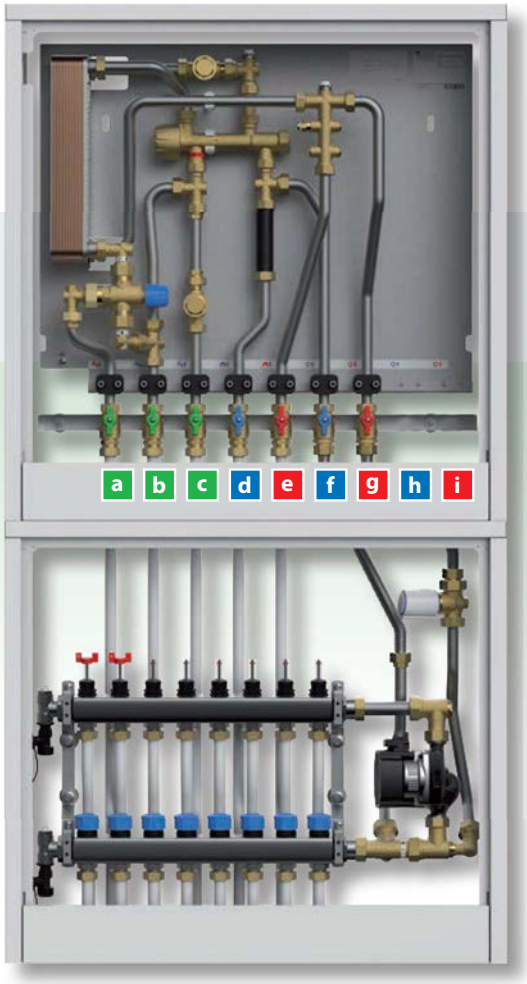
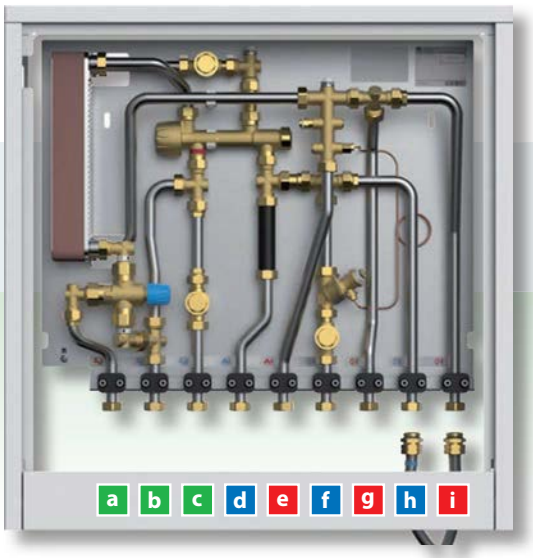


HomeBloC® Basic WF: Radiant floor circuit (mixed)

The HomeBloC® Basic version **WF** is designed to supply a mixed heating circuit.
The temperature in the flow is provided via the mixed or unmixed heating circuit in the basement to the the HomeBloC® Basic. The temperature there is reduced by means of an injection-type circuit and is provided to the radiant floor circuit. The injection-type circuit can be ordered separately.

Application example:
A residential property has one or various radiant floor circuits. The HomeBloC® Basic **WF** version is perfectly suited for this application. By means of an injection-type circuit, the flow temperature can be mixed precisely to the temperature level required for the radiant floor heating.
This temperature is provided to the corresponding rooms via a floor distribution manifold.



HomeBloC® Basic WRF: Radiator circuit and radiant floor circuit (mixed + unmixed)

The HomeBloC® Basic **WRF** combines both heating circuits of the WR and WF versions.
This allows either the radiator circuit or the radiant floor circuit to be operated at the same time. Both functionalities are thus combined in one module.

HomeBloC® Basic WR
Radiator circuit (unmixed)



Application range	**for residential properties with one or various radiator circuits**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 2.5 bar
Operating temperature	Operating temperature: domestic hot water	max. 65 °C
	Operating temperature: heating system	max. 85 °C
Output	Output capacity (10 ->45°C)	12 l/min (≙ 30 kW); 16 l/min (≙ 40 kW); 20 l/min (≙ 49 kW)
	Heating capacity	8.5 kW (when ΔT = 15 K)

Technical data

Connections		**Dimensions**	
Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)	Base plate station	W = 660 mm, H = 555 mm, D = 100 mm
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)	Flush-mounted cupboard	W = 750 mm, H = 685 mm, D = 10 mm
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)	Cover frame (flush-mounted cupboard)	W = 750 mm, H = 555 mm, D = 110 mm
Materials		Wall-mounted cupboard	W = 750 mm, H = 555 mm, D = 150 mm
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet	Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1,436 mm
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)	Adjustment range of the base	0 - 80 mm
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water		
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water		
Pipes	Stainless steel (1.4401), approved for potable water		
Gaskets	Fibre composite / EPDM / Teflon		
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table		

PAW-HomeBloC® Basic WR - Radiator circuit (unmixed)

Heat exchanger	Volume flow limiter*	Item no.
24 plates, copper solder	**12 l/min**	**120317101**
24 plates, coated	**12 l/min**	**120347101**
32 plates, copper solder	**16 l/min**	**120427101**
32 plates, coated	**16 l/min**	**120457101**
50 plates, copper solder	**20 l/min**	**120537101**
50 plates, full stainless steel	**20 l/min**	**120567101**

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HomeBloC® Basic WF
Radiant floor circuit (mixed)



Application range	**for residential properties with one or various radiant floor circuits**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 2.5 bar
Operating temperature	Operating temperature: heating system	max. 85 °C
	Operating temperature: domestic hot water	max. 65 °C
Output	Output capacity (10 ->45°C)	12 l/min (≙ 30 kW); 16 l/min (≙ 40 kW); 20 l/min (≙ 49 kW)
	Heating capacity	8.5 kW (when ΔT = 15 K)

Technical data

Connections		**Dimensions**	
Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)	Base plate station	W = 660 mm, H = 555 mm, D = 100 mm
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)	Flush-mounted cupboard	W = 750 mm, H = 685 mm, D = 10 mm
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)	Cover frame (flush-mounted cupboard)	W = 750 mm, H = 555 mm, D = 110 mm
Materials		Wall-mounted cupboard	W = 750 mm, H = 555 mm, D = 150 mm
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet	Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1,436 mm
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)	Adjustment range of the base	0 - 80 mm
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water		
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water		
Pipes	Stainless steel (1.4401), approved for potable water		
Gaskets	Fibre composite / EPDM / Teflon		
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table		

PAW-HomeBloC® Basic WF - Radiant floor circuit (mixed)

Heat exchanger	Volume flow limiter*	Item no.
24 plates, copper solder	**12 l/min**	**120319101**
24 plates, coated	**12 l/min**	**120349101**
32 plates, copper solder	**16 l/min**	**120429101**
32 plates, coated	**16 l/min**	**120459101**
50 plates, copper solder	**20 l/min**	**120539101**
50 plates, full stainless steel	**20 l/min**	**120569101**

Injection-type circuit for the radiant floor circuit	**1285501102**
Connections: 2x 1"int. thread x 2x ¾"ext.thread, GF UPM3 Auto L 15-70, mandatory for floor distribution manifold	

HomeBloC® Basic WRF
Radiator circuit and radiant floor circuit (mixed + unmixed)



Application range	**for residential properties with radiator circuits or the radiant floor circuits operated at the same time**	
Max. operating pressure	Operating pressure: domestic hot water	max. 10 bar
	Operating pressure: heating system	max. 2.5 bar
Operating temperature	Operating temperature: heating system	max. 85 °C
	Operating temperature: domestic hot water	max. 65 °C
Output	Output capacity (10 ->45°C)	12 l/min (≙ 30 kW); 16 l/min (≙ 40 kW); 20 l/min (≙ 49 kW)
	Heating capacity	8.5 kW (when ΔT = 15 K)

Technical data

Connections		**Dimensions**	
Domestic hot water supply	3 x ¾" int. thread (flat–sealing and self–sealing)	Base plate station	W = 660 mm, H = 555 mm, D = 100 mm
Heat supply	2 x ¾" int. thread (flat–sealing and self–sealing)	Flush-mounted cupboard	W = 750 mm, H = 685 mm, D = 10 mm
Heating circuit outlets	2 x ¾" int. thread (flat–sealing and self–sealing)	Cover frame (flush-mounted cupboard)	W = 750 mm, H = 555 mm, D = 110 mm
Materials		Wall-mounted cupboard	W = 750 mm, H = 555 mm, D = 150 mm
Base plate / Flush-mounted cupboard	zinc-galvanised steel sheet	Total dimensions cupboard for station + floor distribution manifold	W = 750 mm, H = 1,436 mm
Cover frame, door, base cover	Steel sheets, powder-coated, white (RAL 9016)	Adjustment range of the base	0 - 80 mm
Ball valves, valves and fittings: Domestic hot water circuit	Brass, approved for potable water		
Ball valves, valves and fittings: Heating circuit	Brass, approved for potable water		
Pipes	Stainless steel (1.4401), approved for potable water		
Gaskets	Fibre composite / EPDM / Teflon		
Heat exchanger	Standard: Stainless steel plates; Copper solder more heat exchanger designs: see order table		

PAW-HomeBloC® Basic WRF - Radiator circuit and radiant floor circuit (mixed + unmixed)

Heat exchanger	Volume flow limiter*	Item no.
24 plates, copper solder	**12 l/min**	**120318101**
24 plates, coated	**12 l/min**	**120348101**
32 plates, copper solder	**16 l/min**	**120428101**
32 plates, coated	**16 l/min**	**120458101**
50 plates, copper solder	**20 l/min**	**120538101**
50 plates, full stainless steel	**20 l/min**	**120568101**

Injection-type circuit for the radiant floor circuit	**1285501102**
Connections: 2x 1"int. thread x 2x ¾"ext.thread, GF UPM3 Auto L 15-70, mandatory for floor distribution manifold	

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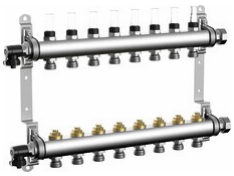
	**7 ball valves without mounting rail**	**1280107101**
	9 ball valves without mounting rail	**1280109101**
	7 ball valves with mounting rail	**1280207101**
	9 ball valves with mounting rail To shut off the lines during commissioning and maintenance. Marked in colour for easy assignment, DVGW approved, connection side G¾" internal thread. Including covering caps to avoid contamination of the ball valves until installation of the station. The ball valves can be ordered with or without mounting rail. When using the mounting rail, the ball valves are mounted to the wall even before the installation of the station. Thus, all pipes can be connected and the system may be set under pressure.	**1280209101**
	**Floor distribution manifold 2-fold**	**1285002101**
	Floor distribution manifold 3-fold	**1285003101**
	Floor distribution manifold 4-fold	**1285004101**
	Floor distribution manifold 5-fold	**1285005101**
	Floor distribution manifold 6-fold	**1285006101**
	Floor distribution manifold 7-fold	**1285007101**
	Floor distribution manifold 8-fold The PAW heating distribution manifold for radiant floor heating ensures a steady and comfortable heat distribution in the flat.Filling, draining and venting is easily possible.The heating distribution manifold can be mounted in a flush-mounted or a wall-mounted cupboard. The floor distribution manifold is available from a 2-fold version up to a 8-fold version. For the versions WF and WRF, the injection-type circuit is mandatory. Connections: ¾" ext. thread Eurocone	**1285008101**
	**Thermal heat retention** By using the thermal heat retaining, it is possible to achieve a higher hot water convenience during summer operation (no heating operation). The bypass between the heating flow and return maintains the line of the HomeBloC® Basic warm, hot domestic water can thus be quickly prepared.	**1280301102**
	**Pressure-dependent heat retention** Pressure-depending heat retaining for the installation in a HomeBloC® for a higher water convenience during summer operation Pipe set ¾" union nut overflow valve 350 mbar polyamide hose 6 mm, up to 6.5 bar	**1280303101**
	**Thermostatic head for radiant floor circuit** Thermostatic head with immersion sensor, for assembly with PAW injection-type circuits for floor distribution manifolds, constant temperature control 10 °C - 40 °C, without auxiliary energy	**1288602101**

	**Injection-type circuit for radiant floor circuit** To control the flow temperature and to ensure the supply and heat distribution in the (floor) heating circuits. For the versions WF and WRF, this injection-type circuit is mandatory for the floor distribution manifold.	**1285501102**
	**Injection-type circuit for radiant floor circuit** To control the flow temperature and to ensure the supply and heat distribution in the (floor) heating circuits. For the versions WF and WRF, this injection-type circuit is mandatory for the floor distribution manifold.	**1285501201**
	**Injection-type circuit for radiant floor circuit** To control the flow temperature and to ensure the supply and heat distribution in the (floor) heating circuits. For the versions WF and WRF, this injection-type circuit is mandatory for the floor distribution manifold.	**1285501301**
	**Controller Alpha Basis STD Plus**	**13526001**
	Controller Alpha Basis Comfort Connection unit for single room controls of heating and cooling systems in combination with surface temperature regulation. The power supply of the components is provided directly via the controller; minimised wiring effort. Controller Alpha Basis STD Plus: Designated for the connection of up to 6 room operating units and up to 15 actuators with 230 V~ operating voltage. Controller Alpha Basis Comfort: Designated for the connection of up to 10 room operating units and up to 18 actuators with 230 V~ operating voltage.	**13536001**
	**Thermoelectric actuator NC, 230 V, with connecting adapter for PAW injection-type circuit** Thermoelectric actuator NC, 230 V. The actuator is controlled by a 230 V standard room temperature controller with a 2-point output or a pulse width modulation.	**1288601105**
	**Flush-mounted cupboard station**	**1282001101**
	Wall-mounted cupboard station For mounting the station, powder-coated in RAL 9016, rotary lock for opening the cover. Flush-mounted version with 110 mm installation depth, height-adjustable, ideal for partition walls. Wall-mounted version with 150 mm installation depth, also height-adjustable. Insulation on request.	**1282101101**

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	**Flush-mounted cupboard floor distribution manifold**	**1282601101**
	Wall-mounted cupboard floor distribution manifold For mounting the floor distribution manifold, powder-coated in RAL 9016, rotary lock for opening the cover. Flush-mounted version with 110 mm installation depth, height-adjustable, ideal for partition walls. Wall-mounted version with 150 mm installation depth, also height-adjustable. Insulation on request.	**1286101101**



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Award winner HeatBloC® MCom

HeatBloC® MCom DN 25 - 50

Catalogue 04/2025

Automatic, dynamic balancing of distribution manifolds

Valid for the EU

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HeatBloC® MCom - the heating circuit 4.0
Innovative system technology for modern heating

Whether it's about Smart Home in a single-family house or as Direct Digital Control (DDC) in a central building control system – the HeatBloC® MCom upgrades your heating system to level 4.0.

The **HeatBloC® MCom** combines high-quality and durable components of a PAW standard heating circuit with the latest sensor technology, actuator technology and control technology. As a result, numerous installation values (data points) are immediately provided and must not be additionally integrated. **System monitoring is thus as easy as never before!**

The heating circuits of the **HeatBloC® MCom** series can be connected to a multitude of **Smart Home centrals**. The connection is usually established via system-specific gateways. It is therefore compatible **with all common Smart Home systems**, but can also be established directly via **Modbus.**



With the optional communication set and the free PAW app, the HeatBloC® MCom can be easily:

- ✓ **installed**
- ✓ **optimised**
- ✓ **documented**

The advantages of the app at a glance:

Fully equipped heating circuit including sensor technology and actuator technology

- ✓ no subsequent installation of additional components (differential pressure controller), no hidden cost

Easy integration into Smart Home environments

- ✓ compatible with all common Smart Home systems
- ✓ compatible with Modbus

quick
safe
efficient

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Download on the App Store



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Quick commissioning of every heating line

- ✓ hydraulic balancing of distribution manifold happens automatically
- ✓ no time-consuming adjustment of regulating valve or overflow valve
- ✓ radiator balancing is possible with the free PAW app

BAFA-listed components

- ✓ quick processing of subsidy requests
- ✓ subsidizable heating circuits and communication sets

Measuring and visualising all system parameters

- ✓ optimisation of the energy distribution: minimisation of operating costs – without any loss of comfort
- ✓ increase of the reliability

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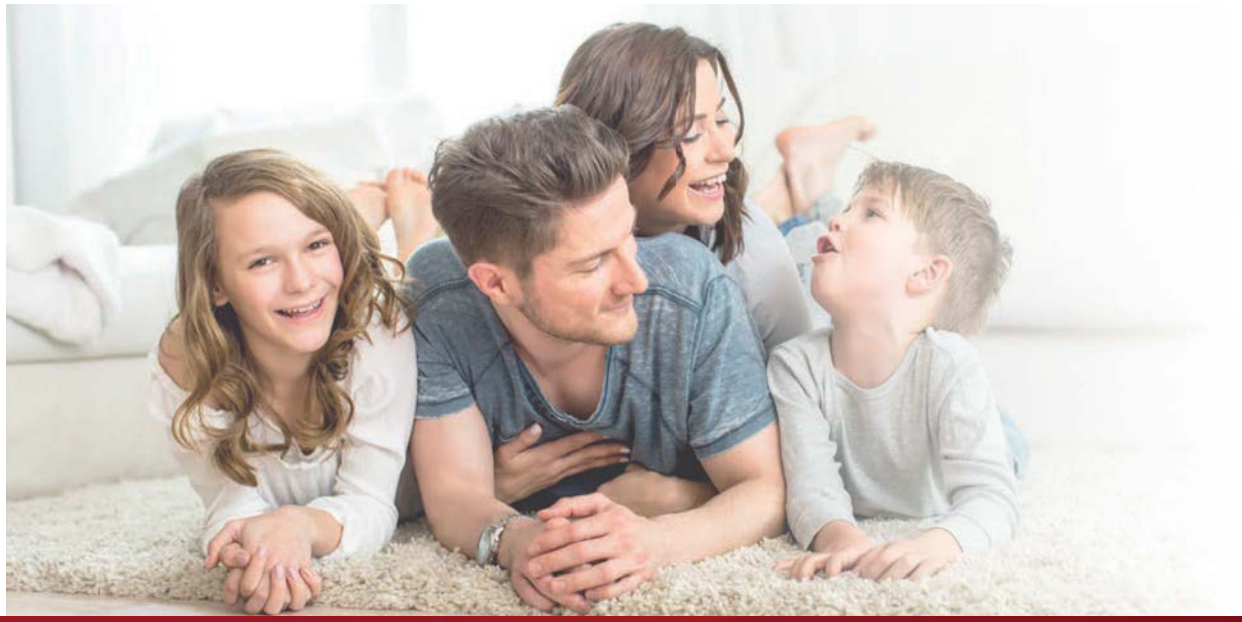
HeatBloC® MCom:
Easy commissioning and high living comfort included!

The **HeatBloC® MCom** guarantees **easy commissioning and high reliability** for high comfort demands.
Time-consuming adjustments can be left out and additional visits of your craftsman are not required.

The HeatBloC® MCom automatically adapts to any operating condition. The heat is transferred to where it is needed.
With our HeatBloC®s MC you can save **pump energy** compared to mechanical differential pressure controllers.



HeatBloC® MCom:
Dynamic hydraulic balancing included!

Installation – adjustment – comfort: The plug & play solution!

Not only does the **HeatBloC® MCom** save you a lot of pump energy and money - combined with the **communication set** and the free **PAW Connect app,** it also makes **hydraulic balancing of your radiators possible** – hydraulic balancing certificate included:

- ✓ **System data**: heating loads, thermal output, heating circuits
- ✓ **Heating parameters**: flow temperature, flow rate, differential pressure
- ✓ **Documentation** (VdZ form for hydraulic balancing, compliant with KFW/BAFA)

With this easy hydraulic balancing, you and your craftsman are on the safe side and you will receive subsidies in no time!



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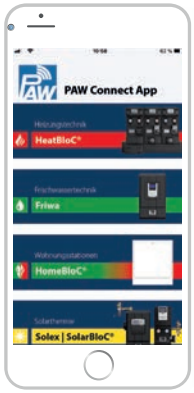
HeatBloC® MCom:
Important data included!

In contrast to other systems, the **HeatBloC® MCom** does not require any additional hardware installations. You will not have any hidden retrofitting cost for upgrades of your sensor technology or actuator technology.
The **HeatBloC® MCom** allows to display and adjust the following values in your **Smart Home system**:





- **Temperature**
  - ✓ TFL-AC, TFL-NOM
  - ✓ TRT-AC
- **Differential pressure**
  - ✓ ΔpAC , ΔpNOM
- **Flow rate**
  - ✓ FRAC
- **Status messages / balance values**
  - ✓ Sensors: min./max. values, error messages
  - ✓ Mixing valves: control (0-10 V), current rotation angle
  - ✓ Pumps: control (PWM), calculated flow rate, error messages

HeatBloC® MCom:
CO_2- and cost reduction included!

Thanks to the integration into Smart Home, the **HeatBloC® MCom** operates at the lowest flow temperature.
Space-time-user profiles of electronic thermostatic valves that used to be rigid can be combined with window contacts, motion detectors, weather reports and user profiles.

This way, Smart Homes equipped with a HeatBloC® MCom pay off considerably faster and have a substantially lower carbon footprint.





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Product range HeatBloC® MC - DN 25
Heating circuits for the balancing of distribution manifolds







All HeatBloC®s MCom offer the following advantages:

Preassembled group of fittings for heating circuits

Automatic, dynamic balancing of distribution manifolds
Security of supply, high comfort, avoids mutual influence at the distribution manifold, no flow rate variation due to the mixing valve position any more, necessary condition for a hydraulic balancing of the heating circuits

Replaces mechanical differential pressure controllers and hydraulic separators
High efficiency thanks to the low return temperature, energy-saving operation of the pumps, energy saving thanks to the pumps of approx. 50 % compared to mechanical differential pressure controllers in each line

Electronic controller
Electronic regulation of the differential pressure, temperature measurement and temperature regulation if necessary (HeatBloC® MC43), display of the flow rate and the heat quantity with Grundfos pump

High flexibility during assembly
modules can be used in nearly any combination

Check valve in the return pipe
avoids gravity circulation, can be opened, 200 mm wc, spring-loaded

Non-return valve in the mixing valve
avoids unwanted circulation at the distribution manifold, can be opened, 50 mm wc, spring-loaded

Flow on the right = standard
The flow and return line can be easily changed on site (also for heating circuits with mixing valve)

All water-carrying parts are made of brass

EnEV-compliant functional insulation
made of durable elastic EPP, complete insulation of the valves and fittings with sealing lips, ventilation opening to cool the pump

PAW heating pumps with high-efficiency technology
fitted with 2 m cable, already installed, integrated in the insulation, pressure tested, serial number, perfectly designed system, pump characteristics, ErP READY

Pump can be isolated
so that it can be replaced without draining

Optional integration in a Smart Home environment







At the end of the chapter, you will find the complete mounting equipment for the modular system DN 25.

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Product range HeatBloC® MC - DN 25
Heating circuits for the balancing of distribution manifolds - types

MC41
direct / unmixed



up to 50 kW*

MC42
3-way mixing valve



up to 40 kW*

MC43
Controlled circuit with constant value, 3-way mixing valve with bypass 0-50%



up to 45.5 kW*

MC44
3-way mixing valve with bypass 0-50%



up to 45.5 kW*

MC45
3-temperature mixing valve



up to 32.5 kW*

MC46
Boiler charging set with 3-way mixing valve



up to 50 kW*

MCom communication set



Connection set for MCom controller (mandatory)



Award winner HeatBloC® MCom:



*Temperature difference = 20 K

HeatBloC® MC41 DN 25 (1")
direct / unmixed





Application range

- Boiler charging
- modulating temperature heating system

Operating data

Range of performance	up to 50 kW
Temperature difference	20 K up to 2150 l/h
Kvs value	7.2
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC41 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	500 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

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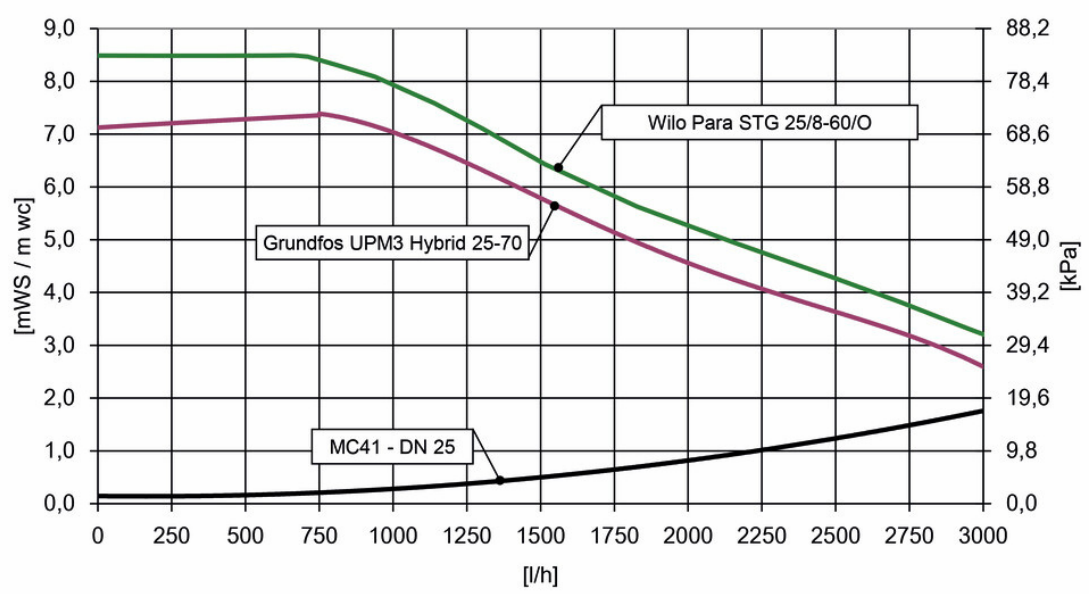
HeatBloC® MC41 DN 25 (1")
direct / unmixed



HeatBloC® MC41 DN 25 (1")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 25-70, flow rate signal**		▲	**4536013GU7**
	Wilo Para STG 25/8/-60/O		▲	**4536013WS08**

▲ = with pump ⊖ = without pump Ⓜ =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC42 DN 25 (1")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Operating data

Range of performance	up to 40 kW
Temperature difference	20 K up to 1750 l/h
Kvs value	5.2
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC42 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc
Actuator SR5	230 V - 50 Hz

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	500 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

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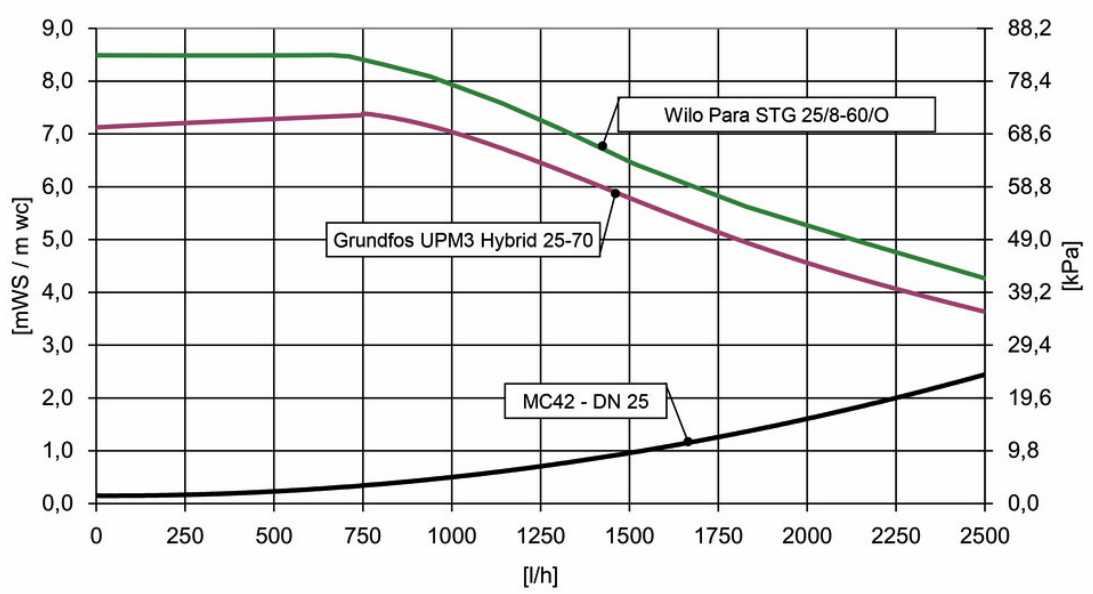
HeatBloC® MC42 DN 25 (1")
3-way H-type mixing valve



HeatBloC® MC42 DN 25 (1")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 25-70, flow rate signal**			**4536053MGU7**
	Wilo Para STG 25/8/-60/O			**4536053MWS08**

= with pump = without pump =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC43 DN 25 (1")
Controlled circuit, const. value, 3-way mixing valve with bypass





Application range

- For low-temperature heating systems controlled by a mixing valve
- constant value control circuit or indication of the nominal temperature via Smart Home environment

Operating data

Range of performance	up to 45 kW
Temperature difference	20 K up to 1940 l/h
Kvs value	6
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC43 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc
Actuator SR10	24 V AC/DC

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	500 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

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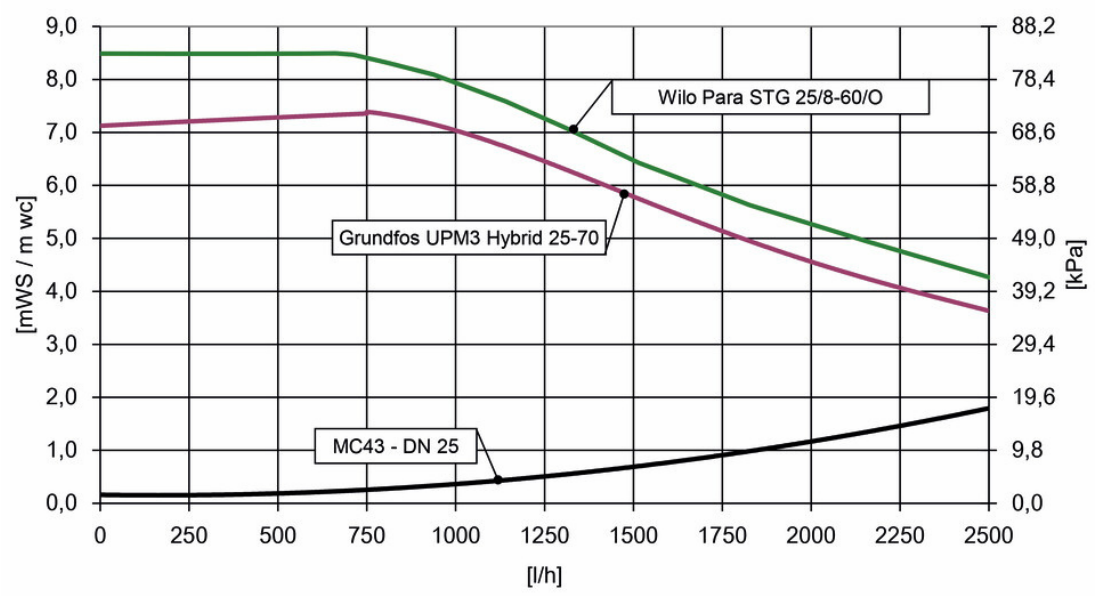
HeatBloC® MC43 DN 25 (1")
Controlled circuit, const. value, 3-way mixing valve with bypass



HeatBloC® MC43 DN 25 (1")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 25-70, flow rate signal**			**4536073MGU7**
	Wilo Para STG 25/8/-60/O			**4536073MWS08**

= with pump = without pump =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC44 DN 25 (1")
3-way bypass mixing valve





Application range

- for low-temperature heating systems controlled by a mixing valve

Operating data

Range of performance	up to 45 kW
Temperature difference	20 K up to 1940 l/h
Kvs value	6
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC44 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc
Actuator SR5	230 V - 50 Hz

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	500 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

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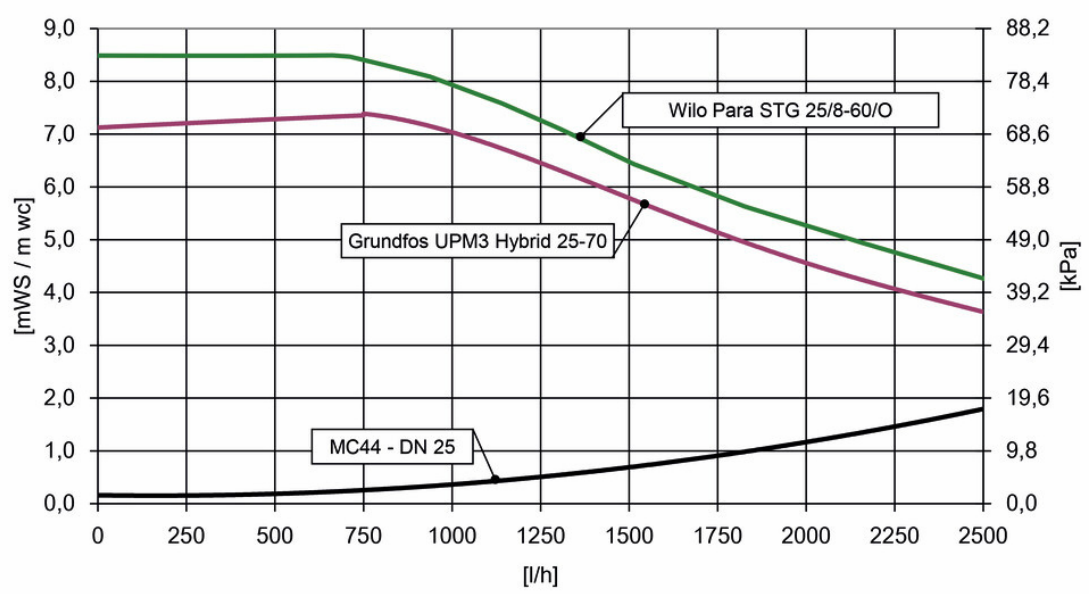
HeatBloC® MC44 DN 25 (1")
3-way bypass mixing valve



HeatBloC® MC44 DN 25 (1")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 25-70, flow rate signal**			**4536063MGU7**
	Wilo Para STG 25/8/-60/O			**4536063MWS08**

= with pump = without pump =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC45 DN 25 (1")
3-temperatures mixing valve





Application range

- Heating installations with buffer tank and solar heating support
- control of radiant floor and panel heating systems

Operating data

Range of performance	up to 32 kW
Temperature difference	20 K up to 1400 l/h
Kvs value	4.7
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC45 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc
Actuator SR5	230 V - 50 Hz

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	500 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

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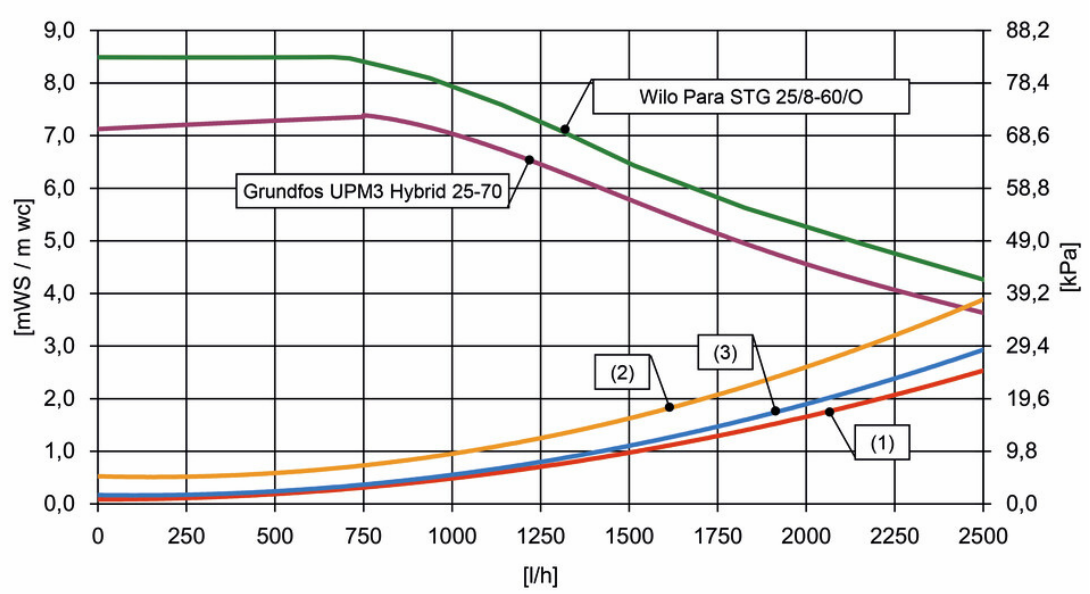
HeatBloC® MC45 DN 25 (1")
3-temperatures mixing valve



(1) 100% return, Kvs value = 5.1 (2) low temperature flow, Kvs value = 4.1 (3) 100% high temperature flow, Kvs value = 4.7

HeatBloC® MC45 DN 25 (1")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 25-70, flow rate signal**			**4536093MGU7**
	Wilo Para STG 25/8/-60/O			**4536093MWS08**

= with pump = without pump =with actuator *EEI = Energy Efficiency Index

Product range HeatBloC® MC - DN 32
Heating circuits for the balancing of distribution manifolds







All HeatBloC®s MCom offer the following advantages:

Preassembled group of fittings for heating circuits

Automatic, dynamic balancing of distribution manifolds
Security of supply, high comfort, avoids mutual influence at the distribution manifold, no flow rate variation due to the mixing valve position any more, necessary condition for a hydraulic balancing of the heating circuits

Replaces mechanical differential pressure controllers and hydraulic separators
High efficiency thanks to the low return temperature, energy-saving operation of the pumps, energy saving thanks to the pumps of approx. 50 % compared to mechanical differential pressure controllers in each line

Electronic controller
Electronic regulation of the differential pressure, temperature measurement and temperature regulation if necessary (HeatBloC® MC43), display of the flow rate and the heat quantity with Grundfos pump

High flexibility during assembly
modules can be used in nearly any combination

Check valve in the return pipe
avoids gravity circulation, can be opened, 200 mm wc, spring-loaded

Non-return valve in the mixing valve
avoids unwanted circulation at the distribution manifold, can be opened, 50 mm wc, spring-loaded

Flow on the right = standard
The flow and return line can be easily changed on site (also for heating circuits with mixing valve)

All water-carrying parts are made of brass

EnEV-compliant functional insulation
made of durable elastic EPP, complete insulation of the valves and fittings with sealing lips, ventilation opening to cool the pump

PAW heating pumps with high-efficiency technology
fitted with 2 m cable, already installed, integrated in the insulation, pressure tested, serial number, perfectly designed system, pump characteristics, ErP READY

Pump can be isolated
so that it can be replaced without draining

Optional integration in a Smart Home environment

At the end of the chapter, you will find the complete mounting equipment for the modular system DN 32.

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Product range HeatBloC® MC - DN 32
Heating circuits for the balancing of distribution manifolds - types

MC41
direct / unmixed



up to 65 kW*

MC42
3-way mixing valve



up to 51 kW*

MC43
Controlled circuit with constant value, 3-way mixing valve with bypass 0-50%



up to 64 kW*

MC44
3-way mixing valve with bypass 0-50%



up to 64 kW*

MC46
Boiler charging set with 3-way mixing valve



up to 64 kW*

MCom communication set (optional)



Connection set for MCom controller (mandatory)



Award winner HeatBloC® MCom:



*Temperature difference = 20 K

HeatBloC® MC41 DN 32 (1¼")
direct / unmixed





Application range

- Boiler charging
- modulating temperature heating system

Operating data

Range of performance	up to 65 kW
Temperature difference	20 K up to 2800 l/h
Kvs value	15.1
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC41 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	557 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

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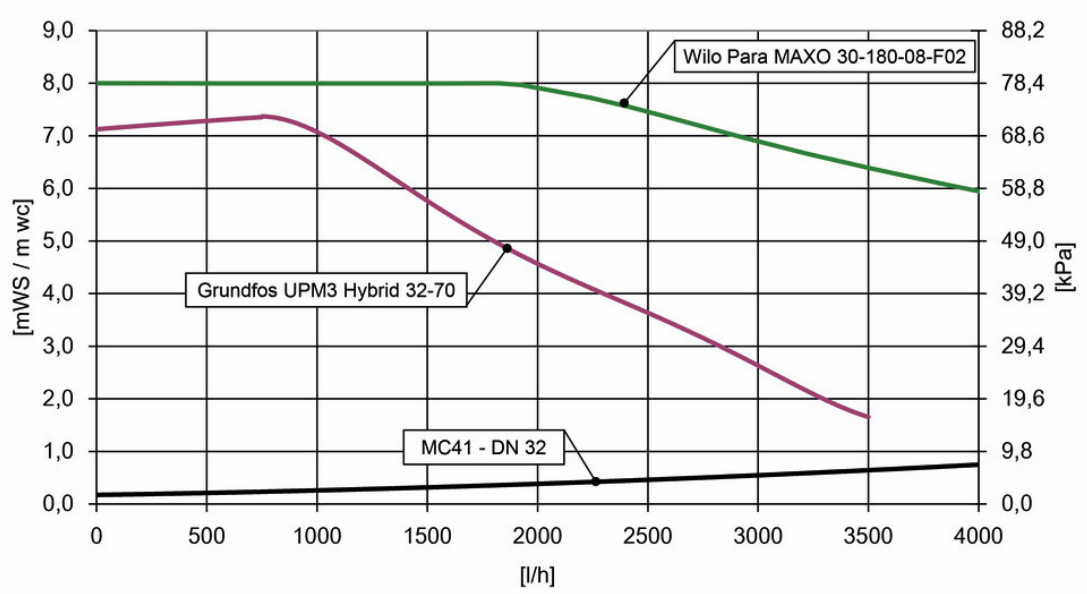
HeatBloC® MC41 DN 32 (1¼")
direct / unmixed



HeatBloC® MC41 DN 32 (1¼")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 32-70, flow rate signal**		▲	**4539013GU7**
	Wilo Para MAXO 30-180-08-F02		▲	**4539013WM08**

▲ = with pump ⊖ = without pump Ⓜ =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC42 DN 32 (1¼")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Operating data

Range of performance	up to 51 kW
Temperature difference	20 K up to 2200 l/h
Kvs value	9.6
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC42 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc
Actuator SR5	230 V - 50 Hz

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	557 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

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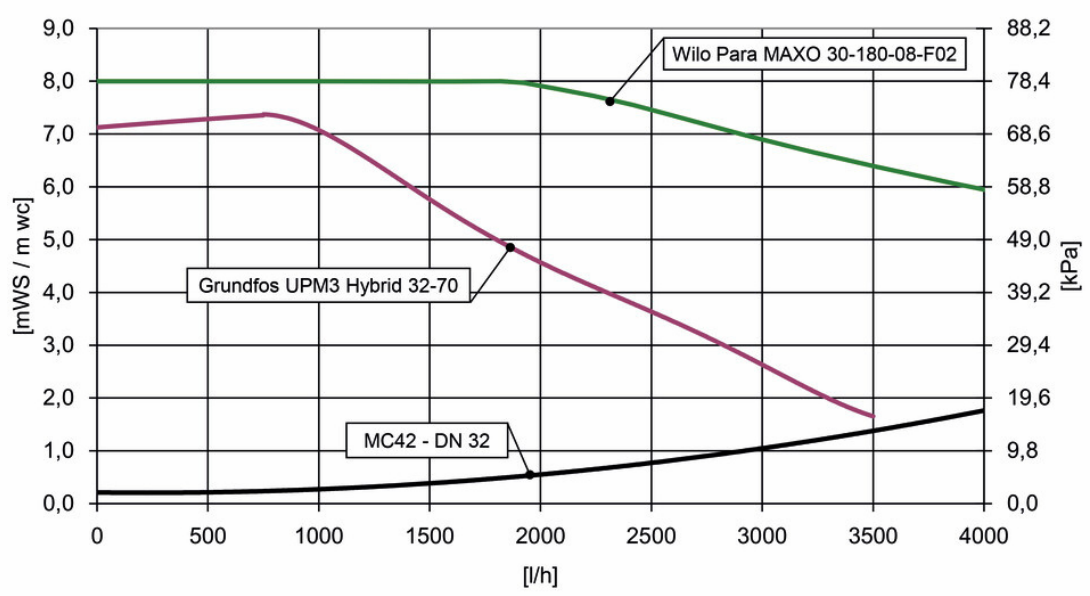
HeatBloC® MC42 DN 32 (1¼")
3-way H-type mixing valve



HeatBloC® MC42 DN 32 (1¼")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 32-70, flow rate signal**			**4539053MGU7**
	Wilo Para MAXO 30-180-08-F02			**4539053MWM08**

= with pump = without pump =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC43 DN 32 (1¼")
Controlled circuit with constant temperature, electronically





Application range

- For low-temperature heating systems controlled by a mixing valve
- constant value control circuit or indication of the nominal temperature via Smart Home environment

Operating data

Range of performance	up to 64 kW
Temperature difference	20 K up to 2760 l/h
Kvs value	10.1
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC43 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc
Actuator SR10	24 V AC/DC

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	557 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

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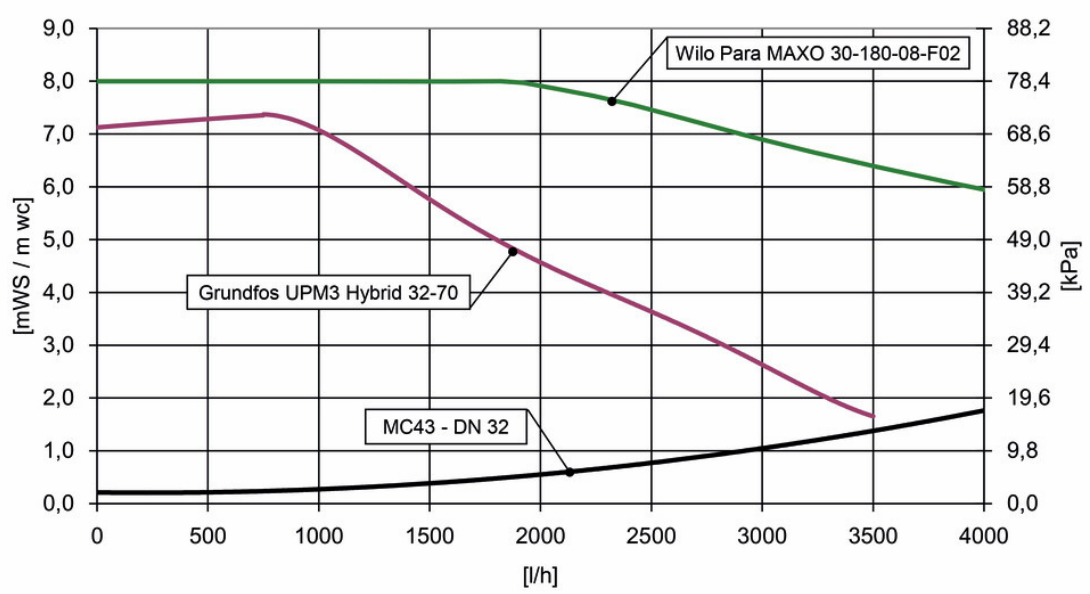
HeatBloC® MC43 DN 32 (1¼")
Controlled circuit with constant temperature, electronically



HeatBloC® MC43 DN 32 (1¼")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 32-70, flow rate signal**			**4539073MGU7**
	Wilo Para MAXO 30-180-08-F02			**4539073MWM08**

= with pump = without pump =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC44 DN 32 (1¼")
3-way bypass mixing valve





Application range

- for low-temperature heating systems controlled by a mixing valve

Operating data

Range of performance	up to 64 kW
Temperature difference	20 K up to 2760 l/h
Kvs value	10.1
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC44 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 200 mm wc
Actuator SR5	230 V - 50 Hz

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	557 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

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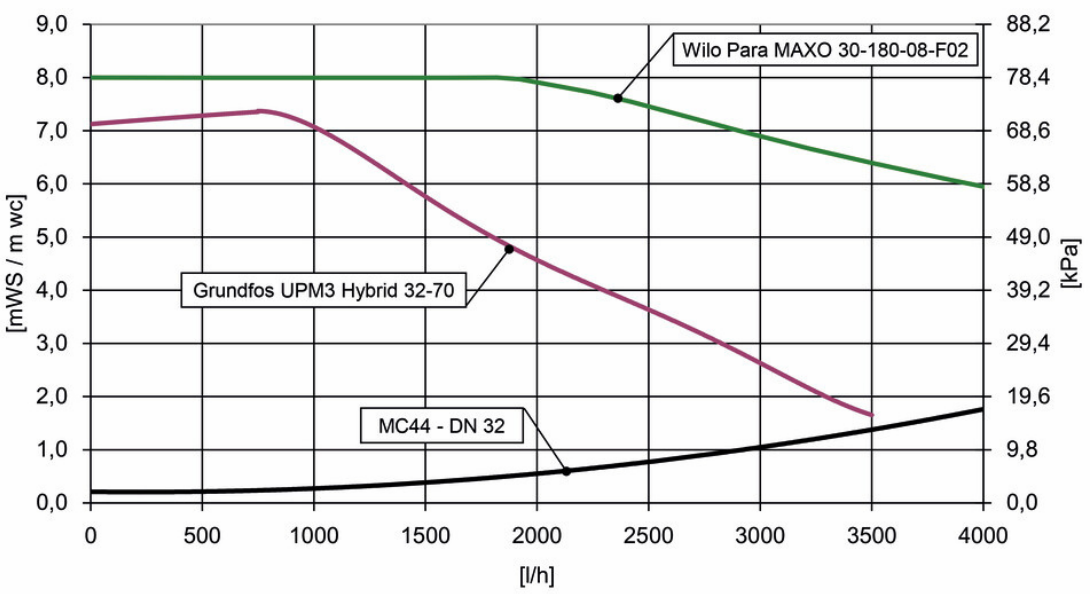
HeatBloC® MC44 DN 32 (1¼")
3-way bypass mixing valve



HeatBloC® MC44 DN 32 (1¼")		EEI*	with	Item no.
	**Grundfos UPM3 Hybrid 32-70, flow rate signal**			**4539063MGU7**
	Wilo Para MAXO 30-180-08-F02			**4539063MWM08**

= with pump = without pump =with actuator *EEI = Energy Efficiency Index

Product range HeatBloC® MC - DN 40/50
Heating circuits for the balancing of distribution manifolds







All HeatBloC®s MCom offer the following advantages:

Preassembled group of fittings for heating circuits

Automatic, dynamic balancing of distribution manifolds
Security of supply, high comfort, avoids mutual influence at the distribution manifold, no flow rate variation due to the mixing valve position any more, necessary condition for a hydraulic balancing of the heating circuits

Replaces mechanical differential pressure controllers and hydraulic separators
High efficiency thanks to the low return temperature, energy-saving operation of the pumps, energy saving thanks to the pumps of approx. 50 % compared to mechanical differential pressure controllers in each line

Electronic controller
Electronic regulation of the differential pressure and temperature measurement

High flexibility during assembly
modules can be used in nearly any combination

Check valve in the return pipe
avoids gravity circulation, can be opened, 200 mm wc, spring-loaded

Flow on the right = standard
The flow and return line can be easily changed on site (also for heating circuits with mixing valve)

All water-carrying parts are made of brass

EnEV-compliant functional insulation
made of durable elastic EPP, complete insulation of the valves and fittings with sealing lips, ventilation opening to cool the pump

PAW heating pumps with high-efficiency technology
fitted with 2 m cable, already installed, integrated in the insulation, pressure tested, serial number, perfectly designed system, pump characteristics, ErP READY

Pump can be isolated
so that it can be replaced without draining

Optional integration in a Smart Home environment







At the end of the chapter, you will find the complete mounting equipment for the modular system DN 40 / 50.

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Product range HeatBloC® MC - DN 40/50
Heating circuits for the balancing of distribution manifolds - types

MC41 - DN 40 (1½“)
direct / unmixed



up to 150 kW*

MC42 - DN 40 (1½“)
3-way mixing valve



up to 125 kW*

MC41 - DN 50 (2“)
direct / unmixed



up to 250 kW*

MC42 - DN 50 (2“)
3-way mixing valve



up to 230 kW*

MCom communication set
(optional)



Connection set for MCom controller
(mandatory)



Award winner
HeatBloC® MCom:

PLUS X AWARD
2021 | Ausgezeichnet für:
Innovation
High Quality
Bedienkomfort
Funktionalität
Ökologie
www.plusxaward.de

*Temperature difference = 20 K

HeatBloC® MC41 DN 40 (1½")
direct / unmixed





Application range

- Boiler charging
- modulating temperature heating system

Operating data

Range of performance	up to 150 kW
Temperature difference	20 K up to 6500 l/h
Kvs value	28.3
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC41 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 250 mm wc

Dimensions

Nominal diameter	DN 40 (1½")
Connection generator	Flange DN 40 / PN 6
Connection consumer	1½" int. thread
Height	790 mm
Installation length	560 mm
Centre distance	160 mm
Width	320 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

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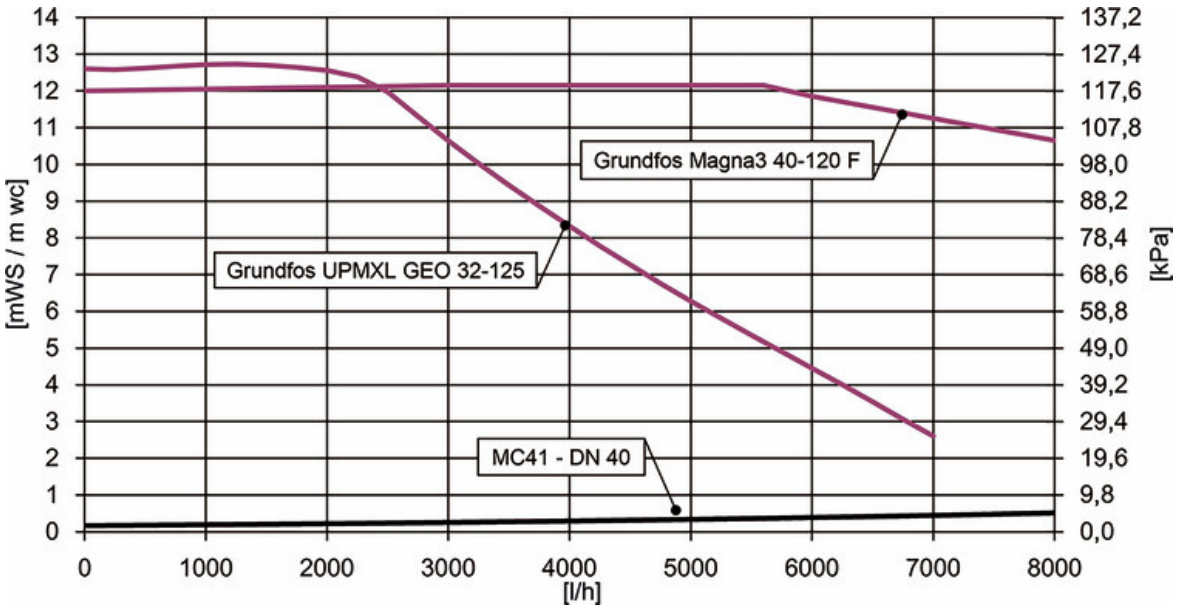
HeatBloC® MC41 DN 40 (1½")
direct / unmixed



HeatBloC® MC41 DN 40 (1½")		EEI*	with	Item no.
	**Grundfos MAGNA3 40-120 F**	< 0.18	▲	**4541011GH12**
	Grundfos UPMXL GEO 32-125, flow estimation	< 0.23	▲	**4541011GX12**

▲ = with pump ⊖ = without pump Ⓜ =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC42 DN 40 (1½")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Operating data

Range of performance	up to 125 kW
Temperature difference	20 K up to 5400 l/h
Kvs value	17.7
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC42 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 250 mm wc
Actuator SR10	230 V - 50 Hz

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 40 (1½")
Connection generator	Flange DN 40 / PN 6
Connection consumer	1½" int. thread
Height	790 mm
Installation length	560 mm
Centre distance	160 mm
Width	320 mm

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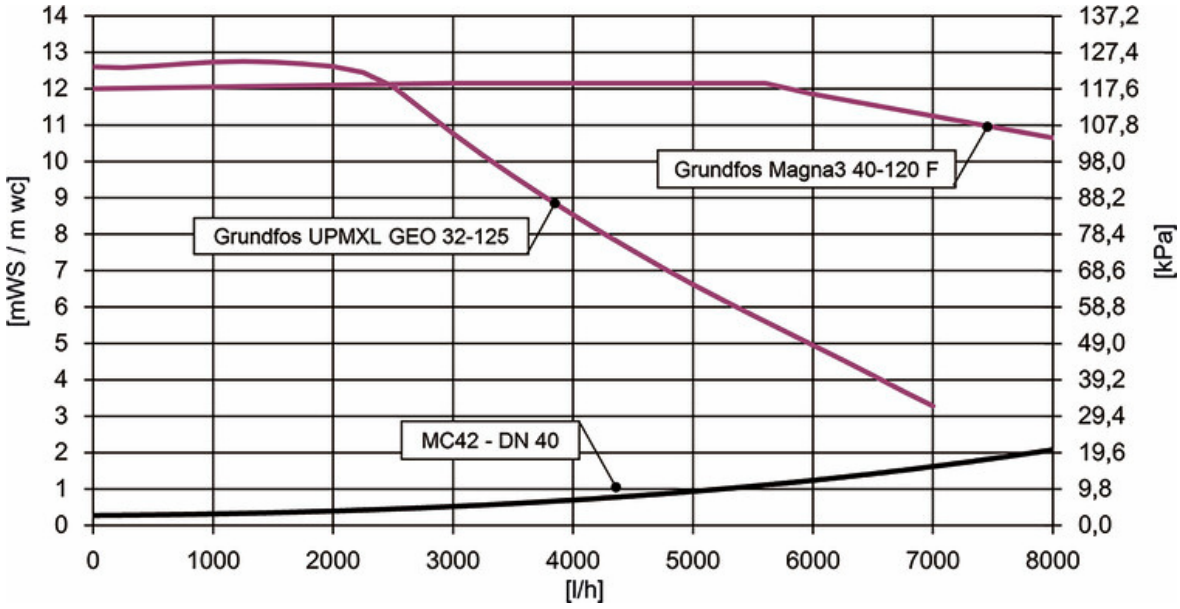
HeatBloC® MC42 DN 40 (1½")
3-way H-type mixing valve



HeatBloC® MC42 DN 40 (1½")		EEI*	with	Item no.
	**Grundfos MAGNA3 40-120 F**	< 0.18		**4541051MGH12**
	Grundfos UPMXL GEO 32-125, flow estimation	< 0.23		**4541051MGX12**

= with pump = without pump =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC43 DN 40 (1½")
Controlled circuit with constant value, 3-way mixing valve





Application range

- Radiant floor heating systems from 3.5 kW
- low-temperature heating systems

Operating data

Range of performance	up to 125 kW
Temperature difference	20 K up to 5400 l/h
Kvs value	17.7
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC43 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 250 mm wc
Actuator SR10	24 V AC/DC

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 40 (1½")
Connection generator	Flange DN 40 / PN 6
Connection consumer	1½" int. thread
Height	790 mm
Installation length	560 mm
Centre distance	160 mm
Width	320 mm

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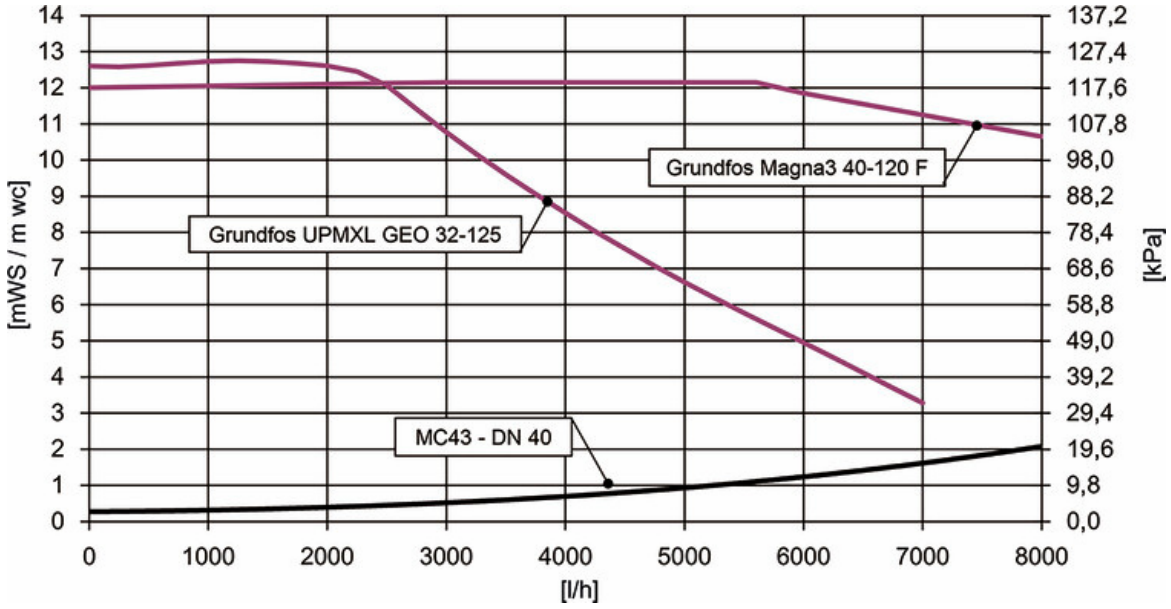
HeatBloC® MC43 DN 40 (1½")
Controlled circuit with constant value, 3-way mixing valve



HeatBloC® MC43 DN 40 (1½")		EEI*	with	Item no.
	**Grundfos MAGNA3 40-120 F**	< 0.18	▲Ⓜ	**4541071MGH12**
	Grundfos UPMXL GEO 32-125, flow estimation	< 0.23	▲Ⓜ	**4541071MGX12**

▲ = with pump ⊖ = without pump Ⓜ =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC41 DN 50 (2") direct / unmixed





Application range

- Boiler charging
- modulating temperature heating system

Operating data

Range of performance	up to 250 kW
Temperature difference	20 K up to 10800 l/h
Kvs value	31.2
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC41 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 250 mm wc

Dimensions

Nominal diameter	DN 50 (2")
Connection generator	Flange DN 50 / PN 6
Connection consumer	2" int. thread
Height	850 mm
Installation length	630 mm
Centre distance	180 mm
Width	320 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

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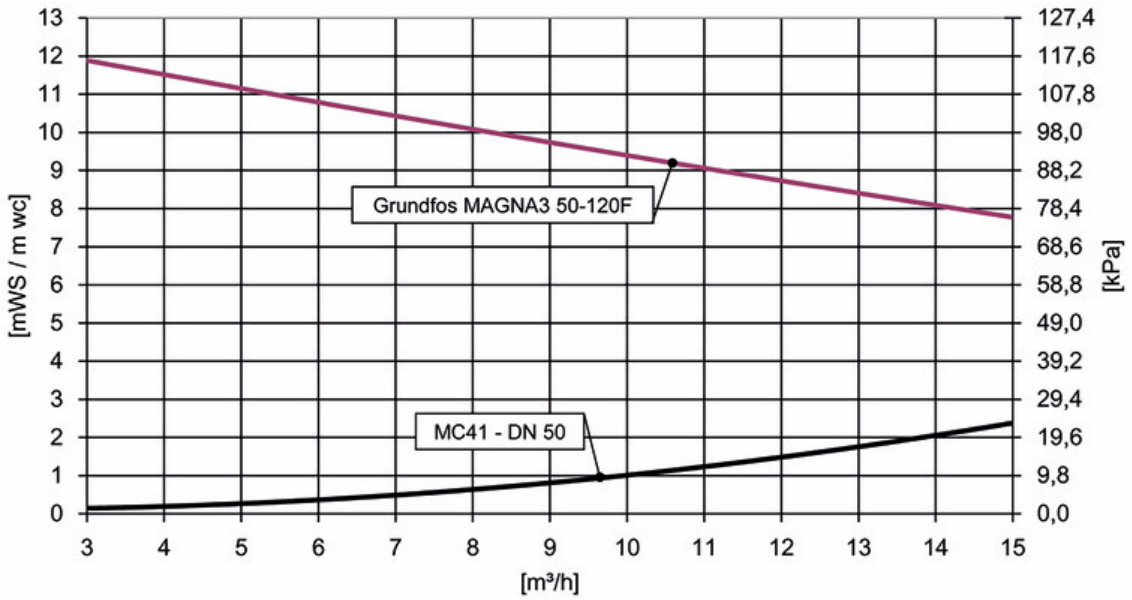
HeatBloC® MC41 DN 50 (2")
direct / unmixed



HeatBloC® MC41 DN 50 (2")		EEI*	with	Item no.
	**Grundfos MAGNA3 50-120 F**	< 0.18	⏏	**4551011GH12**

⏏ = with pump ⊖ = without pump Ⓜ =with actuator *EEI = Energy Efficiency Index

HeatBloC® MC42 DN 50 (2")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Operating data

Range of performance	up to 230 kW
Temperature difference	20 K up to 9980 l/h
Kvs value	25.7
Max. operating pressure	6 bar
Operating temperature	110 °C

Functions

- differential pressure controlled, for the automatic, dynamic balancing of the distribution manifold
- for hydraulic balancing of the radiators, the HeatBloC® MC42 as well as the PAW Connect App are necessary
- the connection of 1-8 controllers to the power supply requires a connection set
- the integration in a Smart Home environment is possible with the MCom communication set (item no.: 1398731)

Technical data

Equipment

Controller MCom 3.4	24 Vdc, max. 200 mA Interface: Modbus RTU (integration into building control and SmartHome systems)
Temperature sensors	1x Pt1000 in the flow and return
Differential pressure sensors	0-600 mbar
Thermometer	0 - 120 °C
Check valves	1 x 250 mm wc
Actuator SR10	230 V - 50 Hz

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Dimensions

Nominal diameter	DN 50 (2")
Connection generator	Flange DN 50 / PN 6
Connection consumer	2" int. thread
Height	850 mm
Installation length	630 mm
Centre distance	180 mm
Width	360 mm

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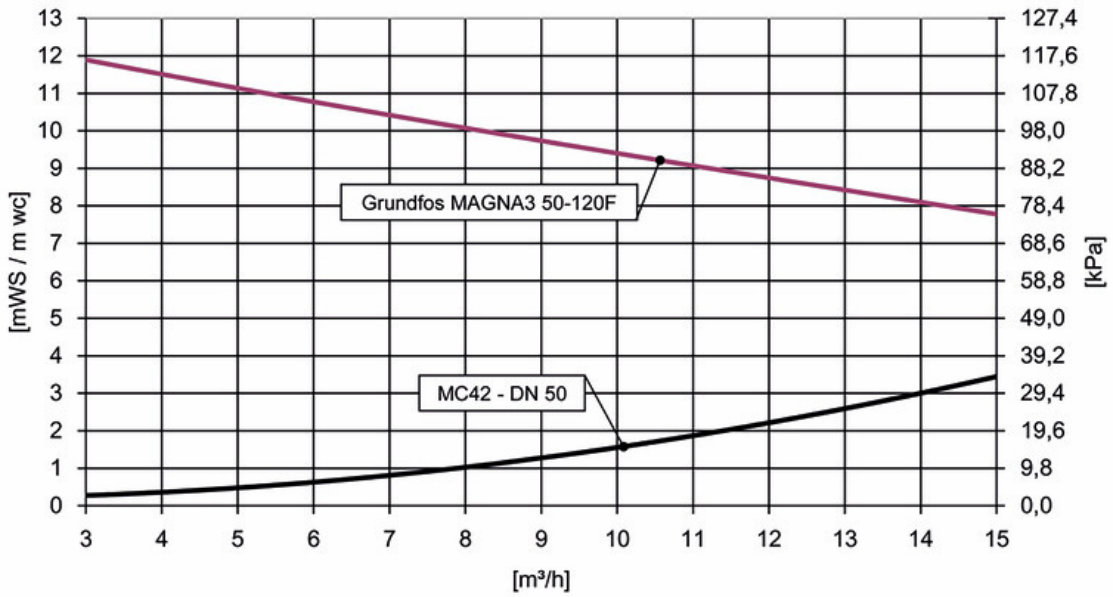
HeatBloC® MC42 DN 50 (2")
3-way H-type mixing valve



HeatBloC® MC42 DN 50 (2")		EEI*	with	Item no.
	**Grundfos MAGNA3 50-120 F**	< 0.18	▲	**4551051MGH12**

▲ = with pump ⊖ = without pump Ⓜ =with actuator *EEI = Energy Efficiency Index

Equipment HeatBloC® MCom DN 25 up to DN 50

	**Modular distribution manifold DN 25, 2-fold**	**34123**
	Modular distribution manifold DN 25, 3-fold	**34133**
	Modular distribution manifold DN 25, 4-fold	**34143**
	Modular distribution manifold DN 25, 5-fold	**34153**
	Modular distribution manifold DN 25, 6-fold completely made of brass ; completely premounted entirely insulated with EPP half-shells extremely low resistance, free passage d = 36 mm up to 6 groups, premounted, extendable several boiler connections possible, for higher outputs	**34163**
	**Modular distribution manifold DN 32, 2-fold**	**37123**
	Modular distribution manifold DN 32, 3-fold	**37133**
	Modular distribution manifold DN 32, 4-fold	**37143**
	Modular distribution manifold DN 32, 5-fold	**37153**
	Modular distribution manifold DN 32, 6-fold completely made of brass; completely premounted entirely insulated with EPP half-shells extremely low resistance, free passage d = 50 mm up to 6 groups, premounted, extendable several boiler connections possible, for higher outputs	**37163**
	**Modular distribution manifold DN 40, 2-fold**	**4112**
	Modular distribution manifold DN 40, 3-fold	**4113**
	Modular distribution manifold DN 40, 4-fold modular distribution manifold made of brass connecting flanges as slip-on flanges made of steel seals and screws for boiler connection DN 50 included completely premounted; entirely insulated with EPP shells extremely low resistance, free passage d = 64 mm up to 4 groups, premounted, extendable boiler connections DN 50	**4114**
	**Modular distribution manifold DN 50, 2-fold**	**5112**
	Modular distribution manifold DN 50, 3-fold	**5113**
	Modular distribution manifold DN 50, 4-fold modular distribution manifold made of brass connecting flanges as slip-on flanges made of steel gaskets and screws for boiler connection DN 65 included completely premounted; entirely insulated with EPP shells extremely low resistance, free passage d = 84 mm up to 4 groups, premounted, extendable boiler connections DN 65	**5114**
	**Manifold DN 25 (1"), 2- / 3-fold** The distribution manifold V23 - DN 25 is a completely insulated brass manifold for hydronic heating. Depending on the size, two or three HeatBloC®s can be connected to the manifold. The HeatBloC®s DN 25 can be directly mounted onto or under the distribution manifolds V23 - DN 25 without any other accessories.	**433413**
	**MCom communication set** For WiFi communication with an Apple or Android terminal. The communication module is the condition for for the automatic hydraulic balancing of the radiators via the PAW app. You can get the corresponding app in the App Store or Google Play Store by searching for "PAW MCom". With insulation and device for the installation on the modular distribution manifold Communication module Raspberry Pi with Modbus cable WLAN adapter 802.11n nano Wall power supply 5 V DC	**1398731**

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Equipment HeatBloC® MCom DN 25 up to DN 50

	**Connection set for MCom** Mains cable (24 V DC, RJ12, RS485) for the connection of the MCom controllers to the power supply. Please note: For the function of a MC system with up to 8 controllers, one connection set is necessary.	**1398700**
	**PowerLine Case** for extending the reach of the WiFi radio network during the hydraulic balancing	**1398736**
	**Plug adapter** RJ12 adapter, for connecting the MCom system as Modbus-RTU-Slave (GLT, Loxone) to external systems	**1398710**
	**KM2 Interface adapter** Modbus-IP client for visualising the system parameters in the Modbus-IP network or for system integration into VBus.NET. - Optional accessory for SC5.14 - Optional accessory for FC4.13	**1309001**
	**Maintenance set DPS - DN 25 / DN 32 (1"/1¼")** 1x sealing cap 2x strainer	**N00257**
	**Wall bracket for HeatBloC® DN 25 - DN 32** Consisting of: wall bracket (galvanised steel), mounting equipment DN 25 / DN 32: Possible wall distance: 155 mm Not required for installation with a PAW modular distribution manifold	**34722**
	**Wall bracket for modular distribution manifold - DN 25 (1") - DN 32 (1¼")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**34721**
	**Wall bracket set for module heating circuit - DN 25 (1")** Components: 2 x 1½" nut, mounting plate, wall bracket possible wall distance: 155 mm	**3422SET**
	Wall bracket set for module heating circuit - DN 32 Components: 2 x 2" nut, mounting plate, wall bracket possible wall distance: 142.5-167.5 mm	**3722SET**
	**Wall bracket for HeatBloC® DN 40 (1½")** Components: Wall bracket, 2 gaskets, mounting equipment, distance of the pipe axis to the wall A = 270 mm	**41641**

Equipment HeatBloC® MCom DN 25 up to DN 50

	**Wall bracket for HeatBloC®s - DN 50 (2")** Components: Wall bracket (galvanised steel), 2 gaskets, mounting equipment, distance of the pipe axis to the wall A = 400 mm	**41642**
	**Wall bracket set for modular distribution manifold - DN 40 (1½")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**41651**
	**Wall bracket set for modular distribution manifold - DN 50 (2")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**41652**
	**Floor bracket set for modular distribution manifold - DN 40 / 50 (1½"/ 2")** Components: 2 floor brackets (galvanized steel), 4 wall plugs, 4 screws, 2 screws for fixing the distribution manifold onto the floor brackets Height = adjustable 1,050 - 1,080 mm, for shortening simply cut off	**41671**
	**Extension set HeatBloC® MCom - DN 25 / 32** Required extension set for operating MCom heating circuits DN 25/32 when used in building cooling and heating. With the extension set, the thermal separation of electronic components is achieved in order to avoid damage caused by condensate. The thermometers are replaced by condensate-proof thermometers.	**4537023**
	**Extension set HeatBloC® MCom - DN 40 / 50** Required extension set for operating MCom heating circuits DN 40/50 when used in building cooling and heating. With the extension set, the thermal separation of electronic components is achieved in order to avoid damage caused by condensate. The thermometers are replaced by condensate-proof thermometers.	**4546021**

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HeatBloC®
Heating technology



HeatBloC®
Standard series DN 20-50

Catalogue 04/2025

Systems, valves and fittings
for the use in hot water heating systems

Valid for the EU

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All HeatBloC®s offer the following advantages:

Preassembled group of fittings for heating circuits

High flexibility during assembly
modules can be used in nearly any combination

Ball valve with full port, gaskets of the spindle can be replaced during operation

Flat-sealing connections, 1" external thread
including 1" union nut for assembly on a PAW distribution manifold. With PAW mounting equipment, the HeatBloC® can be installed on wall brackets.

Large ball valve handles,
easy handling, visible closing position

EnEV-compliant functional insulation
made of durable elastic EPP, complete insulation of valves and fittings, ventilation opening to cool the pump.
The insulation for the distribution manifold is integrated in the heating circuit insulation.

Free access to the pump head

Check valve in the return pipe
can be opened, 200 mm wc, spring-loaded, and thus also suited for horizontal and overhead installation

Flow on the right = standard
The HeatBloC®s can be delivered with flow on the left against additional charge.

Flow and return line can be changed on site,
also for heating circuits with mixing valve

All water-carrying parts are made of brass

Full metal thermometer
can be pulled off, with immersion sleeve, integrated in the ball valve

PAW heating pumps with high-efficiency technology (ECM technology)
fitted with 2 m cable, already installed, integrated in the insulation, pressure tested, serial number, perfectly designed system, pump characteristics, EuP/ErP READY

pump can be isolated
so that it can be replaced without draining

At the end of the chapter, you will find the complete mounting equipment for the modular system DN 20.

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Product range HeatBloC®
Heating circuits DN 20 - types

K31
direct / unmixed



up to 30 kW*

K32
with 3-way mixing valve



up to 21 kW*

K33
Controlled circuit with constant value, 3-way mixing valve with bypass 0-50%



up to 5 kW*

K34
3-way mixing valve with bypass 0-50%



up to 21 kW*

K36
Boiler charging set with thermal control valve



up to 10 kW*

*Temperature difference = 20 K

HeatBloC® K31 DN 20 (¾")
direct / unmixed





Application range

- Boiler charging

Recommended application range

- up to 30 kW
- 20 K up to 1300 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	4.7

Technical data

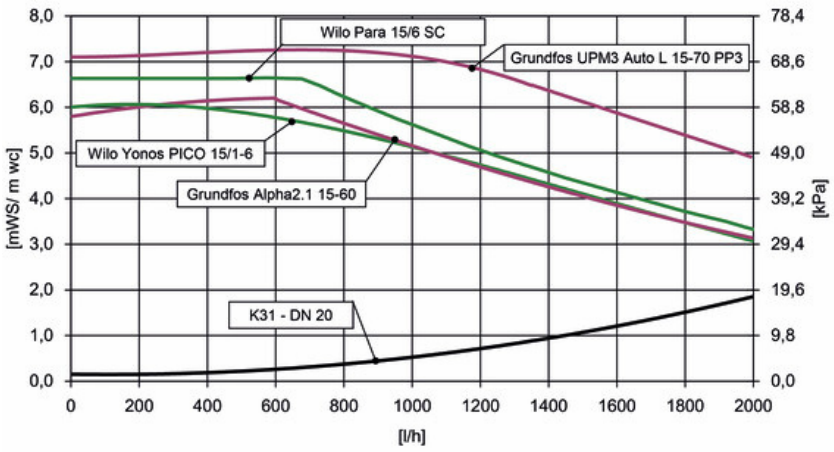
Dimensions

Nominal diameter	DN 20 (¾")
Connection generator	1" ext. thread, flat sealing
Connection consumer	¾" int. thread
Height	385 mm
Installation length	255 mm
Centre distance	90 mm
Width	180 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K31 DN 20 (¾")		EEI*	with	Item no.
	**Wilo Para SC 15/6-43**	< 0.20	▲	**32013WP6**
	Wilo Yonos PICO 15/1-6	< 0.20	▲	**32013WN06**
	Grundfos ALPHA2.1 15-60	< 0.17	▲	**32013GH6**
	Grundfos UPM3 Auto 15-70	< 0.20	▲	**32013GM6**
	without pump - for pumps with 1" ext. thread x 130 mm		⊖	**32013**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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HeatBloC® K32 DN 20 (¾")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Recommended application range

- up to 20 kW
- 20 K up to 905 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	3.7

Technical data

Dimensions

Nominal diameter	DN 20 (¾")
Connection generator	1" ext. thread, flat sealing
Connection consumer	¾" int. thread
Height	385 mm
Installation length	255 mm
Centre distance	90 mm
Width	180 mm

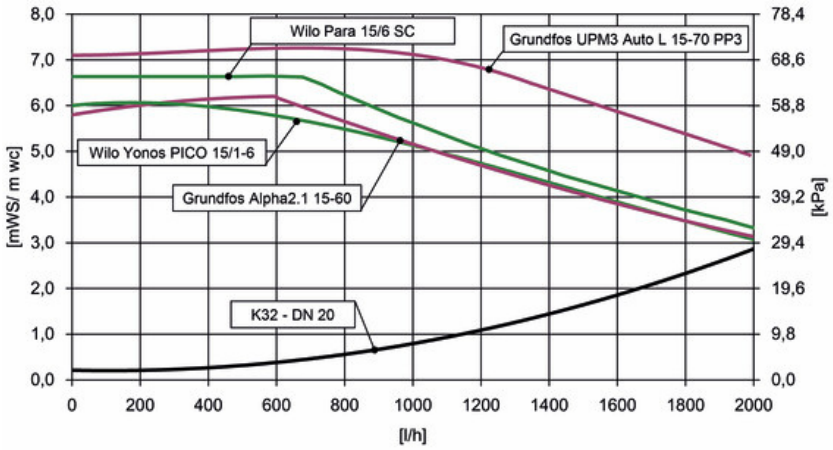
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR2	230 V - 50 Hz

Differential pressure diagram



HeatBloC® K32 DN 20 (¾")		EEI*	with	Item no.
	**Wilo Para SC 15/6-43**	< 0.20	▲Ⓜ	**32053MWP6**
	Wilo Yonos PICO 15/1-6	< 0.20	▲Ⓜ	**32053MWN06**
	Grundfos ALPHA2.1 15-60	< 0.17	▲Ⓜ	**32053MGH6**
	Grundfos UPM3 Auto 15-70	< 0.20	▲Ⓜ	**32053MGM6**
	without pump - for pumps with 1" ext. thread x 130 mm		⊖Ⓜ	**32053M**
	Wilo Para SC 15/6-43	< 0.20	▲	**32053WP6**
	Wilo Yonos PICO 15/1-6	< 0.20	▲	**32053WN06**
	Grundfos ALPHA2.1 15-60	< 0.17	▲	**32053GH6**
	Grundfos UPM3 Auto 15-70	< 0.20	▲	**32053GM6**
	without pump - for pumps with 1" ext. thread x 130 mm		⊖	**32053**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

HeatBloC® K33 DN 20 (¾")
Constant-value mixing valve





Application range

- For low-temperature heating systems controlled by a mixing valve

Recommended application range

- up to 5 kW
- 20 K up to 430 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	1.3
Adjustment range bypass	0 - 50 %
Adjusting range contact thermostat	20-60 °C

Technical data

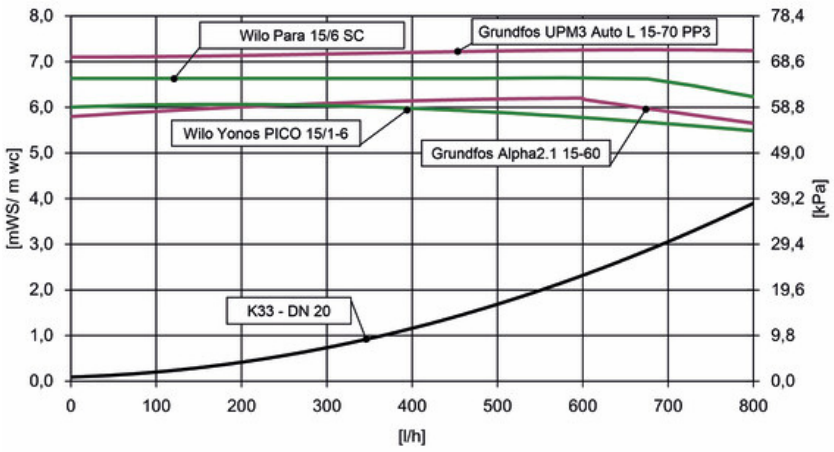
Dimensions

Nominal diameter	DN 20 (¾")
Connection generator	1" ext. thread, flat sealing
Connection consumer	¾" int. thread
Height	385 mm
Installation length	255 mm
Centre distance	90 mm
Width	180 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K33 DN 20 (¾")		EEI*	with	Item no.
	**Wilo Para SC 15/6-43**	< 0.20	▲	**32073WP6**
	Wilo Yonos PICO 15/1-6	< 0.20	▲	**32073WN06**
	Grundfos ALPHA2.1 15-60	< 0.17	▲	**32073GH6**
	Grundfos UPM3 Auto 15-70	< 0.20	▲	**32073GM6**
	without pump - for pumps with 1" ext. thread x 130 mm		⊖	**32073**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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HeatBloC® K34 DN 20 (¾")
3-way bypass mixing valve





Application range

- for low-temperature heating systems controlled by a mixing valve

Recommended application range

- up to 20 kW
- 20 K up to 905 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	3.7
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 20 (¾")
Connection generator	1" ext. thread, flat sealing
Connection consumer	¾" int. thread
Height	385 mm
Installation length	255 mm
Centre distance	90 mm
Width	180 mm

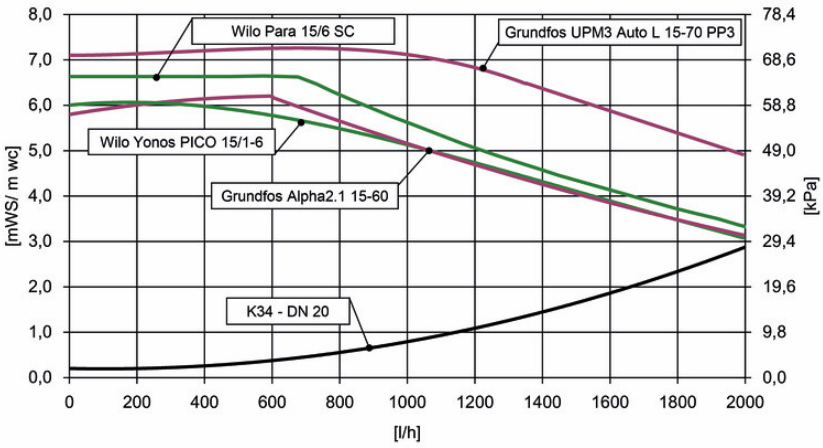
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR2	230 V - 50 Hz

Differential pressure diagram



HeatBloC® K34 DN 20 (¾")		EEI*	with	Item no.
	**Wilo Para SC 15/6-43**	< 0.20	▲Ⓜ	**32063MWP6**
	Wilo Yonos PICO 15/1-6	< 0.20	▲Ⓜ	**32063MWN06**
	Grundfos ALPHA2.1 15-60	< 0.17	▲Ⓜ	**32063MGH6**
	Grundfos UPM3 Auto 15-70	< 0.20	▲Ⓜ	**32063MGM6**
	without pump - for pumps with 1" ext. thread x 130 mm		⊖Ⓜ	**32063M**
	Wilo Para SC 15/6-43	< 0.20	▲	**32063WP6**
	Wilo Yonos PICO 15/1-6	< 0.20	▲	**32063WN06**
	Grundfos ALPHA2.1 15-60	< 0.17	▲	**32063GH6**
	Grundfos UPM3 Auto 15-70	< 0.20	▲	**32063GM6**
	without pump - for pumps with 1" ext. thread x 130 mm		⊖	**32063**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

HeatBloC® K36 DN 20 (¾")
Boiler charging set with thermal control valve





Application range

- Return flow temperature maintenance for solid fuel boilers, wood firing and stove heating systems

Recommended application range

- up to 10 kW
- 10 K up to 860 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	2.5

Technical data

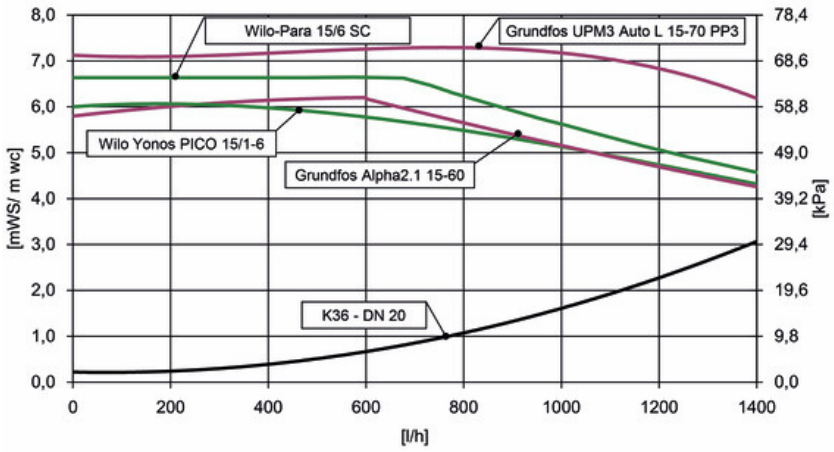
Dimensions

Nominal diameter	DN 20 (¾")
Connection generator	¾" int. thread
Connection consumer	¾" int. thread
Height	385 mm
Installation length	347 mm
Centre distance	90 mm
Width	180 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K36 DN 20 (¾")			EEI*	with	Item no.
	**Wilo Para SC 15/6-43**	Opening temperature: 45 °C	< 0.20	▲	**320353WP6**
	Wilo Yonos PICO 15/1-6	Opening temperature: 45 °C	< 0.20	▲	**320353WN06**
	Grundfos ALPHA2.1 15-60	Opening temperature: 45 °C	< 0.17	▲	**320353GH6**
	Grundfos UPM3 Auto 15-70	Opening temperature: 45 °C	< 0.20	▲	**320353GM6**
	without pump - for pumps with 1" ext. thread x 130 mm	Opening temperature: 45 °C		⊖	**320353**
	Wilo Para SC 15/6-43	Opening temperature: 60 °C	< 0.20	▲	**320373WP6**
	Wilo Yonos PICO 15/1-6	Opening temperature: 60 °C	< 0.20	▲	**320373WN06**
	Grundfos ALPHA2.1 15-60	Opening temperature: 60 °C	< 0.17	▲	**320373GH6**
	Grundfos UPM3 Auto 15-70	Opening temperature: 60 °C	< 0.20	▲	**320373GM6**
	without pump - for pumps with 1" ext. thread x 130 mm	Opening temperature: 60 °C		⊖	**320373**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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Equipment for modular sytem DN 20

	**Union nut DN 20 (¾")** Brass, to screw insertion pieces for soldering below distribution manifolds DN 20 (¾")	**2055**
	**Sealing for nut - DN 20 (¾")** asbestos-free, outside diameter: 30 mm, inside diameter: 21 mm, height: 2 mm	**2057**
	**Conversion kit DN 20 (¾") from flow on the left to flow on the right**	**31071**
	Conversion kit DN 20 (¾") from flow on the right to flow on the left The conversion kit for changing the flow line is mandatory for mixing valves K33 with bypass at the front.	**31072**
	**Modular distribution manifold DN 20, 2-fold**	**3112**
	Modular distribution manifold DN 20, 3-fold	**3113**
	Modular distribution manifold DN 20, 4-fold	**3114**
	Modular distribution manifold DN 20, 5-fold	**3115**
	Modular distribution manifold DN 20, 6-fold completely made of brass; completely premounted flow and return chamber 95 % thermally separated manifolds are delivered with insulation caps, the insulation for the manifold is integrated into the insulation of the HeatBloC®s extremely low resistance, free passage d = 25 mm up to 6 groups, premounted, extendable several boiler connections possible, for higher outputs	**3116**
	**Wall bracket for HeatBloC® DN 20 (¾")** Components: 2 wall bracket sets, mounting equipment Possible wall distance: 70-100 mm, distance: 15 mm For 5-fold modular distribution manifolds, we recommend to use two wall bracket sets.	**3121**
	**Wall bracket set for module heating circuit - DN 20** Components: mounting plate, wall bracket, 2 x 1" nut, possible centre distance: 55-115 mm distance: 15 mm	**3122SET**
	**Coupling piece for overhead installation - DN 20 (¾")** Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing. Please note: When you use wall brackets, an additional mounting plate is necessary for installing a 2-fold distribution manifold MV2.	**31241**
	**Mounting plate DN 20 (¾")** Components: mounting plate, 2 gaskets, 2 x 1" nut, 2 x reducing nipple 1" ext. thread x ¾" ext.thread for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3125**

Equipment for modular sytem DN 20

	**Overflow set DN 20 (¾")** For hydronic heating installations with standard circulation pumps and thermostatic or zone valves. The PAW differential pressure overflow valve reduces noises due to circulation and keeps the pump pressure constant, even when the flow in the radiators is reduced (particularly when thermostatic valves are used). The valve controls the flow rate in proportion to the thermostatic or zone valves. The return temperature is increased as soon as the valve opens. For weather compensated control we recommend to mount the sensor to the flow line directly behind the circulation pump. The higher return temperature guarantees that the boiler does not corrode.	**31301**
	**Connection set DN 20 (¾")** Consisting of 2 adapter pieces with 1" nut and ¾" internal thread for connecting pipes with ¾" external thread under modular distribution manifolds DN 20 (¾")	**3131**
	**Piping group DN 20** Piping group for hydraulic separator, consisting of 2 pipe sections, union nuts and seals, for connection of a vertically mounted hydraulic separator below a PAW distribution manifold. Flat-sealing connection, completely insulated, outlet on the left or on the right.	**3142KS1**
	**Extension set for low-loss header - DN 20 (¾")** for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Range of application up to 950 l/h, max. up to a 3-fold distribution manifold MV3. Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**3143**
	**Fitting for for heat flowmeter - DN 20 (¾")** - for HeatBloC®s DN 20 - for heat flowmeters with the dimensions ¾" external thread x 110 mm - to be mounted above the insulation Scope of delivery: - Thermo ball valve - Screw-in fittings - Union nuts - Adapter pipe - Flange fitting - T-piece with counter nut and immersion sleeve - Seals	**3145**
	**Flush and drain set DN 20 (¾")** 2 x counter-T-pieces ¾" with fill and drain valve, each equipped with an extension piece, permits to flush and drain individual HeatBloC®s.	**3161**
	**Set extension pieces DN 20 - DN 25** Set of adaptor pieces for the overhead installation of HeatBloC®s DN 25 below distribution manifolds DN 20, centre distance changed from 90 mm to 125 mm, connections 1" nut x 1" flange (for nut 1½"), flat sealing.	**34352**
	**Safety set DN 20 (¾"), up to 50 kW** for distribution manifolds DN 20, with self-sealing counter T-piece ¾" x ½", outlet ¾" with cap for expansion tank, pressure relief valve ½" x ¾", 3 bar, up to 50 kW, pressure gauge 0-4 bar	**5257**

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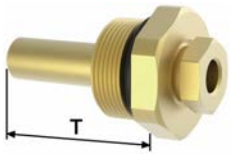
Equipment for modular sytem DN 20

	**Cutting-ring compression fitting DN 20 (¾"), d = 15 mm**	**561215**
	Cutting-ring compression fitting DN 20 (¾"), d = 18 mm	**561218**
	Cutting-ring compression fitting DN 20 (¾"), d = 22 mm ¾" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C.	**561222**
	**Immersion sleeve ½" ext. thread x T = 30 mm**	**566001**
	Immersion sleeve ¼" ext. thread x T = 60 mm	**566002**
	Immersion sleeve ½" ext. thread x T = 60 mm	**5660021**
	Immersion sleeve ½" ext. thread x T = 100 mm	**566003**
	Immersion sleeve ½" ext. thread x T = 150 mm For all immersion sleeves: for the installation of the temperature sensors (d = 6 mm) in the storage tank, in the collector and the hydraulic separator. Attention: suitable for ball valves until 2016!	**566004**
	**PAW actuator SR2** Easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, due to the removable scale it is suited for flow on the right or left side, change-over switch for manual / automatic operation Electrical connection: 230 V - 50 Hz Input power: 1 W Torque: min. 2 Nm Setting time for 90°: 105 s	**705013**
	**Connection set for diaphragm expansion tank - DN 20 (¾")** for assembly to distribution manifolds DN 20, with tank connector ¾", wall bracket and mounting equipment, armoured hose with bend ¾" x 700 mm, maximum tank diameter = 440 mm	**7509**
	**Contact thermostat 20-60 °C** Contact thermostat for limiting the flow temperature, adjustable from 20 - 60 °C	**N00083**





All HeatBloC®s offer the following advantages:

Preassembled group of fittings for heating circuits

High flexibility during assembly
modules can be used in nearly any combination

Ball valve with full port, gaskets of the spindle can be replaced during operation

Flat-sealing connections, 1½" external thread
including 1½" union nut for assembly on a PAW distribution manifold. With PAW mounting equipment, the HeatBloC® can be installed on wall brackets.

Large ball valve handles,
easy handling, visible closing position

EnEV-compliant functional insulation
made of durable elastic EPP, complete insulation of the valves and fittings with sealing lips, ventilation opening to cool the pump.

Free access to the pump head

Check valve in the return pipe
can be opened, 200 mm wc, spring-loaded, and thus also suited for horizontal and overhead installation

Flow on the right = standard
The HeatBloC®s can be delivered with flow on the left against additional charge.

Flow and return line can be changed on site
also for heating circuits with mixing valve

All water-carrying parts are made of brass

Full metal thermometer
can be pulled off, with immersion sleeve, integrated in the ball valve

PAW heating pumps with high-efficiency technology (ECM technology)
fitted with 2 m cable, already installed, integrated in the insulation, pressure tested, serial number, perfectly designed system, pump characteristics, EuP/ErP READY

pump can be isolated
so that it can be replaced without draining

At the end of the chapter, you will find the complete mounting equipment for the modular system DN 25.

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Product range HeatBloC®
Heating circuits DN 25

K31 direct / unmixed	K32 with 3-way mixing valve	K33 Controlled circuit with constant value, 3-way mixing valve with bypass 0-50%
		
up to 50 kW*	up to 40 kW*	up to 10 kW*

K33R Controlled circuit with constant value, electronic, 3-way mixing valve with bypass 0-50%	K34 3-way mixing valve with bypass 0-50%	K35 3-temperature mixing valve
		
up to 22.5 kW* (radiant panel heating, ΔT = 10 K) up to 45 kW* (return flow temperature maintenance, ΔT = 20 K)	up to 45.5 kW*	up to 32.5 kW*

K36E direct / unmixed	K38 with 4-way mixing valve	K34R, weather compensated controller 3-way mixing valve with bypass 0-50 %
		
up to 40 kW*	up to 33 kW*	up to 45.5 kW*

*Temperature difference = 20 K

HeatBloC® K31 DN 25 (1")
direct / unmixed





Application range

- Boiler charging

Recommended application range

- up to 50 kW
- 20 K up to 2150 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	7.2

Technical data

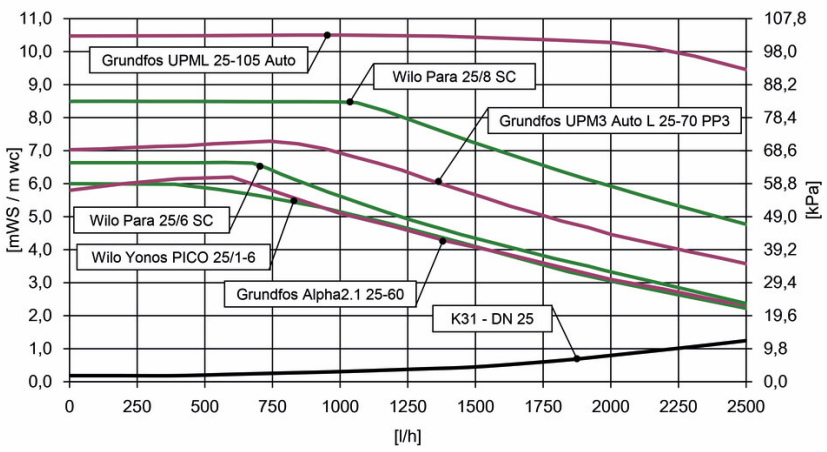
Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K31 DN 25 (1")		EEI*	with	Item no.
	**Grundfos ALPHA2.1 25-60**	< 0.17	⏏	**36013GH6**
	Grundfos UPM3 Auto 15-70	< 0.20	⏏	**36013GM6**
	Grundfos UPML 25-105 AUTO	< 0.23	⏏	**36013GL9**
	Wilo Para SC 25/8-60/O	< 0.20	⏏	**36013WP8**
	Wilo Para SC 25/6-43	< 0.20	⏏	**36013WP6**
	Wilo Yonos PICO 25/1-6	< 0.20	⏏	**36013WN06**
	without pump - for pumps with 1½" ext. thread x 180 mm		⊖	**36013**

⏏ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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HeatBloC® K32 DN 25 (1")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Recommended application range

- up to 40 kW
- 20 K up to 1750 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	5.7

Technical data

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

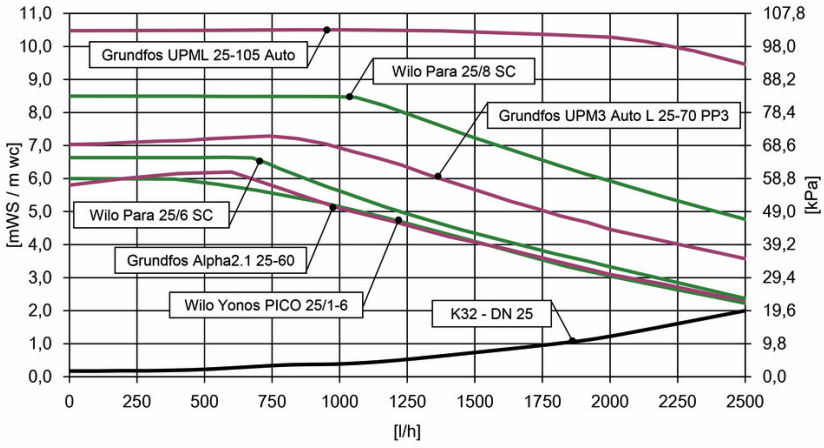
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR5	230 V - 50 Hz

Differential pressure diagram



HeatBloC® K32 DN 25 (1")		EEI*	with	Item no.
	**Wilo Para SC 25/6-43**	< 0.20	▲Ⓜ	**36053MWP6**
	Wilo Para SC 25/8-60/O	< 0.20	▲Ⓜ	**36053MWP8**
	Wilo Yonos PICO 25/1-6	< 0.20	▲Ⓜ	**36053MWN06**
	Grundfos ALPHA2.1 25-60	< 0.17	▲Ⓜ	**36053MGH6**
	Grundfos UPM3 Auto 15-70	< 0.20	▲Ⓜ	**36053MGM6**
	Grundfos UPML 25-105 AUTO	< 0.23	▲Ⓜ	**36053MGL9**
	without pump - for pumps with 1½" ext. thread x 180 mm		⊖Ⓜ	**36053M**
	Wilo Para SC 25/6-43	< 0.20	▲	**36053WP6**
	Wilo Para SC 25/8-60/O	< 0.20	▲	**36053WP8**
	Wilo Yonos PICO 25/1-6	< 0.20	▲	**36053WN06**
	Grundfos ALPHA2.1 25-60	< 0.17	▲	**36053GH6**
	Grundfos UPM3 Auto 25-70	< 0.20	▲	**36053GM6**
	Grundfos UPML 25-105 AUTO	< 0.23	▲	**36053GL9**
	without pump - for pumps with 1½" ext. thread x 180 mm		⊖	**36053**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

HeatBloC® K33 DN 25 (1")
Controlled circuit with constant value, 3-way mixing valve





Application range

- Radiant floor heating systems from 3.5 kW / low-temperature heating installations

Recommended application range

- up to 10 kW
- 10 K up to 860 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	3
Adjustment range bypass	0 - 50 %
Adjusting range contact thermostat	20-60 °C

Technical data

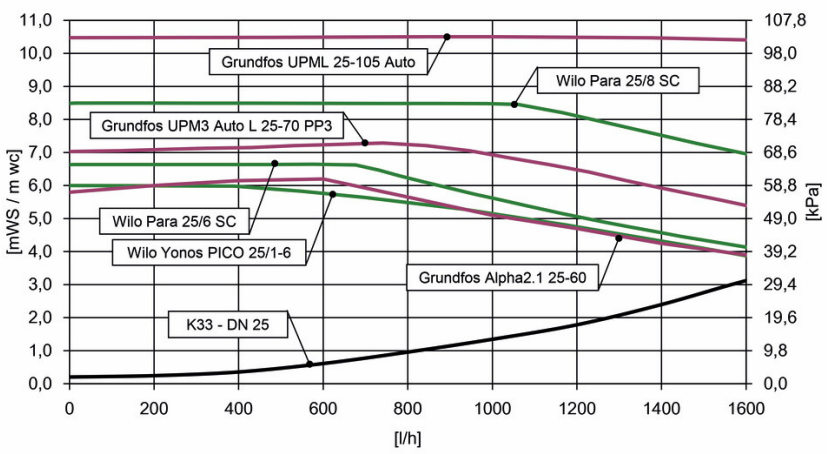
Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K33 DN 25 (1")		EEI*	with	Item no.
	**Wilo Para SC 25/6-43**	< 0.20	▲	**36073WP6**
	Wilo Para SC 25/8-60/O	< 0.20	▲	**36073WP8**
	Wilo Yonos PICO 25/1-6	< 0.20	▲	**36073WN06**
	Grundfos ALPHA2.1 25-60	< 0.17	▲	**36073GH6**
	Grundfos UPM3 Auto 25-70	< 0.20	▲	**36073GM6**
	Grundfos UPML 25-105 AUTO	< 0.23	▲	**36073GL9**
	without pump - for pumps with 1½" ext. thread x 180 mm		⊖	**36073**

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HeatBloC® K33R DN 25 (1")
Controlled circuit with constant temperature, electronically





Application range

- for thermally controlled radiant heating systems, for low-temperature heating systems, as a return flow temperature maintenance for solid fuel boilers, wood firing and stove heating systems

Recommended application range

- up to 22,5 / 45 kW
- 20 K up to 1940 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	6
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

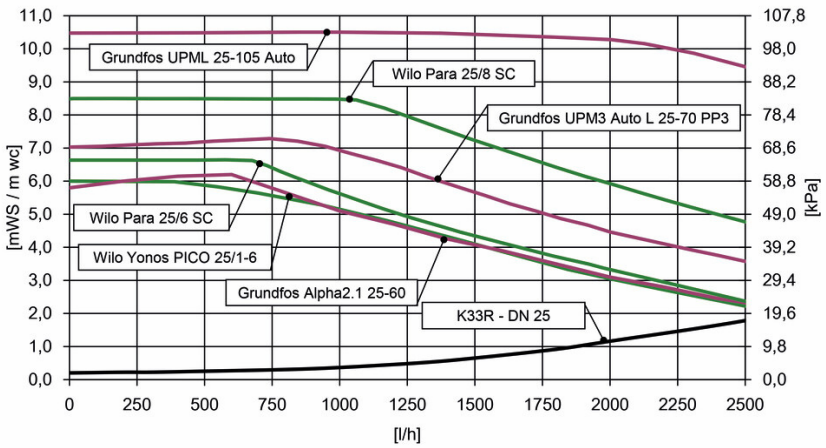
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Controller	Constant temp. controller PKR6

Differential pressure diagram



HeatBloC® K33R DN 25 (1")	EEI*	with	Item no.
Wilo Para SC 25/6-43	< 0.20	▲	**360463WP6**
Wilo Para SC 25/8-60/O	< 0.20	▲	**360463WP8**
Wilo Yonos PICO 25/1-6	< 0.20	▲	**360463WN06**
Grundfos ALPHA2.1 25-60	< 0.17	▲	**360463GH6**
Grundfos UPM3 Auto 25-70	< 0.20	▲	**360463GM6**
Grundfos UPML 25-105 AUTO	< 0.23	▲	**360463GL9**
without pump - for pumps with 1½" ext. thread x 180 mm		⊖	**360463**



= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

HeatBloC® K34 DN 25 (1")
3-way bypass mixing valve





Application range

- for low-temperature heating systems controlled by a mixing valve

Recommended application range

- up to 45 kW
- 20 K up to 1940 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	6
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

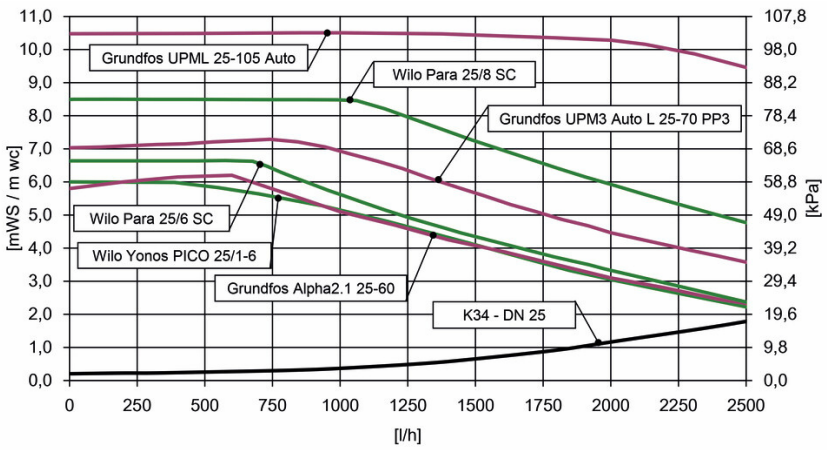
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR5	230 V - 50 Hz

Differential pressure diagram



HeatBloC® K34 DN 25 (1")		EEI*	with	Item no.
	**Wilo Para SC 25/6-43**	< 0.20	▲Ⓜ	**36063MWP6**
	Wilo Para SC 25/8-60/O	< 0.20	▲Ⓜ	**36063MWP8**
	Wilo Yonos PICO 25/1-6	< 0.20	▲Ⓜ	**36063MWN06**
	Grundfos ALPHA2.1 25-60	< 0.17	▲Ⓜ	**36063MGH6**
	Grundfos UPM3 Auto 25-70	< 0.20	▲Ⓜ	**36063MGM6**
	Grundfos UPML 25-105 AUTO	< 0.23	▲Ⓜ	**36063MGL9**
	without pump - for pumps with 1½" ext. thread x 180 mm		⊖Ⓜ	**36063M**
	Wilo Para SC 25/6-43	< 0.20	▲	**36063WP6**
	Wilo Para SC 25/8-60/O	< 0.20	▲	**36063WP8**
	Wilo Yonos PICO 25/1-6	< 0.20	▲	**36063WN06**
	Grundfos ALPHA2.1 25-60	< 0.17	▲	**36063GH6**
	Grundfos UPM3 Auto 25-70	< 0.20	▲	**36063GM6**
	Grundfos UPML 25-105 AUTO	< 0.23	▲	**36063GL9**
	without pump - for pumps with 1½" ext. thread x 180 mm		⊖	**36063**

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HeatBloC® K34R DN 25 (1")
weather-compensated





Application range

- for retrofitting of weather-compensated low-temperature heating systems controlled by a mixing valve

Recommended application range

- up to 45 kW
- 20 K up to 1940 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	6
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

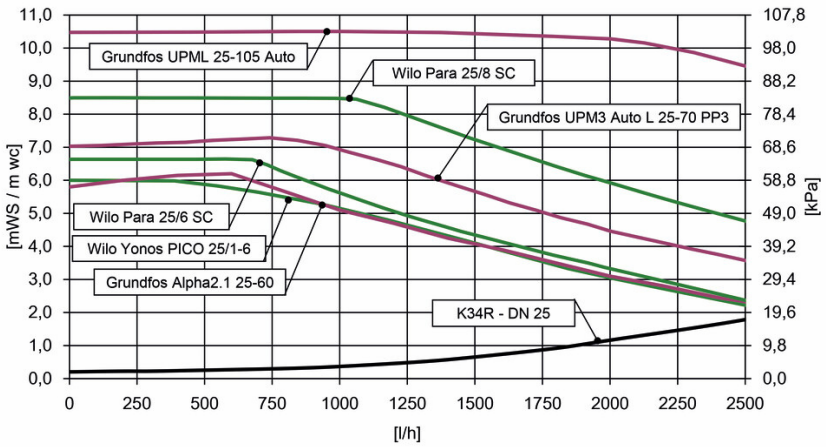
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Controller	Weather-comp. controller PWR6

Differential pressure diagram



HeatBloC® K34R DN 25 (1")	EEI*	with	Item no.
Wilo Para SC 25/6-43	< 0.20	▲Ⓜ	**360663MWP6**
Wilo Para SC 25/8-60/O	< 0.20	▲Ⓜ	**360663MWP8**
Wilo Yonos PICO 25/1-6	< 0.20	▲Ⓜ	**360663MWN06**
Grundfos ALPHA2.1 25-60	< 0.17	▲Ⓜ	**360663MGH6**
Grundfos UPM3 Auto 25-70	< 0.20	▲Ⓜ	**360663MGM6**
Grundfos UPML 25-105 AUTO	< 0.23	▲Ⓜ	**360663MGL9**
without pump - for pumps with 1½" ext. thread x 180 mm		⊖Ⓜ	**360663M**



= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

HeatBloC® K35 DN 25 (1")
3-temperatures mixing valve





Application range

- Heating installations with buffer tank and solar heating support

Recommended application range

- up to 32 kW
- 20 K up to 1400 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	4.1

Technical data

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	340 mm
Centre distance	125 mm
Width	250 mm

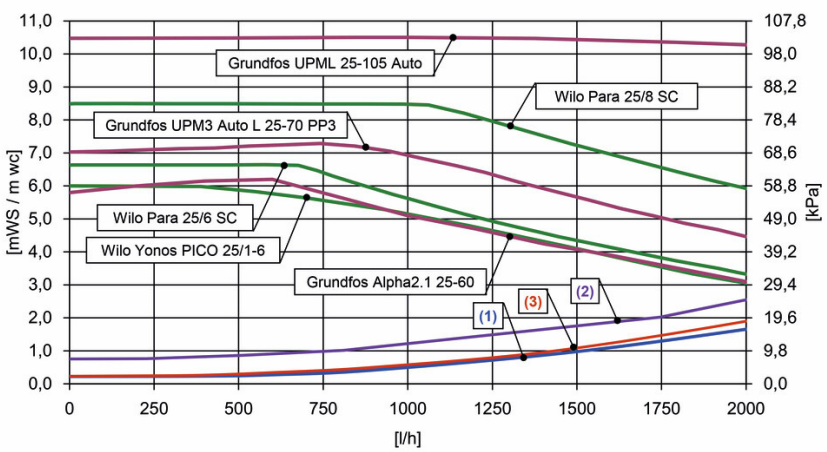
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR5	230 V - 50 Hz

Differential pressure diagram



(1) 100% return, Kvs value = 5.1 (2) low temperature flow, Kvs value = 4.1 (3) 100% high temperature flow, Kvs value = 4.7

HeatBloC® K35 DN 25 (1")		EEI*	with	Item no.
	**Wilo Para SC 25/6-43**	< 0.20	▲Ⓜ	**36093MWP6**
	Wilo Para SC 25/8-60/O	< 0.20	▲Ⓜ	**36093MWP8**
	Wilo Yonos PICO 25/1-6	< 0.20	▲Ⓜ	**36093MWN06**
	Grundfos ALPHA2.1 25-60	< 0.17	▲Ⓜ	**36093MGH6**
	Grundfos UPM3 Auto 25-70	< 0.20	▲Ⓜ	**36093MGM6**
	Grundfos UPML 25-105 AUTO	< 0.23	▲Ⓜ	**36093MGL9**
	without pump - for pumps with 1½" ext. thread x 180 mm		⊖Ⓜ	**36093M**
	Wilo Para SC 25/6-43	< 0.20	▲	**36093WP6**
	Wilo Para SC 25/8-60/O	< 0.20	▲	**36093WP8**
	Wilo Yonos PICO 25/1-6	< 0.20	▲	**36093WN06**
	Grundfos ALPHA2.1 25-60	< 0.17	▲	**36093GH6**
	Grundfos UPM3 Auto 25-70	< 0.20	▲	**36093GM6**
	Grundfos UPML 25-105 AUTO	< 0.23	▲	**36093GL9**
	without pump - for pumps with 1½" ext. thread x 180 mm		⊖	**36093**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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HeatBloC® K36E DN 25 (1")
Boiler charging set, with integrated overflow valve





Application range

- Return flow temperature maintenance for solid fuel boilers, wood firing and stove heating systems

Recommended application range

- up to 40 kW
- 20 K up to 1725 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	5.9

Technical data

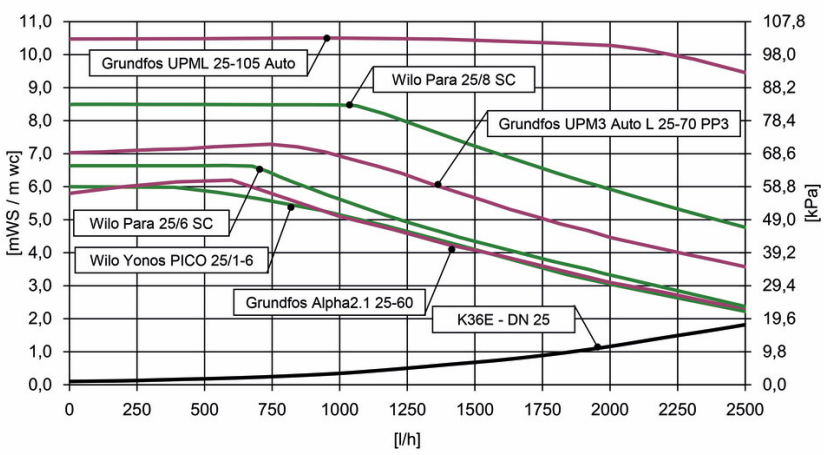
Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1" int. thread
Connection consumer	1½" int. thread
Height	383 mm
Installation length	408 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K36E DN 25 (1")			EEI*	with	Item no.
	**Wilo Para SC 25/6-43**	Opening temperature: 45 °C	< 0.20	▲	**360343WP6**
	Wilo Para SC 25/8-60/O	Opening temperature: 45 °C	< 0.20	▲	**360343WP8**
	Wilo Yonos PICO 25/1-6	Opening temperature: 45 °C	< 0.20	▲	**360343WN06**
	Grundfos ALPHA2.1 25-60	Opening temperature: 45 °C	< 0.17	▲	**360343GH6**
	Grundfos UPM3 Auto 25-70	Opening temperature: 45 °C	< 0.20	▲	**360343GM6**
	Grundfos UPML 25-105 AUTO	Opening temperature: 45 °C	< 0.23	▲	**360343GL9**
	without pump - for pumps with 1½" ext. thread x 180 mm	Opening temperature: 45 °C		⊖	**360343**
	Wilo Para SC 25/6-43	Opening temperature: 60 °C	< 0.20	▲	**360373WP6**
	Wilo Para SC 25/8-60/O	Opening temperature: 60 °C	< 0.20	▲	**360373WP8**
	Wilo Yonos PICO 25/1-6	Opening temperature: 60 °C	< 0.20	▲	**360373WN06**
	Grundfos ALPHA2.1 25-60	Opening temperature: 60 °C	< 0.17	▲	**360373GH6**
	Grundfos UPM3 Auto 25-70	Opening temperature: 60 °C	< 0.20	▲	**360373GM6**
	Grundfos UPML 25-105 AUTO	Opening temperature: 60 °C	< 0.23	▲	**360373GL9**
	without pump - for pumps with 1½" ext. thread x 180 mm	Opening temperature: 60 °C		⊖	**360373**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

Equipment for modular sytem DN 25

	**Fitting for heat flowmeter - DN 25 for unmixed HeatBloC®s** - for unmixed HeatBloC®s DN 25 - for heat flowmeters with the dimensions ¾" x 110 mm and 1" x 130 mm Scope of delivery: - Pump ball valve with check valve, can be opened (200 mm wc) - Screw-in fittings - Union nuts - Adapter pipe - Flange fitting - Reducers for immersion sensor (¼" ext. thread, self-sealing x M10 x 1 int. thread and ¼" ext. thread, self-sealing x M12 x 1.5 ext. thread) - Seals	**34453**
	**Fitting for heat flowmeter - DN 25 für mixed HeatBloC®s** - for HeatBloC®s DN 25 with 3-way or 4-wax mixing valve - for heat flowmeters with the dimensions ¾" x 110 mm and 1" x 130 mm Scope of delivery: - Screw-in fittings - Union nuts - Adapter pipe - Reducers for immersion sensor (¼" ext. thread, self-sealing x M10 x 1 int. thread and ¼" ext. thread, self-sealing x M12 x 1.5 ext. thread) - Non-return valve for mixing valve return - Seals	**34463**
	**HeatBloC® K31 DN 25 with fitting for heat meter** unmixed HeatBloC® K31 DN 25 (1"), but with preassembled fitting for heat flowmeter, without pump	**36113**
	**HeatBloC® K32 DN 25 with fitting for heat meter** mixed HeatBloC® K32 DN 25 (1"), but with preassembled fitting for heat flowmeter, without pump	**36153**
	**HeatBloC® K34 DN 25 with fitting for heat meter** HeatBloC® K34 DN 25 (1") with 3-way mixing valve and bypass, but with preassembled fitting for heat flowmeter	**36163**
	**Flush and drain set DN 25 (1")** 2 x counter-T-pieces 1" ext. thread x 1" int. thread with fill and drain valve, each equipped with an extension piece, permits to flush and drain individual HeatBloC®s. Please note: Flush and drain set is not compatible with the HeatBloC® MC system!	**3461**

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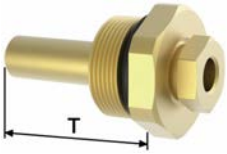
Equipment for modular sytem DN 25

	**Modular distribution manifold DN 25, 2-fold**	**34123**
	Modular distribution manifold DN 25, 3-fold	**34133**
	Modular distribution manifold DN 25, 4-fold	**34143**
	Modular distribution manifold DN 25, 5-fold	**34153**
	Modular distribution manifold DN 25, 6-fold completely made of brass ; completely premounted entirely insulated with EPP half-shells extremely low resistance, free passage d = 36 mm up to 6 groups, premounted, extendable several boiler connections possible, for higher outputs	**34163**
	**Manifold DN 25 (1"), 2- / 3-fold** The distribution manifold V23 - DN 25 is a completely insulated brass manifold for hydronic heating. Depending on the size, two or three HeatBloC®s can be connected to the manifold. The HeatBloC®s DN 25 can be directly mounted onto or under the distribution manifolds V23 - DN 25 without any other accessories.	**433413**
	**Adapter pipe DN 25 (1")** 2 x 1½" external thread, flat-sealing, length 180 mm, when an external circulation pump is used to bridge the pump connection.	**3447**
	**Reducer set DN 25 - DN 20** for installation of HeatBloC®s DN 20 on modular distribution manifolds DN 25, adapter set 1½" external thread, flat-sealing with nut on ¾" PAW flange, reduction of the centre distance from 125 mm to 90 mm, distance pipe 1" internal thread x 1" external thread, flat sealing, brass, with sealing. The required union nuts 1" internal thread are part of the scope of delivery of the HeatBloC®s.	**34351**
	**Set extension pieces DN 25 - DN 32** for the assembly of HeatBloC®s DN 32 on distribution manifolds DN 25, set of distance rings for union nut 2" internal thread on 1" PAW flange, made of brass, with special sealing, flat-sealing	**3436**
	**Coupling piece for overhead installation - DN 25 (1")** Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing. Please note: When you use wall brackets, an additional mounting plate is necessary for installing a 2-fold distribution manifold MV2.	**34241**
	**Mounting plate DN 25 (1")** Components: mounting plate, 2 gaskets, 2 x 1½" nut, 2 x housing of coupling F 1" x 1½" ext. thread for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3425**
	**Wall bracket for HeatBloC® - DN 25 (1") / DN 32 (1¼")** Galvanised mounting bracket for wall assembly of HeatBloC®s. Mount HeatBloC®s on mounting bracket for an easy assembly.	**34723**
	**Wall bracket for HeatBloC® DN 25 - DN 32** Consisting of: wall bracket (galvanised steel), mounting equipment DN 25 / DN 32: Possible wall distance: 155 mm Not required for installation with a PAW modular distribution manifold	**34722**

Equipment for modular sytem DN 25

	**Wall bracket for modular distribution manifold - DN 25 (1") - DN 32 (1¼")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**34721**
	**Wall bracket set for module heating circuit - DN 25 (1")** Components: 2 x 1½" nut, mounting plate, wall bracket possible wall distance: 155 mm	**3422SET**
	**Immersion sleeve ½" ext. thread x T = 30 mm**	**566001**
	Immersion sleeve ¼" ext. thread x T = 60 mm	**566002**
	Immersion sleeve ½" ext. thread x T = 60 mm	**5660021**
	Immersion sleeve ½" ext. thread x T = 100 mm	**566003**
	Immersion sleeve ½" ext. thread x T = 150 mm For all immersion sleeves: for the installation of the temperature sensors (d = 6 mm) in the storage tank, in the collector and the hydraulic separator. Attention: suitable for ball valves until 2016!	**566004**
	**Union nut DN 25 (1")** Brass, to screw insertion pieces for soldering below distribution manifolds DN 25 (1")	**2155**
	**Sealing for nut - DN 25 (1")** asbestos-free, outside diameter: 44 mm, inside diameter: 32 mm, height: 2 mm	**2157**
	**Cutting-ring compression fitting DN 25 (1"), d = 15 mm**	**562915**
	Cutting-ring compression fitting DN 25 (1"), d = 18 mm	**562918**
	Cutting-ring compression fitting DN 25 (1"), d = 22 mm 1" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C.	**562922**
	**Connection set - DN 25 (1")** Consisting of 2 insertion pieces for connection of pipes with 1" external thread below HeatBloC®s or for the use of cutting-ring compression fittings.	**3431**
	**Connection set DN 25 (1")** 2 brass screw-in fittings 1½" external thread x 1" internal thread, for connection of pipes with 1" external thread	**3432**
	**Non-return valve for the mixing valve return - DN 25 (1")** To be inserted into the PAW mixing valve. Prevents unwanted circulation for example when various mixing valves are connected to one distribution manifold. The shutoff valve can be simply inserted into the mixing valve. Not for HeatBloC® K38 DN 25.	**340112**

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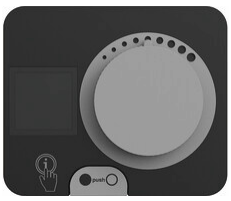
Equipment for modular sytem DN 25

	**Piping for two HeatBloC®s K35** Pipe set DN 25 to connect the connections on the backside, for the assembly of two HeatBloC®s K35 on one distribution manifold.	**36092KS2**
	**Extension pipe set for three HeatBloC®s K35** For installation of three K35 HeatBloC®s the extension pipe set DN 25 is additionally required to extend 36092KS2.	**36092KS3**
	**Piping for a single HeatBloC® K35** Pipe set DN 25 to connect a mixing valve to a HeatBloC® K35	**36092KS4**
	**Piping group for hydraulic separator - DN 25 (1")** Piping group for hydraulic separator, consisting of 2 pipe sections, union nuts and seals, for connection of a vertically mounted hydraulic separator below a PAW distribution manifold. Flat-sealing connection, completely insulated, outlet on the left or on the right.	**3442KS1**
	**Extension set for low-loss header - DN 25 (1")** for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Range of application up to 1600 l/h, max. up to a 3-fold distribution manifold MV3. Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**34431**
	**Contact thermostat 20-60 °C** Contact thermostat for limiting the flow temperature, adjustable from 20 - 60 °C	**N00083**
	**Safety set for distribution manifold - DN 25 (1") up to 50 kW** For the installation on modular distribution manifolds DN 25 (as of 2017), with a connection of ¾" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7507), pressure relief valve ½" x ¾", 3 bar, up to 50 kW, pressure gauge 0-4 bar	**52543**

Equipment for modular sytem DN 25

	**Safety set distribution manifold - DN 25 (1") up to 50 kW, counter elbow** For the installation on modular distribution manifolds DN 25, with self-sealing counter elbow ¾" x ½", outlet ¾" for expansion tank with cap pressure relief valve ½" x ¾", 3 bar, up to 50 kW, pressure gauge 0-4 bar	**5254**
	**Connection set for diaphragm expansion tank DN 20** for assembly to safety group DN 25, with self-sealing double nipple ¾" and mounting equipment, tank connector ¾", armoured hose with bend ¾" x 700 mm, double nipple ¾", maximum tank diameter = 440 mm	**7507**
	**Limit switch** The limit switch is a micro switch. For the assembly in the actuators SR5 and SR10-24/3P.	**705101**
	**Temperature sensor Pt1000-B** Temperature sensor for the integration into the flow and return ball valve of products of the HeatBloC® range DN 25 and DN 32. • The temperature sensor Pt1000 with plug connection measures the temperature directly in the fluid. • ¼" external thread • including matching connection cable (2.9 m) with wire end ferrules	**131934**
	**PAW constant temperature controller PKR6** Easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 2 m cable and Schuko plug, incl. mounting set for snap-in assembly on the PAW mixing valve and PT1000 screw-in sensor G¼" for the flow ball valve, change-over switch for manual / automatic operation. Controller settings for direction of rotation, operation mode and nominal temperature can be adjusted at the display Power supply: 230 V - 50 Hz Power consumption: 3 W Torque: min. 6 Nm Setting time 90°: 120 s	**703601**
	Weather compensated controller PWR6 Same type as the PAW constant temperature controller PKR6 (art.no. 703601), but for the use of a weather-compensated heating circuit. The package includes the outdoor sensor, the flow sensor as well as the source sensor. This ensures that the mixing valve or the heating circuit can be operated in an autarkic manner and without boiler control. In addition, it is possible to set the room temperature centrally in the flat via a room based remote control (art.no. 1359501).	**723681**
	**Room remote control RCD 2.0** Room remote control RCD 2.0 for weather compensated controller PWR6	**1359501**

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	**PAW actuator SR5** Change-over switch for manual / automatic operation, easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, thanks to the removable scale, it is suited for flow on the right or left side Electrical connection: 230 V / 50 Hz Input power: 2.5 W Torque: 5 Nm Setting time for 90°: 140 s	**705001**
	PAW actuator SR10 Thanks to the removable scale, it is suited for flow on the right or left side, easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, change-over switch for manual / automatic operation Electrical connection: 230 V / 50 Hz Input power: 3.5 W Torque: 10 Nm Setting time for 90°: 140 s	**705002**
	PAW actuator SR10 24/3P Like PAW actuator type SR10 (item no. 705002), but with: electrical connection/supply voltage: 24 VAC for control systems with 3-level-control	**7054**
	PAW actuator SR10 24/ST Like PAW actuator SR10 (item no. 705002), but with: electrical connection/supply voltage: 24 VAC/DC control voltage direct: 0(2)...10 VDC for continuous control systems with 0…10 V output Electrical connection: 230 V / 50 Hz Input power: 1.5 W Torque: 10 Nm Setting time for 90°: 140 s	**70541**





All HeatBloC®s offer the following advantages:

Preassembled group of fittings for heating circuits

High flexibility during assembly
modules can be used in nearly any combination

Ball valve with full port, gaskets of the spindle can be replaced during operation

Flat-sealing connections, 2" external thread
including 2" union nut for assembly on a PAW distribution manifold. With PAW mounting equipment, the HeatBloC® can be installed on wall brackets.

Large ball valve handles,
easy handling, visible closing position

EnEV-compliant functional insulation
made of durable elastic EPP, complete insulation of the valves and fittings with sealing lips, ventilation opening to cool the pump.

Free access to the pump head

Check valve in the return pipe
can be opened, 200 mm wc, spring-loaded, and thus also suited for horizontal and overhead installation

Flow on the right = standard
The HeatBloC®s can be delivered with flow on the left against additional charge.

Flow and return line can be changed on site
also for heating circuits with mixing valve

All water-carrying parts are made of brass

Full metal thermometer
can be pulled off, with immersion sleeve, integrated in the ball valve

PAW heating pumps with high-efficiency technology (ECM technology)
fitted with 2 m cable, already installed, integrated in the insulation, pressure tested, serial number, perfectly designed system, pump characteristics, EuP/ErP READY

Pump can be isolated
so that it can be replaced without draining

At the end of the chapter, you will find the complete mounting equipment for the modular system DN 32.

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Product range HeatBloC®
Heating circuits DN 32

K31
direct / unmixed



up to 65 kW*

K32
with 3-way mixing valve



up to 51 kW*

K33R
Controlled circuit with constant value, electronic, 3-way mixing valve with bypass 0-50%



up to 32 kW*
(radiant panel heating, ΔT = 10 K)
up to 64 kW* (return flow temperature maintenance, ΔT = 20 K)

K34
3-way mixing valve with bypass 0-50%



up to 64 kW*

K36E
Boiler charging set, with integrated overflow valve



up to 60 kW*

K38
with 4-way mixing valve



up to 52 kW*

K34R, weather compensated controller, 3-way mixing valve with bypass 0-50 %



up to 64 kW*

*Temperature difference = 20 K

HeatBloC® K31 DN 32 (1¼")
direct / unmixed





Application range

- Boiler charging

Recommended application range

- up to 65 kW
- 20 K up to 2800 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	15.1

Technical data

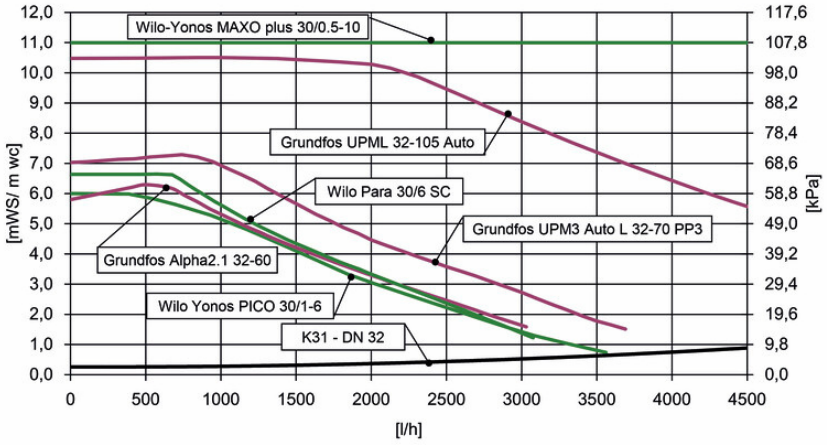
Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	441 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K31 DN 32 (1¼")		EEI*	with	Item no.
	**Wilo Para SC 30/6-43**	< 0.20	▲	**39013WP6**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲	**39013WY10**
	Wilo Yonos PICO 30/1-6	< 0.20	▲	**39013WN06**
	Grundfos ALPHA2.1 32-60	< 0.17	▲	**39013GH6**
	Grundfos UPM3 Auto 32-70	< 0.20	▲	**39013GM6**
	Grundfos UPML 32-105 AUTO	< 0.23	▲	**39013GL9**
	without pump - for pumps with 2" ext. thread x 180 mm		⊖	**39013**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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HeatBloC® K32 DN 32 (1¼")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Recommended application range

- up to 51 kW
- 20 K up to 2200 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	9.6

Technical data

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	441 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

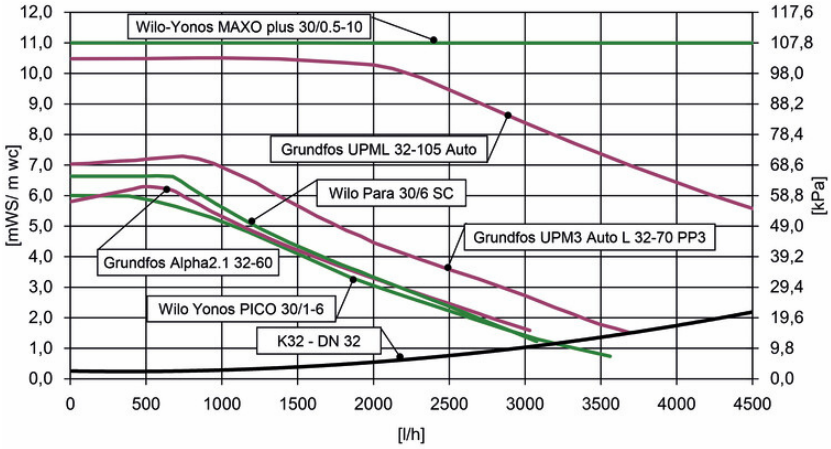
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR5	230 V - 50 Hz

Differential pressure diagram



HeatBloC® K32 DN 32 (1¼")		EEI*	with	Item no.
	**Wilo Para SC 30/6-43**	< 0.20	▲Ⓜ	**39053MWP6**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲Ⓜ	**39053MWY10**
	Wilo Yonos PICO 30/1-6	< 0.20	▲Ⓜ	**39053MWN06**
	Grundfos ALPHA2.1 32-60	< 0.17	▲Ⓜ	**39053MGH6**
	Grundfos UPM3 Auto 32-70	< 0.20	▲Ⓜ	**39053MGM6**
	Grundfos UPML 32-105 AUTO	< 0.23	▲Ⓜ	**39053MGL9**
	without pump - for pumps with 2" ext. thread x 180 mm		⊖Ⓜ	**39053M**
	Wilo Para SC 30/6-43	< 0.20	▲	**39053WP6**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲	**39053WY10**
	Wilo Yonos PICO 30/1-6	< 0.20	▲	**39053WN06**
	Grundfos ALPHA2.1 32-60	< 0.17	▲	**39053GH6**
	Grundfos UPM3 Auto 32-70	< 0.20	▲	**39053GM6**
	Grundfos UPML 32-105 AUTO	< 0.23	▲	**39053GL9**
	without pump - for pumps with 2" ext. thread x 180 mm		⊖	**39053**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

HeatBloC® K33R DN 32 (1¼")
Controlled circuit with constant temperature, electronically





Application range

- for thermally controlled radiant heating systems, for low-temperature heating systems, as a return flow temperature maintenance for solid fuel boilers, wood firing and stove heating systems

Recommended application range

- up to 15 kW
- 20 K up to 2760 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	10.1
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 32
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	441 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

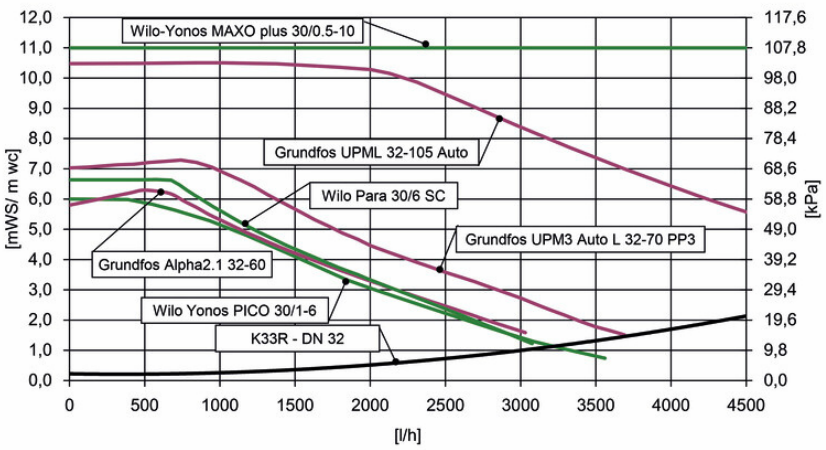
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Controller	Constant temp. controller PKR6

Differential pressure diagram



HeatBloC® K33R DN 32 (1¼")		EEI*	with	Item no.
	**Wilo Para SC 30/6-43**	< 0.20	▲	**390463WP6**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲	**390463WY10**
	Wilo Yonos PICO 30/1-6	< 0.20	▲	**390463WN06**
	Grundfos ALPHA2.1 32-60	< 0.17	▲	**390463GH6**
	Grundfos UPM3 Auto 32-70	< 0.20	▲	**390463GM6**
	Grundfos UPML 32-105 AUTO	< 0.23	▲	**390463GL9**
	without pump - for pumps with 2" ext. thread x 180 mm		⊖	**390463**

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HeatBloC® K34 DN 32 (1¼")
3-way bypass mixing valve





Application range

- for low-temperature heating systems controlled by a mixing valve

Recommended application range

- up to
- 20 K up to 2760 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	10.1
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	441 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

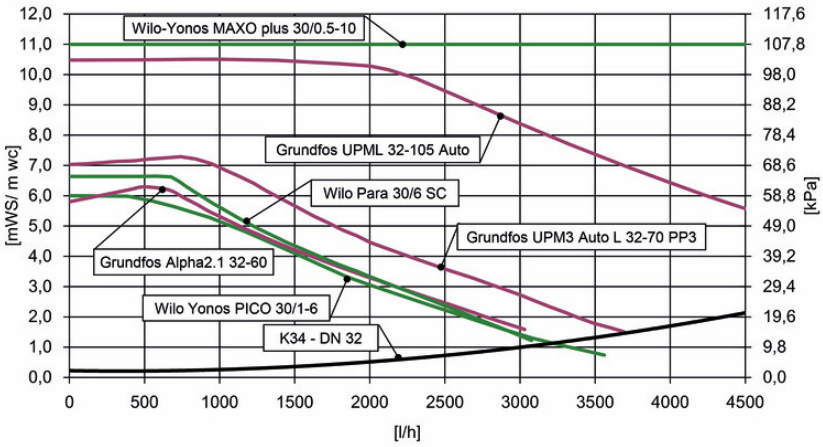
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR5	230 V - 50 Hz

Differential pressure diagram



HeatBloC® K34 DN 32 (1¼")		EEI*	with	Item no.
	**Wilo Para SC 30/6-43**	< 0.20	▲Ⓜ	**39063MWP6**
	Wilo Yonos PICO 30/1-6	< 0.20	▲Ⓜ	**39063MWN06**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲Ⓜ	**39063MWY10**
	Grundfos ALPHA2.1 32-60	< 0.17	▲Ⓜ	**39063MGH6**
	Grundfos UPM3 Auto 32-70	< 0.20	▲Ⓜ	**39063MGM6**
	Grundfos UPML 32-105 AUTO	< 0.23	▲Ⓜ	**39063MGL9**
	without pump - for pumps with 2" ext. thread x 180 mm		⊖Ⓜ	**39063M**
	Wilo Para SC 30/6-43	< 0.20	▲	**39063WP6**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲	**39063WY10**
	Wilo Yonos PICO 30/1-6		▲	**39063WN06**
	Grundfos ALPHA2.1 32-60	< 0.17	▲	**39063GH6**
	Grundfos UPM3 Auto 32-70	< 0.20	▲	**39063GM6**
	Grundfos UPML 32-105 AUTO	< 0.23	▲	**39063GL9**
	without pump - for pumps with 2" ext. thread x 180 mm		⊖	**39063**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

HeatBloC® K34R DN 32 (1¼") weather-compensated





Application range

- for retrofitting of weather-compensated low-temperature heating systems controlled by a mixing valve

Recommended application range

- up to 64 kW
- 20 K up to 2760 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	10.1
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	2" ext. thread, flat sealing
Connection consumer	1¼" int. thread
Height	441 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

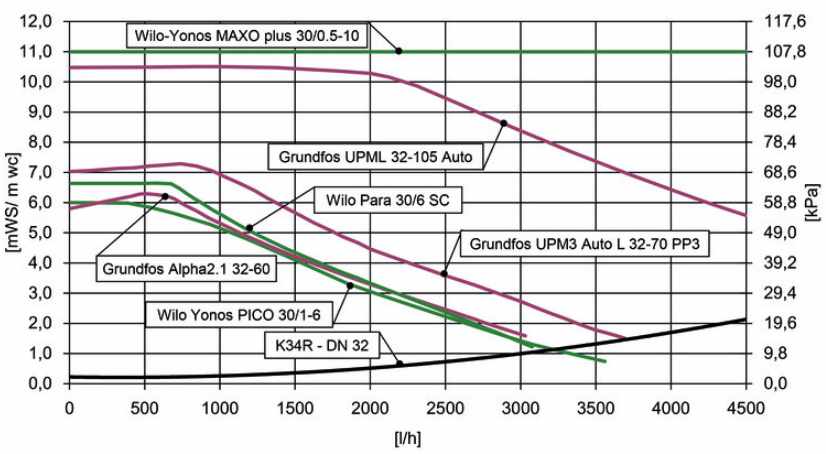
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Controller	Weather-comp. controller PWR6

Differential pressure diagram



HeatBloC® K34R DN 32 (1¼")		EEI*	with	Item no.
	**Wilo Para 30/6-43**	< 0.20	▲Ⓜ	**390663MWP6**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲Ⓜ	**390663MWY10**
	Wilo Yonos PICO 30/1-6	< 0.20	▲Ⓜ	**390663MWN06**
	Grundfos ALPHA2.1 32-60	< 0.17	▲Ⓜ	**390663MGH6**
	Grundfos UPM3 Auto 32-70	< 0.20	▲Ⓜ	**390663MGM6**
	Grundfos UPML 32-105 AUTO	< 0.23	▲Ⓜ	**390663MGL9**
	without pump - for pumps with 2" ext. thread x 180 mm		⊖Ⓜ	**390663M**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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HeatBloC® K36E DN 32 (1¼")
Boiler charging set, with integrated overflow valve





Application range

- Return flow temperature maintenance for solid fuel boilers, wood firing and stove heating systems

Recommended application range

- up to 60 kW
- 20 K up to 2600 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	9.7

Technical data

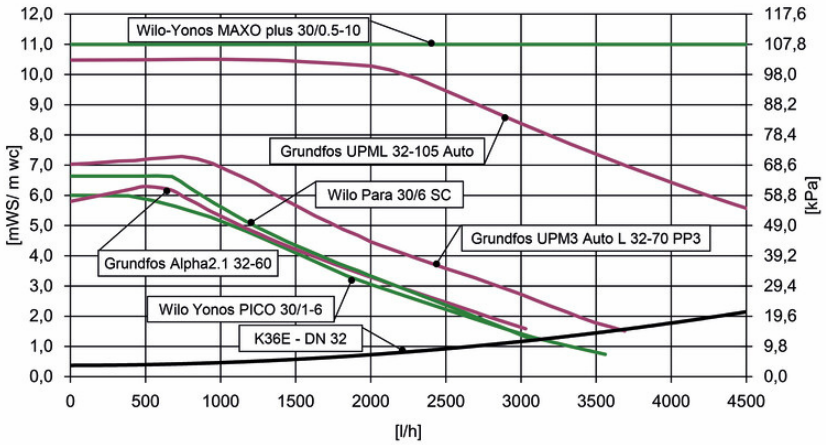
Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	1¼" int. thread
Connection consumer	2" int. thread
Height	441 mm
Installation length	465 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

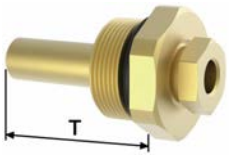
Differential pressure diagram



HeatBloC® K36E DN 32 (1¼")			EEI*	with	Item no.
	**Wilo Para SC 30/6-43**	Opening temperature: 45 °C	< 0.20	▲	**390343WP6**
	Wilo Yonos PICO 25/1-6	Opening temperature: 45 °C	< 0.20	▲	**390343WN06**
	Wilo Yonos MAXO plus 30/0.5-10	Opening temperature: 45 °C	< 0.20	▲	**390343WY10**
	Grundfos ALPHA2.1 32-60	Opening temperature: 45 °C	< 0.17	▲	**390343GH6**
	Grundfos UPM3 Auto 32-70	Opening temperature: 45 °C	< 0.20	▲	**390343GM6**
	Grundfos UPML 32-105 AUTO	Opening temperature: 45 °C	< 0.23	▲	**390343GL9**
	without pump - for pumps with 2" ext. thread x 180 mm	Opening temperature: 45 °C		⊖	**390343**
	Wilo Para SC 30/6-43	Opening temperature: 60 °C	< 0.20	▲	**390373WP6**
	Wilo Yonos PICO 30/1-6	Opening temperature: 60 °C	< 0.20	▲	**390373WN06**
	Wilo Yonos MAXO plus 30/0.5-10	Opening temperature: 60 °C	< 0.20	▲	**390373WY10**
	Grundfos ALPHA2.1 32-60	Opening temperature: 60 °C	< 0.17	▲	**390373GH6**
	Grundfos UPM3 Auto 32-70	Opening temperature: 60 °C	< 0.20	▲	**390373GM6**
	Grundfos UPML 32-105 AUTO	Opening temperature: 60 °C	< 0.23	▲	**390373GL9**
	without pump - for pumps with 2" ext. thread x 180 mm	Opening temperature: 60 °C		⊖	**390373**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

Equipment for modular sytem DN 32

	**Fitting for heat flowmeter - DN 32 for unmixed HeatBloC®s** - for unmixed HeatBloC®s DN 32 - for heat flowmeters with the dimensions 1" x 130 mm Scope of delivery: - Pump ball valve with check valve, can be opened (200 mm wc) - Screw-in fittings, flat sealing - Union nut - Adapter pipe - Reducers for immersion sensor (¼" ext. thread, self-sealing x M10 x 1" int. thread and ¼" ext. thread, self-sealing x M12 x 1.5" ext. thread) - Seals	**37453**
	**Fitting for heat flowmeter - DN 32 for mixed HeatBloC®s** - for HeatBloC®s DN 32 with 3-way or 4-wax mixing valve - for heat flowmeters with the dimensions 1" ext. thread x 130 mm Scope of delivery: - Screw-in fittings flat sealing - Adapter pipe - Reducers for immersion sensor (¼" ext. thread, self-sealing x M10 x 1" int. thread and ¼" ext. thread, self-sealing x M12 x 1.5" ext. thread) - Non-return valve for mixing valve return - Seals	**37463**
	**Immersion sleeve ½" ext. thread x T = 30 mm**	**566001**
	Immersion sleeve ¼" ext. thread x T = 60 mm	**566002**
	Immersion sleeve ½" ext. thread x T = 60 mm	**5660021**
	Immersion sleeve ½" ext. thread x T = 100 mm	**566003**
	Immersion sleeve ½" ext. thread x T = 150 mm For all immersion sleeves: for the installation of the temperature sensors (d = 6 mm) in the storage tank, in the collector and the hydraulic separator. Attention: suitable for ball valves until 2016!	**566004**
	**Adapter pipe DN 32 (1¼")** Brass, 2 x 2" external thread, flat-sealing, length 180 mm, when an external circulation pump is used to bridge the pump connection.	**3747**
	**Flush and drain set DN 32 (¼")** 2 x counter-T-pieces 1¼" with fill and drain valve, each equipped with an extension piece, permits to flush and drain individual HeatBloC®s. Please note: The flush and drain set is not compatible with the HeatBloC® MC system!	**3761**
	**Union nut DN 32 (1¼")** Brass, to screw insertion pieces for soldering below distribution manifolds DN 32 (1¼")	**2156**
	**Sealing for nut - DN 32 (1¼")** asbestos-free, outside diameter: 50 mm, inside diameter: 38 mm, height: 2 mm	**2158**

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Equipment for modular sytem DN 32

	**Connection set DN 32 (1¼")** Consisting of 2 insertion pieces for connection of pipes w/ 1¼" external thread below HeatBloC®s	**3731**
	**Connection set DN 32 (1¼")** Connection set for DN 32 (1¼"), consists of 2 screw-in fittings with 2" external thread and 1¼" internal thread for the connection of pipes 1¼" external thread.	**3732**
	**Non-return valve DN 32 (1¼")** To be inserted into the PAW mixing valve. Prevents unwanted circulation for example when various mixing valves are connected to one distribution manifold. The shutoff valve can be simply inserted into the mixing valve.	**37011**
	**Coupling piece for overhead installation - DN 32 (1¼")** Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing. Please note: When you use wall brackets, an additional mounting plate is necessary for installing a 2-fold distribution manifold MV2.	**3724**
	**Mounting plate DN 32 (1¼")** Components: mounting plate, 2 gaskets, 2 x 2" nut for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3725**
	**Wall bracket for HeatBloC® - DN 25 (1") / DN 32 (1¼")** Galvanised mounting bracket for wall assembly of HeatBloC®s. Mount HeatBloC®s on mounting bracket for an easy assembly.	**34723**
	**Wall bracket for HeatBloC® DN 25 - DN 32** Consisting of: wall bracket (galvanised steel), mounting equipment DN 25 / DN 32: Possible wall distance: 155 mm Not required for installation with a PAW modular distribution manifold	**34722**
	**Wall bracket for modular distribution manifold - DN 25 (1") - DN 32 (1¼")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**34721**
	**Wall bracket set for module heating circuit - DN 32** Components: 2 x 2" nut, mounting plate, wall bracket possible wall distance: 142.5-167.5 mm	**3722SET**
	**Reducer set DN 32 - DN 25** for the installalation of DN 25 HeatBloC®s on DN 32 distribution manifolds, adapter set 2" external thread, flat-sealing with nut on 1½" internal thread, flat-sealing, made of brass, with gaskets, 2 types	**37351**
	Reducer set DN 32 - DN 25 for installation of modular heating circuits DN 20 on modular distribution manifolds DN 25, adapter set 1½" external thread, flat-sealing with nut on ¾" PAW flange, reduction of the centre distance from 125 mm to 90 mm, distance pipe 1" internal thread x 1" external thread, flat sealing, brass, with sealing. The required union nuts 1" internal thread are dismounted from the heating circuit.	**3735**

Equipment for modular sytem DN 32

	**Piping group for hydraulic separator - DN 32 (1¼")** Piping group for hydraulic separator, consisting of 2 pipe sections, union nuts and seals, for connection of a vertically mounted hydraulic separator below a PAW distribution manifold. Flat-sealing connection, completely insulated, outlet on the left or on the right.	**34742KS1**
	**Extension set for low-loss header - DN 32 (1¼")** for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Range of application up to 2600 l/h, max. up to a 3-fold distribution manifold MV3. Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**37431**
	**Modular distribution manifold DN 32, 2-fold**	**37123**
	Modular distribution manifold DN 32, 3-fold	**37133**
	Modular distribution manifold DN 32, 4-fold	**37143**
	Modular distribution manifold DN 32, 5-fold	**37153**
	Modular distribution manifold DN 32, 6-fold completely made of brass; completely premounted entirely insulated with EPP half-shells extremely low resistance, free passage d = 50 mm up to 6 groups, premounted, extendable several boiler connections possible, for higher outputs	**37163**
	**Contact thermostat 20-60 °C** Contact thermostat for limiting the flow temperature, adjustable from 20 - 60 °C	**N00083**
	**Safety set for distribution manifold - DN 32 (1¼") up to 100 kW** For the installation on modular distribution manifolds DN 32 (as of 2017), with a connection of 1" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7508), pressure relief valve ¾" x 1", 3 bar, up to 100 kW, pressure gauge 0-4 bar	**52553**
	**Connection set DN 25 for diaphragm expansion tank** for assembly to a safety group DN 32, with self-sealing double nipple 1", cap valve 1", armoured hose with bend 1" x 700 mm.	**7508**
	**Temperature sensor Pt1000-B** Temperature sensor for the integration into the flow and return ball valve of products of the HeatBloC® range DN 25 and DN 32. • The temperature sensor Pt1000 with plug connection measures the temperature directly in the fluid. • ¼" external thread • including matching connection cable (2.9 m) with wire end ferrules	**131934**

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	**PAW constant temperature controller PKR6** Easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 2 m cable and Schuko plug, incl. mounting set for snap-in assembly on the PAW mixing valve and PT1000 screw-in sensor G¼" for the flow ball valve, change-over switch for manual / automatic operation. Controller settings for direction of rotation, operation mode and nominal temperature can be adjusted at the display Power supply: 230 V - 50 Hz Power consumption: 3 W Torque: min. 6 Nm Setting time 90°: 120 s	**703601**
	Weather compensated controller PWR6 Same type as the PAW constant temperature controller PKR6 (art.no. 703601), but for the use of a weather-compensated heating circuit. The package includes the outdoor sensor, the flow sensor as well as the source sensor. This ensures that the mixing valve or the heating circuit can be operated in an autarkic manner and without boiler control. In addition, it is possible to set the room temperature centrally in the flat via a room based remote control (art.no. 1359501).	**723681**
	**Room remote control RCD 2.0** Room remote control RCD 2.0 for weather compensated controller PWR6	**1359501**
	**PAW actuator SR5** Change-over switch for manual / automatic operation, easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, thanks to the removable scale, it is suited for flow on the right or left side Electrical connection: 230 V / 50 Hz Input power: 2.5 W Torque: 5 Nm Setting time for 90°: 140 s	**705001**
	PAW actuator SR10 Thanks to the removable scale, it is suited for flow on the right or left side, easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, change-over switch for manual / automatic operation Electrical connection: 230 V / 50 Hz Input power: 3.5 W Torque: 10 Nm Setting time for 90°: 140 s	**705002**
	PAW actuator SR10 24/3P Like PAW actuator type SR10 (item no. 705002), but with: electrical connection/supply voltage: 24 VAC for control systems with 3-level-control	**7054**
	PAW actuator SR10 24/ST Like PAW actuator SR10 (item no. 705002), but with: electrical connection/supply voltage: 24 VAC/DC control voltage direct: 0(2)...10 VDC for continuous control systems with 0…10 V output Electrical connection: 230 V / 50 Hz Input power: 1.5 W Torque: 10 Nm Setting time for 90°: 140 s	**70541**





All HeatBloC®s offer the following advantages:

Preassembled group of fittings for heating circuits

High flexibility during assembly
modules can be used in nearly any combination

Ball valve with full port, gaskets of the spindle can be replaced during operation

Connections
Flange connection DN 40/PN6 resp. DN 50/PN6 as slip-on flange and 1½" / 2" internal thread
incl. gaskets and screws, for installation on PAW modular distribution manifolds
With PAW mounting equipment the heating circuit can be installed on wall brackets.

Hand lever at the ball valve
easy handling from the front, even when the insulation is closed, visible closing position

EnEV-compliant functional insulation
made of durable elastic EPP, complete insulation of valves and fittings, ventilation opening to cool the pump.

Free access to the pump head

Check valve in the return pipe
can be opened, 200 mm wc, spring-loaded, and thus also suited for horizontal and overhead installation

Flow on the right = standard
The HeatBloC®s can be delivered with flow on the left against additional charge.

Flow and return line can be changed on site
also for heating circuits with mixing valve

Fill and drain valve
for flushing, filling and draining, integrated in the ball valve

Full metal thermometer
can be pulled off, with immersion sleeve, integrated in the ball valve

PAW heating pumps with high-efficiency technology (ECM technology)
fitted with cable, already installed, integrated in the insulation, pressure tested, serial number, perfectly designed system, pump characteristics, EuP/ErP READY

Pump can be isolated
so that it can be replaced without draining

At the end of the chapter, you will find the complete mounting equipment for the modular system DN 40 / 50.

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Product range HeatBloC®
Heating circuits DN 40/50 - types

K31 - DN 40 (1½“)
direct / unmixed



up to 150 kW*

K32 - DN 40 (1½“)
with 3-way mixing valve



up to 125 kW*

K31 - DN 50 (2“)
direct / unmixed



up to 250 kW*

K32 - DN 50 (2“)
with 3-way mixing valve



up to 230 kW*

*Temperature difference = 20 K

HeatBloC® K31 DN 40 (1½")
direct / unmixed





Application range

- Boiler charging

Recommended application range

- up to 150 kW
- 20 K up to 6500 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	28.3

Technical data

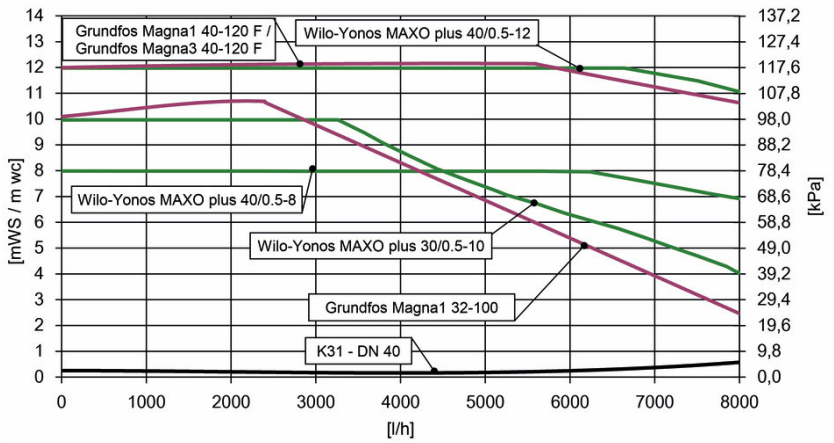
Dimensions

Nominal diameter	DN 40 (1½")
Connection generator	Flange DN 40 / PN 6
Connection consumer	1½" int. thread
Height	610 mm
Installation length	560 mm
Centre distance	160 mm
Width	320 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K31 DN 40 (1½")		EEI*	with	Item no.
	**Wilo Yonos MAXO plus 40/0.5-8**	< 0.20	▲	**41211WY8**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲	**41211WY10**
	Wilo Yonos MAXO plus 40/0.5-12	< 0.20	▲	**41211WY12**
	Grundfos MAGNA1 32-100	< 0.21	▲	**41211GL10**
	Grundfos MAGNA1 40-120 F	< 0.21	▲	**41211GL12**
	Grundfos MAGNA3 40-120 F	< 0.18	▲	**41211GH12**
	without pump - for pumps with flange DN 40/PN6 x 250 mm Optionally available: Adapter pipe 30 mm, pump installation length 220 mm (item no. 12397)		⊖	**41211**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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HeatBloC® K32 DN 40 (1½")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Recommended application range

- up to 125 kW
- 20 K up to 5400 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	17.7

Technical data

Dimensions

Nominal diameter	DN 40 (1½")
Connection generator	Flange DN 40 / PN 6
Connection consumer	1½" int. thread
Height	610 mm
Installation length	560 mm
Centre distance	160 mm
Width	320 mm

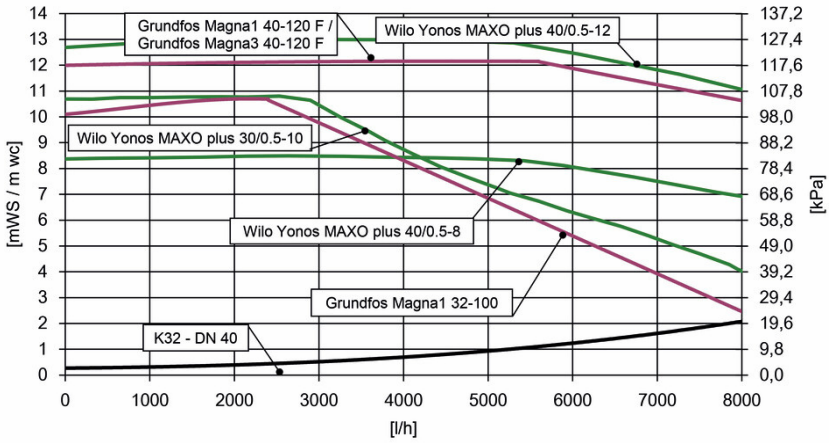
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR10	230 V - 50 Hz

Differential pressure diagram



HeatBloC® K32 DN 40 (1½")		EEI*	with	Item no.
	**Wilo Yonos MAXO plus 40/0.5-8**	< 0.20	▲M	**41221MWY8**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	▲M	**41221MWY10**
	Wilo Yonos MAXO plus 40/0.5-12	< 0.20	▲M	**41221MWY12**
	Grundfos MAGNA1 32-100	< 0.21	▲M	**41221MGL10**
	Grundfos MAGNA1 40-120 F	< 0.21	▲M	**41221MGL12**
	Grundfos MAGNA3 40-120 F	< 0.18	▲M	**41221MGH12**
	without pump - for pumps with flange DN 40/PN6 x 250 mm Optionally available: Adapter pipe 30 mm, pump installation length 220 mm (item no. 12397)		⊖M	**41221M**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

HeatBloC® K31 DN 50 (2")
direct / unmixed





Application range

- Boiler charging

Recommended application range

- up to 250 kW
- 20 K up to 10800 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	31.2

Technical data

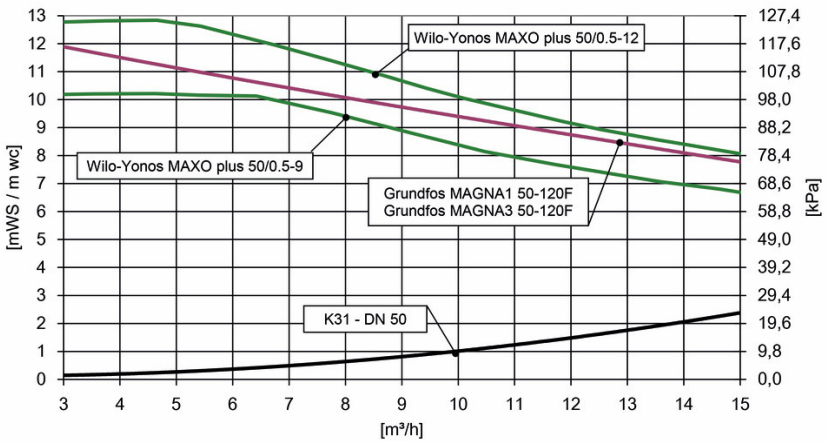
Dimensions

Nominal diameter	DN 50 (2")
Connection generator	Flange DN 50 / PN 6
Connection consumer	2" int. thread
Height	660 mm
Installation length	630 mm
Centre distance	180 mm
Width	360 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



HeatBloC® K31 DN 50 (2")		EEI*	with	Item no.
	**Wilo Yonos MAXO plus 50/0.5-12**	< 0.23	▲	**51211WM12**
	Wilo Yonos MAXO plus 50/0.5-9	< 0.20	▲	**51211WY9**
	Grundfos MAGNA1 50-120 F	< 0.21	▲	**51211GL12**
	Grundfos MAGNA3 50-120 F	< 0.18	▲	**51211GH12**
	without pump - for pumps with flange DN 50/PN6 x 280 mm Optionally available: Adapter pipe 30 mm, pump installation length 250 mm (item no. 12395), 2x adapter pipe 20 mm, pump installation length 240 mm (item no. 12396)		⊖	**51211**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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HeatBloC® K32 DN 50 (2")
3-way H-type mixing valve





Application range

- Heating systems controlled by a mixing valve

Recommended application range

- up to 230 kW
- 20 K up to 9980 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value	25.7

Technical data

Dimensions

Nominal diameter	DN 50 (2")
Connection generator	Flange DN 50 / PN 6
Connection consumer	2" int. thread
Height	660 mm
Installation length	630 mm
Centre distance	180 mm
Width	360 mm

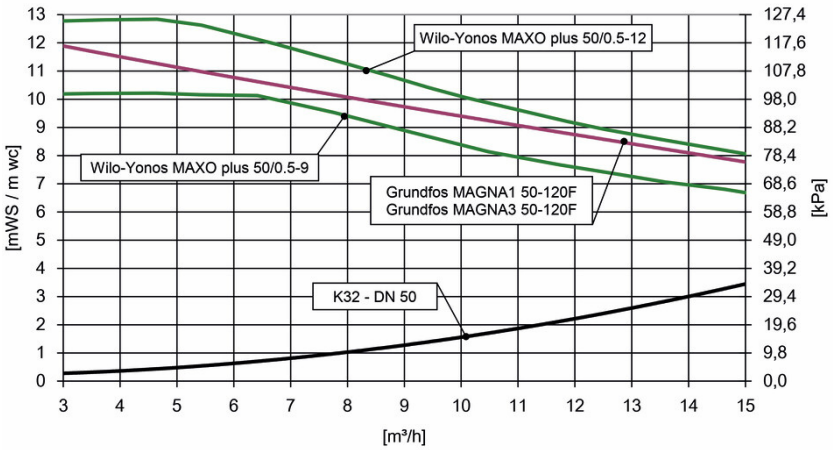
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR10	230 V - 50 Hz

Differential pressure diagram



HeatBloC® K32 DN 50 (2")		EEI*	with	Item no.
	**Wilo Yonos MAXO plus 50/0.5-12**	< 0.23	▲Ⓜ	**51221MWM12**
	Wilo Yonos MAXO plus 50/0.5-9	< 0.20	▲Ⓜ	**51221MWY9**
	Grundfos MAGNA1 50-120 F	< 0.21	▲Ⓜ	**51221MGL12**
	Grundfos MAGNA3 50-120 F	< 0.18	▲Ⓜ	**51221MGH12**
	without pump - for pumps with flange DN 50/PN6 x 280 mm Optionally available: Adapter pipe 30 mm, pump installation length 250 mm (item no. 12395), 2x adapter pipe 20 mm, pump installation length 240 mm (item no. 12396)		⊖Ⓜ	**51221M**

= conversion to flow left (it.no. 999300) ▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

Equipment for modular sytem DN 40 / 50

	**Modular distribution manifold DN 40, 2-fold**	**4112**
	Modular distribution manifold DN 40, 3-fold	**4113**
	Modular distribution manifold DN 40, 4-fold modular distribution manifold made of brass connecting flanges as slip-on flanges made of steel seals and screws for boiler connection DN 50 included completely premounted; entirely insulated with EPP shells extremely low resistance, free passage d = 64 mm up to 4 groups, premounted, extendable boiler connections DN 50	**4114**
	**Modular distribution manifold DN 50, 2-fold**	**5112**
	Modular distribution manifold DN 50, 3-fold	**5113**
	Modular distribution manifold DN 50, 4-fold modular distribution manifold made of brass connecting flanges as slip-on flanges made of steel gaskets and screws for boiler connection DN 65 included completely premounted; entirely insulated with EPP shells extremely low resistance, free passage d = 84 mm up to 4 groups, premounted, extendable boiler connections DN 65	**5114**
	**Floor bracket set for modular distribution manifold - DN 40 / 50 (1½"/ 2")** Components: 2 floor brackets (galvanized steel), 4 wall plugs, 4 screws, 2 screws for fixing the distribution manifold onto the floor brackets Height = adjustable 1,050 - 1,080 mm, for shortening simply cut off	**41671**
	**Wall bracket set for modular distribution manifold - DN 40 (1½")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**41651**
	**Wall bracket set for modular distribution manifold - DN 50 (2")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**41652**
	**Wall bracket for HeatBloC® DN 40 (1½")** Components: Wall bracket, 2 gaskets, mounting equipment, distance of the pipe axis to the wall A = 270 mm	**41641**
	**Wall bracket for HeatBloC®s - DN 50 (2")** Components: Wall bracket (galvanised steel), 2 gaskets, mounting equipment, distance of the pipe axis to the wall A = 400 mm	**41642**

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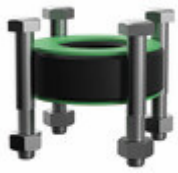
Equipment for modular sytem DN 40 / 50

	**Extension module DN 40 (1½"), for the standard and MC series**	**4111**
	Extension module DN 50 (2"), for the standard and MC series Completely made of brass Completely preassembled Flow and return chamber 95 % thermally separated	**5111**
	**Blind flange DN 40 (1½") / PN 6**	**41611**
	Blind flange 50 (2") / PN 6 PN 6, as per DIN 2527, with 1 gasket, 4 screws and 4 nuts	**51611**
	**Screwed flange DN 40 (1½") / PN 6 on 1½" int. thread**	**41612**
	Screwed flange DN 50 (2") / PN 6 on 2" int. thread	**41613**
	Screwed flange DN 65 (2½") / PN 6 on 2½" int. thread PN 6, acc. to DIN 2565, steel, black	**51612**
	**Weld neck flange DN 40 (1½") / PN 6**	**41614**
	Weld neck flange DN 50 (2") / PN 6	**41615**
	Weld neck flange DN 65 (2½") / PN 6 PN 6, acc. to DIN 2631, steel, black	**51613**
	**Set reducer flanges DN 40 - DN 32 (1½" - 1¼")** Reducer flanges made of brass for the assembly of a pump DN 32* in HeatBloC®s DN 40 or for connection of a single HeatBloC® DN 32 on a distribution manifold DN 40. One side flange DN 40 - PN 6, other side flange for 2" union nut, flat sealing. Reduction of the centre distance from 160 mm to 125 mm, installation height = 35 mm. *For the installation of a DN 32 pump 2x nut and seals are required additionally (2x N00121).	**41610**
	**Set reducer flanges DN 50 - 32 (2" - 1¼")** 2 reducing flanges made of steel, zinced/brass for connecting a DN 32 HeatBloC® on a DN 50 modular distribution manifold. One side DN 50 flange with PN 6, other side flange DN 32 - 1¼". Reduction of the centre distance from 180 mm to 125 mm, with seals and screws for connection to DN 50. Installation height = 48 mm	**5162**
	**Set reducer flanges DN 50 - 40 (2" - 1½")** 2 reducing flanges made of zinced steel for connecting a DN 40 HeatBloC® on a DN 50 modular distribution manifold. For the assembly of a DN 40 pump, installation length 250 mm, in a DN 50 HeatBloC®. One side DN 50 flange (PN 6), other side DN 40 flange (PN 6). Reduction of the centre distance from 180 mm to 160 mm, with seals and screws, installation height = 13 mm Use only with slip-on flanges!	**51610**
	**Extension set for low-loss header - DN 40 (1½")**	**4143**
	Extension set for low-loss header DN 50 (2") for conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Consisting of: 1 distance ring for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**5143**
	**PAW actuator SR10** Thanks to the removable scale, it is suited for flow on the right or left side, easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, change-over switch for manual / automatic operation Electrical connection: 230 V / 50 Hz Input power: 3.5 W Torque: 10 Nm Setting time for 90°: 140 s	**705002**

Equipment for modular sytem DN 40 / 50

	**Adapter pipe DN 40 (1½")** for flange pumps DN 40 DN 40 x 30 mm Installation length from 220 to 250 mm	**12397**
	**Adapter pipe DN 50 (2")** for flange pumps DN 50 DN 50 x 30 mm Installation length from 250 to 280 mm	**12395**
 	**Adaptor pieces DN 50 (2")** for flange pumps DN 50 DN 50 x 20 mm Installation length from 240 to 280 mm	**12396**

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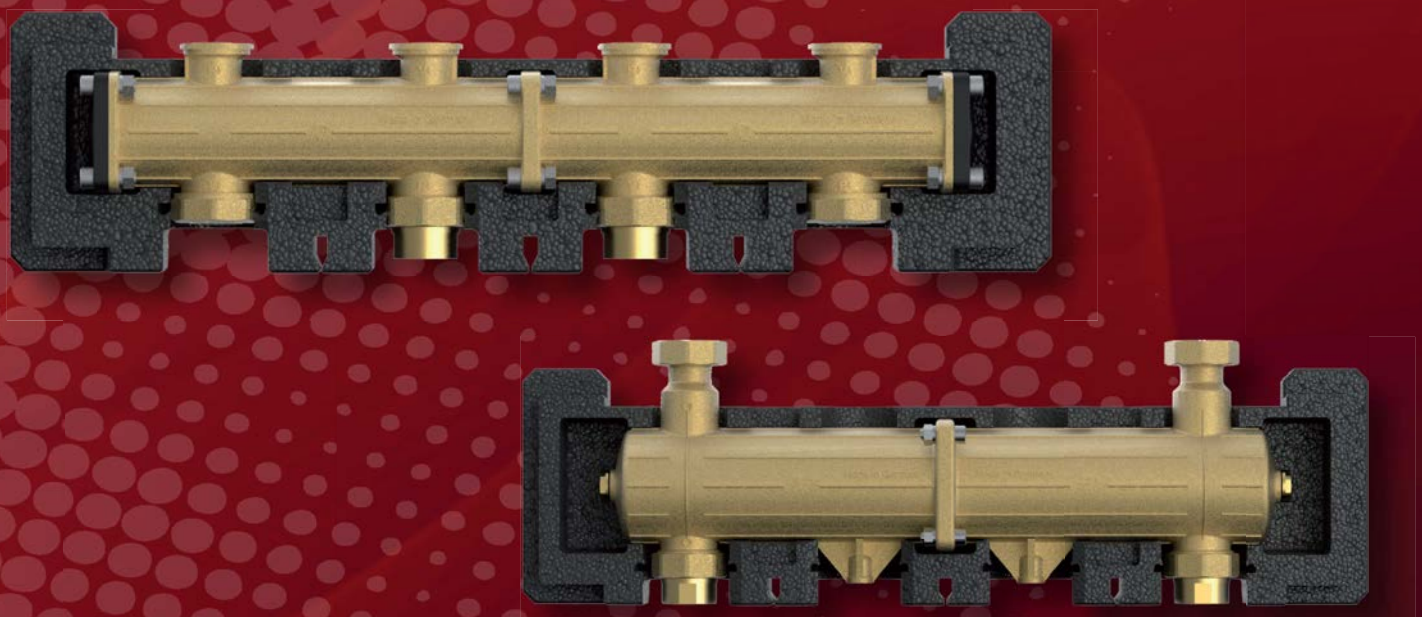

Modular distribution manifolds / hydraulic separators

Catalogue 04/2025

Systems, valves and fittings
for the use in hot water heating systems

Valid for the EU

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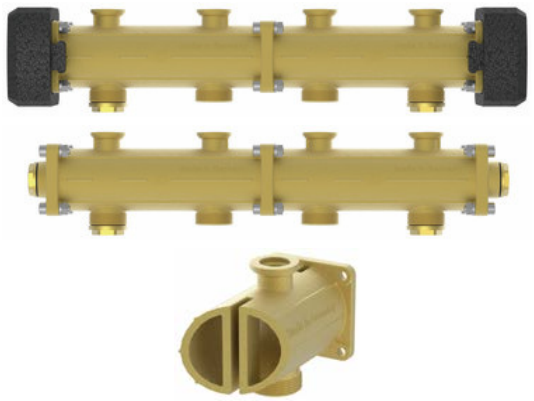
Distribution manifold DN 20 (¾")



Application range

- modular design
- for outputs up to 50 kW (for each boiler connection) at a temperature difference of 20 K

with thermal separation of flow and return chamber

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C

Technical data

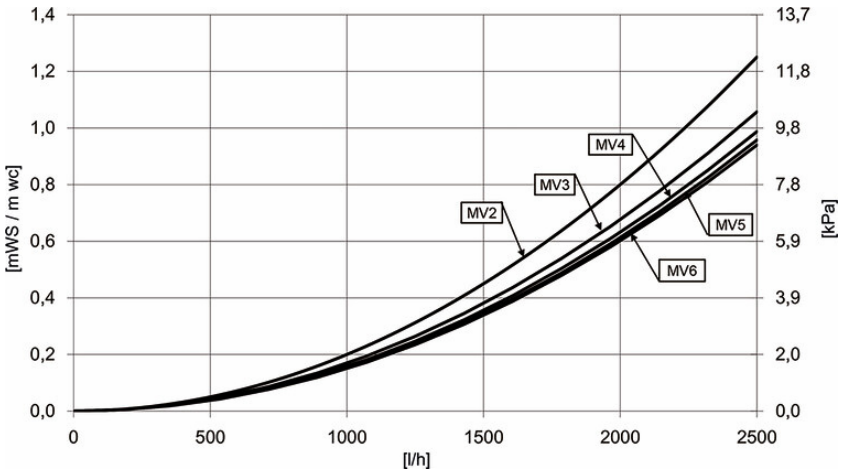
Dimensions

Nominal diameter	DN 20 (¾")
Height	80 mm
Height insulation	85 mm
Centre distance	90 mm
Connection generator	¾" int. thread x 1" ext. thread, flat-sealing (bottom), 2 x for boiler connection, others plugged
Connection consumer	¾" PAW flange for nut 1" (top)
Lateral connection	¾" int. thread, sealed with plug, for safety group and diaphragm expansion tank

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP

Differential pressure diagram



Distribution manifold DN 20	Execution	Kvs value	Width	Connections for HeatBloC®s	Item no.
	2-fold	7.1	440 mm	3	**3112**
	3-fold	7.8	620 mm	5	**3113**
	4-fold	8	800 mm	7	**3114**
	5-fold	8.2	980 mm	9	**3115**
	6-fold	8.2	1 160 mm	11	**3116**

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Manifold DN 25 (1"), 2- / 3-fold



Application range

- for outputs up to 80 kW (for each boiler connection) at a temperature difference of 20 K

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C

Technical data

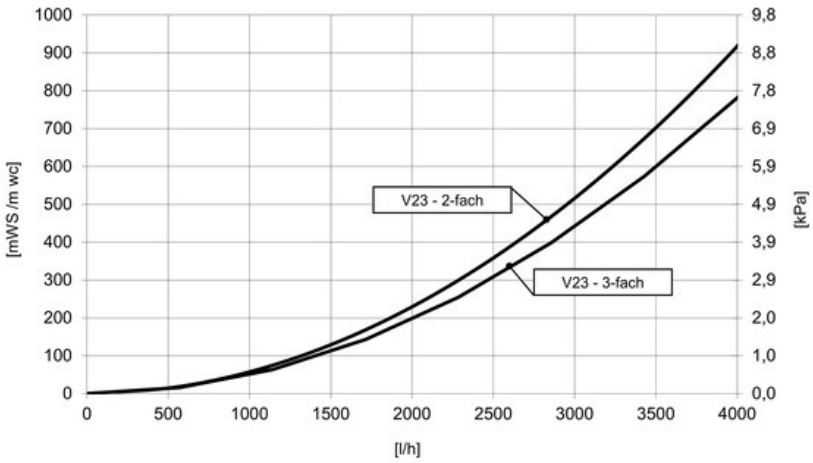
Dimensions

Nominal diameter	DN 25 (1")
Height	104 mm
Height insulation	85 mm
Centre distance	125 mm
Connection generator	1½" external thread, flat-sealing / 1" internal thread
Connection consumer	1" flange for 1½" nut, flat-sealing

Materials

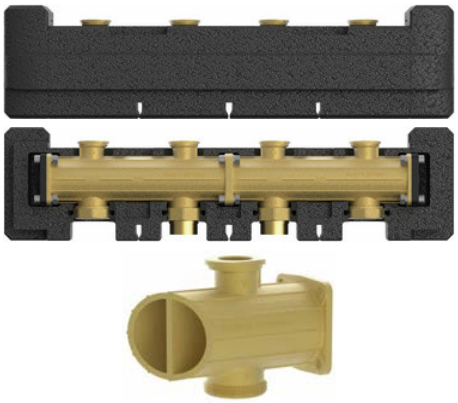
Valves and fittings	Brass
Gaskets	EPDM/NBR
Insulation	EPP

Differential pressure diagram



Manifold DN 25	Execution	Kvs value	Width	Connections for HeatBloC®s	Item no.
	2- / 3-fold	13.3	490 mm	3	**433413**

Distribution manifold DN 25 (1")



Application range

- modular design
- for outputs up to 80 kW (for each boiler connection) at a temperature difference of 20 K

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C

Technical data

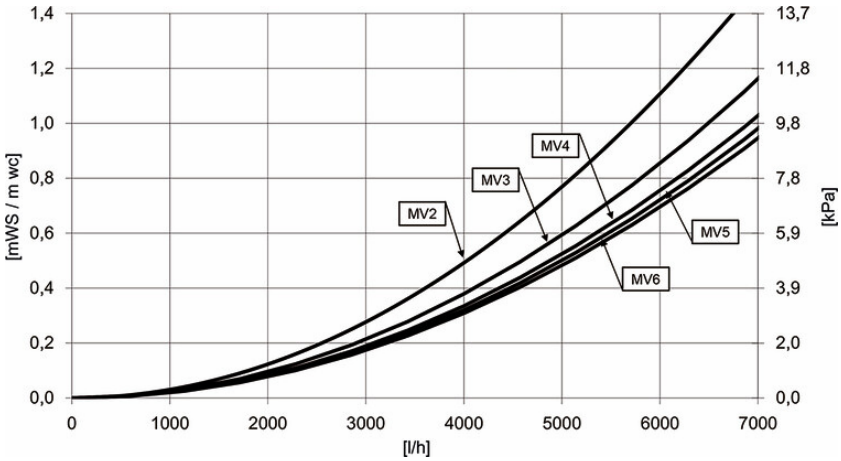
Dimensions

Nominal diameter	DN 25 (1")
Height	128 mm
Height insulation	137 mm
Centre distance	125 mm
Connection generator	1½" ext. thread, flat sealing (bottom), 2 x for boiler connection, others plugged
Connection consumer	1" PAW flange for nut 1½" (top)

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP

Differential pressure diagram



Distribution manifold DN 25	Execution	Kvs value	Width	Connections for HeatBloC®s	Item no.
	2-fold	16	625 mm	3	**34123**
	3-fold	18	875 mm	5	**34133**
	4-fold	18.5	1 125 mm	7	**34143**
	5-fold	19	1 375 mm	9	**34153**
	6-fold	19	1 625 mm	11	**34163**

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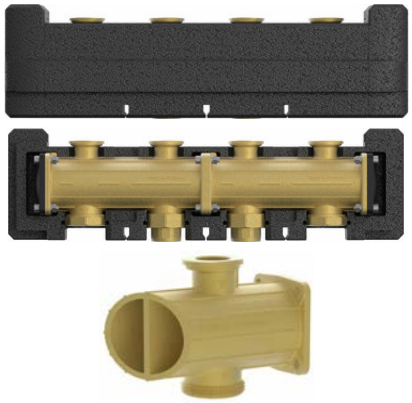
Distribution manifold DN 32 (1¼")



Application range

- modular design
- for outputs up to 150 kW (for each boiler connection) at a temperature difference of 20 K

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C

Technical data

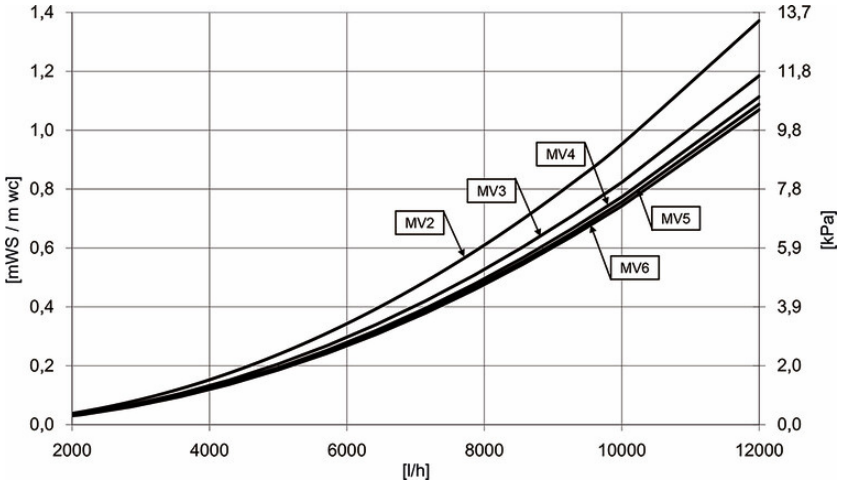
Dimensions

Nominal diameter	DN 32 (1¼")
Height	156 mm
Height insulation	156 mm
Centre distance	125 mm
Connection generator	2" ext. thread, flat sealing (bottom), 2 x for boiler connection, others plugged
Connection consumer	1¼" PAW flange for nut 2" (top)

Materials

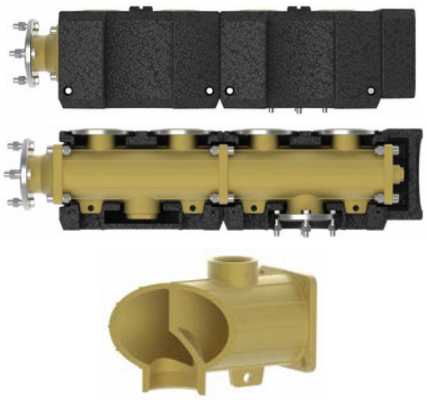
Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP

Differential pressure diagram



Distribution manifold DN 32	Execution	Kvs value	Width	Connections for HeatBloC®s	Item no.
	2-fold	34	625 mm	3	**37123**
	3-fold	37	875 mm	5	**37133**
	4-fold	38	1 125 mm	7	**37143**
	5-fold	38	1 375 mm	9	**37153**
	6-fold	38	1 625 mm	11	**37163**

Distribution manifold DN 40 (1½")



Application range

- modular design
- for outputs up to 250 kW (for each boiler connection) at a temperature difference of 20 K

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C

Technical data

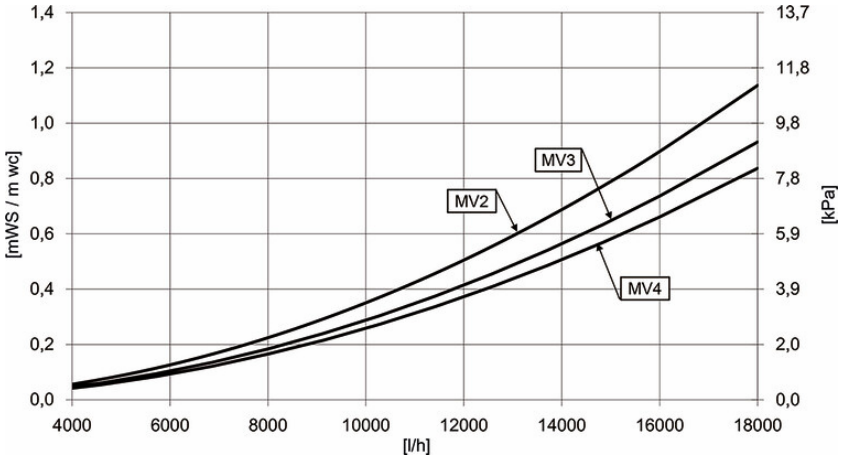
Dimensions

Nominal diameter	DN 40 (1½")
Height	179 mm
Height insulation	190 mm
Centre distance	160 mm
Connection generator	Flange DN 50 / PN 6, flow at the side, return to the bottom, others sealed with 2" plug
Connection consumer	Flange DN 40 / PN 6 (on top)

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP

Differential pressure diagram



Distribution manifold DN 40	Execution	Kvs value	Width	Connections for HeatBloC®s	Item no.
	2-fold	53.9	740 mm	2	**4112**
	3-fold	59.6	1 060 mm	3	**4113**
	4-fold	62.9	1 380 mm	4	**4114**

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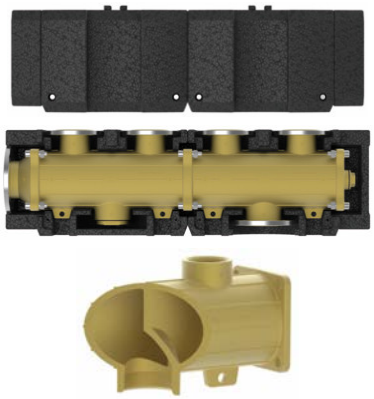
Distribution manifold DN 50 (2")



Application range

- modular design
- for outputs up to 400 kW (for each boiler connection) at a temperature difference of 20 K

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C

Technical data

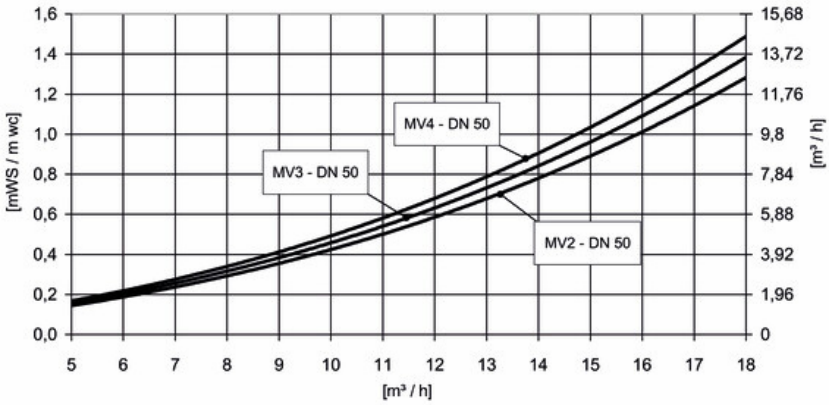
Dimensions

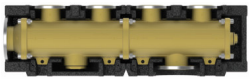
Nominal diameter	DN 50 (2")
Height	225 mm
Height insulation	220 mm
Centre distance	180 mm
Connection generator	Flange DN 65 / PN 6, flow at the side, return to the bottom, others sealed with 2" plug
Connection consumer	Flange DN 50 / PN 6 (on top)
Lateral connection	1¼" int. thread, sealed with plug, for safety group and expansion tank

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP

Differential pressure diagram



Distribution manifold DN 50	Execution	Kvs value	Width	Connections for HeatBloC®s	Item no.
	2-fold	70.4	840 mm	2	**5112**
	3-fold	74.7	1 200 mm	3	**5113**
	4-fold	85.6	1 560 mm	4	**5114**

Mounting equipment modular distribution manifold DN 20-50

	**MCom communication set** For WiFi communication with an Apple or Android terminal. The communication module is the condition for for the automatic hydraulic balancing of the radiators via the PAW app. You can get the corresponding app in the App Store or Google Play Store by searching for "PAW MCom". With insulation and device for the installation on the modular distribution manifold Communication module Raspberry Pi with Modbus cable WLAN adapter 802.11n nano Wall power supply 5 V DC	**1398731**
	**Connection set for diaphragm expansion tank - DN 20 (¾")** for assembly to distribution manifolds DN 20, with tank connector ¾", wall bracket and mounting equipment, armoured hose with bend ¾" x 700 mm, maximum tank diameter = 440 mm	**7509**
	**Union nut DN 20 (¾")** Brass, to screw insertion pieces for soldering below distribution manifolds DN 20 (¾")	**2055**
	**Sealing for nut - DN 20 (¾")** asbestos-free, outside diameter: 30 mm, inside diameter: 21 mm, height: 2 mm	**2057**
	**Wall bracket for HeatBloC® DN 20 (¾")** Components: 2 wall bracket sets, mounting equipment Possible wall distance: 70-100 mm, distance: 15 mm For 5-fold modular distribution manifolds, we recommend to use two wall bracket sets.	**3121**
	**Wall bracket for HeatBloC® DN 40 (1½")** Components: Wall bracket, 2 gaskets, mounting equipment, distance of the pipe axis to the wall A = 270 mm	**41641**
	**Coupling piece for overhead installation - DN 20 (¾")** Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing. Please note: When you use wall brackets, an additional mounting plate is necessary for installing a 2-fold distribution manifold MV2.	**31241**
	**Connection set DN 20 (¾")** Consisting of 2 adapter pieces with 1" nut and ¾" internal thread for connecting pipes with ¾" external thread under modular distribution manifolds DN 20 (¾")	**3131**
	**Set extension pieces DN 20 - DN 25** Set of adaptor pieces for the overhead installation of HeatBloC®s DN 25 below distribution manifolds DN 20, centre distance changed from 90 mm to 125 mm, connections 1" nut x 1" flange (for nut 1½"), flat sealing.	**34352**

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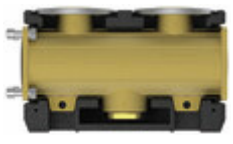
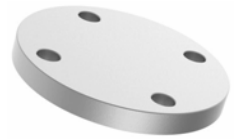
Mounting equipment modular distribution manifold DN 20-50

	**Set extension pieces DN 25 - DN 32** for the assembly of HeatBloC®s DN 32 on distribution manifolds DN 25, set of distance rings for union nut 2" internal thread on 1" PAW flange, made of brass, with special sealing, flat-sealing	**3436**
	**Coupling piece for overhead installation - DN 25 (1")** Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing. Please note: When you use wall brackets, an additional mounting plate is necessary for installing a 2-fold distribution manifold MV2.	**34241**
	**Mounting plate DN 20 (¾")** Components: mounting plate, 2 gaskets, 2 x 1" nut, 2 x reducing nipple 1" ext. thread x ¾" ext.thread for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3125**
	Mounting plate DN 25 (1") Components: mounting plate, 2 gaskets, 2 x 1½" nut, 2 x housing of coupling F 1" x 1½" ext. thread for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3425**
	Mounting plate DN 32 (1¼") Components: mounting plate, 2 gaskets, 2 x 2" nut for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3725**
	**Extension module DN 20** Completely made of brass Completely preassembled Flow and return chamber 95 % thermally separated	**3111**
	**Extension module DN 25 for modular distribution manifold until 12/2016**	**3411**
	Extension module DN 25 for modular distribution manifold as of 01/2017 Number of connections for HeatBloC®s = 1 Width: 251 mm Completely made of brass Completely preassembled Flow and return chamber 95 % thermally separated For the extension of already existing modular distribution manifolds DN 25. The installation may only be made by qualified experts!	**34113**
	**Extension module DN 32 for modular distribution manifold until 12/2016**	**3711**
	Extension module DN 32 for modular distribution manifold as of 01/2017 Number of connections for HeatBloC®s = 1 Width: 251 mm Completely made of brass Completely preassembled Flow and return chamber 95 % thermally separated For the extension of already existing modular distribution manifolds DN 32. The installation may only be made by qualified experts!	**37113**
	**Extension module DN 40 (1½"), for the standard and MC series**	**4111**
	Extension module DN 50 (2"), for the standard and MC series Completely made of brass Completely preassembled Flow and return chamber 95 % thermally separated	**5111**

Mounting equipment modular distribution manifold DN 20-50

	**Extension set for low-loss header - DN 25 (1")** for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Range of application up to 1600 l/h, max. up to a 3-fold distribution manifold MV3. Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**34431**
	Extension set for low-loss header - DN 32 (1¼") for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Range of application up to 2600 l/h, max. up to a 3-fold distribution manifold MV3. Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**37431**
	**Extension set for low-loss header - DN 40 (1½")**	**4143**
	Extension set for low-loss header DN 50 (2") for conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Consisting of: 1 distance ring for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**5143**
	**Blind flange DN 40 (1½") / PN 6**	**41611**
	Blind flange 50 (2") / PN 6 PN 6, as per DIN 2527, with 1 gasket, 4 screws and 4 nuts	**51611**
	**Screwed flange DN 40 (1½") / PN 6 on 1½" int. thread**	**41612**
	Screwed flange DN 50 (2") / PN 6 on 2" int. thread	**41613**
	Screwed flange DN 65 (2½") / PN 6 on 2½" int. thread PN 6, acc. to DIN 2565, steel, black	**51612**
	**Weld neck flange DN 40 (1½") / PN 6**	**41614**
	Weld neck flange DN 50 (2") / PN 6	**41615**
	Weld neck flange DN 65 (2½") / PN 6 PN 6, acc. to DIN 2631, steel, black	**51613**
	**Wall bracket set for modular distribution manifold - DN 40 (1½")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**41651**
	**Wall bracket set for modular distribution manifold - DN 50 (2")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**41652**
	**Floor bracket set for modular distribution manifold - DN 40 / 50 (1½"/ 2")** Components: 2 floor brackets (galvanized steel), 4 wall plugs, 4 screws, 2 screws for fixing the distribution manifold onto the floor brackets Height = adjustable 1,050 - 1,080 mm, for shortening simply cut off	**41671**

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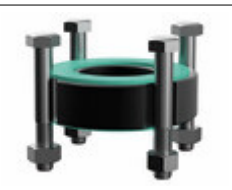
Mounting equipment modular distribution manifold DN 20-50

	**Reducer set DN 25 - DN 20** for installation of HeatBloC®s DN 20 on modular distribution manifolds DN 25, adapter set 1½" external thread, flat-sealing with nut on ¾" PAW flange, reduction of the centre distance from 125 mm to 90 mm, distance pipe 1" internal thread x 1" external thread, flat sealing, brass, with sealing. The required union nuts 1" internal thread are part of the scope of delivery of the HeatBloC®s.	**34351**
	**Wall bracket for modular distribution manifold - DN 25 (1") - DN 32 (1¼")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**34721**
	**Safety set DN 20 (¾"), up to 50 kW** for distribution manifolds DN 20, with self-sealing counter T-piece ¾" x ½", outlet ¾" with cap for expansion tank, pressure relief valve ½" x ¾", 3 bar, up to 50 kW, pressure gauge 0-4 bar	**5257**
	**Safety set for distribution manifold - DN 25 (1") up to 50 kW** For the installation on modular distribution manifolds DN 25 (as of 2017), with a connection of ¾" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7507), pressure relief valve ½" x ¾", 3 bar, up to 50 kW, pressure gauge 0-4 bar	**52543**
	**Safety set for distribution manifold - DN 32 (1¼") up to 100 kW** For the installation on modular distribution manifolds DN 32 (as of 2017), with a connection of 1" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7508), pressure relief valve ¾" x 1", 3 bar, up to 100 kW, pressure gauge 0-4 bar	**52553**
	**Coupling piece for overhead installation - DN 32 (1¼")** Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing. Please note: When you use wall brackets, an additional mounting plate is necessary for installing a 2-fold distribution manifold MV2.	**3724**
	**Adapter pipe DN 40 (1½")** for flange pumps DN 40 DN 40 x 30 mm Installation length from 220 to 250 mm	**12397**
	**Adapter pipe DN 50 (2")** for flange pumps DN 50 DN 50 x 30 mm Installation length from 250 to 280 mm	**12395**

Mounting equipment modular distribution manifold DN 20-50

	**Adaptor pieces DN 50 (2")** for flange pumps DN 50 DN 50 x 20 mm Installation length from 240 to 280 mm	**12396**
	**Reducer set DN 32 - DN 25** for installation of modular heating circuits DN 20 on modular distribution manifolds DN 25, adapter set 1½" external thread, flat-sealing with nut on ¾" PAW flange, reduction of the centre distance from 125 mm to 90 mm, distance pipe 1" internal thread x 1" external thread, flat sealing, brass, with sealing. The required union nuts 1" internal thread are dismounted from the heating circuit.	**3735**
	Reducer set DN 32 - DN 25 for the installalation of DN 25 HeatBloC®s on DN 32 distribution manifolds, adapter set 2" external thread, flat-sealing with nut on 1½" internal thread, flat-sealing, made of brass, with gaskets, 2 types	**37351**
	**Set reducer flanges DN 40 - DN 32 (1½" - 1¼")** Reducer flanges made of brass for the assembly of a pump DN 32* in HeatBloC®s DN 40 or for connection of a single HeatBloC® DN 32 on a distribution manifold DN 40. One side flange DN 40 - PN 6, other side flange for 2" union nut, flat sealing. Reduction of the centre distance from 160 mm to 125 mm, installation height = 35 mm. *For the installation of a DN 32 pump 2x nut and seals are required additionally (2x N00121).	**41610**
	**Set reducer flanges DN 50 - 32 (2" - 1¼")** 2 reducing flanges made of steel, zinced/brass for connecting a DN 32 HeatBloC® on a DN 50 modular distribution manifold. One side DN 50 flange with PN 6, other side flange DN 32 - 1¼". Reduction of the centre distance from 180 mm to 125 mm, with seals and screws for connection to DN 50. Installation height = 48 mm	**5162**
	**Set reducer flanges DN 50 - 40 (2" - 1½")** 2 reducing flanges made of zinced steel for connecting a DN 40 HeatBloC® on a DN 50 modular distribution manifold. For the assembly of a DN 40 pump, installation length 250 mm, in a DN 50 HeatBloC®. One side DN 50 flange (PN 6), other side DN 40 flange (PN 6). Reduction of the centre distance from 180 mm to 160 mm, with seals and screws, installation height = 13 mm Use only with slip-on flanges!	**51610**

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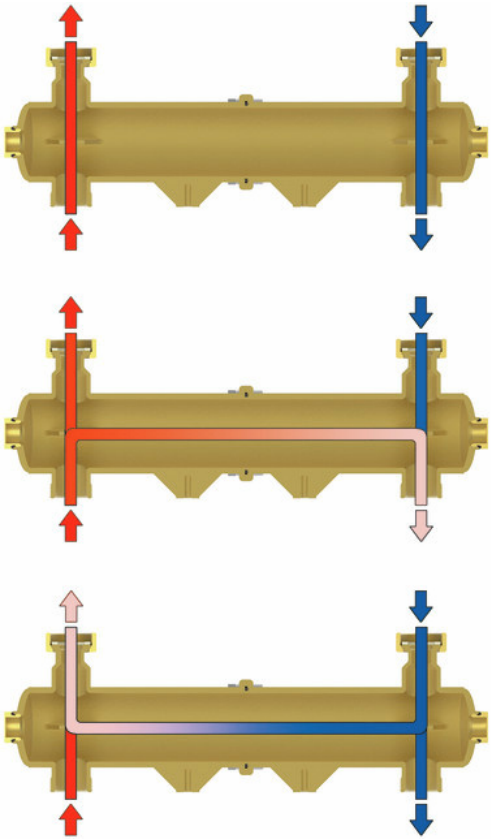
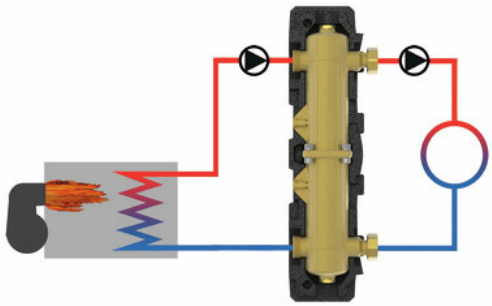
Hydraulic separator DN 20 (¾")

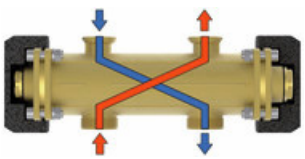


Description

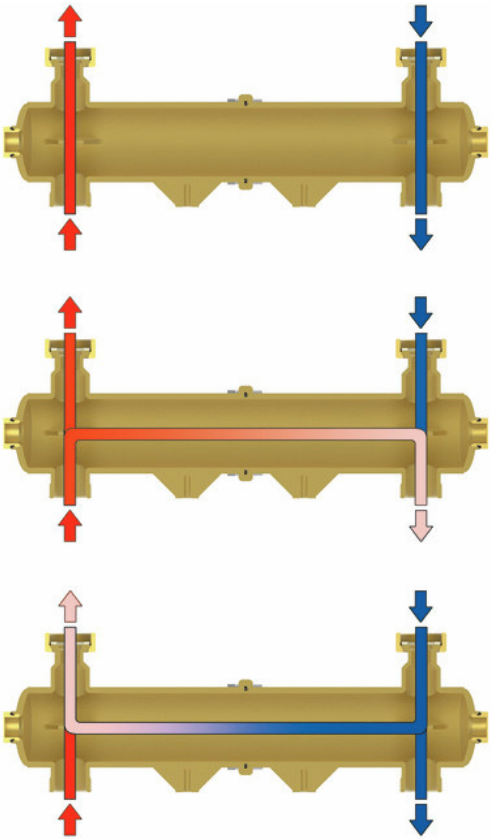
Hydraulic separators are used when there are simultaneously one or more heat generator circuits/primary circuits with an own pump and one or more consumer/secondary circuits with a distribution pump in an installation. The hydraulic separator causes a hydraulic separation of the connected circuits. It is thus possible to make the connected primary and secondary circuits work independently in terms of the hydraulics. The flow in one circuit does not cause a flow in the other circuit when the pressure drop in the hydraulic separator is insignificant.

When a hydraulic separator is used, each circuit (the primary and the secondary one) must be equipped with a pump. Thus, a heat generation circuit/primary circuit can be provided with constant throughput and a consumer circuit/ secondary circuit can be provided with variable flow. These are the typical functioning conditions for modern heating and air conditioning systems. The figures on the adjoining side show three possible conditions of hydraulic stability.



Hydraulic separator DN 20 (¾")		Item no.
	**Flow rate: 2200 l/h** Completely made of brass, completely insulated with EPP insulation, for the installation under a modular distribution manifold DN 20 or separately (vertically or horizontally) to the wall. Connections: ¾" PAW flange for nut 1" nut (top), ¾" internal thread x 1" external thread flat-sealing (bottom), 2 x for boiler connection, others closed with plug, 2 × ½" internal thread for immersion sleeve and fill and drain valve width = 435 mm, installation height = 120 mm, centre distance = 270 mm	**31421**
	**Flow rate: 950 l/h** Completely made of brass, with separate flow and return line, for the installation under an individual HeatBloC® DN 20. The EPP insulation is integrated into the HeatBloC®. Can also be installed under a modular distribution manifold DN 20 (with mounting plate item no. 3125) or separately (in the pipe).When installing separately two additional union nuts item no. 2055 are necessary and the insulation must be produced on site. Connections: ¾" PAW flange for nut 1" nut (top), ¾" internal thread x 1" external thread flat-sealing (bottom), 2 x ¾" internal thread, closed with plug (on the side), width = 260 mm, installation height = 80 mm, centre distance = 90 mm	**3142**

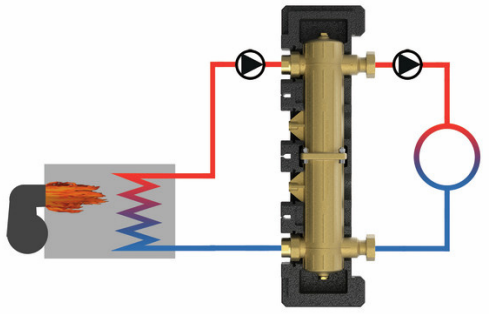
Hydraulic separator DN 25 (1")

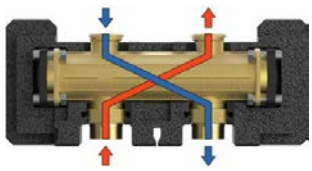


Description

Hydraulic separators are used when there are simultaneously one or more heat generator circuits/primary circuits with an own pump and one or more consumer/secondary circuits with a distribution pump in an installation. The hydraulic separator causes a hydraulic separation of the connected circuits. It is thus possible to make the connected primary and secondary circuits work independently in terms of the hydraulics. The flow in one circuit does not cause a flow in the other circuit when the pressure drop in the hydraulic separator is insignificant.

When a hydraulic separator is used, each circuit (the primary and the secondary one) must be equipped with a pump. Thus, a heat generation circuit/primary circuit can be provided with constant throughput and a consumer circuit/ secondary circuit can be provided with variable flow. These are the typical functioning conditions for modern heating and air conditioning systems.
The figures on the adjoining side show three possible conditions of hydraulic stability.



Hydraulic separator DN 25 (1")		Item no.
	**Flow rate: 3500 l/h** Completely made of brass, completely insulated with EPP insulation, for the installation under a modular distribution manifold DN 25 or separately (vertically or horizontally) to the wall. Connections: 1" PAW flange for 1½" nut (top), 1½" external thread / 1" internal thread, flat-sealing with fitting, 2 x ½" internal thread for immersion sleeve and fill and drain valve, width = 625 mm, installation height = 180 mm centre distance = 375 mm	**344213**
	**Flow rate: 1600 /h** Completely made of brass, with separate flow and return line, for the installation under an individual HeatBloC® DN 25. With EPP insulation. Can also be installed under a modular distribution manifold DN 25 (with mounting plate item no. 3425) or separately (in the pipe). In case of separate installation you need two connection sets item no. 2151. Connections: 1" PAW flange for 1½" nut (top), 1½" external thread, flat-sealing with fitting, width = 375 mm installation height = 128 mm centre distance = 125 mm	**344203**

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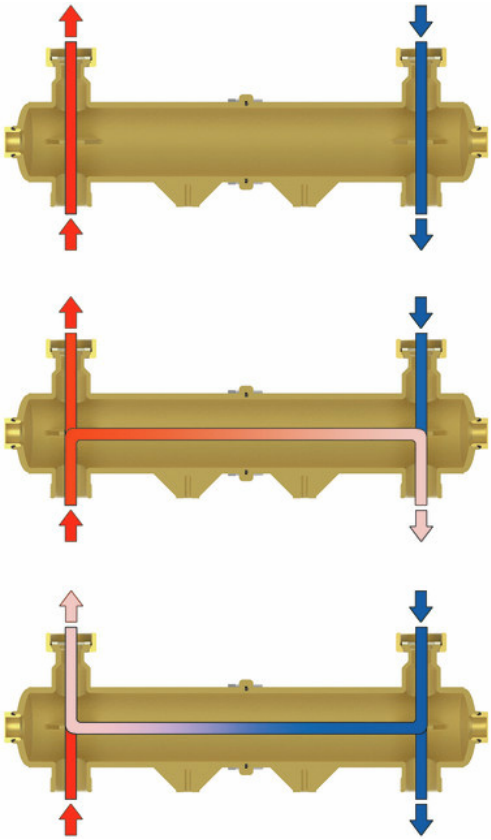
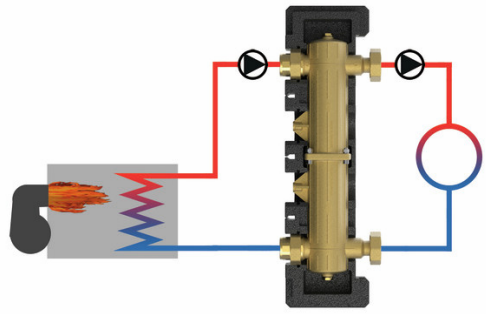
Hydraulic separator DN 32 (1¼")

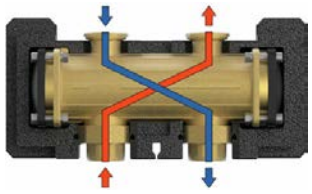


Description

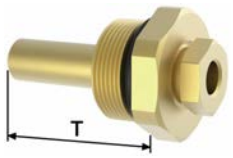
Hydraulic separators are used when there are simultaneously one or more heat generator circuits/primary circuits with an own pump and one or more consumer/secondary circuits with a distribution pump in an installation. The hydraulic separator causes a hydraulic separation of the connected circuits. It is thus possible to make the connected primary and secondary circuits work independently in terms of the hydraulics. The flow in one circuit does not cause a flow in the other circuit when the pressure drop in the hydraulic separator is insignificant.

When a hydraulic separator is used, each circuit (the primary and the secondary one) must be equipped with a pump. Thus, a heat generation circuit/primary circuit can be provided with constant throughput and a consumer circuit/ secondary circuit can be provided with variable flow. These are the typical functioning conditions for modern heating and air conditioning systems. The figures on the adjoining side show three possible conditions of hydraulic stability.



Hydraulic separator DN 32 (1¼")		Item no.
	**Flow rate: 4800 l/h** Completely made of brass, completely insulated with EPP insulation, for the installation under a modular distribution manifold DN 32 or separately (vertically or horizontally) to the wall. Connections: 1¼" PAW flange for 2" nut (top), 1¼" internal thread / 2" external thread, flat-sealing (bottom) with fitting, 2 x ½" internal thread for immersion sleeve and fill and drain valve, width = 600 mm installation height = 200 mm centre distance = 375 mm	**374213**
	**Flow rate: 2600 l/h** Completely made of brass, with separate flow and return line, for the installation under an individual HeatBloC® DN 32. With EPP insulation. Can also be installed under a modular distribution manifold DN 32 (with mounting plate item no. 3725) or separately (in the pipe). In case of separate installation you need two connection sets item no. 2152. Connections: 1¼" PAW flange for 2" nut (top), 2" external thread, flat-sealing with fitting, width = 330 mm installation height = 125 mm centre distance = 125 mm	**374203**

Mounting equipment hydraulic separators DN 20-32

	**Immersion sleeve ¼" ext. thread x T = 60 mm**	**566002**
	**Wall bracket for HeatBloC® DN 20 (¾")** Components: 2 wall bracket sets, mounting equipment Possible wall distance: 70-100 mm, distance: 15 mm For 5-fold modular distribution manifolds, we recommend to use two wall bracket sets.	**3121**
	**Wall bracket for modular distribution manifold - DN 25 (1") - DN 32 (1¼")** Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets Distance of the pipe axis to the wall: A = 400 mm	**34721**
	**Mounting plate DN 20 (¾")** Components: mounting plate, 2 gaskets, 2 x 1" nut, 2 x reducing nipple 1" ext. thread x ¾" ext.thread for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3125**
	Mounting plate DN 25 (1") Components: mounting plate, 2 gaskets, 2 x 1½" nut, 2 x housing of coupling F 1" x 1½" ext. thread for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3425**
	Mounting plate DN 32 (1¼") Components: mounting plate, 2 gaskets, 2 x 2" nut for installation with flat sealings under a modular distribution manifold and for attaching wall brackets	**3725**
	**Fill and drain valve - DN 15 (½")** solid design, with hose connector and cap, completely made of brass, ½" with self-sealing counter nut	**2260**
	**Union nut DN 20 (¾")** Brass, to screw insertion pieces for soldering below distribution manifolds DN 20 (¾")	**2055**
	Union nut DN 25 (1") Brass, to screw insertion pieces for soldering below distribution manifolds DN 25 (1")	**2155**
	Union nut DN 32 (1¼") Brass, to screw insertion pieces for soldering below distribution manifolds DN 32 (1¼")	**2156**
	**Sealing for nut - DN 20 (¾")** asbestos-free, outside diameter: 30 mm, inside diameter: 21 mm, height: 2 mm	**2057**
	Sealing for nut - DN 25 (1") asbestos-free, outside diameter: 44 mm, inside diameter: 32 mm, height: 2 mm	**2157**
	Sealing for nut - DN 32 (1¼") asbestos-free, outside diameter: 50 mm, inside diameter: 38 mm, height: 2 mm	**2158**
	**Low-loss header DN 20, 2-fold** Number of connections for HeatBloC®s = 3 Width = 440 mm	**31422**

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	**Low-loss header DN 20, 3-fold** Number of connections for HeatBloC®s = 5 Width = 620 mm	**31423**
	**Low-loss header DN 25, 2-fold** Number of connections for HeatBloC®s = 3 Width = 580 mm	**344223**
	**Low-loss header DN 25, 3-fold** Number of connections for HeatBloC®s = 5 Width = 830 mm	**344233**
	**Low-loss header DN 32, 2-fold** Number of connections for HeatBloC®s = 3 Width = 600 mm	**374223**
	**Low-loss header DN 32, 3-fold** Number of connections for HeatBloC®s = 5 Width = 850 mm for boilers with integrated pump By means of the conversion kit (item no. 3143 / 34431 / 37431), the modular distribution manifolds get a bypass which connects the flow and return line without causing any resistance (low-loss header). It must be considered that the pump of the boiler circuit must deliver a higher flow rate than the consumer pumps need in total. Otherwise, unwanted circulations occur on the right or left end of the low-loss header. In that case a hydraulic separator must be installed below a distribution manifold. For all low-loss headers, please note: When you plan the system you must already check whether a low-loss header can be used. In combination with central heating boilers, hydraulic separators must be installed below / upstream of a distribution manifold as the boiler delivers a flow rate with a high temperature difference (leads to unwanted circulation in low-loss headers).	**374233**
	**Extension set for low-loss header - DN 20 (¾")** for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Range of application up to 950 l/h, max. up to a 3-fold distribution manifold MV3. Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**3143**
	**Extension set for low-loss header - DN 25 (1")** for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Range of application up to 1600 l/h, max. up to a 3-fold distribution manifold MV3. Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**34431**
	Extension set for low-loss header - DN 32 (1¼") for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header). Range of application up to 2600 l/h, max. up to a 3-fold distribution manifold MV3. Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings.	**37431**

	**Piping group DN 20** Piping group for hydraulic separator, consisting of 2 pipe sections, union nuts and seals, for connection of a vertically mounted hydraulic separator below a PAW distribution manifold. Flat-sealing connection, completely insulated, outlet on the left or on the right.	**3142KS1**
	Piping group for hydraulic separator - DN 25 (1") Piping group for hydraulic separator, consisting of 2 pipe sections, union nuts and seals, for connection of a vertically mounted hydraulic separator below a PAW distribution manifold. Flat-sealing connection, completely insulated, outlet on the left or on the right.	**3442KS1**
	Piping group for hydraulic separator - DN 32 (1¼") Piping group for hydraulic separator, consisting of 2 pipe sections, union nuts and seals, for connection of a vertically mounted hydraulic separator below a PAW distribution manifold. Flat-sealing connection, completely insulated, outlet on the left or on the right.	**34742KS1**

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CoolBloC DN 25 / DN 32

Catalogue 04/2025

Systems, valves and fittings
for modern heating and cooling

Valid for the EU

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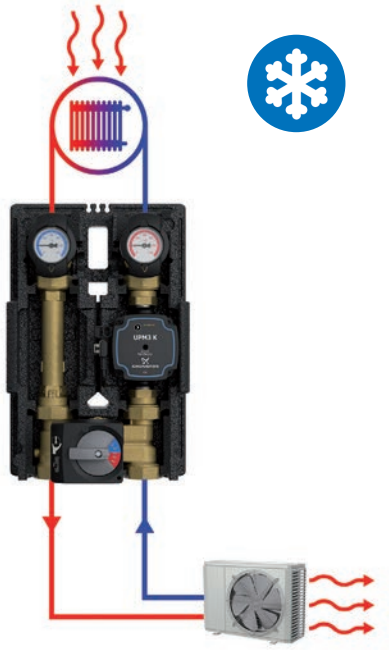
DN 25 / DN 32

All CoolBloCs offer the following advantages:



Pump group for heating and cooling

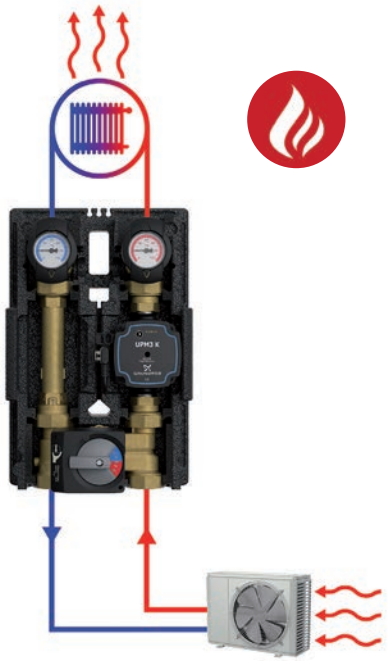
Condensation-resistant valves and fittings:
high-quality components to avoid oxidation

Special pumps with additional insulating element
for the use in special ambient conditions, such as dewing or condensate formation

Thermal separation of the actuator and the mixing valve
to avoid condensate formation

Sealing lips protected by the utility model in the insulation
to reduce condensate formation

CoolBloCs are ideally suitable for the use in combination with heat pumps.



Cooling – application during the summer:

1. A heat sink (e.g. a heat pump) provides cooled fluid.
2. The cooling circuit transports the cooled fluid to the interior spaces.
3. There, a heat transfer takes place and the fluid is heated.
4. The heated fluid is cooled down again in the heat sink.

Heating – application during the winter:

1. A heat source (e.g. a heat pump) provides heated fluid.
2. The cooling circuit transports the heated fluid to the interior spaces.
3. There, a heat transfer takes place and the fluid is cooled down.
4. The cooled fluid is heated again in the heat source.

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C31 - DN 25 (1“)
direct / unmixed



up to 46.5 kW*

C34 - DN 25 (1“)
3-way mixing valve with bypass 0-50%



up to 43 kW*

C31 - DN 32 (1¼“)
direct / unmixed



up to 50 kW*

C34 - DN 32 (1¼“)
3-way mixing valve with bypass 0-50%



up to 48 kW*

*Temperature difference = 20 K

CoolBloC C31 DN 25 (1") direct / unmixed





Application range

- For boiler charging / for modulating temperature heating system

Recommended application range

- up to 46 kW
- 20 K up to 2000 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	95 °C
Kvs value	7.2

Technical data

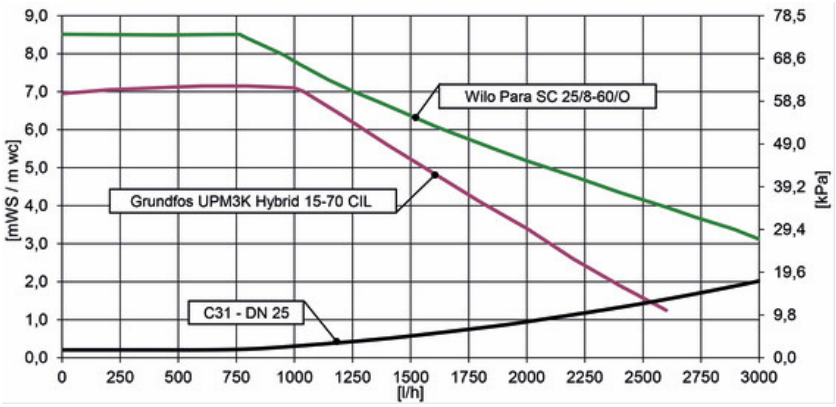
Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	342 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



CoolBloC C31 DN 25 (1")		EEI*	with	Item no.
	**Grundfos UPM3K Hybrid 15-70 CIL**	< 0.20	▲	**4236013GK7**
	Wilo Para SC 25/8-60/O	< 0.20	▲	**4236013WP8**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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CoolBloC C34 DN 25 (1")
3-way bypass mixing valve





Application range

- for heating and cooling systems controlled by a mixing valve

Recommended application range

- up to 43 kW
- 20 K up to 1850 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	95 °C
Kvs value	6
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1½" ext. thread, flat sealing
Connection consumer	1" int. thread
Height	383 mm
Installation length	342 mm
Centre distance	125 mm
Width	250 mm

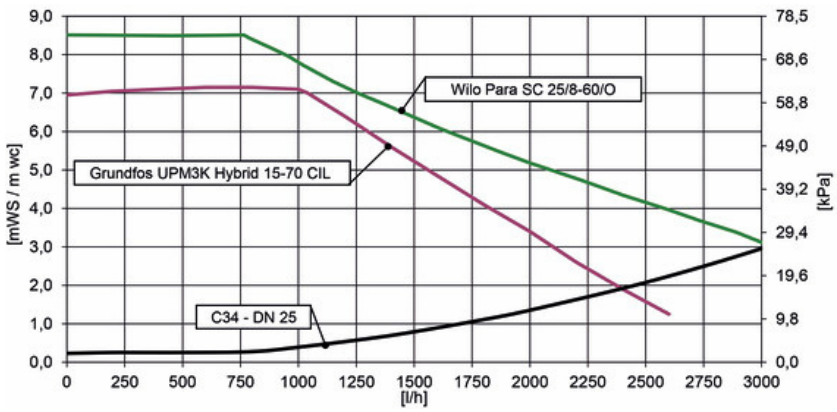
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR5	230 V - 50 Hz

Differential pressure diagram



CoolBloC C34 DN 25 (1")		EEI*	with	Item no.
	**Grundfos UPM3K Hybrid 15-70 CIL**	< 0.20	▲Ⓜ	**4236063MGK7**
	Wilo Para SC 25/8-60/O	< 0.20	▲Ⓜ	**4236063MWP8**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

CoolBloC C31 DN 32 (1¼") direct / unmixed





Application range

- For boiler charging / for modulating temperature heating system

Recommended application range

- up to 50 kW
- 20 K up to 2150 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	95 °C
Kvs value	15.1

Technical data

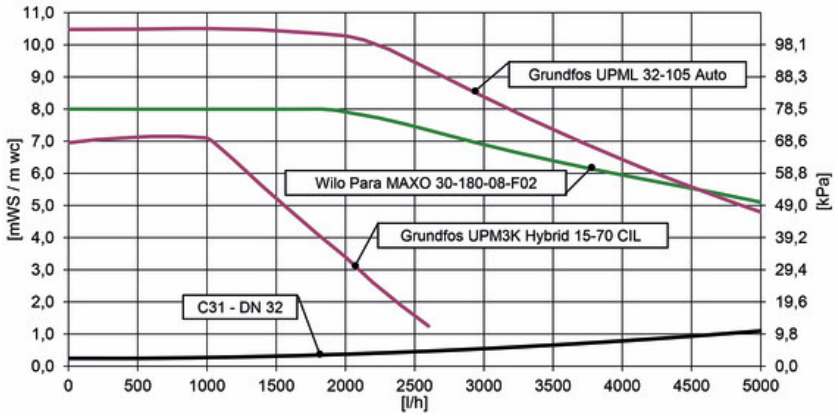
Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	1¼" int. thread
Connection consumer	2" ext. thread, flat sealing
Height	441 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



CoolBloC C31 DN 32 (1¼")		EEI*	with	Item no.
	**Grundfos UPM3K Hybrid 15-70 CIL**	< 0.20	▲	**4239013GK7**
	Grundfos UPML 32-105 AUTO	< 0.23	▲	**4239013GL9**
	Wilo Para MAXO 30/1-8	< 0.20	▲	**4239013WM08**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

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CoolBloC C34 DN 32 (1¼")
3-way bypass mixing valve





Application range

- for heating and cooling systems controlled by a mixing valve

Recommended application range

- up to 48 kW
- 20 K up to 2070 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	95 °C
Kvs value	10.1
Adjustment range bypass	0 - 50 %

Technical data

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	1¼" int. thread
Connection consumer	2" ext. thread, flat sealing
Height	441 mm
Installation length	400 mm
Centre distance	125 mm
Width	250 mm

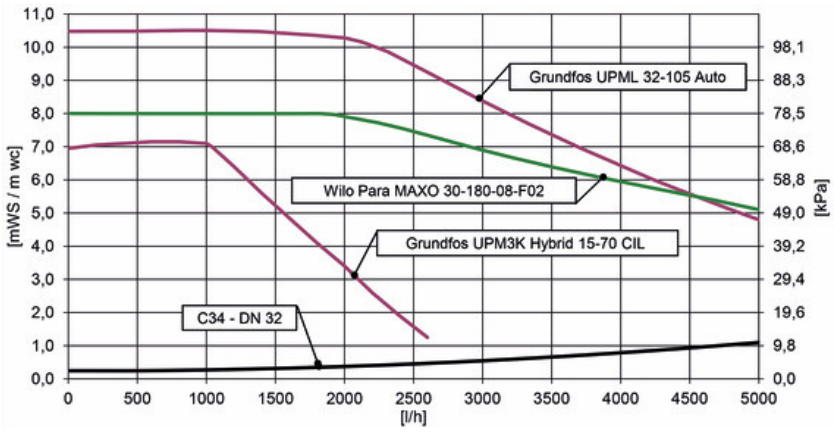
Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Equipment

Actuator SR5	230 V - 50 Hz

Differential pressure diagram



CoolBloC C34 DN 32 (1¼")		EEI*	with	Item no.
	**Grundfos UPM3K Hybrid 15-70 CIL**	< 0.20	▲Ⓜ	**4239063MGK7**
	Grundfos UPML 32-105 AUTO	< 0.23	▲Ⓜ	**4239063MGL9**
	Wilo Para MAXO 30/1-8	< 0.20	▲Ⓜ	**4239063MWM08**

▲ = with pump ⊖ = without pump Ⓜ = with actuator *EEI = Energy Efficiency Index

	**Wall-mounting set for stair bolts** Components: 2 x clip spring, 2 x acoustic decoupling	**Z3445**
	**Connection set - DN 25 (1")** Consisting of 2 insertion pieces for connection of pipes with 1" external thread below HeatBloC®s or for the use of cutting-ring compression fittings.	**3431**
	**Connection set DN 32 (1¼")** Consisting of 2 insertion pieces for connection of pipes w/ 1¼" external thread below HeatBloC®s	**3731**
	**Connection set DN 32 (1¼")** Connection set for DN 32 (1¼"), consists of 2 screw-in fittings with 2" external thread and 1¼" internal thread for the connection of pipes 1¼" external thread.	**3732**

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BoostBloC® DN 25+

Catalogue 04/2025

Electronic post-heating for heat pump applications
and comfortable heat supply

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BoostBloC® DN 25+





Application range

- Comfort maintenance through post-heating via mains power
- Stratification option: integrated switch valve

Operating data

Max. operating pressure	3 bar
Mindestvolumenstrom	500 l/h
Safety valve	3 bar
Kvs value	8.4
Restförderhöhe	60,8 kPa
Nenninhalt	0.8 l
Medium	Heating water

Technical data

Electrical data

Heating cartridge	
Connection	400 V 3N 50 Hz
Nominal output level 1	P1 = 2600 W
Nominal output level 2	P2 = 3000 W
Nominal output level 3	P3 = 3200 W
Cable cross-section	2,5 - 6 mm²
Control	3x relay (230 VAC, 50 Hz, < 5 VA); External control required
Station	Protection class: IP 20, Protection class: I
Safety temperature limiter	
Voltage	400 V
Switch-off temperature	85 °C - 8K
Pump	Grundfos UPM4L 25-75 230 VAC/50 Hz, 0,58 A PWM interface with feedback signal for volume flow rate determination
Actuator	PS5-230-2P 5 Nm, 2-Punkt-Ansteuerung 230 V, 50 Hz, <5 VA 13 s/90°, 60 % EDmax; Protection category: IP42, protection class II Actuator - protection category: IP 42, Actuator - protection class: II
Sensors	1x Pt1000

Hydraulic connections

Flow / return consumer	1½" int. thread
Flow / return heat pump	1½" int. thread

Dimensions

Nominal diameter	DN 25 (1")
Width	406 mm
Height	711 mm
Depth	200 mm
Installation length	661 mm

Materials

Valves and fittings	Copper; Brass
Gaskets	EPDM

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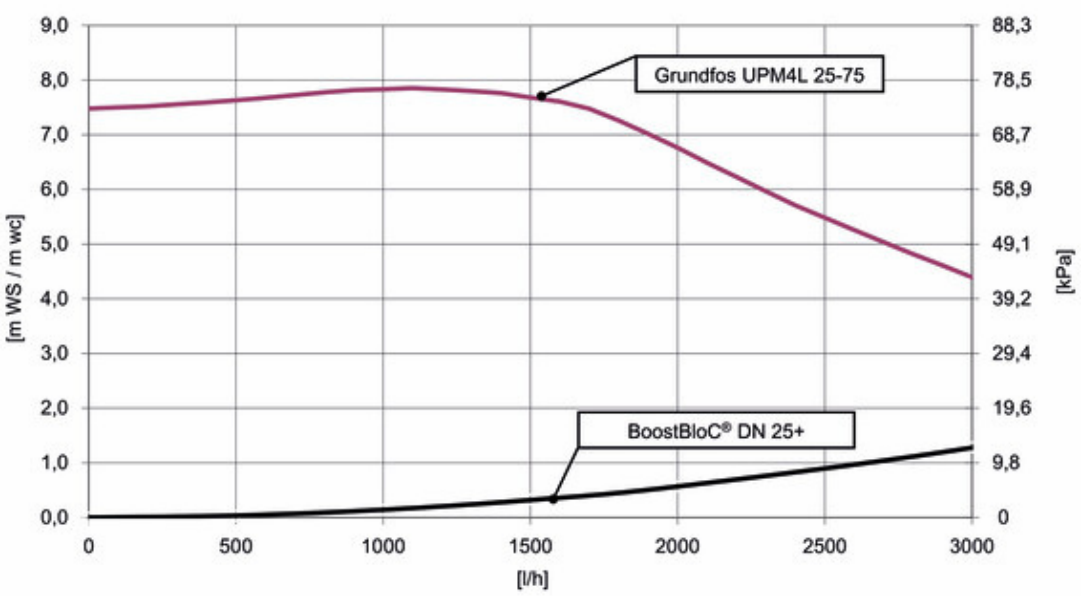

BoostBloC® DN 25+		Item no.
	**Grundfos UPM4L 25-75**	**6743093**



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Thermax
Heating technology



Distribution system Thermax

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Systems, valves and fittings
for the use in hot water heating systems

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Distribution system Thermax DN 20
K31 direct / K32 mixed





Application range

- for wall-mounted boilers

Recommended application range

- K31: up to 23 kW, 20 K up to 1000 l/h
- K32: up to 19 kW, 20 K up to 820 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C
Kvs value unmixed	4,7
Kvs value mixed	3,7
Kvs value Thermax distribution manifold	7,8

Technical data

Dimensions

Nominal diameter	DN 20 (¾")
Connection generator	1" ext.thread / ¾" int.thread
Connection consumer	¾" int. thread
Height	400 mm
Installation length	335 mm
Centre distance	90 mm
Width	408 mm

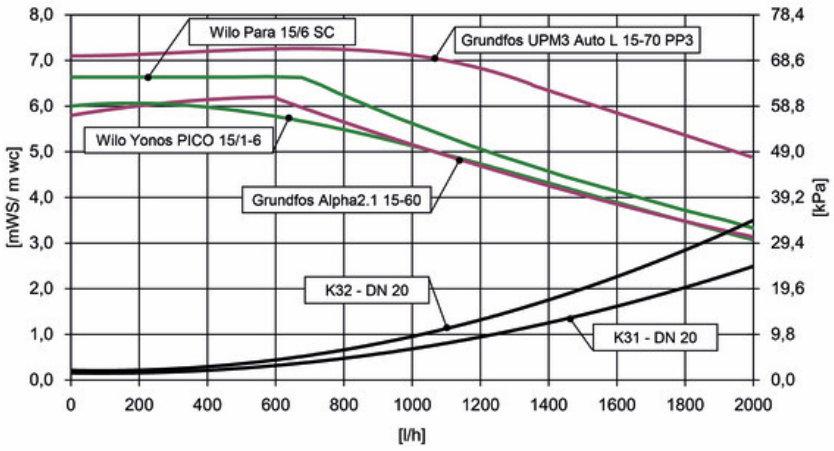
Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP / ABS

Equipment

Actuator SR2	230 V AC

Differential pressure diagram



Distribution system Thermax DN 20		EEI*	with	Item no.
	**K31-K32, 2x Wilo Yonos PICO 15/1-6**	< 0.20	▲Ⓜ	**323621WN06**
	K31-K32, 2x Wilo Para SC 15/6-43	< 0.20	▲Ⓜ	**323621WP6**
	K31-K32, 2x Grundfos ALPHA2.1 15-60	< 0.17	▲Ⓜ	**323621GH6**
	K31-K32, 2x Grundfos UPM3 Auto 15-70	< 0.20	▲Ⓜ	**323621GM6**
	**K32-K32, 2x Wilo Para SC 15/6-43**	< 0.20	▲Ⓜ	**323622WP6**
	K32-K32, 2x Wilo Yonos PICO 15/1-6	< 0.20	▲Ⓜ	**323622WN06**
	K32-K32, 2x Grundfos ALPHA2.1 15-60	< 0.17	▲Ⓜ	**323622GH6**
	K32-K32, 2x Grundfos UPM3 Auto 15-70	< 0.20	▲Ⓜ	**323622GM6**

▲ = with pump ⊖ = without pump Ⓜ =with actuator

*EEI = Energy Efficiency Index

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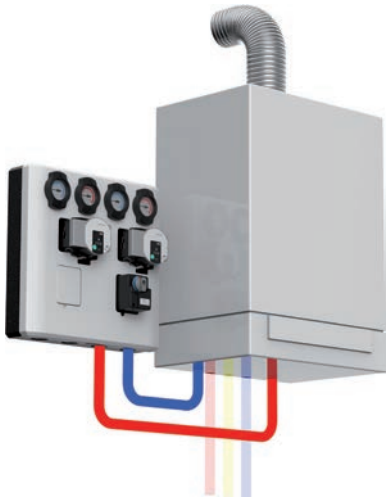
Description of function
Thermax DN 20 (¾")

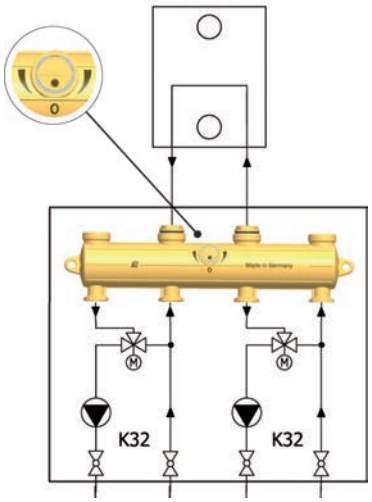




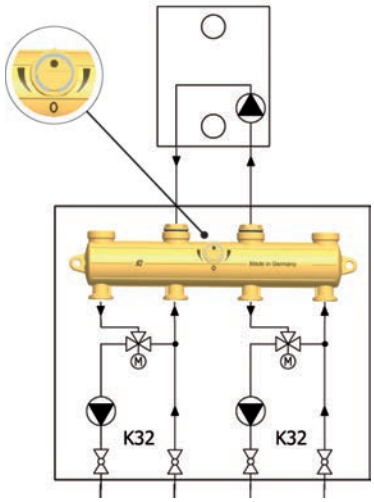
Installation beside the boiler:
Thermax is directly mounted to the wall without distance pieces

Installation below the boiler:
The pipes are installed between the Thermax (with distance pieces) and the wall

The Thermax system has been designed for applications with two different temperature levels. An application example: It can be connected to a consumer with a high flow temperature (such as a radiator) and a consumer with a low flow temperature (such as a radiant floor heating). The Thermax distribution manifold is equipped with an integrated, adjustable bypass. This bypass can be closed (distribution manifold is pressure tight - for applications with boilers without internal pump) or it can be opened (in this case a low-loss bypass is activated in the Thermax distribution manifold - for applications with an internal pump).

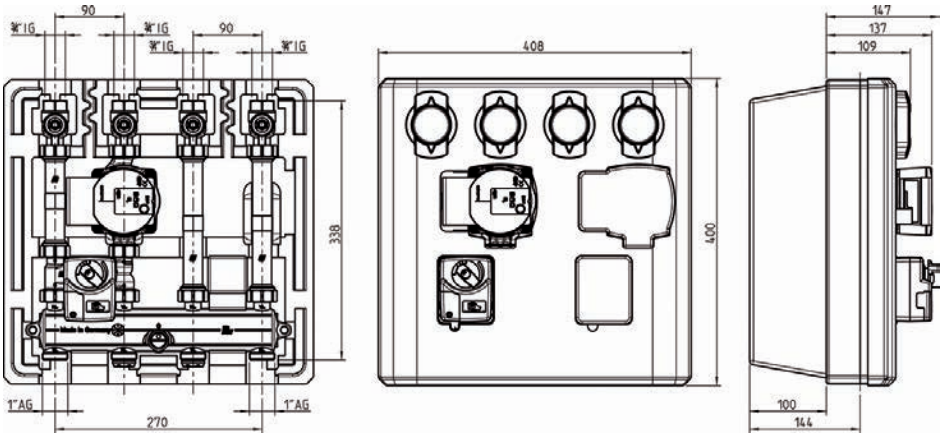


Bypass closed



Bypass open

Dimensions





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System separation DN 25

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Systems, valves and fittings
for the use in hot water heating systems

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System separation DN 25 (1") for HeatBloC®s



Application range
Separation of the boiler circuit and the consumer circuit

- for the protection of new boilers in older heating installations
- for radiant panel heating systems with plastic pipes

Recommended application range

- depending on the heat exchanger and the pump used
- in the case of a pressure loss of 1.5 m wc up to 25 kW 10 K
- up to 2150 l/h

Operating data

Max. operating pressure	6 bar
Max. operating temperature	110 °C

Equipment

Safety valve	3 bar, 50 kW
Pressure gauge	0-4 bar
Tank connection coupling	Stainless-steel corrugated hose: l = 700 mm; Wall bracket: for tanks with a max. diameter of 430 mm
Fill and drain valve	¾" ext. thread x ⅜" ext. thread, self-sealing, with counter nut and hose connector
Immersion sleeve	for sensor d = 6 mm
Vent plug	¾" ext. thread, self-sealing

Technical data

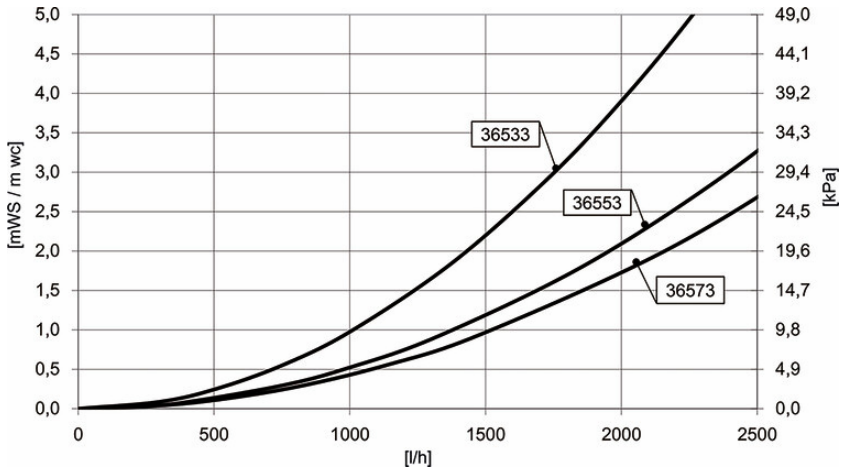
Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1" ext. thread / 1½" int. thread (nut)
Connection consumer	1" PAW flange
Height	176 mm
Installation length	176 mm
Centre distance	125 mm
Width	380 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



System separation HeatBloC®s DN 25	Heat exchanger	Kvs value	Range of performance (in the case of a pressure loss of 1.5 m wc up to 25 kW 10 K)	Item no.
	16 plates	3.3	20 kW at 60-50 °C to 35-45 °C	**36533**
	30 plates	4.4	23 kW at 60-50 °C to 35-45 °C	**36553**
	40 plates	4.9	25 kW at 60-50 °C to 35-45 °C	**36573**

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System separation DN 25 (1") for HeatBloC®s
Application examples

The heating circuits recommended for combination with the system separations (36533, 36553, 36573) are listed on this page. Equipment and prices of the heating circuits can be found on pages K31, K32 and K34.
Note: the heating circuits have to be ordered seperately. The assembly must be carried out on-site!

Application 1:
Extension of already existing heating circuits / installations with a temperature control on the primary side (mixed heating circuit with controlled flow temperature or modulating boiler with boiler circuit pump).

Mounting example	Heating circuit	Pump	EEI*	System separation	Range of performance**
 K31	36013WP6	Wilo Para 25/6-43	≤ 0.2	36533	1580 l/h = 18.3 kW
				36553	1830 l/h = 21.2 kW
				36573	1930 l/h = 22.4 kW
	36013GH6	Grundfos ALPHA2.1 25-60	≤ 0.17	36533	1480 l/h = 17.2 kW
				36553	1710 l/h = 19.9 kW
				36573	1790 l/h = 20.8 kW
	36013GM6	Grundfps UPM3 Auto L 25-70 PP3	≤ 0.2	36533	1720 l/h = 20.0 kW
				36553	2020 l/h = 23.5 kW
				36573	2120 l/h = 24.6 kW

Application 2:
Extension of already existing heating circuits / installations with a pump on the primary side and high flow temperatures (bypass operation in addition to the radiator circuits or operation with solid fuel boiler and boiler circuit pump).

Mounting example	Heating circuit	Pump	EEI*	System separation	Range of performance**
 K34	36063WP6	Wilo Para 25/6-43	≤ 0.2	36533	1540 l/h = 17.9 kW
				36553	1780 l/h = 20.7 kW
				36573	1860 l/h = 21.6 kW
	36063GH6	Grundfos ALPHA2.1 25-60	≤ 0.17	36533	1450 l/h = 16.8 kW
				36553	1650 l/h = 19.2 kW
				36573	1730 l/h = 20.1 kW
	36063GM6	Grundfos UPM3 Auto L 25-70 PP3	≤ 0.2	36533	1690 l/h = 19.6 kW
				36553	1950 l/h = 22.6 kW
				36573	2030 l/h = 23.6 kW

Application 3:
Complete system separation with mixing valve control on the primary side. Ensures low return temperatures of the boiler and allows the operation of several parallel heating circuits, f. ex. on a distribution manifold.

Mounting example	Heating circuit	Pump	EEI*	System separation	Range of performance**
 K31  K32	prim. 36053MWP6 sec. 36013WP6	Wilo Para 25/6-43	≤ 0.2	36533	1540 l/h = 17.9 kW
				36553	1750 l/h = 20.3 kW
				36573	1830 l/h = 21.2 kW
	prim. 36053MGH6 sec. 36013GH6	Grundfos ALPHA2.1 25-60	≤ 0.17	36533	1440 l/h = 16.7 kW
				36553	1630 l/h = 18.9 kW
				36573	1710 l/h = 19.9 kW
	prim. 36053MGM6 sec. 36013GM6	Grundfps UPM3 Auto L 25-70 PP3	≤ 0.2	36533	1670 l/h = 19.4 kW
				36553	1930 l/h = 22.4 kW
				36573	2000 l/h = 23.2 kW

** At a primary temperature of 60 - 50 °C, a secondary temperature of 35 - 45 °C and a secondary residual head of 1.5 m wc



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Return flow temperature maintenance

Catalogue 04/2025

Valves and fittings for the use in hot water heating systems

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Return flow temperature maintenance with thermal control valve DN 20 (¾") / DN 25 (1")

DN 25

Application range

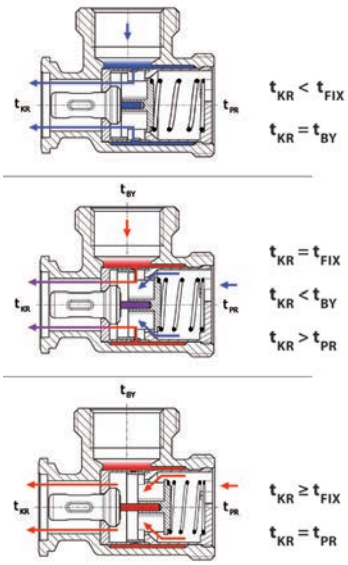


- **Heating systems with return flow temperature maintenance**
- **Solid fuel boilers, wood firing / stove heating systems**

The pump sets for the return flow temperature maintenance are groups of fittings for pumps that can be isolated. They consist of:

Mounting version 1:
- high-efficiency pump
- control valve with opening temperature 45 °C or 60 °C
- 1 thermometer ball valve with red thermometer integrated in the handle, can be pulled off
- 2 thermometer ball valves with blue thermometer integrated in the handle, can be pulled off
- connections DN 20: ¾" int. thread
- connections DN 25: 1" int. thread

Mounting version 2 - Additionally required:
- 1 x sealing: DN 20 item no. 2057, DN 25 item no. 2157
- 1 x screw-in fitting: DN 20 item no. 2053, DN 25 item no. 2153
- 1 x pump fitting DN 20 item no. 2049, DN 25 item no. 2149



Temperatures

t_{BY} = Bypass
t_{KR} = Boiler return
t_{PR} = return buffer tank
t_{FIX} = opening temperature

Thermal control valve with automatic bypass

1. The thermal valve shuts off the connection to the buffer tank, as long as the water in the boiler circuit is colder than the opening temperature of the thermal control valve. The pump circulates the water in the boiler circuit through the bypass. The small quantity of water in the boiler circuit can now heat up quickly.
2. When the boiler circuit reaches the opening temperature of the control valve, the valve reduces the bypass flow rate and opens the buffer tank circuit. The cold water from the buffer tank return is mixed with the hot boiler circuit water in the control valve. This leads to an increase of the return temperature in the boiler circuit to the desired level and avoids condensation in the boiler.
3. When the buffer tank return temperature is higher than the opening temperature, the control valve completely shuts off the bypass. Thus, the water from the buffer tank flows directly into the boiler circuit.



Please note:

If the boiler output is controlled by the boiler temperature the boiler must heat up 20 °C above the opening temperature of the return flow temperature maintenance. Otherwise, the boiler might reduce the output even before the thermal control valve is completely open.



Mounting versions 1 and 2:

Separate assembly of the group of fittings in the flow and return. This version permits an easy isolation of the heat generator without further shut-off valves. Consider the position of the safety group before mounting.

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Return flow temperature maintenance with thermal control valve DN 20 (¾") / DN 25 (1") - types

Thermometer ball valve

- high Kvs value
- 3 ball valves per return flow temperature maintenance allow to shut off the group
- no draining necessary for service work at the pump or at the control valve

High-efficiency pump

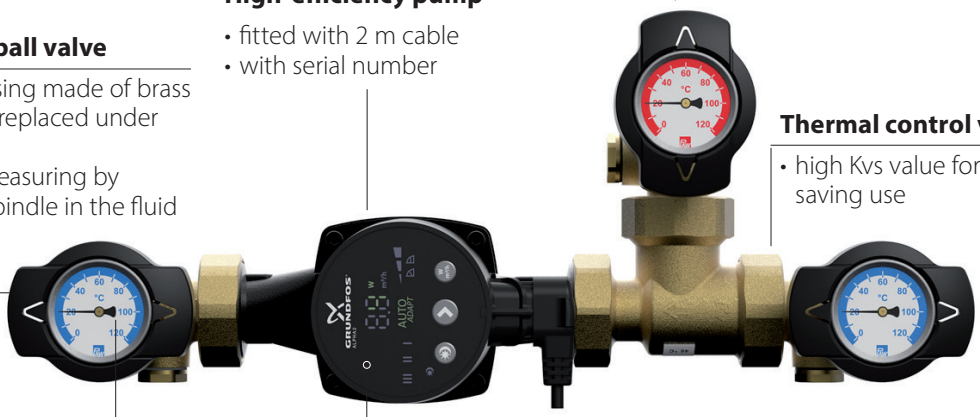
- fitted with 2 m cable
- with serial number

Thermometer ball valve

- one-piece housing made of brass
- spindle can be replaced under pressure
- temperature measuring by means of the spindle in the fluid

Thermal control valve

- high Kvs value for energy-saving use



Immersion thermometer

- with handle, 0 - 120 °C

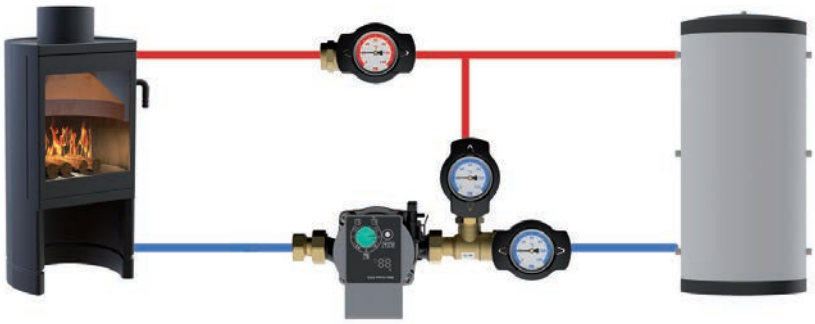
Serial numbers Return flow temperature maintenance and pump

- reliable identification, fast service

Mounting version 1



Mounting version 2



Return flow temperature maintenance RHT with thermal control valve DN 20 (¾")



Application range

- for heating installations with return flow temperature maintenance
- for solid fuel boilers, wood-fired and stove heating systems

Recommended application range

- up to 11 kW
- 10 K up to 950 l/h

Operating data

Max. operating pressure	6 bar
Operating temperature	110 °C
Kvs value	4.7

Technical data

Equipment

red and blue dial thermometer, integrated into black plastic handles (0-120°C)

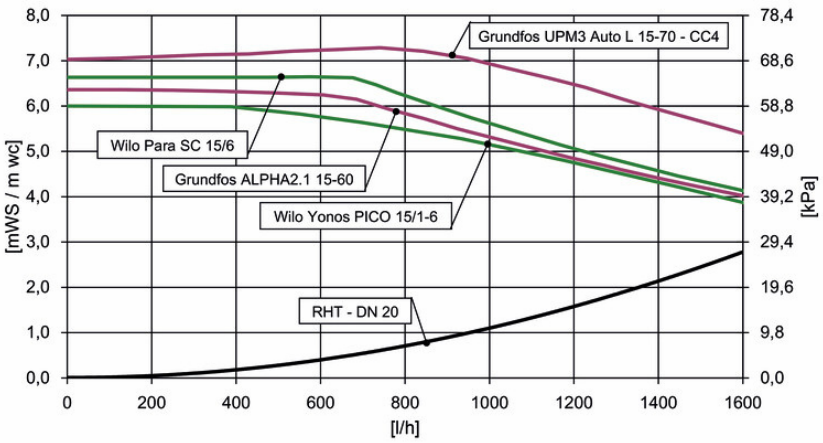
Dimensions

Nominal diameter	DN 20 (¾")
Connection generator	¾" int. thread
Connection consumer	¾" int. thread
Installation height	112 mm
Installation length	336 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



Return flow temperature maintenance with thermal control valve - DN 20 (¾")			EEI*	Item no.
	**Opening temperature: 45 °C**	**Wilo Para SC 15/6-43**	< 0.20	**960250WP6**
	Opening temperature: 45 °C	**Wilo Yonos PICO 15/1-6**	< 0.20	**960250WN06**
	Opening temperature: 45 °C	**Grundfos UPM3 Auto 15-70**	< 0.20	**960250GM6**
	Opening temperature: 45 °C	**Grundfos ALPHA2.1 15-60**	< 0.17	**960250GH6**
	Opening temperature: 45 °C	**without pump - for pumps with 1" ext. thread**		**960250**
	Opening temperature: 60 °C	**Wilo Para SC 15/6-43**	< 0.20	**960260WP6**
	Opening temperature: 60 °C	**Wilo Yonos PICO 15/1-6**	< 0.20	**960260WN06**
	Opening temperature: 60 °C	**Grundfos UPM3 Auto 15-70**	< 0.20	**960260GM6**
	Opening temperature: 60 °C	**Grundfos ALPHA2.1 15-60**	< 0.17	**960260GH6**
	Opening temperature: 60 °C	**without pump - for pumps with 1" ext. thread**		**960260**

* EEI = Energy Efficiency Index

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Return flow temperature maintenance RHT with thermal control valve DN 25 (1")



Application range

- for heating installations with return flow temperature maintenance
- for solid fuel boilers, wood-fired and stove heating systems

Recommended application range

- up to 26 kW
- 10 K up to 2250 l/h

Operating data

Max. operating pressure	6 bar
Operating temperature	110 °C
Kvs value	7.2

Technical data

Equipment

red and blue dial thermometer, integrated into black plastic handles (0-120°C)

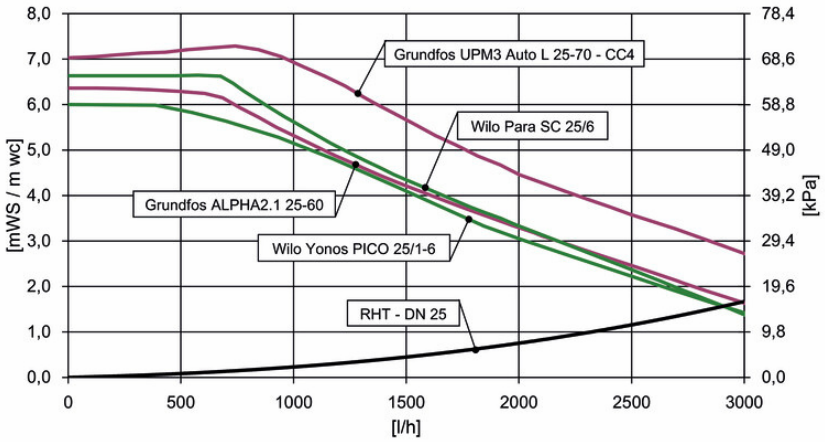
Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1" int. thread
Connection consumer	1" int. thread
Installation height	128 mm
Installation length	428 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



Return flow temperature maintenance with thermal control valve - DN 25 (1")			EEI*	Item no.
	**Opening temperature: 45 °C**	**Wilo Para SC 25/6-43**	< 0.20	**961250WP6**
	Opening temperature: 45 °C	**Wilo Yonos PICO 25/1-6**	< 0.20	**961250WN06**
	Opening temperature: 45 °C	**Grundfos UPM3 Auto 25-70**	< 0.20	**961250GM6**
	Opening temperature: 45 °C	**Grundfos ALPHA2.1 25-60**	< 0.17	**961250GH6**
	Opening temperature: 45 °C	**without pump - for pumps with 1½" ext. thread**		**961250**
	Opening temperature: 60 °C	**Wilo Para SC 25/6-43**	< 0.20	**961260WP6**
	Opening temperature: 60 °C	**Wilo Yonos PICO 25/1-6**	< 0.20	**961260WN06**
	Opening temperature: 60 °C	**Grundfos UPM3 Auto 25-70**	< 0.20	**961260GM6**
	Opening temperature: 60 °C	**Grundfos ALPHA2.1 25-60**	< 0.17	**961260GH6**
	Opening temperature: 60 °C	**without pump - for pumps with 1½" ext. thread**		**961260**

* EEI = Energy Efficiency Index

Return flow temperature maintenance RHT with thermal control valve DN 25 (1") - 32 (1¼")



Application range

- for heating installations with return flow temperature maintenance
- for solid fuel boilers, wood-fired and stove heating systems

Recommended application range

- up to 26 kW
- 10 K up to 2250 l/h

Operating data

Max. operating pressure	6 bar
Operating temperature	110 °C
Kvs value	7.2

Technical data

Equipment

red and blue dial thermometer, integrated into black plastic handles (0-120°C)

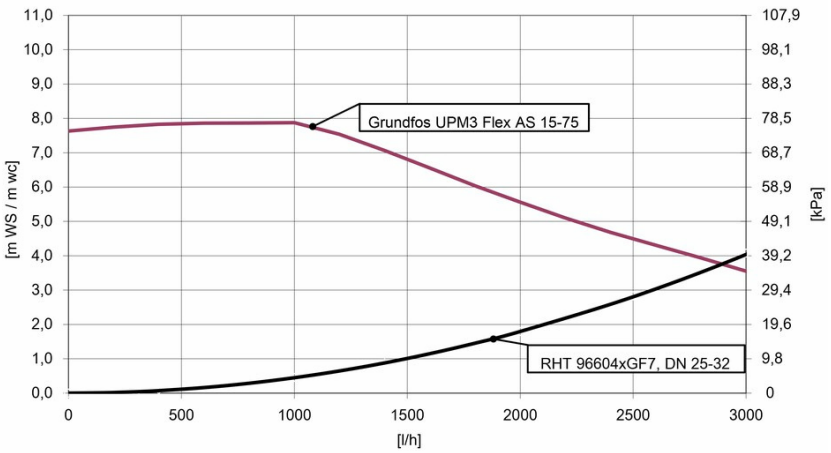
Dimensions

Nominal diameter	DN 25 (1") - DN 32 (1¼")
Connection generator	1¼" int. thread
Connection consumer	1¼" int. thread
Installation height	116 mm
Installation length	274 mm

Materials

Valves and fittings	Brass
Gaskets	EPDM
Insulation	EPP

Differential pressure diagram



Return flow temperature maintenance with thermal control valve (60 °C) - DN 25 (1") - 32 (1¼")			EEI*	Item no.
	**Opening temperature: 45 °C**	**Grundfos UPM3 Flex AS 15-75 GGES3**	< 0.20	**966041GF7**
	Opening temperature: 60 °C	**Grundfos UPM3 Flex AS 15-75 GGES3**	< 0.20	**966042GF7**

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Pump sets for return flow temperature maintenance with actuator DN 20 (¾") - DN 50 (2")

Application range



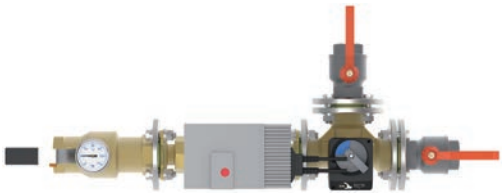
DN 20 (¾")



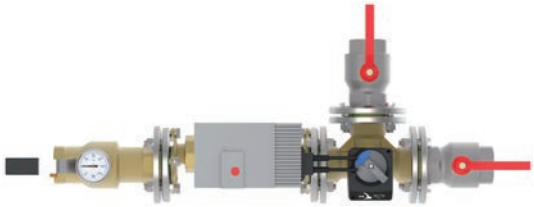
DN 25 (1")



DN 32 (1¼")



DN 40 (1½")



DN 50 (2")

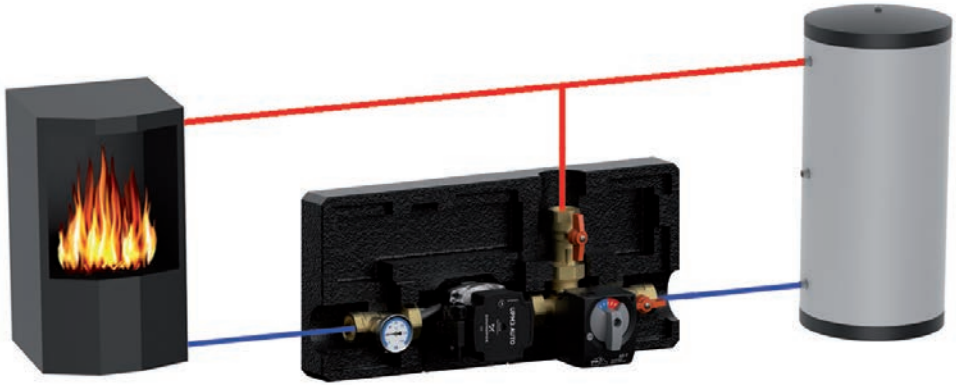
- **Heating systems with return flow temperature maintenance**
- **Solid fuel boilers, wood firing / stove heating systems**

Product description:

The return flow temperature maintenance with actuator is a preassembled fitting group for heating circuits. The pump and the mixing valve can be isolated by means of the ball valves. The pump can thus be maintained without draining the heating circuit.

Description of function:

The pump set prevents the temperature in the boiler from falling under the dew point, thus reducing contamination of the boiler. The pump set is mounted between the buffer tank and the boiler. The actuator is controlled by an external controller. The actuator opens the 3-way valve only when the boiler circuit has reached the opening temperature set. By means of the mixing valve, the return flow temperature in the boiler is kept at a constant level and the maximum amount of energy for the storage tank charging is provided.



Mounting example return flow temperature maintenance with actuator DN 25

Return flow temperature maintenance RHM with actuator DN 20 (¾")



Application range

- for heating installations with return flow temperature maintenance
- for solid fuel boilers, wood-fired and stove heating systems

Recommended application range

- up to 19,5 kW
- 10 K up to 1650 l/h

Operating data

Max. operating pressure	6 bar
Operating temperature	110 °C
Kvs value	5.45

Technical data

Actuator

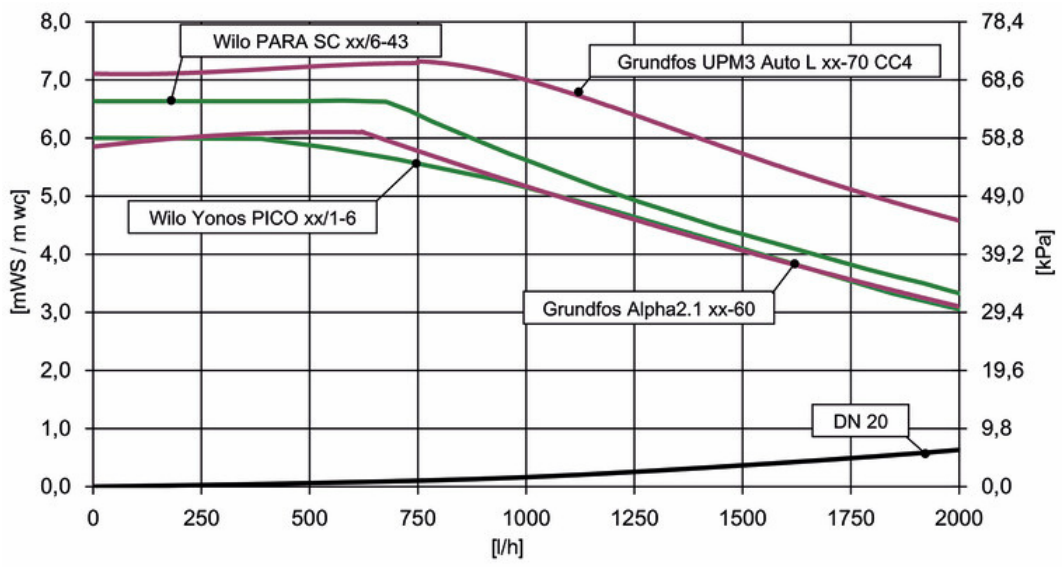
Equipment	Actuator SR2
Electrical data	230 V / 50 Hz
Power consumption	19,5 kW
Torque	2 Nm
Setting time 90°	105 s

Materials

Valves and fittings	Brass
Gaskets	AFM 34
Insulation	--

Dimensions

Nominal diameter	DN 20 (¾")
Connection generator	¾" int. thread
Connection consumer	¾" int. thread
Installation height	134 mm
Installation length	359 mm



Return flow temperature maintenance with actuator - DN 20 (¾")		EEI*	Item no.
	**Wilo Para SC 15/6-43**	< 0.20	**96083WP6**
	Wilo Yonos PICO 15/1-6	< 0.20	**96083WN06**
	Grundfos UPM3 Auto 15-70	< 0.20	**96083GM6**
	Grundfos ALPHA2.1 15-60	< 0.17	**96083GH6**

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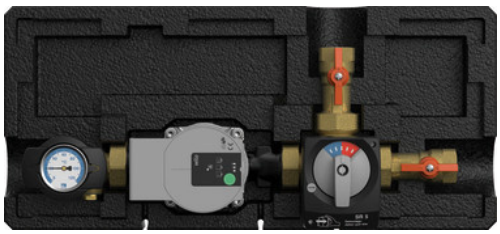
Return flow temperature maintenance RHM with actuator DN 25 (1")



Application range

- for heating installations with return flow temperature maintenance
- for solid fuel boilers, wood-fired and stove heating systems

Recommended application range

- up to 31 kW
- 10 K up to 2670 l/h

Operating data

Max. operating pressure	6 bar
Operating temperature	110 °C
Kvs value	10

Technical data

Actuator

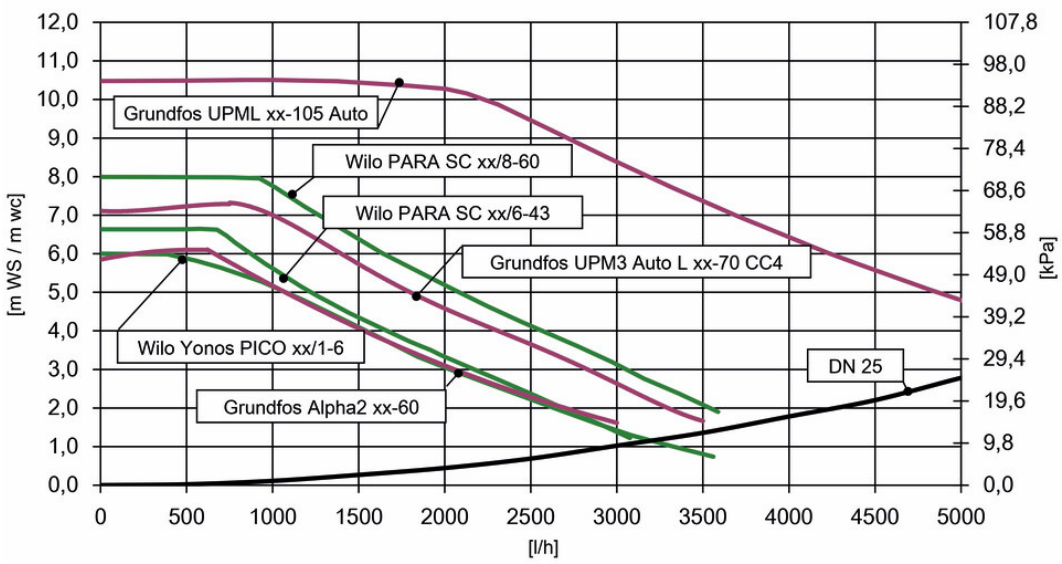
Equipment	Actuator SR5
Electrical data	230 V / 50 Hz
Power consumption	31 kW
Torque	5 Nm
Setting time 90°	140 s

Materials

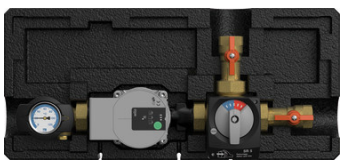
Valves and fittings	Brass
Gaskets	AFM 34
Insulation	EPP

Dimensions

Nominal diameter	DN 25 (1")
Connection generator	1" int. thread
Connection consumer	1" int. thread
Installation height	187 mm
Installation length	437 mm



Return flow temperature maintenance with actuator - DN 25 (1")	EEI*	Item no.
Wilo Para SC 25/6-43	< 0.20	**960841WP6**
Wilo Para SC 25/8-60/O	< 0.20	**960841WP8**
Wilo Yonos PICO 25/1-6	< 0.20	**960841WN06**
Grundfos UPM3 Auto 25-70	< 0.20	**960841GM6**
Grundfos ALPHA2.1 25-60	< 0.17	**960841GH6**
Grundfos UPML 25-105 AUTO	< 0.23	**960841GL9**



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Return flow temperature maintenance RHM with actuator DN 32 (1¼")



Application range

- for heating installations with return flow temperature maintenance
- for solid fuel boilers, wood-fired and stove heating systems

Recommended application range

- up to 50 kW
- 10 K up to 4310 l/h

Operating data

Max. operating pressure	6 bar
Operating temperature	110 °C
Kvs value	16

Technical data

Actuator

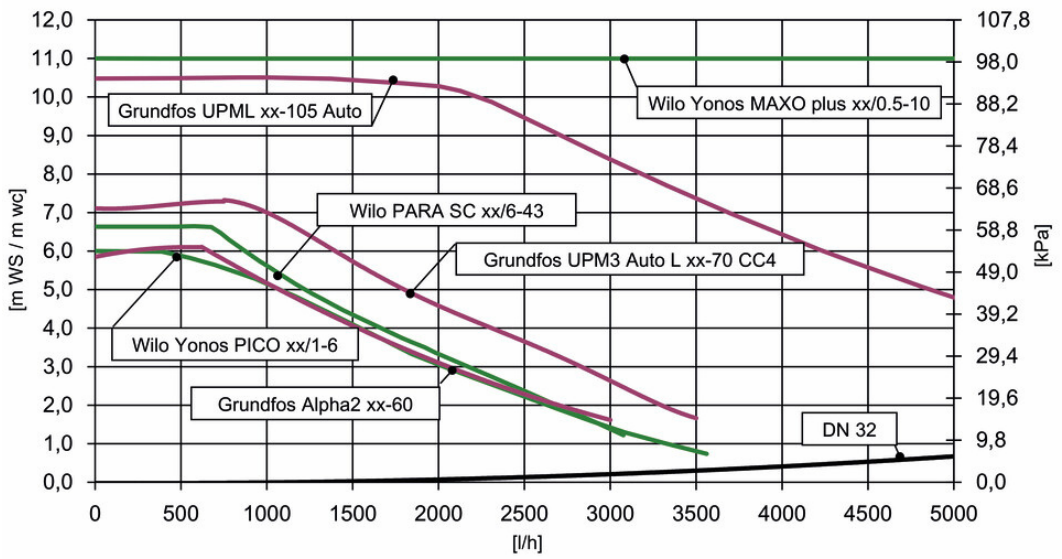
Equipment	Actuator SR5
Electrical data	230 V / 50 Hz
Power consumption	50 kW
Torque	5 Nm
Setting time 90°	140 s

Materials

Valves and fittings	Brass
Gaskets	AFM 34
Insulation	EPP

Dimensions

Nominal diameter	DN 32 (1¼")
Connection generator	1¼" int. thread
Connection consumer	1¼" int. thread
Installation height	217 mm
Installation length	497 mm



Return flow temperature maintenance with actuator - DN 32 (1¼")		EEI*	Item no.
	**Wilo Para SC 30/6-43**	< 0.20	**960851WP6**
	Wilo Yonos PICO 30/1-6	< 0.20	**960851WN06**
	Wilo Yonos MAXO plus 30/0.5-10	< 0.20	**960851WY10**
	Grundfos UPM3 Auto 32-70	< 0.20	**960851GM6**
	Grundfos ALPHA2.1 32-60	< 0.20	**960851GH6**
	Grundfos UPML 32-105 AUTO	< 0.23	**960851GL9**

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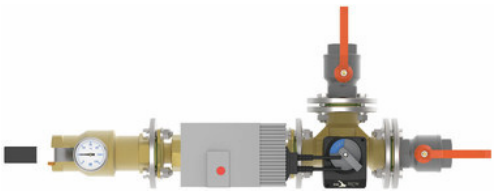
Return flow temperature maintenance RHM with actuator DN 40 (1½")



Application range

- for heating installations with return flow temperature maintenance
- for solid fuel boilers, wood-fired and stove heating systems

Recommended application range

- up to 80 kW
- 10 K up to 6890 l/h

Operating data

Max. operating pressure	6 bar
Operating temperature	110 °C
Kvs value	23

Technical data

Actuator

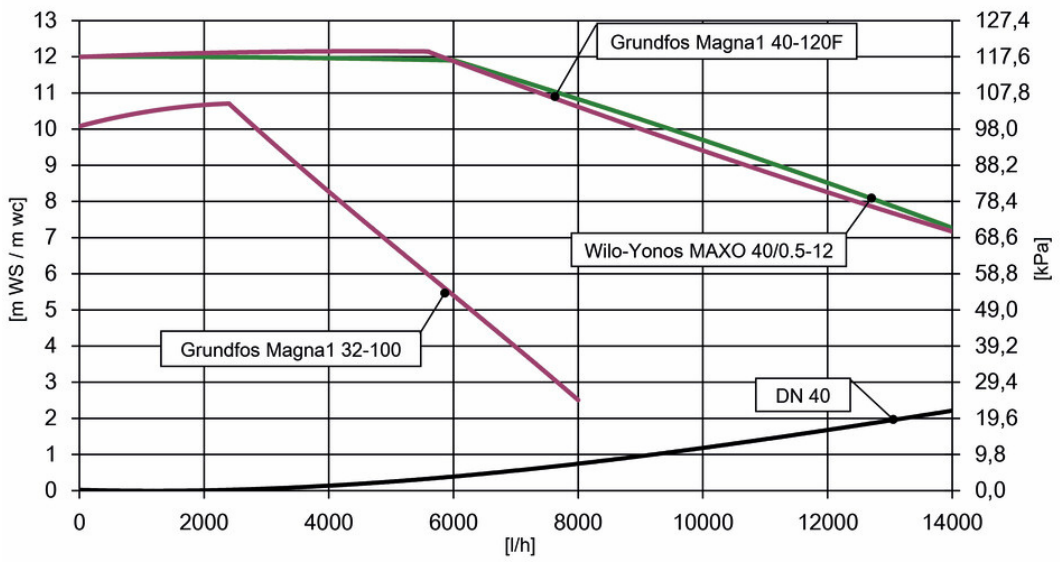
Equipment	Actuator SR5
Electrical data	230 V / 50 Hz
Power consumption	80 kW
Torque	5 Nm
Setting time 90°	140 s

Materials

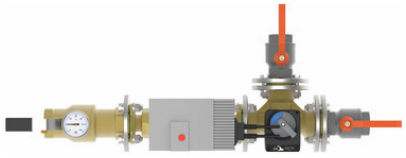
Valves and fittings	Brass
Gaskets	AFM 34
Insulation	--

Dimensions

Nominal diameter	DN 40 (1½")
Connection generator	1½" int. thread
Connection consumer	1½" int. thread
Installation height	266 mm
Installation length	735 mm



Return flow temperature maintenance with actuator - DN 40 (1½")	EEI*	Item no.
Wilo Yonos MAXO plus 40/0,5-12	< 0.20	**960861WY12**
Grundfos MAGNA1 32-100	< 0.21	**960861GL10**
Grundfos MAGNA1 40-120 F	< 0.21	**960861GL12**



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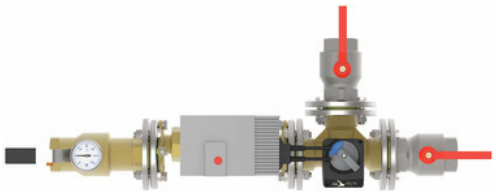
Return flow temperature maintenance RHM with actuator DN 50 (2")



Application range

- for heating installations with return flow temperature maintenance
- for solid fuel boilers, wood-fired and stove heating systems

Recommended application range

- up to 120 kW
- 10 K up to 10340 l/h

Operating data

Max. operating pressure	6 bar
Operating temperature	110 °C
Kvs value	25

Technical data

Actuator

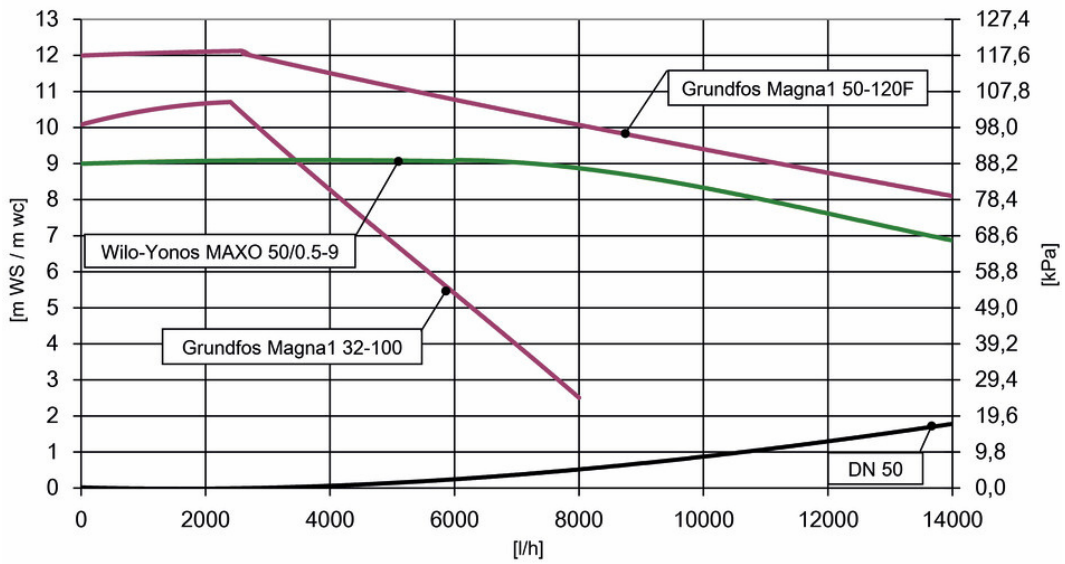
Equipment	Actuator SR5
Electrical data	230 V / 50 Hz
Power consumption	120 kW
Torque	5 Nm
Setting time 90°	140 s

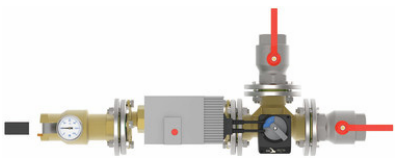
Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	--

Dimensions

Nominal diameter	DN 50 (2")
Connection generator	2" int. thread
Connection consumer	2" int. thread
Installation height	296 mm
Installation length	792 mm



Return flow temperature maintenance with actuator - DN 50 (2")		EEI*	Item no.
	**Wilo Yonos MAXO plus 50/0.5-9**	< 0.20	**960871WY9**
	Grundfos MAGNA1 32-100	< 0.21	**960871GL10**
	Grundfos MAGNA1 50-120 F	< 0.21	**960871GL12**

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	**Sealing for nut - DN 20 (¾")** asbestos-free, outside diameter: 30 mm, inside diameter: 21 mm, height: 2 mm	**2057**
	Sealing for nut - DN 25 (1") asbestos-free, outside diameter: 44 mm, inside diameter: 32 mm, height: 2 mm	**2157**
	**Screw-in fitting DN 20 (¾")** 1" external thread, flat-sealing x ¾" internal thread	**2053**
	Screw-in fitting 25 (1") 1½" external thread, flat-sealing x 1" internal thread	**2153**
	**Pump fitting DN 20 (¾")** with union nut, insert fitting and gasket, length: 30 mm	**2049**
	**Pump fitting 25 (1")** with union nut, insert fitting and gasket, length: 28 mm	**2149**
	**Cutting-ring compression fitting DN 20 (¾"), d = 15 mm**	**561215**
	Cutting-ring compression fitting DN 20 (¾"), d = 18 mm	**561218**
	Cutting-ring compression fitting DN 20 (¾"), d = 22 mm ¾" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C.	**561222**
	**Cutting-ring compression fitting DN 25 (1"), d = 15 mm**	**562915**
	Cutting-ring compression fitting DN 25 (1"), d = 18 mm	**562918**
	Cutting-ring compression fitting DN 25 (1"), d = 22 mm 1" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C.	**562922**





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VALVES, FITTINGS & ACCESSORIES
FOR HYDRONIC HEATING INSTALLATIONS



Ball valves



Actuators



Thermometers

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PAW 3-way valve PV3

NEW

- for demanding application conditions
- simple installation thanks to stop bolts
- flexible application areas: return stratification in the buffer tank
- switch valve for zone/storage tank charging
- management of various heat generators (switching or activating)
- possible ambient temperatures up to 70 °C (medium temperature up to 85 °C)



Advantages PV3:

- change of direction of rotation → flexibility
- actuator with snap-in assembly → quick installation
- leakage rate A according to DIN EN 12266-1
- ambient temperatures up to 70 °C
- short switching time and high Kvs values



Simple change of direction of rotation

The direction of rotation of the actuator can be easily changed

1.) pull off the cover

2.) shift the jumper

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Valve

Nominal diameter	DN 25
Pressure rating	PN 16
Kvs value	15.5 m^3/h
Material	CW612N (CuZn39Pb2)
O-rings	EPDM; Viton; PTFE
Type	L-type ball
Installation of actuator	Rotation lock with spring element holder

Actuator

Control signal	2-level control
Protection class	IP42 (IP54, if required)
Medium temperature, consecutive	0-95 °C
Medium temperature, temporary	0-110 °C
Ambient temperature, temporary	0-70 °C
Operating temperature	max. 110 °C
Cable length	1–3 m (pluggable version)
Torque	5 Nm
Switching time	13 s
Power supply	230 V AC; (on request 24 V DC)

PAW 3-way valve PV3 – DN 25		Item no.
	**3-way valve PV3 – DN 25 (1")**	**5675431**
	3-way valve PV3 with union nut – DN 25 (1")	**5675432**
	Can be used in solar and heating installations, to switch between different zones or to connect and disconnect different parts of the system. The actuator is equipped with a relay which is actuated by a 2-point signal, if needed, it can also be manually operated. The 3-way valve PV3 can be operated in both directions. Electr. connection: 230 V – 50 Hz Torque: 5 Nm Setting time: 90°: 13 s Kvs value: 15.5	

	**Conversion kit from K31 to K32 DN 25 (1")** 1x return pipe DN 25 (1"), with check valve 200 mm wc 1x 3-way mixing valve DN 25 (1") 1x union nut G 1½" 1x gasket 1", for thread connection 1½" 1x actuator with stop bolt and rotation lock	**N00064**
	Conversion kit from K31 to K32 DN 32 (1¼") 1x return pipe DN 32 (1¼"), with check valve 200 mm wc 1x 3-way mixing valve DN 32 (1¼") 1x union nut G2" 1x gasket 1¼", for thread connection 2" 1x actuator with stop bolt and rotation lock	**N00065**
	Conversion kit from K31 to K32 DN 40 (1½") 1x return pipe DN 40 (1½"), with check valve (200 mm wc, can be opened) 1x 3-way mixing valve 1x union nut 1x gasket 1x actuator with stop bolt and rotation lock	**N00066**
	**Extension set for 3-way mixing valve DN 20 (¾") / DN 25 (1")** Before: mixing valve K33 (with bypass on the back), DN 20/DN 25 After: mixing valve K32, DN 20/DN 25, flow on the right + flow on the left	**34012**
	**Extension set for 3-way mixing valve DN 25 (1") / DN 32 (1¼")** Before: mixing valve K33 (with bypass on the front), DN 25 After: K34 - DN 25 (with bypass on the front), flow on the right + left	**37012**
	**3-way mixing valve for HeatBloC® K32 - DN 20 (¾")**	**N00043**
	3-way mixing valve for HeatBloC® K32 - DN 25 (1")	**N00014**
	3-way mixing valve for HeatBloC® K32 - DN 32 (1¼") 4x gaskets 2x union nuts 1x coupling piece for mixing valve shaft 1x rotation lock for actuator	**N00037**
	**3-way mixing valve for HeatBloC® K34 - DN 25 (1")**	**N00020**
	3-way mixing valve for HeatBloC® K34 - DN 32 (1¼") 4x gaskets 2x union nuts 1x coupling piece for mixing valve shaft 1x rotation lock for actuator	**N00038**
	**Conversion kit from K33/34 to K33 flow right, bypass on the front, for PAW mixing valve DN 25** Before: mixing valve K33 (with bypass on the front), DN 25, flow on the left After: mixing valve K33 (with bypass on the front), DN 25, flow on the right	**340711**
	**Conversion kit from K33/34 to K33 flow left, bypass on the front, for PAW mixing valve DN 25** Before: mixing valve K33 (with bypass on the front), DN 25, flow on the right mixing valve K34 (with bypass on the front), DN 25, flow on the right + flow on the left After: mixing valve K33 (with bypass on the front), DN 25, flow on the left	**340722**

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	**Take off the thermometer handles (solar)** Dial thermometer (red, blue); measuring range 0-160 °C, immersion shaft 25 mm, d = 50 mm; field of application: Solar	**N00134**
	Thermometer handles (heating) Dial thermometer (red, blue); measuring range 0 - 120 °C, immersion shaft 25 mm, with self-sealing immersion sleeve, d = 50 mm ; field of application: Heating	**N00128**
	**Set of gaskets for distribution manifold DN 20**	**31131**
	Set of gaskets for distribution manifold - DN 25	**34131**
	Set of gaskets for distribution manifold - DN 32	**37131**
	Set of gaskets for distribution manifold - DN 40	**N00061**
	Set of gaskets for distribution manifold - DN 50 Seals (EPDM) O-rings (EPDM) Hexagon socket head cap screw Spring washer Hexagon nut Tube of grease for o-rings (Synteso Glep1)	**N00062**
	**Sets of gaskets for mixing valve - DN 20-32 (¾" - 1¼")** may only be used in: - 3- and 4-way mixing valves DN 20, 25, 32 - mixing valves with bypass DN 25	**37013**
	Sets of gaskets for mixing valve - DN 32-40 (1¼" - 1½") may only be used in: - mixing valves DN 40 - mixing valves with bypass DN 32	**41013**
	Sets of gaskets for mixing valve - DN 50 (2") Components: o-rings, flat head screws with cross recess, tube of grease for o-rings (Synteso Glep1)	**51013**
	**Flat sealing ¼", for thread connection ¾"**	**N00030**
	Flat sealing ½", for thread connection 1"	**N00024**
	Flat sealing 1", for thread connection 1½"	**N00036**
	Flat sealing 1¼", for thread connection 2" Material: AFM34	**N00047**
	**Flat sealing ¼", for thread connection ¾", 24.0 x 17.0 x 2.0 mm**	**N00127**
	Flat sealing ½", for thread connection 1", 30.0 x 21.0 x 2.0 mm	**N00129**
	Flat sealing 1", for thread connection 1½", 44.0 x 32.0 x 2.0 mm	**N00131**
	Flat sealing 1¼", for thread connection 2", 55.0 x 42.0 x 2.0 mm Material: EPDM	**N00133**
	**Rotary knob for mixing valve** 1 x rotary knob 1 x lens head screw For mixing valves until 2010. For converting to a current actuator.	**N00068**
	**Spindle for ball valve DN 20/25, with o-rings DN 20 (¾") - DN 25 (1")** Replaceable spindle for thermometer ball valve	**N00007**

	**Reducer set for immersion sensor** 1 x ¼" external thread (self-sealing) x M10 x 1" internal thread 1 x ¼" external thread (self-sealing) x M12 x 1.5" external thread	**3444**
	**Control valve input for K33 DN 20/25** Control valve input for the HeatBloC® K33 DN 20 and K33 DN 25 (until 2005).	**N00011**
	**Thermostatic head 20-50 °C** Thermostatic head 20 - 50 °C, with contact sensor spare part for K33	**N00042**
	Thermostatic head 40-70 °C Thermostatic head 40 - 70 °C, with contact sensor spare part for K33	**N00044**
	**Contact thermostat 20-60 °C** Contact thermostat for limiting the flow temperature, adjustable from 20 - 60 °C	**N00083**
	**Thermo ball valve TK - DN 25 (1"), F1" x 1" int. thread, ½", sleeve right** 1x PAW flange (with nut) 1x seal 1" 1x internal thread ½" 1x sleeve For heating circuits DN 25 until 2017!	**N00015**
	**Thermo ball valve TK - DN 25 (1"), F1" x 1" int. thread, ½", sleeve left** 1x PAW flange (with nut) 1x seal 1" 1x internal thread ½" 1x sleeve For heating circuits DN 25 until 2017!	**N00013**
	**Return pipe - DN 20 (¾"), L = 130 mm**	**N00141**
	Return pipe - DN 20 (¾"), L = 188 mm	**N00142**
	Return pipe - DN 25 (1"), L = 180 mm	**N00018**
	Return pipe - DN 25 (1"), L = 262 mm	**N00021**
	Return pipe - DN 32 (1¼"), L = 180 mm	**N00139**
	Return pipe - DN 32 (1¼"), L = 292 mm 1 x Brass pipe with check valve (200 mm wc, can be opened) for the return 2 x seal (EPDM)	**N00140**

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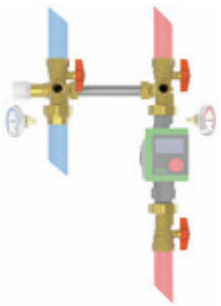
	**Charging pump set K1 - DN 25 (1")**	**2701**
	Charging pump set K1- DN 32 (1¼") Pressure side: - PAW pump ball valve, with red butterfly handle - Check valve, can be opened manually - Automatic air passage - With 2 nuts and 2 gaskets for a pump DN 25 (without pump) Suction side: - PAW pump ball valve, with red butterfly handle	**2702**
	**Flow set K2 - DN 25 (1")**	**2705**
	Flow set K2 - DN 32 (1¼") can be completely isolated Pressure side: - PAW multivalve, with red butterfly handle - Check valve, can be opened - Automatic air passage - With 2 nuts and gaskets for a pump DN 25 (without pump, without dial thermometer) Suction side: - PAW pump ball valve, with red butterfly handle Thermometer available as accessory, item number 21711 (red)	**2706**
	**Return set K3 - DN 25 (1")**	**2708**
	Return set K3 - DN 32 (1¼") consisting of: PAW multivalve with red butterfly handle and thread connection (without dial thermometer) Thermometer available as accessory, item number 21721 (blue)	**2710**
	**Pump set K5 - DN 25 (1")**	**2712**
	Pump set K5 - DN 32 (1¼") can be completely isolated Pressure side: - PAW multifunctional valve, with red butterfly handle - Check valve, can be opened - Automatic air passage - With 2 nuts and gaskets for a pump (without pump, without dial thermometer) Suction side: - PAW pump ball valve, with red butterfly handle Return: - PAW multifunctional valve, with red butterfly handle - Thread connection Thermometer available as accessory, item number 21711 (red), 21721 (blue)	**2714**

Pump sets

	**Bypass set K7 - DN 25** pump can be isolated Pressure side: - PAW multifunctional valve, with red butterfly handle - Check valve, can be opened manually - Automatic air passage - With 2 nuts and 2 gaskets for a pump DN 25 (without pump, without dial thermometer) Suction side: - PAW pump ball valve, with red butterfly handle Return: - PAW multifunctional valve, with red butterfly handle - Thread connection Bypass: - Differential pressure overflow valve ¾" with scale and thread connection - Zinced bypass pipe with elbow gland A min = 80 mm A max = 200 mm for 1": H = 360 mm for 1¼": H = 395 mm Thermometer available as accessory, item number 21711 (red), 21721 (blue)	**2801**
	**Dial thermometer 0-120 °C, with red scale**	**21711**
	Dial thermometer 0-120 °C, with blue scale - Measuring range 0-120 °C, - immersion shaft 25 mm, with self-sealing immersion sleeve, - d = 50 mm	**21721**
	**Flow set TK2 - DN 20 (¾")** Pressure side: - Thermometer ball valve with red scale thermometer integrated in the handle (d = 50 mm, red scale) - integrated check valve, can be opened manually Suction side: - pump ball valve, key-actuated Delivery with 2 nuts and 2 gaskets for a pump (without pump)	**9621**
	**Flow set TK2 - DN 25 (1")**	**9622**
	Flow set TK2 - DN 32 (1¼") Pressure side: - Thermometer ball valve with red scale thermometer integrated in the handle (d = 50 mm, red scale) - integrated check valve, can be opened manually - connection to the left with ½" internal thread for overflow valve or sensor, plugged Suction side: - pump ball valve with butterfly handle Delivery with 2 nuts and 2 gaskets for a pump (without pump)	**9623**

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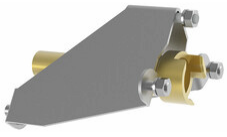
	**Return set TK3 - DN 20 (¾")**	**9611**
	Return set TK3 - DN 25 (1")	**9612**
	Return set TK3 - DN 32 (1¼") consisting of: - Thermometer valve with dial thermometer (d = 50 mm, blue scale), can be pulled off, integrated in the handle - DN 25 and DN 32: connection to the left with ½" internal thread for overflow valve or sensor, plugged Delivery with thread connection	**9613**
	**Pump set TK5 - DN 20** Pressure side: - thermometer valve with red scale, dial thermometer (d = 50 mm) integrated in handle, can be pulled off - integrated check valve, can be opened manually Suction side: - pump ball valve, key-actuated Return: - thermometer valve with blue scale, dial thermometer (d = 50 mm) integrated in the handle, can be pulled off - thread connection Delivery with 2 nuts and 2 gaskets for a pump (without pump)	**9631**
	**Pump set TK5 - DN 25**	**9632**
	Pump set TK5 - DN 32 Pressure side: - thermometer valve with red scale, dial thermometer (d = 50 mm) integrated in handle, can be pulled off - integrated check valve, can be opened manually - with connection to the left, ½" internal thread for overflow valve or sensor connection, plugged Suction side: - pump ball valve, with butterfly handle Return: - thermometer valve with blue scale, dial thermometer (d = 50 mm) integrated in the handle, can be pulled off - with connection to the right, ½" internal thread for overflow valve or sensor connection, plugged - thread connection Delivery with 2 nuts and 2 gaskets for a pump (without pump)	**9633**
	**Overflow set DN 20 (centre distance: 200 mm)**	**2850**
	Overflow set DN 20 (centre distance: 125 mm)	**2851**
	Overflow set DN 20 (centre distance: 200 mm) For hydronic heating installations with standard circulation pumps and thermostatic or zone valves. The PAW differential pressure overflow valve reduces noises due to circulation and keeps the pump pressure constant, even when the flow in the radiators is reduced (particularly when thermostatic valves are used). The valve controls the flow rate in proportion to the thermostatic or zone valves. The return temperature is increased as soon as the valve opens. For weather compensated control we recommend to mount the sensor to the flow line directly behind the circulation pump. The higher return temperature guarantees that the boiler does not corrode.	**2853**

	**PAW actuator SR2** Easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, due to the removable scale it is suited for flow on the right or left side, change-over switch for manual / automatic operation Electrical connection: 230 V - 50 Hz Input power: 1 W Torque: min. 2 Nm Setting time for 90°: 105 s	**705013**
	**PAW actuator SR5** Change-over switch for manual / automatic operation, easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, thanks to the removable scale, it is suited for flow on the right or left side Electrical connection: 230 V / 50 Hz Input power: 2.5 W Torque: 5 Nm Setting time for 90°: 140 s	**705001**
	PAW actuator SR10 Thanks to the removable scale, it is suited for flow on the right or left side, easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 1.5 m cable and mounting set for halting assembly on the PAW mixing valve, for weather-compensated control, change-over switch for manual / automatic operation Electrical connection: 230 V / 50 Hz Input power: 3.5 W Torque: 10 Nm Setting time for 90°: 140 s	**705002**
	PAW actuator SR10 24/3P Like PAW actuator type SR10 (item no. 705002), but with: electrical connection/supply voltage: 24 VAC for control systems with 3-level-control	**7054**
	PAW actuator SR10 24/ST Like PAW actuator SR10 (item no. 705002), but with: electrical connection/supply voltage: 24 VAC/DC control voltage direct: 0(2)...10 VDC for continuous control systems with 0…10 V output Electrical connection: 230 V / 50 Hz Input power: 1.5 W Torque: 10 Nm Setting time for 90°: 140 s	**70541**
	**Accessory kit for Viessmann actuators** Accessory kit for PAW actuators with 3-point suspension (Dekamatik and Vitotronic) to PAW mixing valves DN 20 - DN 50 with short shaft. Please consider the width of the actuator when mounting it to the HeatBloC®s DN 20. Not to be mounted to transfer systems TE3.	**705610**

	**PAW constant temperature controller PKR6** Easy assembly and disassembly thanks to the smart PAW snap-in mechanism, with 2 m cable and Schuko plug, incl. mounting set for snap-in assembly on the PAW mixing valve and PT1000 screw-in sensor G¼" for the flow ball valve, change-over switch for manual / automatic operation. Controller settings for direction of rotation, operation mode and nominal temperature can be adjusted at the display Power supply: 230 V - 50 Hz Power consumption: 3 W Torque: min. 6 Nm Setting time 90°: 120 s	**703601**
	Weather compensated controller PWR6 Same type as the PAW constant temperature controller PKR6 (art.no. 703601), but for the use of a weather-compensated heating circuit. The package includes the outdoor sensor, the flow sensor as well as the source sensor. This ensures that the mixing valve or the heating circuit can be operated in an autarkic manner and without boiler control. In addition, it is possible to set the room temperature centrally in the flat via a room based remote control (art.no. 1359501).	**723681**
	**Limit switch** The limit switch is a micro switch. For the assembly in the actuators SR5 and SR10-24/3P.	**705101**
	**Adapter set for mixing valve shaft** Adapter piece to extend the shaft of PAW mixing valves, for the assembly of actuators of other manufacturers	**705580**
	**2-way zone valve - DN 20 (¾")** for connecting and disconnecting single storage tanks, DN 20, ¾" int. thread, setting time for 90°: 30 sec., Kvs value = 41	**563532**
	2-way zone valve - DN 25 (1") for tank heat transfer module Midi for connecting and disconnecting single storage tanks, DN 25, 1" int. thread, setting time for 90°: 30 sec., Kvs value = 68	**563542**
	2-way zone valve - DN 32 (1¼") for tank heat transfer module Maxi for connecting and disconnecting single storage tanks, DN 32, 1¼" internal thread, setting time for 90°: 30 sec., Kvs value = 123	**563552**
	**3-way zone valve - DN 20 (¾")** for switching between single storage tanks, DN 20, ¾" int. thread, setting time for 90°: 18 sec., Kvs value = 7	**563533**
	**3-way valve PV3 - DN 25 (1")**	**5675431**
	3-way valve PV3 with union nut - DN 25 (1") Can be used in solar and heating installations, to switch between different zones or to connect and disconnect different parts of the system. The actuator is equipped with a relay which is actuated by a 2-point signal, if need be it can also be manually operated. The 3-way zone PV3 valve can be operated in both directions. Power supply: 230 V - 50 Hz Power consumption: 5 Nm Setting time 90°: 13 s Kvs value: 15.5	**5675432**

Screw connections

	**Thread connection for PAW flange DN 20 (¾")**	**2051**
	Thread connection for PAW flange DN 25 (1")	**2151**
	Thread connection for PAW flange DN 32 (1¼") Thread connection for PAW flange with union nut, screw-in fitting and gasket	**2152**
	**Pump fitting DN 20 (¾")** with union nut, insert fitting and gasket, length: 30 mm	**2049**
	**Pump fitting 25 (1")** with union nut, insert fitting and gasket, length: 28 mm	**2149**
	Pump fitting DN 32 (1¼") with union nut, insert fitting and gasket, length: 31 mm	**2150**
	**Screw-in fitting DN 20 (¾")** 1" external thread, flat-sealing x ¾" internal thread	**2053**
	Screw-in fitting 25 (1") 1½" external thread, flat-sealing x 1" internal thread	**2153**
	Screw-in fitting DN 32 (1¼") 2" external thread flat-sealing x 1¼" internal thread	**2154**
	**Insert fitting DN 25 (1")**	**2159**
	Insert fitting - DN 32 (1¼") For the connection of pipes with external thread	**2160**
	**Union nut DN 20 (¾")** Brass, to screw insertion pieces for soldering below distribution manifolds DN 20 (¾")	**2055**
	Union nut DN 25 (1") Brass, to screw insertion pieces for soldering below distribution manifolds DN 25 (1")	**2155**
	Union nut DN 32 (1¼") Brass, to screw insertion pieces for soldering below distribution manifolds DN 32 (1¼")	**2156**
	**Sealing for nut - DN 20 (¾")** asbestos-free, outside diameter: 30 mm, inside diameter: 21 mm, height: 2 mm	**2057**
	Sealing for nut - DN 25 (1") asbestos-free, outside diameter: 44 mm, inside diameter: 32 mm, height: 2 mm	**2157**
	Sealing for nut - DN 32 (1¼") asbestos-free, outside diameter: 50 mm, inside diameter: 38 mm, height: 2 mm	**2158**

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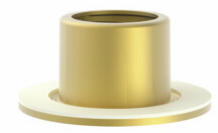
		Connection	Length	Item no.
	**Check valve SBA - DN 25 (1")**	ext.: 1½" Flange (w/ nut): 1"	48 mm (IL)	**1003**
	Check valve SBA with automatic air passage - DN 25 (1") Check valve, can be opened, with union nut, gasket and PAW flange for warm water central heating, PN 10, 120 °C, suited for horizontal and vertical installation, to be screwed directly on the pump. Opening pressure 200 mm wc IL = Installation length	ext.: 1½" Flange (w/ nut): 1"	24 mm (IL)	**1103**
	**Check valve SBM - DN 20 (¾")**	int.: 1" ext.: 1"	26 mm (IL)	**1016**
	Check valve SBM - DN 20 (¾")	int.: 1¼" ext.: 1¼"	28 mm (IL)	**1015**
	Check valve SBM with automatic air passage - DN 20 (¾")	int.: 1" ext.: 1"	26 mm (IL)	**1116**
	Check valve SBM - DN 25 (1")	int.: 1½" ext.: 1½"	28 mm (IL)	**1055**
	Check valve SBM - DN 25 (1")	int.: 1½" ext.: 1½"	37 mm (IL)	**1005**
	Check valve SBM with automatic air passage - DN 25 (1")	int.: 1½" ext.: 1½"	28 mm (IL)	**1155**
	Check valve SBM with automatic air passage - DN 25 (1")	int.: 1½" ext.: 1½"	37 mm (IL)	**1105**
	Check valve SBM - DN 32 (1¼")	int.: 2" ext.: 2"	38 mm (IL)	**1006**
	Check valve SBM with automatic air passage - DN 32 (1¼") Check valve, can be opened, with gasket for warm water central heating, PN 10, 120 °C, suited for horizontal and vertical installation, to be screwed directly to the pump. Opening pressure 200 mm wc IL = Installation length	int.: 2" ext.: 2"	38 mm (IL)	**1106**
	**Check valve SBE - int. thread DN 20 (¾")**	int.: ¾" Flange: 1"	41 mm	**1019**
	Check valve SBE - int. thread DN 25 (1")	int.: 1" Flange: 1"	45 mm	**1017**
	Check valve SBE - int. thread DN 25 (1")	int.: 1" Flange: 1"	57 mm	**1007**
	Check valve SBE with automatic air passage - int. thread DN 25 (1")	int.: 1" Flange: 1"	45 mm	**1117**
	Check valve SBE with automatic air passage - int. thread DN 25 (1") Check valve, can be opened, with automatic air passage, with internal thread and PAW flange for warm water central heating, PN 10, 120 °C. Suited for horizontal and vertical installation. Can also be used as non return valve. To be directly screwed to the pump. Opening pressure 200 mm wc	int.: 1" Flange: 1"	57 mm	**1107**
	**Check valve SBE - ext. thread DN 25 (1")**	ext.: 1" Flange: 1"	57 mm	**1010**
	Check valve SBE with automatic air passage - ext. thread DN 25 (1") Check valve, can be opened, with automatic air passage, with external thread and PAW flange for warm water central heating, PN 10, 120 °C. Suited for horizontal and vertical installation. Can also be used as non return valve. To be directly screwed to the pump. Opening pressure 200 mm wc	ext.: 1" Flange: 1"	57 mm	**1110**

Check valves

		Connection	Length	Item no.
	**Elbow check valve - DN 25 (1")** - with check valve, can be opened manually, automatic air passage - with connection for automatic air vent (½" sleeve) - opening pressure 200 mm wc	int.: ½" Flange: 1"	50 mm	**7610**
	**Non return valve ES - DN 20 (¾")**	Flange: ½"	2 mm	**10122**
	Non-return valve ES - DN 25 (1")	Flange: 1"	2 mm	**1013**
	Non-return valve ES - DN 32 (1¼")	Flange: 1¼"	2 mm	**1014**
	Non-return valve with automatic air passage ES - DN 32 (1¼") The PAW non-return valve is directly inserted into the thread connection of the circulation pump.	Flange: 1¼"	2 mm	**1114**
	**Socket check valve MR - DN 15 (½")**	int.: ½"	48 mm	**1082**
	Socket check valve MR - DN 20 (¾")	int.: ¾"	53 mm	**1083**
	Socket check valve MR - DN 25 (1")	int.: 1"	59 mm	**1084**
	Socket check valve MR - DN 32 (1¼")	int.: 1¼"	66 mm	**1085**
	Socket check valve MR - DN 40 (1½")	int.: 1½"	71 mm	**1086**
	Socket check valve MR - DN 50 (2") Flow direction according to marking	int.: 2"	80 mm	**1087**
	**PAW socket check valve MA - type 1 - DN 15 (½")**	int.: ½" ext.: ½"	53 mm	**1096**
	PAW socket check valve MA - type 1 - DN 20 (¾")	int.: ¾" ext.: ¾"	58 mm	**1097**
	PAW socket check valve MA - type 1 - DN 25 (1") Flow in the direction of the external thread	int.: 1" ext.: 1"	65 mm	**1098**
	**PAW socket check valve MA - type 2 - DN 15 (½")**	int.: ½" ext.: ½"	54 mm	**1092**
	PAW socket check valve MA - type 2 - DN 20 (¾")	int.: ¾" ext.: ¾"	59 mm	**1093**
	PAW socket check valve MA - type 2 - DN 25 (1")	int.: 1" ext.: 1"	67 mm	**1094**
	PAW socket check valve MA - type 2 - DN 32 (1¼") Flow in the direction of the internal thread	int.: 1¼" ext.: 1¼"	74 mm	**10941**
	**Solar check valve RSS - DN 20 (¾")** can be opened, up to 150 °C	int.: ¾"	50 mm	**1211**
	Solar check valve RSS - DN 20 (¾") without possibility for manual opening, up to 220 °C with brass valve plate, all installation positions possible, opening pressure 200 mm wc, ¾" internal thread, length = 50 mm	int.: ¾"	50 mm	**12111**

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		Connection	Length	Item no.
	**Multivalve MK - DN 25**	int.: 1"	94 mm	**2301**
	Multivalve MK - DN 32 2 x sleeves ½" (on the side) 1 x self-sealing blind plug ½" 1 x PAW flange 1" (DN 25) / 1¼" (DN 32) (without nut) 1 x 1" int thread (DN 25) / 1¼" int. thread (DN 32) with red butterfly handle	int.: 1¼"	115 mm	**2302**
	**Multivalve with check valve MKS - DN 25**	int.: 1"	94 mm	**2309**
	Multivalve with check valve MKS - DN 32 2 x sleeves ½" (on the side) 1 x self-sealing blind plug ½" 1 x 1" (DN 25) / 1¼" (DN 32) PAW flange (without nut) 1 x 1" (DN 25) / 1¼" (DN 32) int. thread with automatic air passage and check valve (can be opened) with red butterfly handle	int.: 1¼"	115 mm	**2310**
	**Pump ball valve PK - DN 25**	int.: 1"	78 mm	**2101**
	Pump ball valve PK - DN 32 1 x PAW flange (without nut) 1 x internal thread material: brass, with red butterfly handle	int.: 1¼"	100 mm	**2102**
	**Pump ball valve with check valve PKS - DN 25**	int.: 1"	78 mm	**2129**
	Pump ball valve with check valve PKS - DN 32 1 x PAW flange (without nut) 1" (DN 25) / 1¼" (DN 32) 1 x internat thread 1" (DN 25) / 1¼" (DN 32) with automatic air passage and check valve (can be opened) with red butterfly handle	int.: 1¼"	100 mm	**2130**
	**Pump ball valve PKA - DN 25** 1 x 1" PAW flange (without nut) 1 x 1" external thread material: brass with red butterfly handle	ext.: 1"	93 mm	**2105**
	**Pump ball valve with check valve PKAS - DN 25** 1 x 1" PAW flange (without nut) 1 x 1" external thread with automatic air passage and check valve (can be opened) with red butterfly handle	ext.: 1"	93 mm	**2107**
	**Pump ball valve PKV - DN 25**	ext.: 1½"	80 mm	**2109**
	Pump ball valve PKV - DN 32 1 x PAW flange (without nut) 1½" (DN 25) / 2" (DN 32) 1 x external thread 1" (DN 25) / 1¼" (DN 32) material: brass with red butterfly handle	ext.: 2"	110 mm	**2110**
	**Pump ball valve with check valve PKVS - DN 25**	ext.: 1"	80 mm	**2111**
	Pump ball valve with check valve PKVS - DN 32 1 x PAW flange (without nut) 1½" (DN 25) / 2" (DN 32) 1 x 1" F (DN 25) / 1¼" external thread (DN 32) with automatic air passage and check valve (can be opened) with red butterfly handle	ext.: 1¼"	110 mm	**2112**

Ball valves

		Connection	Length	Item no.
	**Thermo ball valve TK - DN 20** 1 x ¾" PAW flange (without nut) 1 x ¾" internal thread diameter thermometer = 50 mm dial thermometer with blue scale in the handle, handle can be pulled off with thermometer	int.: ¾"	66 mm	**96501**
	**Thermo ball valve TK - DN 25**	int.: 1"	81 mm	**96511**
	Thermo ball valve TK - DN 32 1 x PAW flange (without nut) 1 x internal thread 1 x sleeve (on the side) ½", for overflow valve 1 x self-sealing blind plug ½" diameter thermometer = 50 mm dial thermometer with blue scale in the handle, handle can be pulled off with thermometer	int.: 1¼"	104 mm	**96521**
	**Thermometer valve with flow check valve TKS - DN 20** 1 x ¾" PAW flange (without nut) 1 x ¾" internal thread diameter thermometer = 50 mm dial thermometer with red scale in the handle, handle with thermometer can be pulled off, check valve 200 mm wc, can be opened	int.: ¾"	65 mm	**96541**
	**Thermometer valve with flow check valve TKS - DN 25**	int.: 1"	81 mm	**96551**
	Thermometer valve with flow check valve TKS - DN 32 1 x PAW flange (without nut) 1" (DN 25) / 1¼" (DN 32) 1 x internal thread 1" (DN 25) / 1¼" (DN 32) 1 x sleeve (on the side) ½", for overflow valve or immersion sleeve/ sensor connection 1 x self-sealing blind plug ½" diameter thermometer = 50 mm dial thermometer with red scale in the handle, handle can be pulled off with thermometer, check valve 200 mm wc, can be opened	int.: 1¼"	104 mm	**96561**
	**Ball valve - DN 25** 1 x external thread 1 x nut G = 1" key actuated, ideal to shut off armoured hoses as it is flat-sealing	ext.: 1"	50 mm	**905003**
	**Elbow ball valve DN 25** 1 x 1" external thread 1 x nut G = 1" key actuated, ideal to shut off armoured hoses as it is flat-sealing	ext.: 1"	87 mm	**905002**
	**Handle extension for ball valve - DN 25/32**		88 mm	**2162**
	Handle extension for ball valve - DN 40/50 Function: for thick insulation of the ball valve Material: Brass, chromed Can be replaced under pressure when the ball valve is closed. available for: MK, PK, TK, KMM, KMV. nominal diameter: DN 20, 25, 32, 40, 50 Please state the type of ball valve and the nominal diameter when ordering!		95 mm	**2165**

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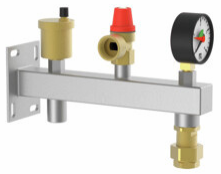
Ball valves

		Connection	Length	Item no.
	**Full port ball valve KMA - DN 15** 1 x ½" external thread 1 x ½" internal thread	int.: ½" ext.: ½"	48,5 mm	**2218**
	Full port ball valve KMA - DN 20 1 x ¾" external thread 1 x ¾" internal thread	int.: ¾" ext.: ¾"	64 mm	**2219**
	Full port ball valve KMA - DN 25 1 x 1" external thread 1 x 1" internal thread Material: Brass, nickel-plated, Max. operating temperature = 100 °C with red butterfly handle	int.: 1" ext.: 1"	66 mm	**2220**
	**Full port ball valve KMM - DN 12** 2 x ⅜'' internal thread	int.: ⅜"	48 mm	**2207**
	Full port ball valve KMM - DN 15 2 x ½" internal thread	int.: ½"	48 mm	**2208**
	Full port ball valve KMM - DN 20 2 x ¾" internal thread	int.: ¾"	65 mm	**2209**
	Full port ball valve KMM - DN 25 2 x 1" internal thread	int.: 1"	67 mm	**2210**
	Full port ball valve KMM - DN 32 2 x 1¼" internal thread	int.: 1¼"	81 mm	**2211**
	Full port ball valve KMM - DN 40 2 x 1½" internal thread	int.: 1½"	93 mm	**2212**
	Full port ball valve KMM - DN 50 2 x 2" internal thread Material: Brass, nickel-plated Max. operating temperature = 100 °C	int.: 2"	113 mm	**2213**
	**Full port ball valve with connection KMV - DN 15**	int.: ½" ext.: ½"	73,5 mm	**2228**
	Full port ball valve with connection KMV - DN 20	int.: ¾" ext.: ¾"	88 mm	**2229**
	Full port ball valve with connection KMV - DN 25	int.: 1" ext.: 1"	98 mm	**2230**
	Full port ball valve with connection KMV - DN 32 1 x external thread 1 x internal thread material: brass, nickel-plated with red butterfly handle max. operating temperature = 100 °C	int.: 1¼"	113 mm	**2231**

Safety sets and heating equipment

	**Boiler safety group KSG - DN 25 (1") up to 50 kW**	**5201**
	Boiler safety group KSG - DN 25 (1") up to 100 kW	**52021**
	Boiler safety group KSG - DN 25 (1") up to 200 kW	**5203**
	Boiler safety group KSG - DN 32 (1¼") up to 300 kW completely mounted, consisting of: 1 wall bracket 1 heating manometer d = 63 mm, 0-4 bar with automatic isolation 1 pressure relief valve 3 bar, firmly sealed 1 automatic air vent ⅜", with automatic isolation 1 EPS insulation 5201: pressure relief valve ½", brass bracket, 1" int. thread 52021: pressure relief valve ¾", brass bracket, 1" int. thread 5203: pressure relief valve 1", steel bracket, 1" int. thread 5204: pressure relief valve 1¼", steel bracket, 1¼" int. thread	**5204**
	**Tank connection group ¾" GAG/heating** completely mounted, consisting of: 1 steel bracket ¾" 1 heating pressure gauge d = 63 mm, 0-4 bar with automatic isolation 1 pressure relief valve ½", 3 bar, 1 automatic air vent ⅜", with automatic isolation 1 tank connector ¾", 2 screws and wall plugs	**5205**
	**Safety group SID - DN 25 up to 50 kW** for straight piping - with pressure relief valve ½", opening pressure 3 bar - with pressure gauge 0 - 4 bar, with shut-off valve	**5208**
	**Safety set for distribution manifold - DN 25 (1") up to 50 kW** For the installation on modular distribution manifolds DN 25 (as of 2017), with a connection of ¾" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7507), pressure relief valve ½" x ¾", 3 bar, up to 50 kW, pressure gauge 0-4 bar	**52543**
	**Safety set for distribution manifold - DN 32 (1¼") up to 100 kW** For the installation on modular distribution manifolds DN 32 (as of 2017), with a connection of 1" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7508), pressure relief valve ¾" x 1", 3 bar, up to 100 kW, pressure gauge 0-4 bar	**52553**
	**Pressure relief valve ½" x ¾", up to 50 kW**	**523103**
	Pressure relief valve ¾" x 1", up to 100 kW The diaphragm pressure relief valve is only activated when the thermostats of the boiler have failed. In this case the pressure relief valve can let the entire heating capacity of the boiler escape in the form of hot water and vapour.	**523113**
	**Pressure relief valve with pressure gauge up to 50 kW** The diaphragm pressure relief valve is only activated when the thermostats of the boiler have failed. In this case the pressure relief valve can let the entire heating capacity of the boiler escape in the form of hot water and vapour.	**5241**

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	**Flush and drain set DN 20 (¾")** 2 x counter-T-pieces ¾" with fill and drain valve, each equipped with an extension piece, permits to flush and drain individual HeatBloC®s.	**3161**
	Flush and drain set DN 25 (1") 2 x counter-T-pieces 1" ext. thread x 1" int. thread with fill and drain valve, each equipped with an extension piece, permits to flush and drain individual HeatBloC®s. Please note: Flush and drain set is not compatible with the HeatBloC® MC system!	**3461**
	Flush and drain set DN 32 (¼") 2 x counter-T-pieces 1¼" with fill and drain valve, each equipped with an extension piece, permits to flush and drain individual HeatBloC®s. Please note: The flush and drain set is not compatible with the HeatBloC® MC system!	**3761**
	**Automatic air vent ⅜" external thread**	**5234**
	Automatic air vent ½" external thread Automatic air vent, vertical, with automatic shut-off valve The automatic air vent eliminates air residues in the circuit of heating installations without that any manual operation is necessary. Undesired effects such as noises, wear of hydraulic components and reduced performance of radiators are thus prevented.	**5235**
	**Microbubble resorber 1¼"** with automatic air vent completely made of brass, stainless steel grid and drain connection ½" for sludge removal, for the use in heating systems, connections = internal thread, max. speed through the microbubble resorber 1.2 m/s 52374: L = 110 mm, up to 35.3 l/min or 2.12 m^3/h 52375: L = 124 mm; up to 57.8 l/min or 3.47 m^3/h	**52375**
	**Connection set for diaphragm expansion tank DN 20** for assembly to safety group DN 25, with self-sealing double nipple ¾" and mounting equipment, tank connector ¾", armoured hose with bend ¾" x 700 mm, double nipple ¾", maximum tank diameter = 440 mm	**7507**
	**Connection set DN 25 for diaphragm expansion tank** for assembly to a safety group DN 32, with self-sealing double nipple 1", cap valve 1", armoured hose with bend 1" x 700 mm.	**7508**
	**Counter cross DN 25 (1")** Connection top: 1" external thread, self-sealing with o-ring and counter nut Connection bottom: 1" internal thread Connections side: ¾" internal thread Connection front: ⅜" internal thread	**5251**
	**Counter elbow** ¾" external thread, self-sealing with O-ring and counter nut ½" external thread, self-sealing with O-ring and counter nut	**5252**

Safety sets and heating equipment

	**Tank connection coupling DN 20 (¾"), max. operating temperature 100 °C**	**5300**
	Tank connection coupling DN 20 (¾"), max. operating temperature 130 °C Tank connection coupling ¾" with automatic shut-off valve for expansion tank, allows the expansion tank to be easily dismounted and separated from the heating installation during servicing or replacement, max. pressure 10 bar	**5310**
	**Tank connection coupling with cap valve - DN 20 (¾")**	**5302**
	Tank connection coupling with cap valve - DN 25 (1") allows the expansion tank to be easily dismounted and separated from the heating installation during servicing or replacement, max. operating temperature 120 °C, max. pressure 6 bar	**5301**
	**Fill and drain valve - DN 15 (½")** solid design, with hose connector and cap, completely made of brass, ½" with self-sealing counter nut	**2260**
	**Dial thermometer 0-120 °C, with red scale**	**21711**
	Dial thermometer 0-120 °C, with blue scale - Measuring range 0-120 °C, - immersion shaft 25 mm, with self-sealing immersion sleeve, - d = 50 mm	**21721**
	**Pressure gauge ⅜" d = 50 mm** Pressure gauge with automatic isolation, measuring range: 0-4 bar diameter: d = 50 mm shut-off valve: ½" x ⅜"	**523204**

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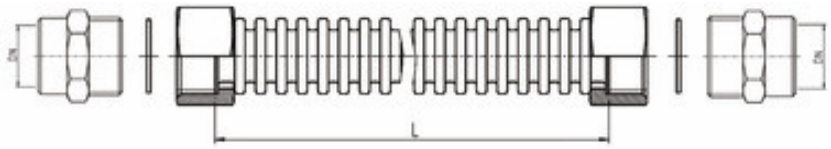
Stainless-steel corrugated hose



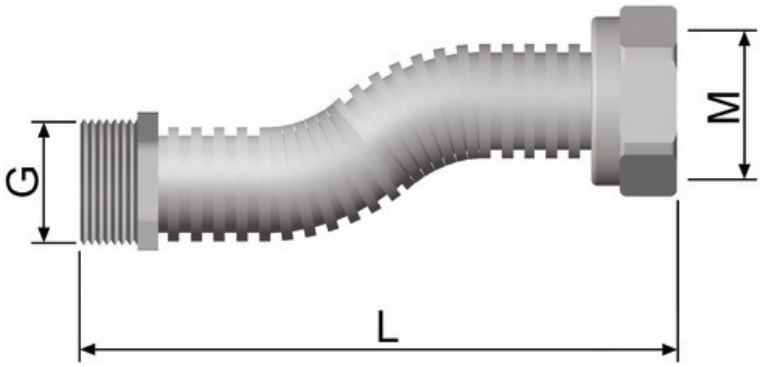
The elastic pipe for a flexible connection.
Material corrugated hose: 1.4404 (DIN 17440)
Material fittings and union nuts: brass

Minimum length 5 m per roll

Nominal diameter	Inside diameter	Outside diameter	Wall width	Nominal pressure	Burst pressure	Operating temperature	Bending radius (min)
DN 15 (½")	16 mm	22 mm	0.25 mm	12 bar	120	-30 °C - 180 °C	45 mm
DN 20 (¾")	20 mm	26.8 mm	0.25 mm	10 bar	80	-30 °C - 180 °C	60 mm
DN 25 (1")	25 mm	32.3 mm	0.3 mm	8 bar	70	-30 °C - 180 °C	75 mm
DN 32 (1¼")	32 mm	41.5 mm	0.3 mm	6 bar	65	-30 °C - 180 °C	100 mm

	**Stainless-steel corrugated hose - DN 15 (½")**	**801210**
	Stainless-steel corrugated hose - DN 20 (¾")	**803410**
	Stainless-steel corrugated hose - DN 25 (1")	**804410**
	Stainless-steel corrugated hose - DN 32 (1¼") Material 1.4404 Minimum length 5 m per roll more than 50 m per roll on request When ordering by metre, please indicate: ... rolls with ... metres per roll	**805410**
	**Connection for stainless-steel corrugated hose - DN 15 (½") int. thread**	**811201**
	Connection for stainless-steel corrugated hose - DN 20 (¾") int. thread	**813401**
	Connection for stainless-steel corrugated hose - DN 25 (1") int. thread	**814401**
	Connection for stainless-steel corrugated hose - DN 32 (1¼") int. thread Scope of delivery: 1 stainless-steel holding ring, 1 screw-in fitting, 1 union nut, 1 seal	**815401**
	**Connection for stainless-steel corrugated hose - DN 15 (½") ext. thread**	**821201**
	Connection for stainless-steel corrugated hose - DN 20 (¾") ext. thread	**823401**
	Connection for stainless-steel corrugated hose - DN 25 (1") ext. thread	**824401**
	Connection for stainless-steel corrugated hose - DN 32 (1¼") ext. thread Scope of delivery: 1 stainless-steel holding ring, 1 screw-in fitting, 1 union nut, 1 seal	**825401**

Flexan



Flexan is a fitting system for flexible connections, it permits to quickly compensate length differences and offsets, for example for the assembly or exchange of radiators.
Stretchable by 75 %.
Not suited for dynamic loads!

In compliance with the Italian norms
- UNI-CIG 7129/72
- UNI-CIG 8041/85
- UNI-CIG 8042/85

Materials		Technical data	
Hose	Stainless steel 1.4404	Operating temperature	-30 °C - 180 °C
nut	Brass, nickel-plated	Nominal pressure	16 bar
		Burst pressure	60

	Nominal diameter	Connection 1	Connection 2	Length	Item no.
	**DN 10 (⅜")**	⅜" ext. thread	⅜" nut	80 - 120 mm	**8511**
	DN 15 (½")	½" ext. thread	½" nut	80 - 120 mm	**8512**
	DN 20 (¾")	¾" ext. thread	¾" nut	80 - 120 mm	**8514**
	DN 25 (1")	1" ext. thread	1" nut	80 - 120 mm	**8515**
	DN 10 (⅜")	⅜" ext. thread	⅜" nut	105 - 185 mm	**8521**
	DN 15 (½")	½" ext. thread	½" nut	105 - 185 mm	**8522**
	DN 20 (¾")	¾" ext. thread	¾" nut	105 - 185 mm	**8524**
	DN 25 (1")	1" ext. thread	1" nut	105 - 185 mm	**8525**
	DN 32 (1¼")	1¼" ext. thread	1¼" nut	105 - 185 mm	**8526**
	DN 15 (½")	½" ext. thread	½" nut	180 - 300 mm	**8532**
	DN 20 (¾")	¾" ext. thread	¾" nut	180 - 300 mm	**8534**
	DN 25 (1")	1" ext. thread	1" nut	180 - 300 mm	**8535**
	DN 32 (1¼")	1¼" ext. thread	1¼" nut	180 - 300 mm	**8536**

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Friwa
Domestic hot water technology



Domestic hot water modules DN 15-32

Frischwassermodul gem. TrinkwV 2001 Trinkwasserverordnung

Qualität made in Germany 100% Quality Quality made in Germany

Handwerkergarantie 5 Years Manufacturer's warranty

Catalogue 04/2025

Solutions for domestic hot water technology

Valid for the EU

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Overview product range Friwa
Domestic hot water technology



Design data FriwaMicro - DN 15 (½") - up to 20 l/min (acc. to SPF LK 1)*, cold water entry temperature = 10 °C			
Set hot water temperature	**Withdrawal of hot water with 45 °C at the preset hot water temperature**	**Transmission performance**	**Primary required flow temperature**
45 °C	20 l/min	49 kW	60 °C (LK 1)*
	23 l/min	57 kW	70 °C
60 °C	14 l/min	48 kW	70 °C (LK 2)*
	Modules		
thermally controlled	6400010		
	6400030	(coated heat exchanger)	



Design data FriwaMini - DN 15 (½") - up to 28 l/min (acc. to SPF LK 1)*, cold water entry temperature = 10 °C			
Set hot water temperature	**Withdrawal of hot water with 45 °C at the preset hot water temperature**	**Transmission performance**	**Primary required flow temperature**
45 °C	28 l/min	69 kW	60 °C (LK 1)*
	38 l/min	93 kW	70 °C
60 °C	20 l/min	69 kW	70 °C (LK 2)*
	Modules		
without circulation	6401511	6401531 (coated heat exchanger)	
with circulation**	6401516	6401536 (coated heat exchanger)	



Design data FriwaMidi - DN 20 (¾") - up to 50 l/min (acc. to SPF LK 1)*, cold water entry temperature = 10 °C			
Set hot water temperature	**Withdrawal of hot water with 45 °C at the preset hot water temperature**	**Transmission performance**	**Primary required flow temperature**
45 °C	50 l/min	121 kW	60 °C (LK 1)*
	63 l/min	155 kW	70 °C
60 °C	37 l/min	130 kW	70 °C (LK 2)*
	Modules		
without circulation	6405511	6405531 (coated heat exchanger)	
with circulation (internal)**	6405516	6405536 (coated heat exchanger)	

Single-family house (up to two showers)
LK 1 = performance indicator 1
at a set hot water temperature of 45 °C
at a primary flow temperature of 60 °C

LK 2 = performance indicator 2
at a set hot water temperature of 60 °C
at a primary flow temperature of 70 °C

****Friwa modules can be equipped subsequently with internal circulation sets - see equipment**

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Cascade solutions
Selection table



Design data FriwaMaxi - DN 25 (1") - up to 77 l/min (acc. to SPF LK 1)*, cold water entry temperature = 10 °C			
Set hot water temperature	**Withdrawal of hot water with 45 °C at the preset hot water temperature**	**Transmission performance**	**Primary required flow temperature**
45 °C	77 l/min	187 kW	60 °C (LK 1)*
	88 l/min	215 kW	70 °C
60 °C	58 l/min	201 kW	70 °C (LK 2)*
	Modules		
without circulation	6406511	6406531 (coated heat exchanger)	
with circulation (internal)**	6406516	6406536 (coated heat exchanger)	



Design data FriwaMega - DN 32 (1¼") - up to 123 l/min (acc. to SPF LK 1)*, cold water entry temperature = 10 °C			
Set hot water temperature	**Withdrawal of hot water with 45 °C at the preset hot water temperature**	**Transmission performance**	**Primary required flow temperature**
45 °C	123 l/min	300 kW	60 °C (LK 1)*
	130 l/min	317 kW	70 °C
60 °C	93 l/min	324 kW	70 °C (LK 2)*
	Modules		
without circulation	6407511	6407530 (coated heat exchanger)	
with circulation (internal)**	6407517	6407535 (coated heat exchanger)	

Single-family house (up to two showers)
LK 1 = performance indicator 1
at a set hot water temperature of 45 °C
at a primary flow temperature of 60 °C

LK 2 = performance indicator 2
at a set hot water temperature of 60 °C
at a primary flow temperature of 70 °C

****Friwa modules can be equipped subsequently with internal circulation sets - see equipment**



Example: FriwaMini combined with a mixed CoolBloC C34 and a heat pump

Dimensioning Friwa

The performance of the Friwa primarily depends on the temperature in the buffer tank which delivers the energy to heat up the domestic hot water module.

The demand of domestic hot water depends on the flow and the number of consumers. In larger apartment buildings, a certain statistic distribution of withdrawals can be observed. The following table gives a general overview of the application range of the different Friwa modules.

Housing unit	70 °C / 60 °C / 10 °C	70 °C / 45 °C / 10 °C ***	60 °C / 50 °C / 10 °C ***
Single-family house (up to two showers)	FriwaMicro	FriwaMicro	FriwaMicro
Single-family house (three or more showers)	FriwaMini	FriwaMini	FriwaMini
Two-family house	FriwaMidi	FriwaMidi	FriwaMidi
3	FriwaMidi	FriwaMidi	FriwaMidi
5	FriwaMidi	FriwaMidi	FriwaMidi
10	FriwaMidi	FriwaMidi	FriwaMidi
15	FriwaMaxi	FriwaMidi	FriwaMaxi
20	FriwaMaxi	FriwaMidi	FriwaMaxi
30	2x FriwaMidi	FriwaMaxi	2x FriwaMidi
50	FriwaMega	2x FriwaMidi	FriwaMega
70	2x FriwaMaxi	FriwaMega	2x FriwaMaxi
100	2x FriwaMega	2x FriwaMaxi	2x FriwaMega

***A DHW temperature below 60 °C during operation does not comply with DVGW 551 (German association for gas and water).
The compliance with water quality standards must be observed.

70 °C / 60 °C / 10 °C flow temperature 70 °C / Hot water temperature 60 °C / Cold water temperature 10 °C
The DHW demand of max. 12 l/min and the simultaneity factor according to DIN 4708 represent the basis of calculation.



Optional accessories - WiFi3.10

Internet Gateway module - item no. 1339003

- ✓ For the connection of DHW modules to an Internet platform with the controller FC3.10
- ✓ System monitoring and parametrisation
- ✓ Display of the activated functions and graphic overview of the nominal values
- ✓ E-mail notification in case of error messages
- ✓ Display of the alarms history



Optional accessories - MB3.10

Modbus RTU module - item no. 1339002

- ✓ Connection of a cascade to a BMS
- ✓ The controller FC3.10 offers 2500 registers that can be processed by means of the MB3.10
- ✓ Communication status visible via LED codification
- ✓ Modbus RTU protocol
- ✓ Modbus specific parameters can be set at the controller – high flexibility and possibility to adapt to an existing BMS

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Cascade solutions
Selection table

Required module and pipe set for double cascade*** - example FriwaMini

Example: 2x


Basic module

+


Pipe set for cascade

+


Return distribution set

+


Circulation line

	FriwaMini			
Basic modules	2x 6401510			
	2x 6401530 (coated heat exchanger)			
Pipe set for cascade	64042933			
Return distribution set	5675431			
Optional: circulation line	6404111			
	Optional accessories: WiFi3.10 Internet Gateway module and MB3.10 Modbus RTU module			

Required module and pipe set for double cascade*** - example FriwaMidi

Example: 2x


Basic module

+


Pipe set for cascade

+


Return distribution set

+


Circulation line

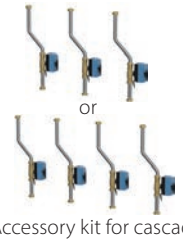
		FriwaMidi	FriwaMaxi	FriwaMega
Basic modules		2x 6405511	2x 6406511	2x 6407511
		2x 6405531 (coated heat exchanger)	2x 6406531 (coated heat exchanger)	2x 6407530 (coated heat exchanger)
Pipe set for cascade		64042943	64042953	1x 64042963
Return distribution set		5675431	6404242	6404244
Optional: circulation line		6404136GM7	6404136GM7	6404136GM7
		6404136GH10	6404136GH10	6404136GH10
		6404136GH12	6404136GH12	6404136GH12
	Optional accessories: WiFi3.10 Internet Gateway module and MB3.10 Modbus RTU module			

Required module for triple or quadruple cascade*** - example FriwaMidi

Example: 3x or 4x


Basic module

+


Accessory kit for cascade

+


Return distribution set

+


Circulation line

		FriwaMidi	FriwaMaxi	FriwaMega
Basic modules		3x or 4x 6405511	3x or 4x 6406511	3x or 4x 6407511
		3x or 4x 6405531 (coated heat exchanger)	3x or 4x 6406531 (coated heat exchanger)	3x or 4x 6407530 (coated heat exchanger)
Accessory set for Friwa cascade		64042622 (2-fold) 64042632 (3-fold) 64042642 (4-fold)	64042722 (2-fold) 64042732 (3-fold) 64042742 (4-fold)	64042820 (2-fold) 64042830 (3-fold) 64042840 (4-fold)
Return distribution set		6404242	6404242	6404244
Optional: circulation line		6404136GM7	6404136GM7	6404136GM7
		6404136GH10	6404136GH10	6404136GH10
		6404136GH12	6404136GH12	6404136GH12
	Optional accessories: WiFi3.10 Internet Gateway module and MB3.10 Modbus RTU module			

*** The cascade solution is available on request; / = not possible

FriwaMicro, thermally controlled up to 20 l/min (as per SPF LK1)*





Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- in solar thermal systems
- in systems with solid fuel boilers, oil or gas boilers
- connection to a buffer tank

Operating data

Max. operating pressure	primary: 3 bar secondary: 10 bar
Operating temperature	80 °C
Min. flow rate as per SPF LK 1*	2 l/min
Max. flow rate as per SPF LK 1*as per SPF LK1*	20 l/min
Transmission performanceas per SPF LK1*	48 kW

*For information on design data, see "Product range Friwa" ; You will find the equipment at the end for the product family "Domestic hot water technology".

Technical data

Equipment

Heat exchanger	E8ASH, 24 plates
Cartridge sensor	30-60 °C
Flow switch	Type 1.3 l/min

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Cartridge sensor	Stainless steel
Flow switch	Noryl
Thermostatic valve	Housing / valve plate: brass
Heat exchanger	coating (optional): based on silica; Solder: copper; Plates + connecting pieces: stainless steel

Dimensions

Height	420 mm
Width	282 mm
Depth	265 mm
Installation length	418 mm
Centre distance	65 mm
Centre distance sec.	65 mm
Nominal diameter	DN 15 (½")
Connections	¾" int. thread

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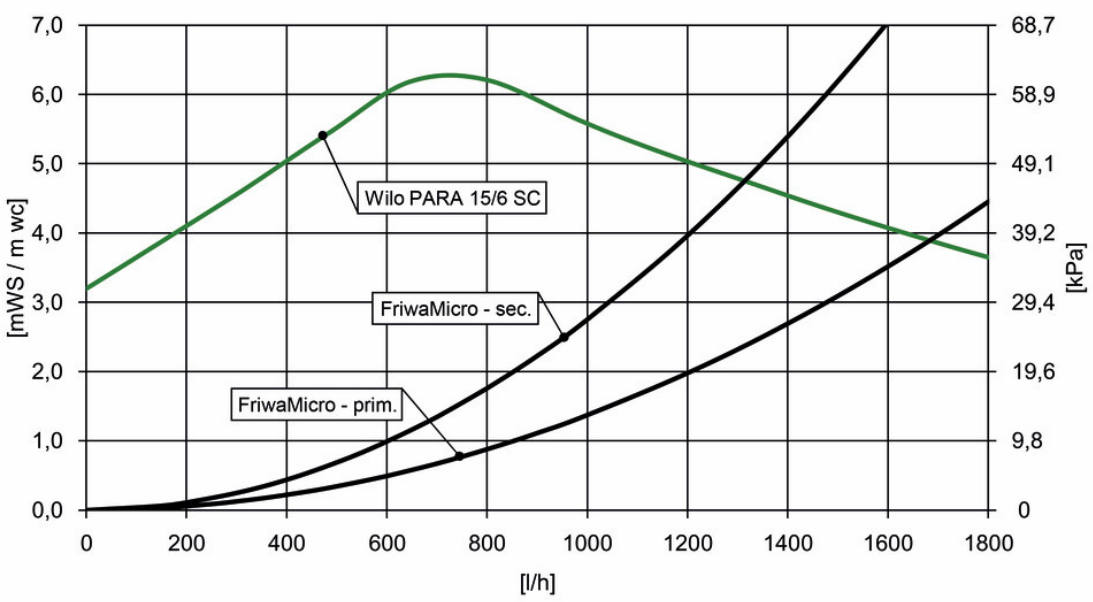
FriwaMicro, thermally controlled up to 20 l/min (as per SPF LK1)*



FriwaMicro - DN 15 (½")		Item no.
	**FriwaMicro, thermally controlled** Wilo Para SC 15/6-43	**6400010**
	FriwaMicro, thermally controlled, coated heat exchanger Wilo Para SC 15/6-43	**6400030**

FriwaMini
up to 28 l/min (as per SPF LK1)*





Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- in solar thermal systems
- in systems with solid fuel boilers, oil or gas boilers
- connection to a buffer tank

Operating data

Max. operating pressure	primary: 3 bar secondary: 10 bar
Operating temperature	95 °C
Min. flow rate as per SPF LK 1*	2 l/min
Max. flow rate as per SPF LK 1* as per SPF LK1*	28 l/min
Transmission performance as per SPF LK1*	69 kW
Kvs value	primary: 3,1 secondary: 2.4

*For information on design data, see "Product range Friwa" ; You will find the equipment at the end for the product family "Domestic hot water technology".

Technical data

Equipment

Check valves	primary: 1 x 200 mm wc
Controller	FC3.10
Sensors	2 x Pt1000
Heat exchanger	E8ASW-N, 32 plates
Circulation line	optional
Communication module (WiFi3.10/ MB3.10)	optional

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	coating (optional): based on silica; Solder: copper; Plates + connecting pieces: stainless steel

Dimensions

Height	539 mm
Width	309 mm
Depth	314 mm
Installation length	494 mm
Centre distance prim.	90 mm
Centre distance sec.	90 mm
Nominal diameter	DN 15 (½")
Connections	primary: ¾" int. thread secondary: ¾" ext. thread
Connection circulation line	1" ext. thread

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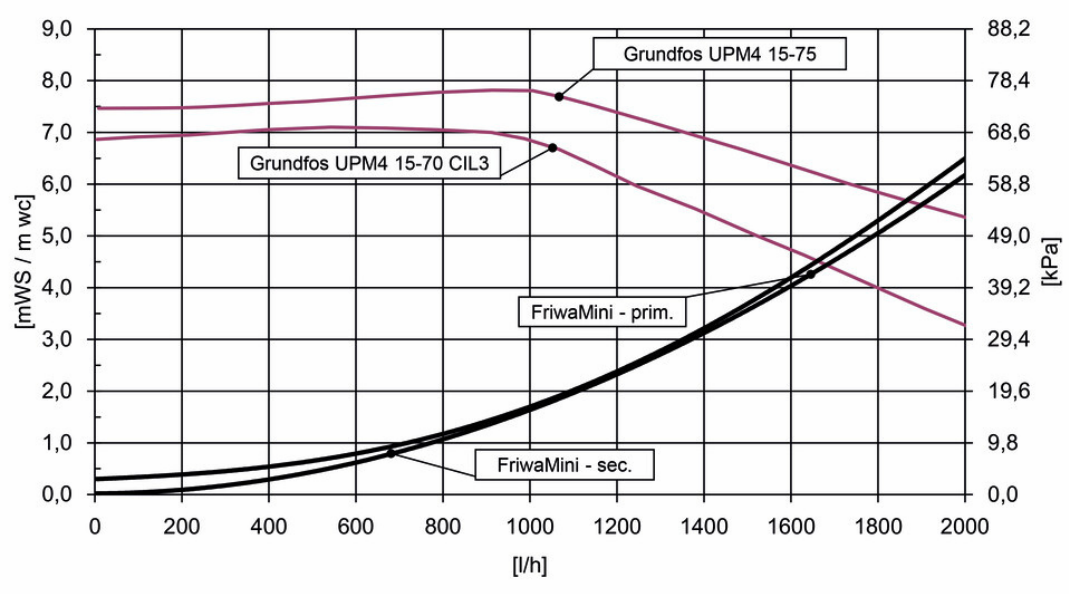
FriwaMini
up to 28 l/min (as per SPF LK1)*



FriwaMini - DN 15 (½")		Item no.
	**FriwaMini, without circulation** Primary pump: Grundfos UPM4 15-75	**6401510**
	FriwaMini, with circulation Primary pump: Grundfos UPM4 15-75 Secondary pump: Grundfos UPM4 15-70 CIL3	**6401515**
	FriwaMini, without circulation, coated heat exchanger Primary pump: Grundfos UPM4 15-75	**6401530**
	FriwaMini, with circulation, coated heat exchanger Primary pump: Grundfos UPM4 15-75 Secondary pump: Grundfos UPM4 15-70 CIL3	**6401535**

FriwaMidi
up to 50 l/min (as per SPF LK1)*





Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- in solar thermal systems
- in systems with a heat pump, a solid fuel boiler, oil or gas boiler
- connection to a buffer tank
- as a quadruple cascade up to 200 l/min (as per SPF LK 1)*

Operating data

Max. operating pressure	primary: 3 bar secondary: 10 bar
Operating temperature	95 °C
Min. flow rate as per SPF LK 1*	2 l/min
Max. flow rate as per SPF LK 1* as per SPF LK1*	50 l/min
Transmission performance as per SPF LK1*	129 kW
Kvs value	primary: 4,5 secondary: 3.9

*For information on design data, see "Product range Friwa" ; You will find the equipment at the end for the product family "Domestic hot water technology".

Technical data

Equipment

Check valves	primary: 2 x 190 mm wc
Heat exchanger	40 plates, copper solder/coated
Sensors	primary: 1 x Pt1000 / secondary: 2 x Pt1000 / 1 x flow meter
Controller	FC3.10
Circulation line	optional
Communication module (WiFi3.10/ MB3.10)	optional

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	coating (optional): based on silica; Solder: copper; Plates + connecting pieces: stainless steel

Dimensions

Height	795 mm
Width	602 mm
Depth	298 mm
Installation length	757 mm
Centre distance prim.	120 mm
Centre distance sec.	100 mm
Nominal diameter	DN 20 (¾")
Connections	primary: 1½" ext. thread secondary: 1" ext. thread
Connection circulation line	1" ext. thread

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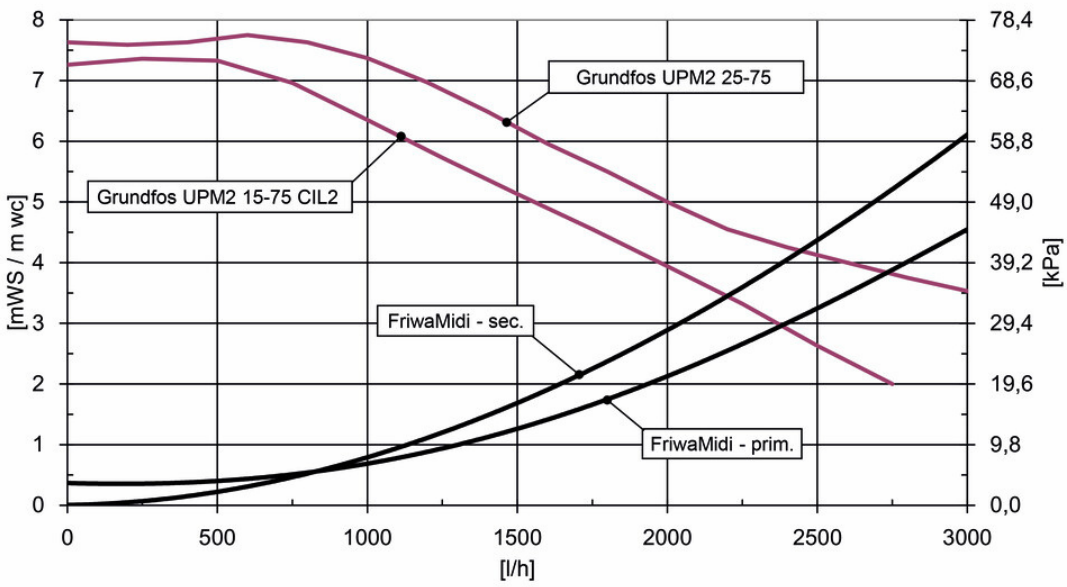
FriwaMidi
up to 50 l/min (as per SPF LK1)*



FriwaMidi - DN 20 (¾")		Item no.
	**FriwaMidi, without circulation** Primary pump: Grundfos UPM2 25-75 LowFlow	**6405511**
	FriwaMidi, with circulation Primary pump: Grundfos UPM2 25-75 LowFlow Secondary pump: Grundfos UPM2 15-75 CIL2	**6405516**
	FriwaMidi, without circulation, coated heat exchanger Primary pump: Grundfos UPM2 25-75 LowFlow	**6405531**
	FriwaMidi, with circulation, coated heat exchanger Primary pump: Grundfos UPM2 25-75 LowFlow Secondary pump: Grundfos UPM2 15-75 CIL2	**6405536**

FriwaMaxi
up to 77 l/min (as per SPF LK1)*





Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- in solar thermal systems
- in systems with a heat pump, a solid fuel boiler, oil or gas boiler
- connection to a buffer tank
- as a quadruple cascade up to 308 l/min (as per SPF LK 1)*

Operating data

Max. operating pressure	primary: 3 bar secondary: 10 bar
Operating temperature	95 °C
Min. flow rate as per SPF LK 1*	2 l/min
Max. flow rate as per SPF LK 1* as per SPF LK1*	77 l/min
Transmission performance as per SPF LK1*	187 kW
Kvs value	primary: 5,6 secondary: 5.2

*For information on design data, see "Product range Friwa" ; You will find the equipment at the end for the product family "Domestic hot water technology".

Technical data

Equipment

Check valves	primary: 2 x 400 mm wc
Heat exchanger	60 plates, copper solder/coated
Sensors	primary: 1 x Pt1000 / secondary: 2 x Pt1000 / 1 x flow meter
Controller	FC3.10
Circulation line	optional
Communication module (WiFi3.10/ MB3.10)	optional

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	coating (optional): based on silica; Solder: copper; Plates + connecting pieces: stainless steel

Dimensions

Height	795 mm
Width	602 mm
Depth	298 mm
Installation length	769 mm
Centre distance prim.	120 mm
Centre distance sec.	100 mm
Nominal diameter	DN 25 (1")
Connections	primary: 2" ext. thread secondary: 1 ¼" ext. thread
Connection circulation line	1" ext. thread

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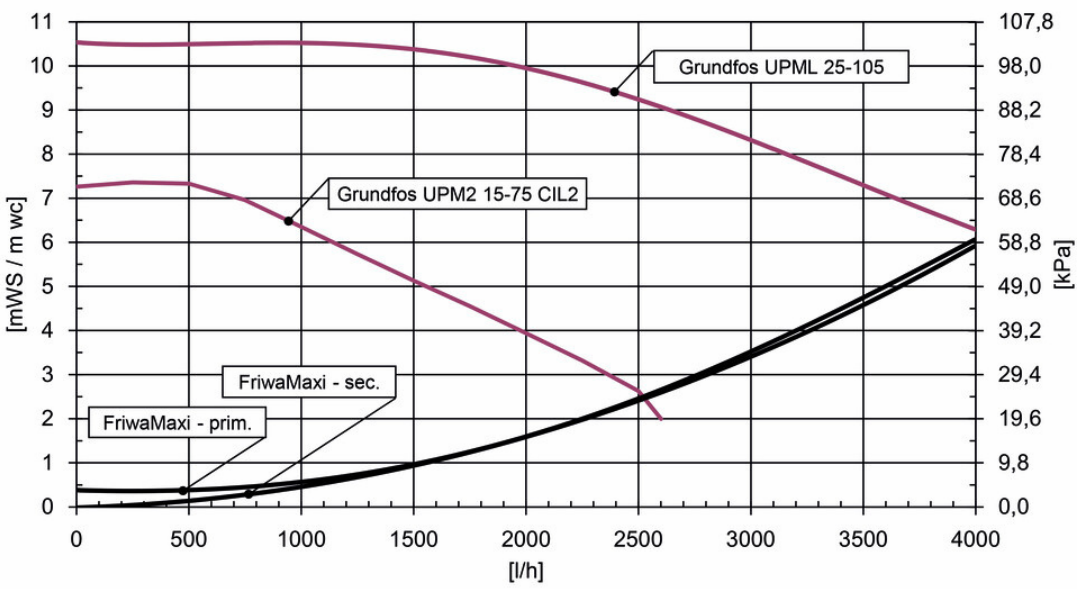
FriwaMaxi
up to 77 l/min (as per SPF LK1)*



FriwaMaxi - DN 25 (1")		Item no.
	**FriwaMaxi, without circulation** Primary pump: Grundfos UPML 25-105	**6406511**
	FriwaMaxi, with circulation Primary pump: Grundfos UPML 25-105 Secondary pump: Grundfos UPM2 15-75 CIL2	**6406516**
	FriwaMaxi, without circulation, coated heat exchanger Primary pump: Grundfos UPML 25-105	**6406531**
	FriwaMaxi, with circulation, coated heat exchanger Primary pump: Grundfos UPML 25-105 Secondary pump: Grundfos UPM2 15-75 CIL2	**6406536**

FriwaMega
up to 123 l/min (as per SPF LK1)*





Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- in solar thermal systems
- in systems with a heat pump, a solid fuel boiler, oil or gas boiler
- connection to a buffer tank
- as a quadruple cascade up to 492 l/min (as per SPF LK 1)*

Operating data

Max. operating pressure	primary: 3 bar secondary: 10 bar
Operating temperature	95 °C
Min. flow rate as per SPF LK 1*	4 l/min
Max. flow rate as per SPF LK 1* as per SPF LK1*	123 l/min
Transmission performance as per SPF LK1*	300 kW
Kvs value	primary: 11,8 secondary: 10

*For information on design data, see "Product range Friwa" ; You will find the equipment at the end for the product family "Domestic hot water technology".

Technical data

Equipment

Check valves	primary: 2 x 450 mm wc
Heat exchanger	2x 60 plates, copper solder/coated
Sensors	primary: 1 x Pt1000 / secondary: 2 x Pt1000 / 2 x flow meter
Controller	FC3.10
Circulation line	optional
Communication module (WiFi3.10/ MB3.10)	optional

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	coating (optional): based on silica; Solder: copper; Plates + connecting pieces: stainless steel

Dimensions

Height	1 423 mm
Width	710 mm
Depth	920 mm
Installation length	1 205 mm
Centre distance prim.	158 mm
Centre distance sec.	158 mm
Nominal diameter	DN 32 (1¼")
Connections	primary: 1½" int. thread secondary: 1½“ ext. thread
Connection circulation line	thread / 1¼" ext. thread

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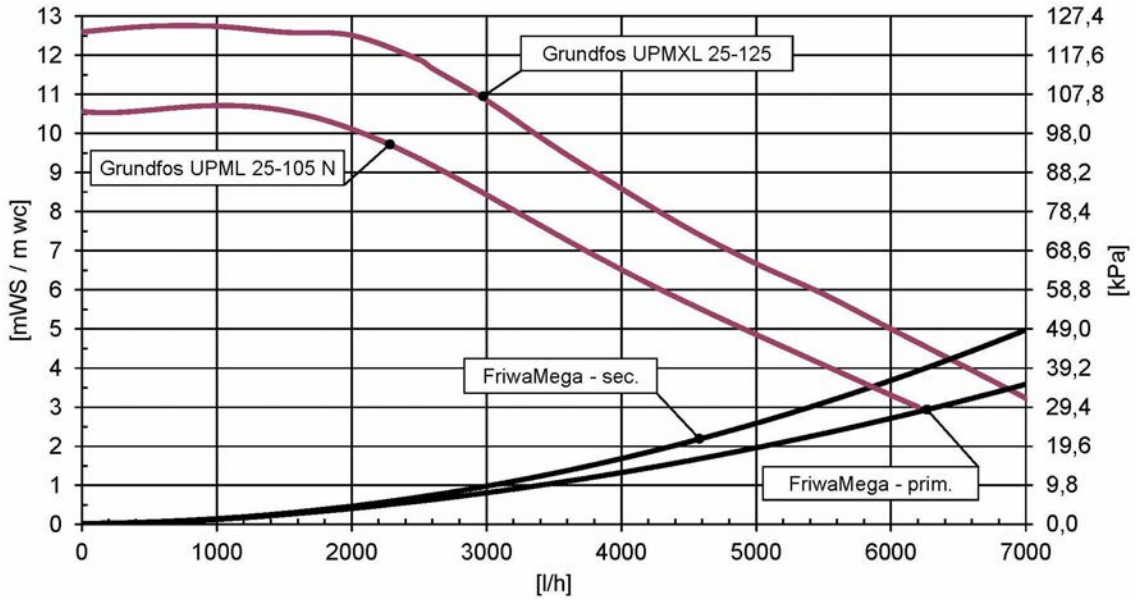
FriwaMega
up to 123 l/min (as per SPF LK1)*



FriwaMega - DN 32 (1¼")		Item no.
	**FriwaMega, without circulation** Primary pump: Grundfos UPMXL GEO 25-125	**6407511**
	FriwaMega, with circulation Primary pump: Grundfos UPMXL GEO 25-125 Secondary pump: Grundfos UPML 25-105 N	**6407517**
	FriwaMega, without circulation, coated heat exchanger Primary pump: Grundfos UPMXL GEO 25-125	**6407530**
	FriwaMega, with circulation (internal), coated heat exchanger Primary pump: Grundfos UPMXL GEO 25-125 Secondary pump: Grundfos UPML 25-105 N	**6407535**



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Tank heat transfer modules DN 20-25

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Solutions for domestic hot water technology

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Tank heat transfer module Midi up to 33 l/min (as per SPF LK1)*





Application range

- for charging/preheating domestic hot water tanks via large buffer tank systems with high tap performances

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- in solar thermal systems
- in systems with solid fuel boilers, oil or gas boilers
- connection to a buffer tank
- up to 33 l/min

Operating data

Max. operating pressure	primary: 3 bar secondary: 10 bar
Operating temperature	95 °C
Min. flow rate as per SPF LK 1*	2 l/min
Max. flow rate as per SPF LK 1* as per SPF LK1*	33 l/min
Transmission performance as per SPF LK1*	92 kW
Kvs value	primary: 4,1 secondary: 3.4

*For information on design data, see "Product range Friwa" ; You will find the equipment at the end for the product family "Domestic hot water technology".

Technical data

Equipment

Check valves	primary: 2 x 190 mm wc
Heat exchanger	B25TH, 40 plates
Sensors	3 x Pt1000 (integrated) / 3 x Pt1000 (enclosed)
Controller	FC4.13

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel

Dimensions

Height	795 mm
Width	602 mm
Depth	298 mm
Installation length	757 mm
Centre distance prim.	120 mm
Centre distance sec.	220 mm
Nominal diameter	DN 20 (¾")
Connections	primary: 1½" ext. thread secondary: 1" ext. thread

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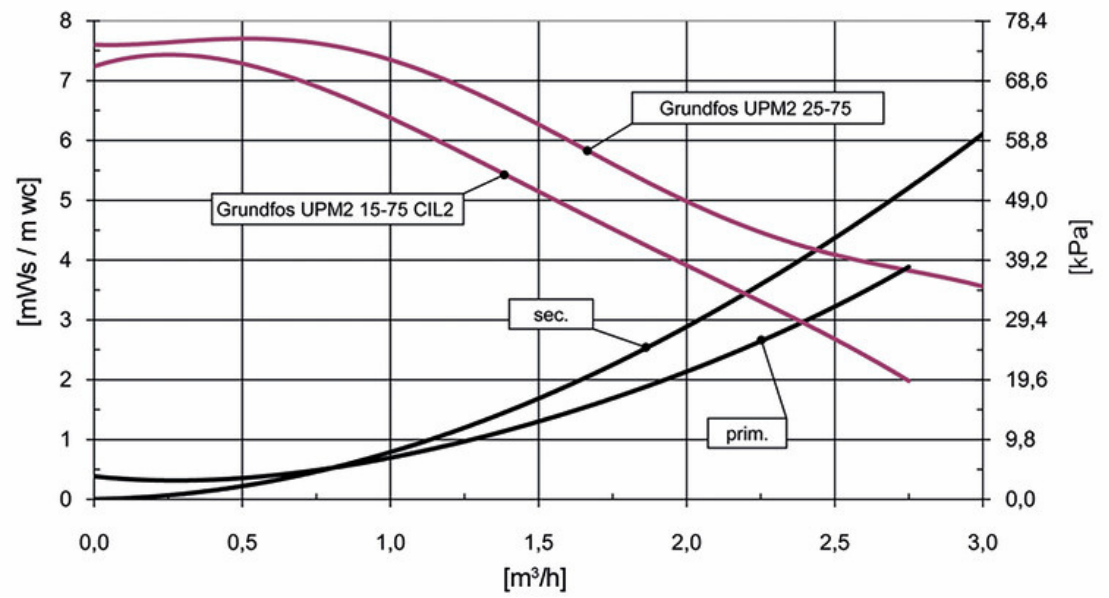
Tank heat transfer module Midi up to 33 l/min (as per SPF LK1)*



Tank heat transfer module Midi - DN 20 (¾")		Item no.
	**Tank heat transfer module Midi up to 33 l/min** Primary pump: Grundfos UPM2 25-75 LowFlow Secondary pump: Grundfos UPM2 15-75 CIL2	**6435445**

Tank heat transfer module Maxi up to 63 l/min (as per SPF LK1)*





Application range

- for charging/preheating domestic hot water tanks via large buffer tank systems with high tap performances

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- in solar thermal systems
- in systems with solid fuel boilers, oil or gas boilers
- connection to a buffer tank
- up to 63 l/min

Operating data

Max. operating pressure	primary: 3 bar secondary: 10 bar
Operating temperature	95 °C
Min. flow rate as per SPF LK 1*	2 l/min
Max. flow rate as per SPF LK 1* as per SPF LK1*	63 l/min
Transmission performance as per SPF LK1*	175 kW
Kvs value	primary: 5,5 secondary: 5.1

*For information on design data, see "Product range Friwa" ; You will find the equipment at the end for the product family "Domestic hot water technology".

Technical data

Equipment

Check valves	primary: 2 x 400 mm wc
Heat exchanger	B25TH, 60 plates
Sensors	3 x Pt1000 (integrated) / 3 x Pt1000 (enclosed)
Controller	FC4.13

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel

Dimensions

Height	795 mm
Width	602 mm
Depth	298 mm
Installation length	769 mm
Centre distance prim.	120 mm
Centre distance sec.	220 mm
Nominal diameter	DN 25 (1")
Connections	primary: 2" ext. thread secondary: 1 ¼" ext. thread

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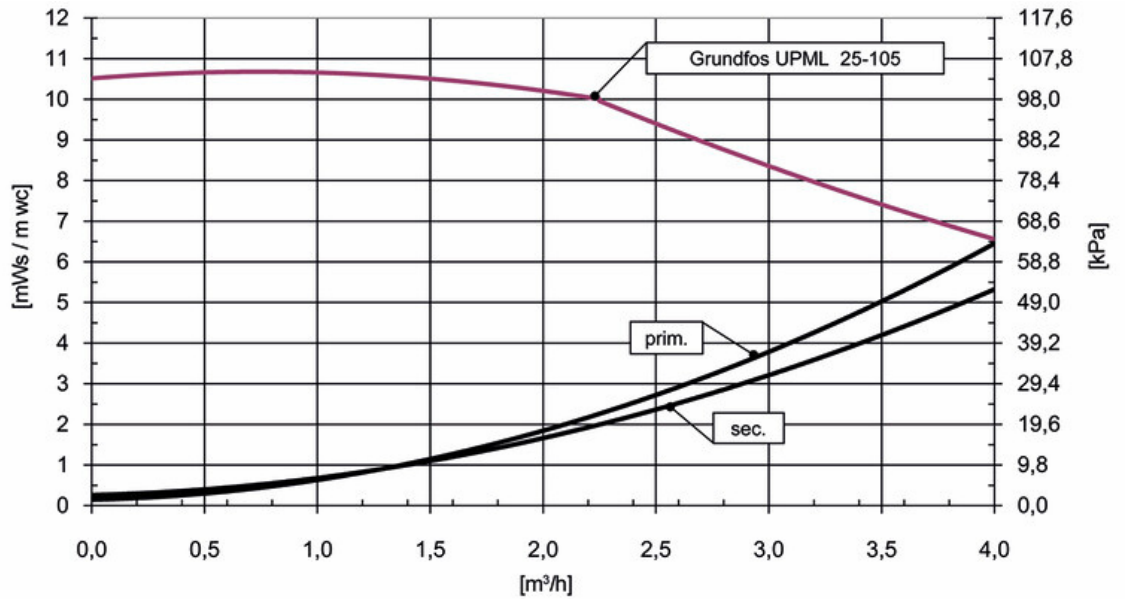
Tank heat transfer module Maxi
up to 63 l/min (as per SPF LK1)*



Tank heat transfer module Maxi - DN 25 (1")		Item no.
	**Tank heat transfer module Maxi up to 63 l/min** Primary pump: Grundfos UPML 25-105 Secondary pump: Grundfos UPML 25-105 N	**6436465**

Domestic hot water equipment

	**Service water mixing valve - DN 20** The PAW service water mixing valve is used for setting a constant temperature of the water withdrawn from solar or buffer storage tanks between 30 °C and 70 °C. With this valve, the danger of scalding due to hot water from the storage tank is reduced considerably. A must-have for each correctly designed solar thermal system for service water. Housing: Brass, insensitive to calcification, resistant to dezincification Precision of settings: +/- 2 °C Max. operating temperature: 98 °C Max. operating pressure: PN 10 Range of setting: 30-70 °C Withdrawal: 39 l/min (DP = 1.5 bar) Connections: thread connection with ¾" external thread	**56311**
	**Domestic hot water safety group ¾"** Safety group for hot water storage tank, with shut-off valve and adjustable check valve. For horizontal installation. With seat made of stainless steel. Brass housing. Chromed. Certified in conformity to EN 1487. Opening pressure 7 bar, max. power 10 kW	**563907**
	**Withdrawal valve** Flame-treated valves for sterile withdrawal of water. For the subsequent installation inside the Friwa module, on each piston valve of the domestic hot water circuit.	**640422**
	**Accessory set FriwaMicro** 3x ball valve DN 15 Authorisation according to DVGW Connection: ¾" ext. thread	**64042001**
	**Accessory set FriwaMidi-Kaskade 2-fold**	**64042622**
	Accessory set FriwaMidi-Kaskade 3-fold	**64042632**
	Accessory set FriwaMidi-Kaskade 4-fold The accessory set is for cascading of two, three or four identically constructed Friwa modules. The two-way valves are prefitted and can be easily mounted in the cold water line. Due to the short opening time of the valve there is no loss of comfort when connecting or disconnecting of single cascade modules.	**64042642**
	**Accessory set FriwaMaxi-Kaskade 2-fold**	**64042722**
	Accessory set FriwaMaxi-Kaskade 3-fold	**64042732**
	Accessory set FriwaMaxi-Kaskade 4-fold The accessory set is for cascading of two, three or four identically constructed Friwa modules. The two-way valves are prefitted and can be easily mounted in the cold water line. Due to the short opening time of the valve there is no loss of comfort when connecting or disconnecting of single cascade modules.	**64042742**
	**Accessory set FriwaMega-Kaskade 2-fold**	**64042820**
	Accessory set FriwaMega-Kaskade 3-fold	**64042830**
	Accessory set FriwaMega-Kaskade 4-fold The accessory set serves for cascading two, three or four identically constructed domestic hot water modules. The two-way valves are prefitted and can be easily mounted in the cold water line. Thanks to the short opening time of the valve, there is no loss of comfort when connecting or disconnecting of single cascade modules.	**64042840**

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	**Circulation set for FriwaMidi/Maxi** - with high-efficiency pump Grundfos UPM3 15-70 CIL3 - with piston valve and non-return valve Connection: 1" ext. thread	**6404123**
	**Circulation set for internal retrofitting of FriwaMega** - with high-efficiency pump Grundfos UPML 25-105 N - with piston valve and non-return valve Connection: 1¼" ext. thread	**6404135GH10**
	**Circulation set for internal retrofitting for FriwaMini FC3.10** - with high-efficiency pump Grundfos UPM4 15-70 CIL3 - with piston valve and non-return valve Connection: 1" ext. thread	**6404111**
	**Circulation set for Friwa-Kaskade (Midi, Maxi, Mega) and for tank heat transfer module Midi, Maxi** - with high-efficiency pump Grundfos UPM4 15-70 CIL3 - with piston valves, non-return valve and draining Connection: 1" ext. thread	**6404136GM7**
	**Circulation set for Friwa-Kaskade (Midi, Maxi, Mega) and for tank heat transfer module Midi, Maxi** - with high-efficiency pump Grundfos UPML 25-105 N - with piston valves, non-return valve and draining Connection: 1½" ext. thread	**6404136GH10**

Domestic hot water equipment

	**Circulation set for Friwa-Kaskade (Maxi/Mega-Kaskade)** - with high-efficiency pump Grundfos UPMXL 25-125 N - with piston valves, non-return valve and draining Connection: 1½" ext. thread	**6404136GH12**
	**Return distribution set for FriwaMaxi, tank heat transfer module Maxi - DN 32** 3-way valve with actuator, setting time for 90°: 35 sec., Kvs value: 16 3 x 1½" int. thread	**640424**
	Return distribution set for FriwaMidi/Maxi-Kaskade, FriwaMega, SolexMega HZ - DN 40 3-way valve with actuator, setting time for 90°: 35 sec., Kvs value: 25 3 x 1½" int. thread	**6404242**
	Return distribution set 2" int. thread - DN 50 (2") 3-way valve with actuator, setting time for 90°: 35 sec., Kvs value: 40 3 x 2" int. thread	**6404244**
	**Pipe set for FriwaMini-Kaskade** Insulated pipe set for cascading of two Friwa modules (item no. 6401510) - with 2 two-way valves for switching - with mounting rail for an easy wall assembly	**64042933**
	**Pipe set for FriwaMidi-Kaskade** Insulated pipe set for cascading of two Friwa modules (item no. 6405511) - with 2 two-way valves for switching - with mounting rail for an easy wall assembly	**64042943**
	Pipe set for FriwaMaxi-Kaskade Insulated pipe set for cascading of two Friwa modules (item no. 6406511) - with 2 two-way valves for switching - with mounting rail for an easy wall assembly	**64042953**
	**Pipe set for FriwaMega-Kaskade** Insulated pipe set for cascading of two Friwa modules (item no. 6407511) - with two 2-way valves for switching	**64042963**
	**WiFi3.10 Internet Gateway Module** Communication module to connect PAW systems with domestic hot water controllers FC3.10 with the Internet visualisation platform emodul.eu. The communication module WiFi3.10 is connected to the FC3.10 master via the integrated RS interface. The system specific data points are transmitted wirelessly to the platform emodul.eu via a router provided by the customer. An Internet access is required. Exclusive integration into the network structure provided by the customer. Consists of controller WiFi3.10, power supply unit, RS bus cable, instructions Operating voltage: 115-230 V/50-60 Hz Protection type: IP 20	**1339003**

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	**MB3.10** Communication module to integrate PAW systems with domestic hot water controllers FC3.10 or solar controllers SC3.10 into superior systems with Modbus RTU interface. The communication module consists of two separate Modbus interfaces. The RS485 interface is connected with the master controller FC3.10 or SC3.10 of the PAW system. The communication module provides the superior Modbus server with the data via the Modbus RTU interface. All inputs and outputs of the connected controllers are available as readable data points.	**1339002**
	**2-way zone valve - DN 25 (1") for tank heat transfer module Midi** for connecting and disconnecting single storage tanks, DN 25, 1" int. thread, setting time for 90°: 30 sec., Kvs value = 68	**563542**
	2-way zone valve - DN 32 (1¼") for tank heat transfer module Maxi for connecting and disconnecting single storage tanks, DN 32, 1¼" internal thread, setting time for 90°: 30 sec., Kvs value = 123	**563552**
	**3-way valve PV3 - DN 25 (1")**	**5675431**
	3-way valve PV3 with union nut - DN 25 (1") Can be used in solar and heating installations, to switch between different zones or to connect and disconnect different parts of the system. The actuator is equipped with a relay which is actuated by a 2-point signal, if need be it can also be manually operated. The 3-way zone PV3 valve can be operated in both directions. Power supply: 230 V - 50 Hz Power consumption: 5 Nm Setting time 90°: 13 s Kvs value: 15.5	**5675432**



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Solex
Solar thermal systems



Solar transfer stations DN 15-50

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Solutions for solar thermal systems

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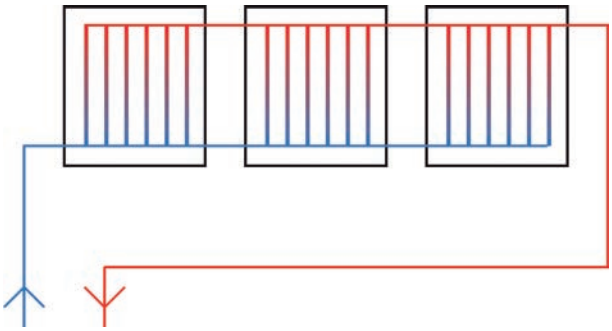
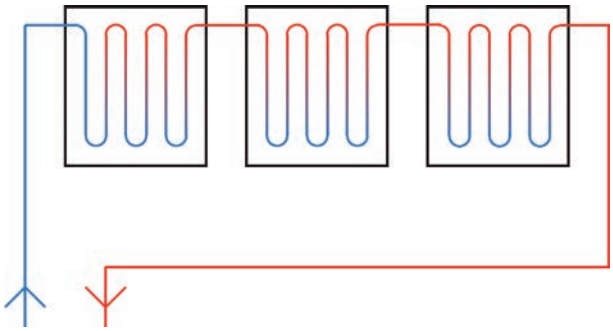
Product range Solex
Solar transfer stations

High-flow system with harp collectors



Low-flow system with meander collectors



Dimensioning of a Solex module

Different collector types with the same size of collector field need very different flow rates for an effective operation without interruption. The hydraulic connection of the collector field as well as the shape of the collector can also influence the optimal flow of the solar circuit. Corresponding values should be agreed with the manufacturer of the collectors. They can also be found in the technical documents of the collectors.

The solar systems are roughly divided into High-Flow systems and Low-Flow systems. High-Flow systems are operated with a higher flow rate and a smaller temperature difference between collector inlet and collector outlet.
Usually, these systems have less pressure drop than Low-flow systems. Accordingly, Low-Flow systems work with lower flow rates and a higher temperature difference.
The Solex transfer stations can be used for High-Flow solar thermal systems as well as for Low-Flow systems.

The values for the specific flow rate given below refer to the nominal flow rate. Depending on the control target and the basic conditions, the flow rate in the partial-load range is adapted by the controller and can be much smaller than the calculated nominal flow rate.

High-Flow systems have a flow rate of 25 to 40 litres per square metre of collector surface and hour or 0.42 to 0.67 litre per square metre of collector surface and minute.

Low-Flow systems have a flow rate of 10 to 20 litres per square metre of collector surface and hour or 0.17-0.33 litre per square metre of collector surface and minute.

The total flow rate in a solar thermal system depends on:

- system operation mode (High-Flow/Low-Flow)
- collector surface
- performance of the heat exchanger (secondary)

The **circulation pump dimensioning** depends on:

- flow rate
- pressure drop of heat exchanger, collector, piping system

For the selection table of the proper Solex, we assumed a minimum head of ~5 m wc (~50 kPa). If the real collector field (including pipes) has a higher pressure drop, a detailed dimensioning is inevitable.

Selection table solar transfer stations - Solex

Specific flow rate in l/(m² x h)	Collector surface in m²																
	15	**20**	**25**	**30**	**40**	**50**	**60**	**70**	**80**	**90/ 100**	**120**	**140/ 160**	**180/ 200**	**240**	**280**	**320**	**360/ 400**
15	Mini	Mini	Mini	Midi	Midi	Midi	Maxi	Maxi	Maxi	Maxi	Mega	Mega	Mega	2x Mega	2x Mega	2x Mega	2x Mega
20	Mini	Mini	Mini	Midi	Midi	Midi	Maxi	Maxi	Maxi	Maxi	Mega	Mega	Mega	2x Mega	2x Mega	2x Mega	2x Mega
25	Mini	Mini	Mini	Midi	Midi	Maxi	Maxi	Maxi	Maxi	Mega	Mega	Mega	2x Mega	2x Mega	2x Mega	2x Mega	***
30	Mini	Mini	Mini	Midi	Midi	Maxi	Maxi	Maxi	Mega	Mega	Mega	2x Mega	2x Mega	2x Mega	***	/	/
35	Mini	Mini	Midi	Midi	Maxi	Maxi	Maxi	Mega	Mega	Mega	2x Mega	2x Mega	2x Mega	***	/	/	/
40	Mini	Midi	Midi	Midi	Maxi	Maxi	Mega	Mega	Mega	Mega	2x Mega	2x Mega	2x Mega	***	/	/	/

*** precise dimensioning required

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Overview product range Solex
Solar transfer stations



SolexMini - for installations up to 36 m² of collector surface

SolexMini HZ	Operating mode	Collector surface	Output	Temperature difference (collector inlet/collector outlet)
	25 l/(m²xh)	36 m²	18 kW	20 K
	40 l/(m²xh)	30 m²	15 kW	12 K

Irradiation = 800 W/m²; efficiency $\eta_{0.05}$ = 65%



SolexMidi - for installations up to 60 m² of collector surface

SolexMidi HZ/TW	Operating mode	Collector surface	Output	Temperature difference (collector inlet/collector outlet)
	15 l/(m²xh)	60 m²	31 kW	33 K
	40 l/(m²xh)	30 m²	15 kW	12 K

Irradiation = 800 W/m²; efficiency $\eta_{0.05}$ = 65%



SolexMaxi - for installations up to 100 m² of collector surface

SolexMaxi HZ/TW	Operating mode	Collector surface	Output	Temperature difference (collector inlet/collector outlet)
	15 l/(m²xh)	100 m²	50 kW	33 K
	25 l/(m²xh)	80 m²	25 kW	12 K

Irradiation = 800 W/m²; efficiency $\eta_{0.05}$ = 65%



SolexMega - for installations up to 200 m² of collector surface

SolexMega HZ/TW	Operating mode	Collector surface	Output	Temperature difference (collector inlet/collector outlet)
	15 l/(m²xh)	200 m²	100 kW	33 K
	25 l/(m²xh)	160 m²	50 kW	12 K

Irradiation = 800 W/m²; efficiency $\eta_{0.05}$ = 65%



SolexMega Cascade - for installations up to 400 m² of collector surface

SolexMega Cascade HZ/TW	Operating mode	Collector surface	Output	Temperature difference (collector inlet/collector outlet)
	15 l/(m²xh)	400 m²	200 kW	33 K
	25 l/(m²xh)	320 m²	100 kW	12 K

Irradiation = 800 W/m²; efficiency $\eta_{0.05}$ = 65%

Replacement set for solar pumps

The PAW solution for replacing solar pumps and changeover to high-efficiency technology

Due to the requirements for the energy efficiency of heating and solar pumps, only high-efficiency pumps may be used in solar thermal systems.

However, the controllers of older solar systems are generally not compatible with the new high-efficiency technology. High-efficiency pumps always require constant mains voltage for operation, the speed control is carried out via separate/additional control signals (0-10 V or PWM signal).
Older controllers are not equipped with an appropriate control signal output.

In the case that an existing (asynchronous) pump has to be exchanged without replacing the controller, PAW offers the PAW replacement set for solar pumps, consisting of:

- ✓ **High-efficiency pump**
- ✓ **Pumps control signal converter (PSW)***
- ✓ **Connection cables**
- ✓ **Sealing material**

The table at the right helps you to find the suitable replacement set for the solar installation.

*The PSW converts the controlled 230 V alternating voltage such as control via pulse packages, phase angle or trailing-edge phase into a PWM or 0-10 V control signal.



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How to replace the pump

- **Dismount the asynchronous pump and replace it with a high-efficiency pump.**
- **Connect the PSW to the controller (to the same relay to which the previous pump was connected to).**
- **Connect the PSW to the pump plugs and plug the safety plug into a socket. The PSW is correctly preset for the pump.**

Complex solar installations can thus be operated with the existing controller.

Whether it is the replacement of a faulty asynchonous pump or the increase of the efficiency of an installation: The PAW service team is happy to assist you in the selection of a high-efficiency pump with an appropriate characteristic curve.

Solar pump replacement set for solar installations				
	DN 20 (¾")		**DN 25 (1")**	**DN 32 (1¼")**
Item no.	**12187314**	**12387313**	**12187414**	**12187514**
Pump	Grundfos UPM3 Solar 15-145	Wilo Para ST 15/13	Grundfos Solar PML 25-145	Grundfos Solar PML 32-145
				

What is the situation with domestic hot water installations?
PAW domestic hot water modules are equipped with perfectly matched components such as heat exchanger, pumps, sensors and controllers. The pumps are usually designed as high-efficiency pumps. To ensure the usual temperature stability after replacing a component, please contact our service team and keep the serial number of the station at hand. The serial number is placed in the lower right corner of the retaining plate of the station. We will gladly submit you a specific recommendation for replacement.

SolexMini HZ (heating system)
up to 36 m² of collector surface





Application range

- for charging buffer storage tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 36 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 3 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	40 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 2 x 200 mm wc / secondary: 1 x 200 mm wc
Controller	SC5.14
Sensors	2 x Pt1000 (integrated) / 3 x Pt1000 (enclosed)
Heat exchanger	E8ASH, 24 plates
Safety valve	primary: 6 bar / secondary: 3 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	0.5-15 l/min
Flow meter (secondary)	0.5-15 l/min

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

Dimensions

Height	658 mm
Width	427 mm
Depth	313 mm
Installation length	595 mm
Nominal diameter	DN 15 (½")
Connections	primary: ¾" int. thread secondary: ¾" int. thread

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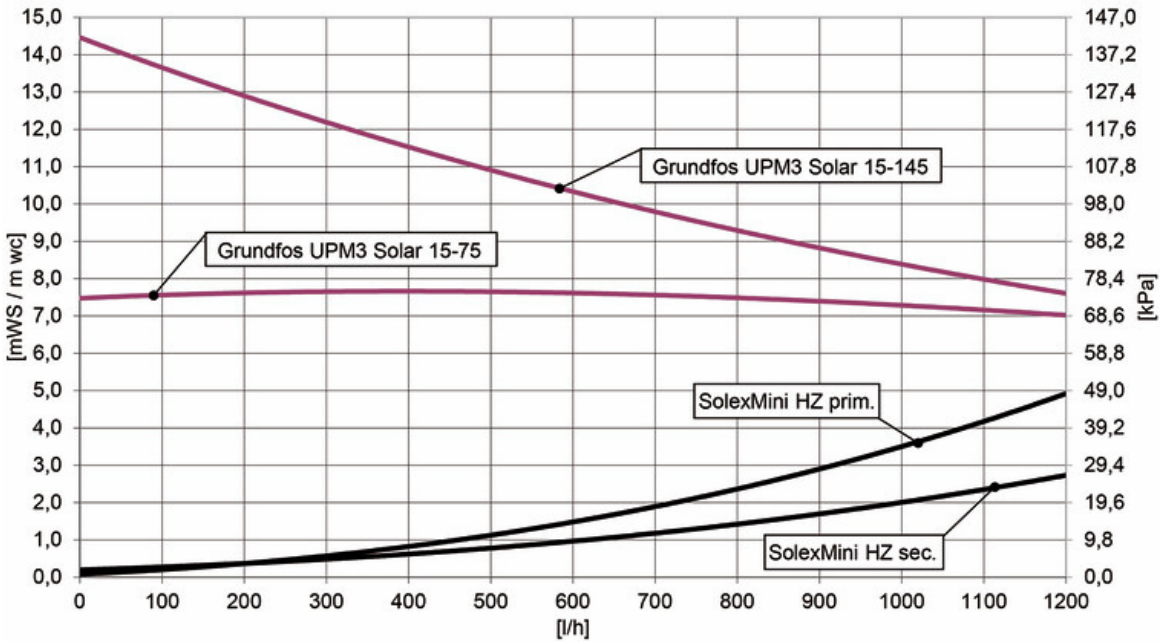
SolexMini HZ (heating system)
up to 36 m² of collector surface



SolexMini HZ - DN 15 (½")		Item no.
	Primary pump **Grundfos UPM3 Solar 15-145** Secondary pump **Grundfos UPM3 Solar 15-75**	**6091410**

SolexMidi HZ (heating system)
up to 60 m² of collector surface



Application range

- for charging buffer storage tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 60 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 6 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	40 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 2 x 200 mm wc / secondary: 2 x 200 mm wc
Controller	SC5.14
Sensors	2 x Pt1000 (integrated) / 3 x Pt1000 (enclosed)
Heat exchanger	B25TH, 30 plates
Safety valve	primary: 6 bar / secondary: 6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	2-50 l/min
Flow meter (secondary)	3-22 l/min

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

Dimensions

Height	795 mm
Width	662 mm
Depth	298 mm
Installation length	670 mm
Centre distance	120 mm
Nominal diameter	DN 20 (¾")
Connections	primary: ¾" int. thread secondary: ¾" int. thread

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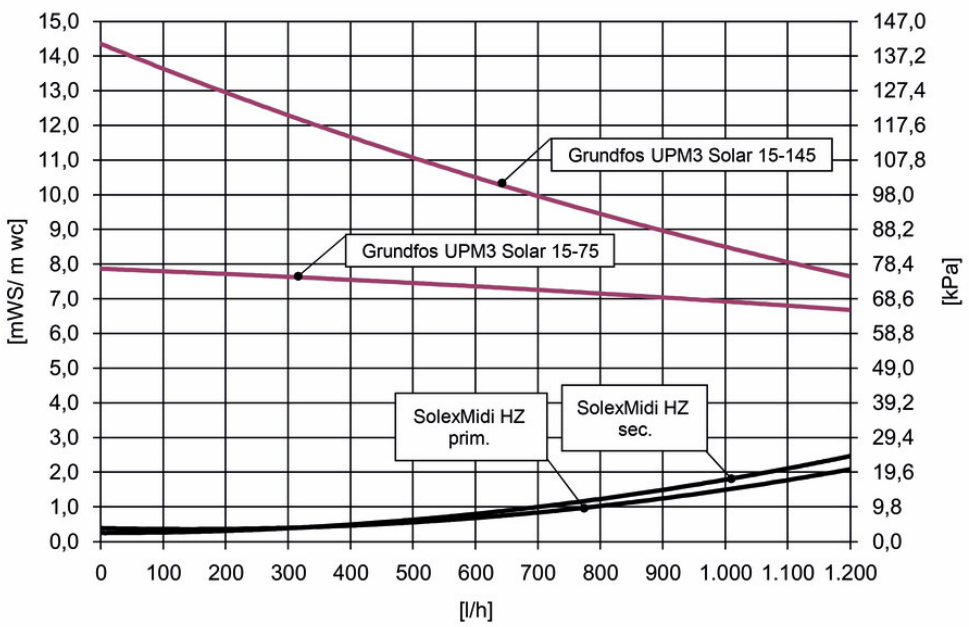
SolexMidi HZ (heating system)
up to 60 m² of collector surface



SolexMidi HZ - DN 20 (¾")		Item no.
	Primary pump **Grundfos UPM3 Solar 15-145** Secondary pump **Grundfos UPM3 Solar 15-75**	**6095430**

SolexMaxi HZ (heating system)
up to 100 m² of collector surface



Application range

- for charging buffer storage tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 100 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 6 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	25 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 2 x 200 mm wc / secondary: 1 x 200 mm wc
Controller	SC5.14
Sensors	2 x Pt1000 (integrated) / 3 x Pt1000 (enclosed)
Heat exchanger	B25TH, 60 plates
Safety valve	primary: 6 bar / secondary: 6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	2-50 l/min
Flow meter (secondary)	5-40 l/min

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

Dimensions

Height	828 mm
Width	664 mm
Depth	298 mm
Installation length	707 mm
Centre distance	120 mm
Nominal diameter	DN 25 (1")
Connections	primary: 1" int. thread secondary: 1" int. thread

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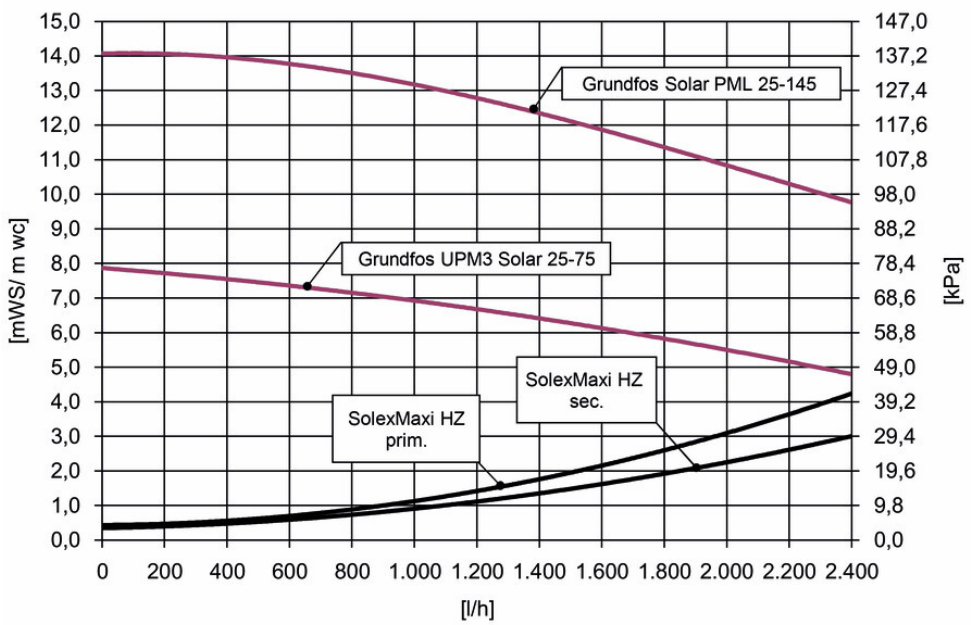
SolexMaxi HZ (heating system)
up to 100 m² of collector surface



SolexMaxi HZ - DN 25 (1")		Item no.
	Primary pump **Grundfos Solar PML 25-145** Secondary pump **Grundfos UPM3 Solar 25-75**	**6096460**

SolexMega HZ (heating system) up to 200 m² of collector surface





Application range

- for charging buffer storage tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 200 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 6 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	25 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 2 x 250 mm wc / secondary: 2 x 250 mm wc
Controller	SC5.14
Sensors	2 x Pt1000 (integrated)
Heat exchanger	XB37M-1, 2x 50 plates
Safety valve	primary: 6 bar / secondary: 6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	5-100 l/min

Dimensions

Height	1 654 mm
Width	710 mm
Depth	920 mm
Installation length	1 205 mm
Centre distance	158 mm
Nominal diameter	DN 32 (1¼")
Connections	primary: 1½" int. thread secondary: 1½" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

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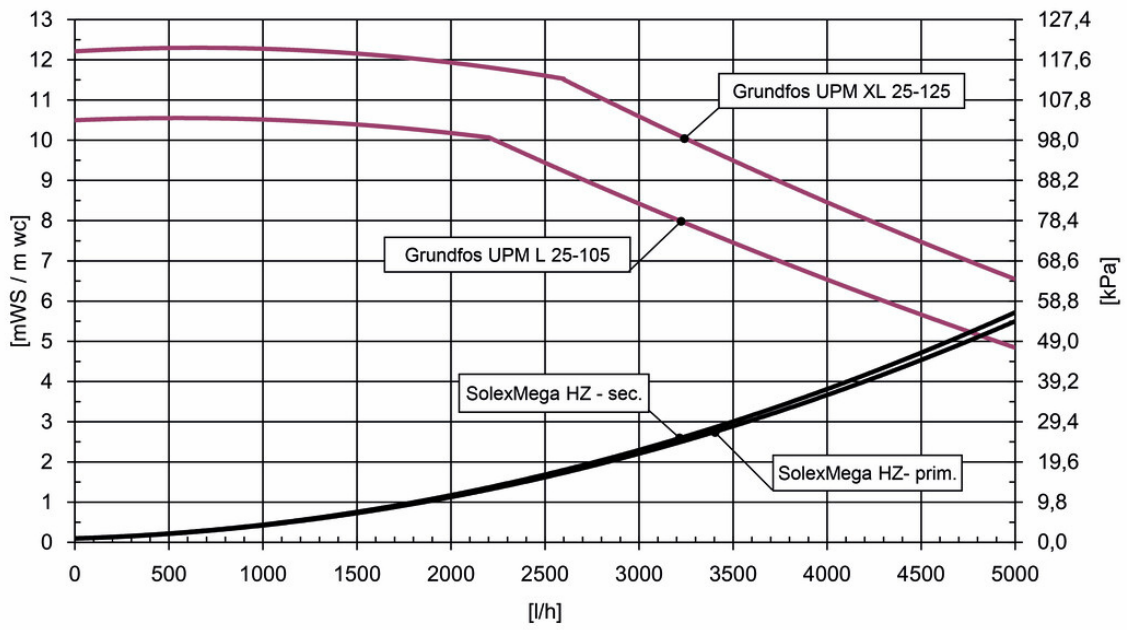
SolexMega HZ (heating system)
up to 200 m² of collector surface



SolexMega HZ - DN 32 (1¼")		Item no.
	Primary pump **Grundfos UPMXL GEO 25-125** Secondary pump **Grundfos UPML 25-105**	**6097460**

SolexMega-Kaskade HZ (heating system) up to 400 m² of collector surface





Application range

- for charging buffer storage tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 400 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 6 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	25 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 4 x 250 mm wc / secondary: 4 x 250 mm wc
Controller	SC5.14
Sensors	4 x Pt1000 (integrated)
Heat exchanger	XB37M-1, 4x 50 plates
Safety valve	primary: 6 bar / secondary: 6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	2 x 5-100 l/min

Dimensions

Height	1 705 mm
Width	1 424 mm
Depth	920 mm
Installation length	1 672 mm
Centre distance	158 mm
Nominal diameter	DN 50 (2")
Connections	primary: 2" ext. thread / flange DN 50 secondary: 2" ext. thread / flange DN 50

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

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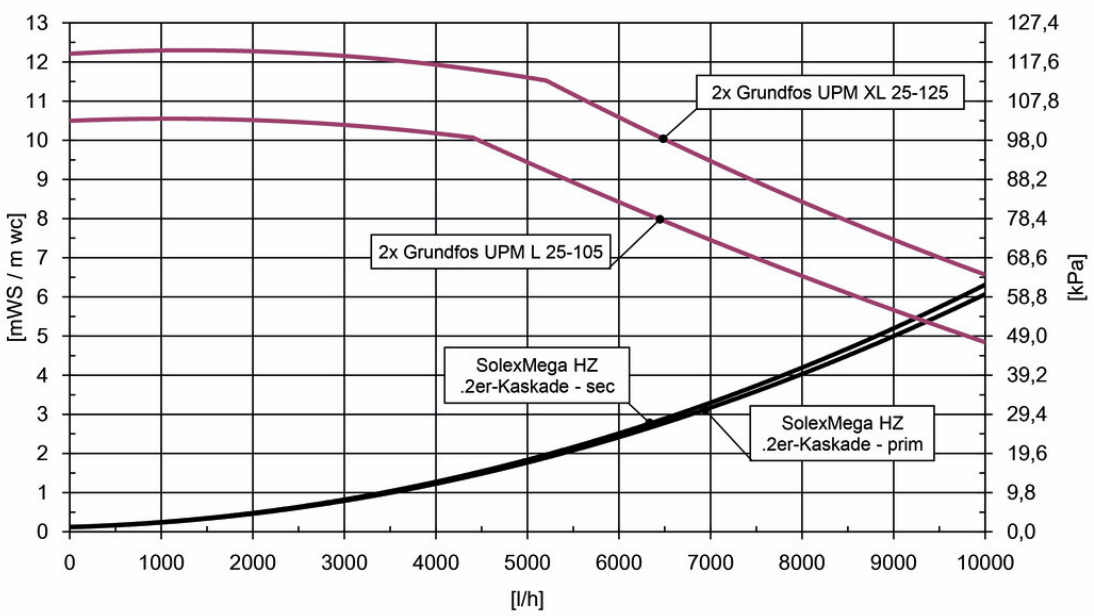
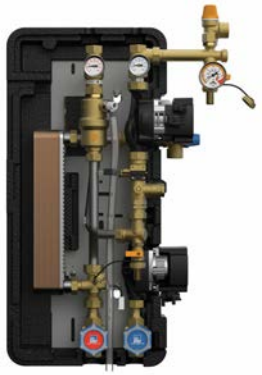
SolexMega-Kaskade HZ (heating system) up to 400 m² of collector surface



SolexMega-Kaskade HZ - DN 50 (2")		Item no.
	Primary pump **Grundfos UPMXL GEO 25-125** Secondary pump **Grundfos UPML 25-105**	**6098460**

SolexMini TW (domestic hot water system) up to 36 m² of collector surface





Application range

- for charging domestic hot water tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 36 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 10 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	25 l/(m²xh)
Operating mode HighFlow	40 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 2 x 200 mm wc
Controller	SC5.14
Sensors	3 x Pt1000 (integrated) / 2 x Pt1000 (enclosed)
Heat exchanger	E8ASH, 24 plates
Safety valve	primary: 6 bar / secondary: 10 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	0.5-15 l/min

Dimensions

Height	681 mm
Width	417 mm
Depth	249 mm
Installation length	686 mm
Nominal diameter	DN 15 (½")
Connections	primary: ¾" int. thread secondary: ¾" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

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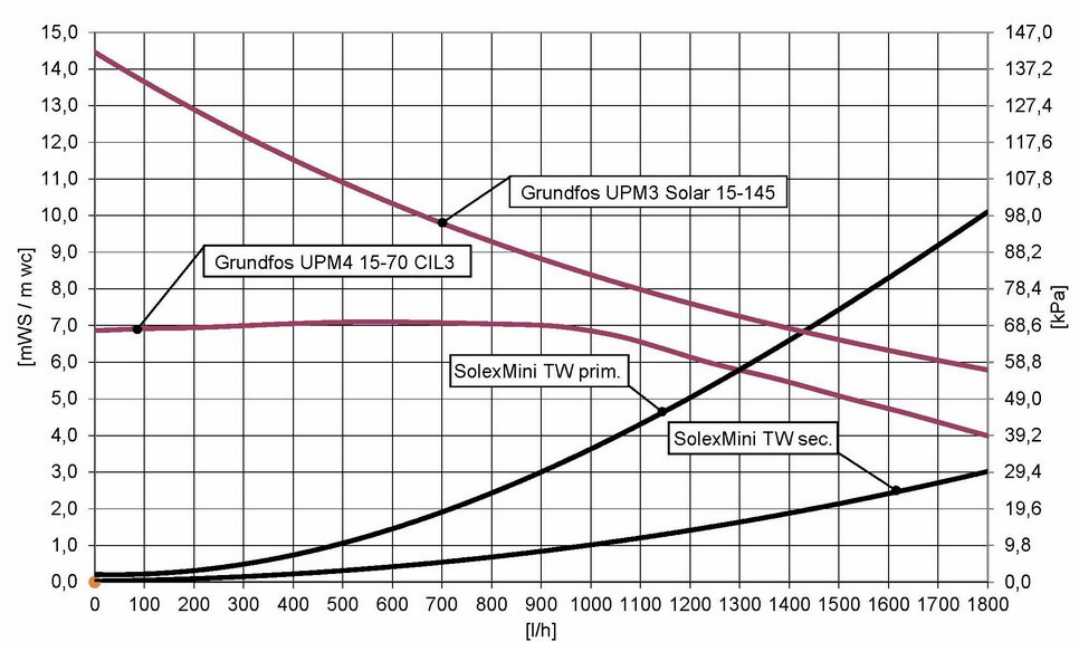
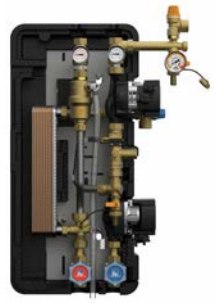
SolexMini TW (domestic hot water system) up to 36 m² of collector surface



SolexMini TW - DN 15 (½")		Item no.
	Primary pump **Grundfos UPM3 Solar 15-145** Secondary pump **Grundfos UPM4 15-70 CIL3**	**6091426**

SolexMidi TW (domestic hot water system) up to 60 m² of collector surface



Application range

- for charging domestic hot water tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 60 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 10 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	40 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 2 x 200 mm wc / secondary: 1 x 200 mm wc
Controller	SC5.14
Sensors	2 x Pt1000 (integrated) / 2 x Pt1000 (enclosed)
Heat exchanger	B25TH, 30 plates
Safety valve	primary: 6 bar / secondary: 10 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	2-50 l/min

Dimensions

Height	795 mm
Width	674 mm
Depth	298 mm
Installation length	678 mm
Centre distance	120 mm
Nominal diameter	DN 20 (¾")
Connections	primary: ¾" int. thread secondary: 1" ext. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

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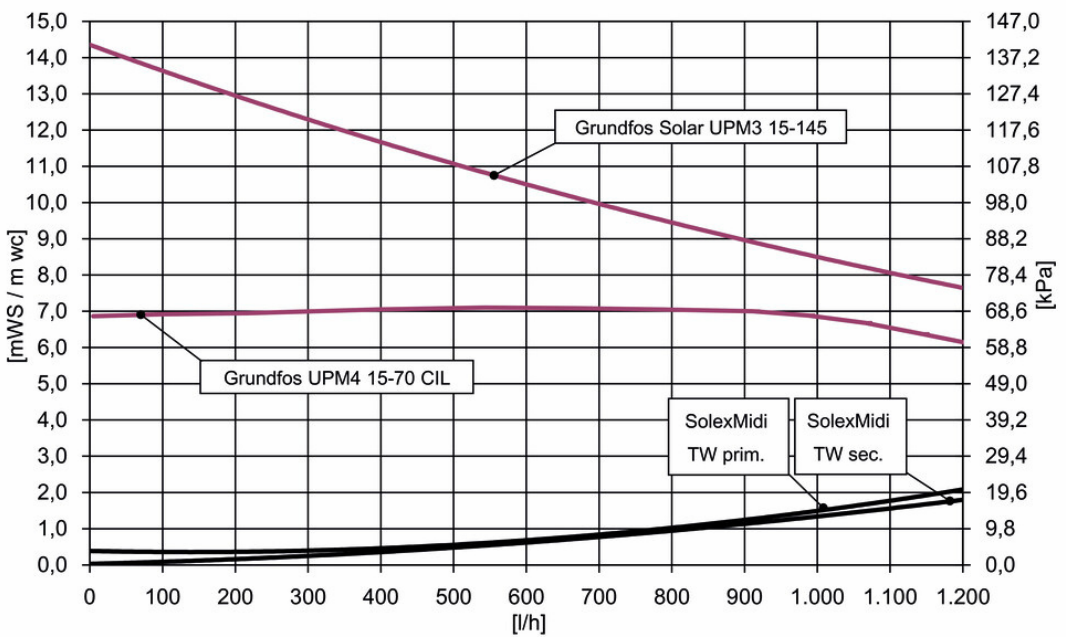
SolexMidi TW (domestic hot water system) up to 60 m² of collector surface



SolexMidi TW - DN 20 (¾")		Item no.
	Primary pump **Grundfos UPM3 Solar 15-145** Secondary pump **Grundfos UPM4 15-70 CIL3**	**6095436**

SolexMaxi TW (domestic hot water system) up to 100 m² of collector surface



Application range

- for charging domestic hot water tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 100 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 10 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	25 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 2 x 200 mm wc / secondary: 1 x 150 mm wc
Controller	SC5.14
Sensors	2 x Pt1000 (integrated) / 2 x Pt1000 (enclosed)
Heat exchanger	B25TH, 60 plates
Safety valve	primary: 6 bar / secondary: 10 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	2-50 l/min

Dimensions

Height	829 mm
Width	662 mm
Depth	298 mm
Installation length	716 mm
Centre distance	120 mm
Nominal diameter	DN 25 (1")
Connections	primary: 1" int. thread secondary: 1 ¼" ext. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

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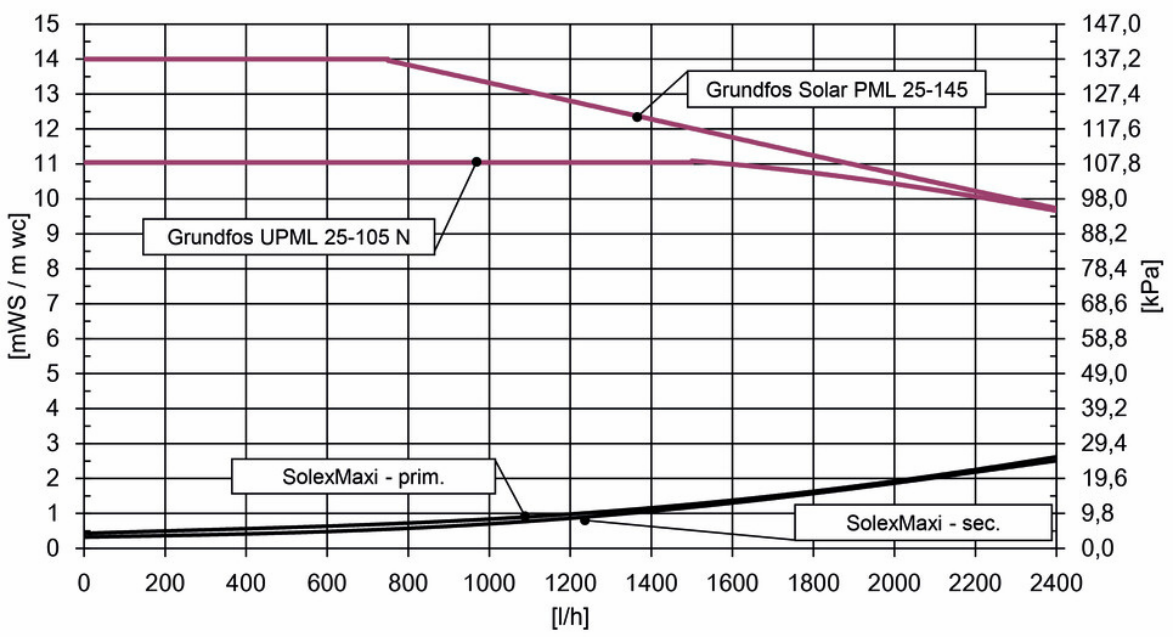
SolexMaxi TW (domestic hot water system) up to 100 m² of collector surface



SolexMaxi TW - DN 25 (1")		Item no.
	Primary pump **Grundfos Solar PML 25-145** Secondary pump **Grundfos UPML 25-105 N**	**6096465**

SolexMega TW (domestic hot water system) up to 200 m² of collector surface





Application range

- for charging domestic hot water tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 200 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 10 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	25 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 2 x 250 mm wc / secondary: 1 x 150 mm wc
Controller	SC5.14
Sensors	2 x Pt1000 (integrated) / 2 x Pt1000 (enclosed)
Heat exchanger	XB37M-1, 2x 50 plates
Safety valve	primary: 6 bar / secondary: 10 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	5-100 l/min

Dimensions

Height	1 654 mm
Width	710 mm
Depth	920 mm
Installation length	1 175 mm
Centre distance	158 mm
Nominal diameter	DN 32 (1¼")
Connections	primary: 1½" int. thread secondary: 1½" ext. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	Brass

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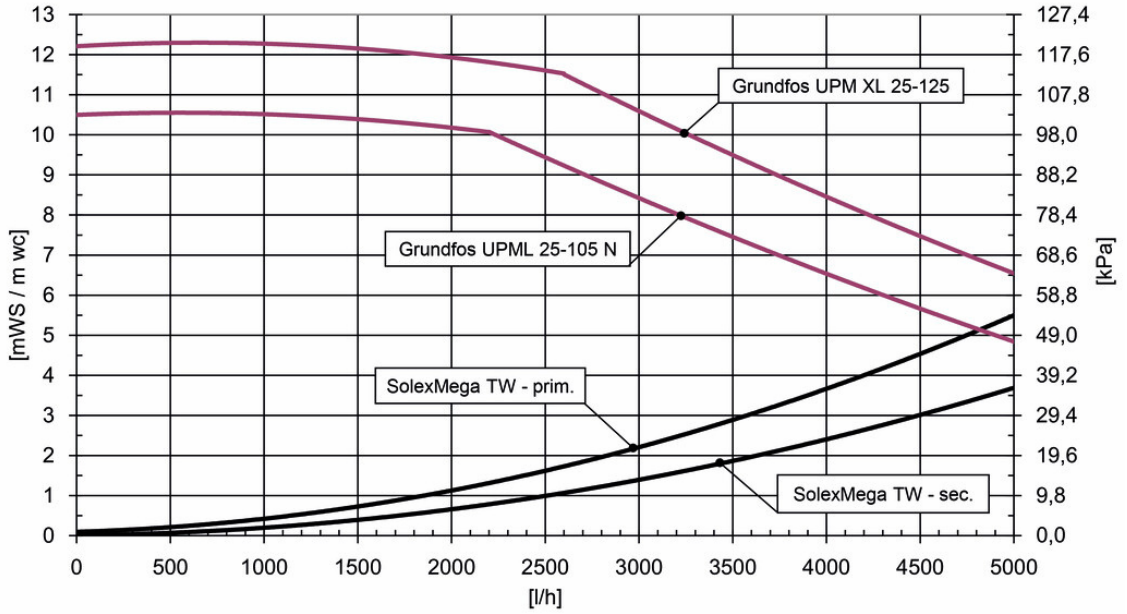
SolexMega TW (domestic hot water system) up to 200 m² of collector surface



SolexMega TW - DN 32 (1¼")		Item no.
	Primary pump **Grundfos UPMXL GEO 25-125** Secondary pump **Grundfos UPML 25-105 N**	**6097465**

SolexMega-Kaskade TW (domestic hot water system) up to 400 m² of collector surface





Application range

- for charging domestic hot water tanks
- incl. heat quantity measurement according to the BAFA promotion directive for solar thermal systems

The CE-conformity of the module has been certified according to DIN EN 60335.

Application range

- up to 400 m² of collector surface

Operating data

Max. operating pressure	primary: 6 bar secondary: 10 bar
Operating temperature	primary: 120 °C secondary: 95 °C
Operating mode LowFlow	15 l/(m²xh)
Operating mode HighFlow	25 l/(m²xh)

For information on design data, see chapter "Product range Solex"

Technical data

Equipment

Check valves	primary: 4 x 250 mm wc / secondary: 2 x 150 mm wc
Controller	SC5.14
Sensors	2 x Pt1000 (integrated) / 4 x Pt1000 (enclosed))
Heat exchanger	XB37M-1, 4x 50 plates
Safety valve	primary: 6 bar / secondary: 10 bar
Pressure gauge	0-6 bar, resistant to high temperatures
FlowRotor (primary)	2 x 5-100 l/min

Dimensions

Height	1 672 mm
Width	1 424 mm
Depth	920 mm
Installation length	1 672 mm
Centre distance	158 mm
Nominal diameter	DN 50 (2")
Connections	primary: 1½" int. thread secondary: 1½“ ext. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Heat exchanger	Solder: copper; Plates + connecting pieces: stainless steel
Check valves	

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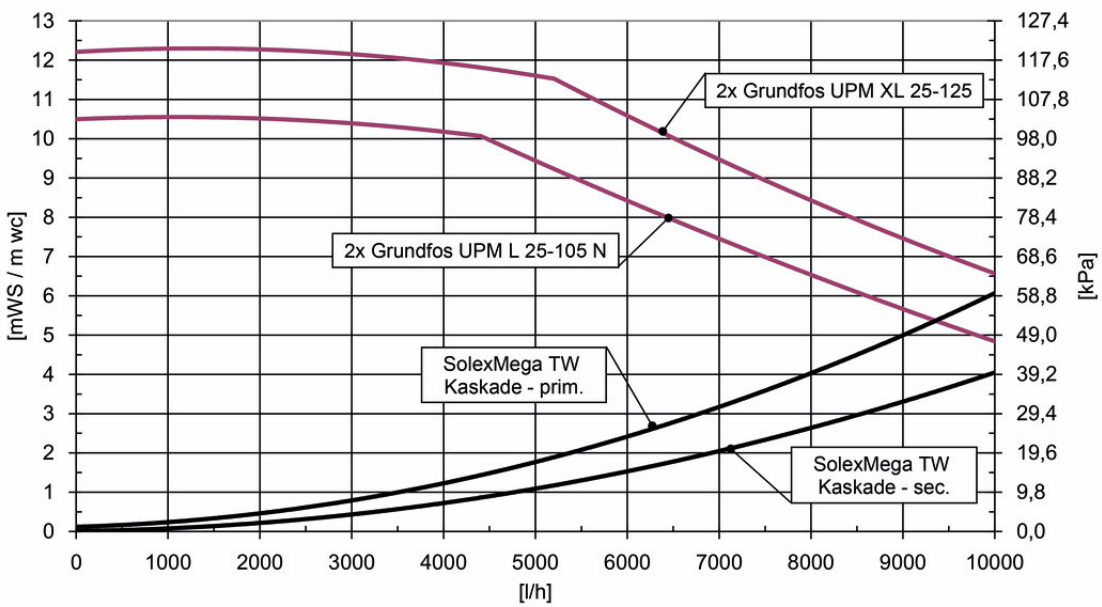
SolexMega-Kaskade TW (domestic hot water system) up to 400 m² of collector surface



SolexMega-Kaskade TW - DN 50 (2")		Item no.
	Primary pump **Grundfos UPMXL GEO 25-125** Secondary pump **Grundfos UPML 25-105 N**	**6098465**



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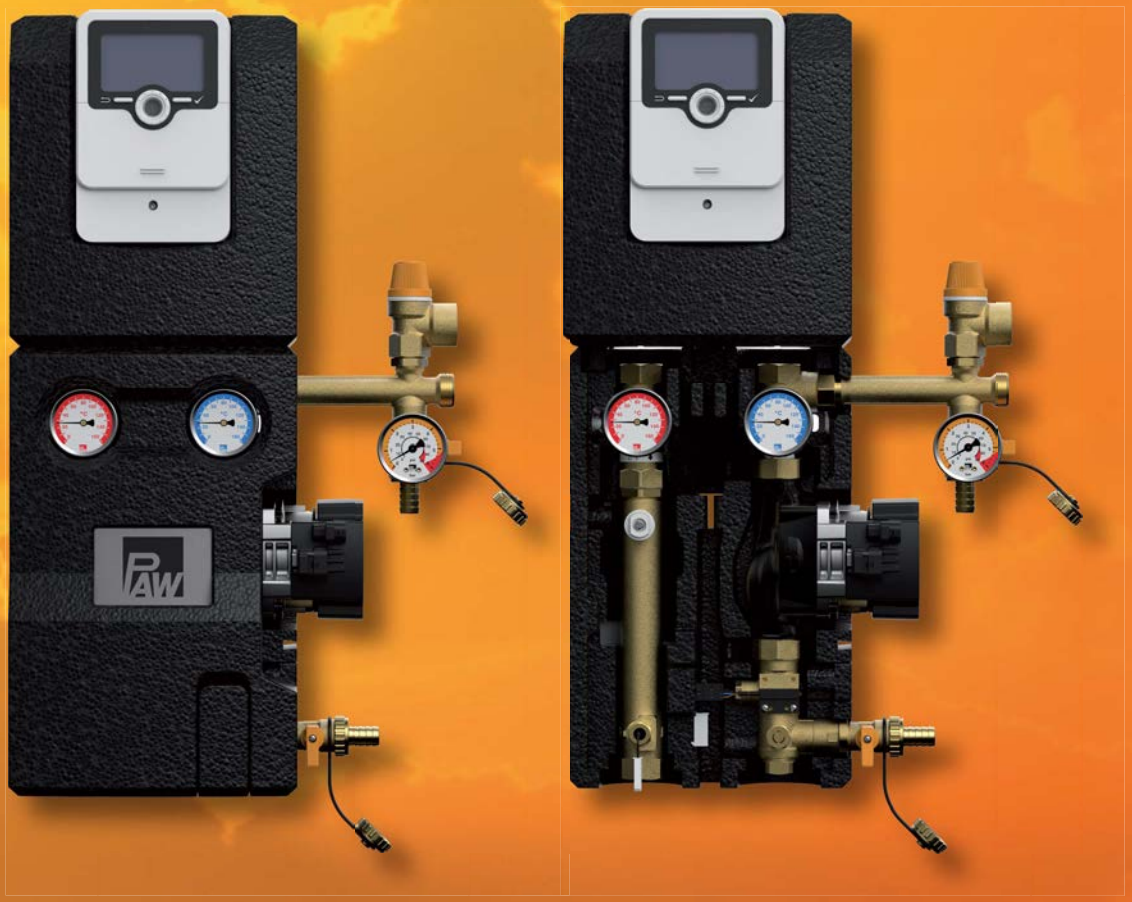
SolarBloC®
Solar thermal systems



Solar stations DN 20 - 32

Catalogue 04/2025

Solutions for solar thermal systems

Valid for the EU

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Overview product range SolarBloC®
Solar stations



Performance data	SolarBloC® midi Premium	SolarBloC® maxi Premium	SolarBloC® mega
Nominal diameter	DN 20 (¾")	DN 25 (1")	DN 32 (1¼")
Max. flow rate [l/h]	1200	2500	3500
Max. collector surface [m^2] High-Flow (30 l/m^2h)	40	80	115
Max. collector surface [m^2] Low-Flow (15 l/m^2h)	60	125	175

Selection table of available product versions: solar stations - SolarBloC®

	Controller		Pump		Sensor technology	
			Wilo	Grundfos	Basic	Premium
	without (to be obtained by the customer)	SC3.6	High-efficiency pump	High-efficiency pump		P_{FL} = digital sensor
					P_{FL} = pressure gauge	$\dot{V}$ = impulse
					V_{RET} = flowmeter	T_{FL} = digital sensor
					T = Thermometer	T_{RET} = Pt1000
1-line return DN 20	•	–	PWM / iPWM	PWM	•	–
2-line Basic DN 20	•	•	PWM / iPWM	PWM	•	–
2-line Premium DN 20	–	•	PWM / iPWM	PWM	–	•
3-line Basic DN 20	•	–	PWM / iPWM	PWM	•	–
1-line return DN 25	•	–	PWM / iPWM	PWM	•	–
2-line Basic DN 25	•	•	PWM / iPWM	PWM	•	–
2-line Premium DN 25	–	•	PWM / iPWM	PWM	–	•
2-line Basic DN 32	•	–	0 - 10 V	PWM	•	–

• = available, – = not available

Application range / collector surface depending on the operation mode

Flow types in the collector field

Low-flow = 0.25 l/minute per m^2 of collector surface

High-flow = 0.5 l/minute per m^2 of collector surface

Please note:
In order to guarantee a trouble-free function it is essential to carry out a hydraulic dimensioning/check of the solar installation.

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Function overview controller - SC3.10
Solar thermal systems



Controller for solar stations

- Premium version: SC3.5 / SGC36HV
  Basic version: SC2.3 / SGC26H
- completely mounted and configured
- graphically animated LCD display
- the controller comprises 17 preset systems
- the controller can be used in solar installations with up to two collector fields or up to two domestic hot water or buffer storage tanks
- use of a solar transfer station with an external heat exchanger and a tank for potable water or a buffer tank with two loading areas is possible

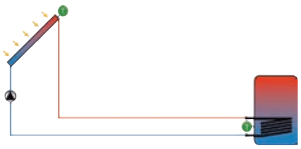
Optional accessories SC3.5 and SC2.3:
data logger (can be connected via VBus interface, DL2 Plus)

Optional accessories SGC36HV and SGC26H:
communication interface GWD

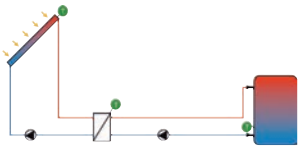
Function overview controller

Display	graphic LCD display
Operation	4 (5) push buttons
Relay outputs	3 x 230 V, semiconductor relay 1 x 230 V, switching relay 1 x SELV (max. 24 V), potential-free relay 2 x PWM signal for rotation speed control
Inputs	4 x Pt1000
Flow rate sensor	yes
Heat quantity measurement	yes
Post-heating	yes
Alarm output	yes
circulation (depending on time / temperature)	yes
Holiday (storage tank recooling)	yes
Solid fuel boiler	yes
Reduction of stagnation	yes
Active cooling	yes
Quick tank charging	yes
Thermostat function	yes
Interval / tube collector	yes

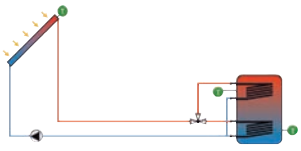
Preset systems:



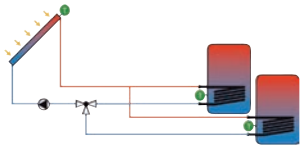
Internal heat exchanger, pump logic



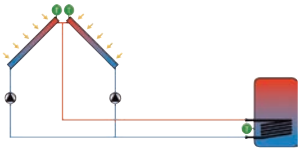
External heat exchanger, pump logic (1 x E13170 additionally required)



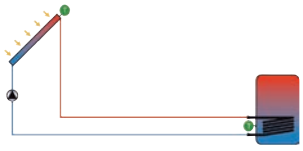
Internal heat exchanger, zone charging, valve logic
(1 x E13170 additionally required)



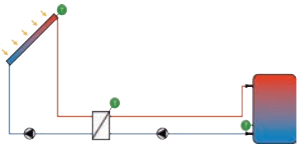
2 storage tanks, internal heat exchanger, valve logic
(1 x E13170 additionally required)



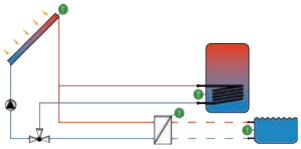
2 collector fields, internal heat exchanger, pump logic
(1 x E13170 additionally required)



Internal heat exchanger, pump logic, return temperature maintenance
(2 x E13170 additionally required)



Storage tank and pool, stand-alone operation of the external heat exchanger, pump logic
(2 x E13170 additionally required)



Storage tank and pool, stand-alone operation of the external heat exchanger, valve logic (2 x E13170 additionally required)

SolarBloC® midi Premium
up to a collector surface of 60 m²





Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- up to a collector surface of 60 m²

Operating data

Max. operating pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m² of collector surface	up to a collector surface of 60 m²
High-flow = 0.5 l/min per m² of collector surface	up to a collector surface of 40 m²

For information on design data, see chapter "Product range SolarBloC®"

Technical data

Equipment

Check valves	2 x 200 mm wc
Controller	SC3.5
Sensors	2 x Pt1000 (integrated) / 3 x Pt1000 (enclosed)
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Airstop	yes
FlowRotor	0.5-15 l/min

Dimensions

Height	560 mm
Width	322 mm
Depth	150 mm
Installation length	302 mm
Centre distance	100 mm
Nominal diameter	DN 20 (¾")
Connections	¾" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Check valves	Brass

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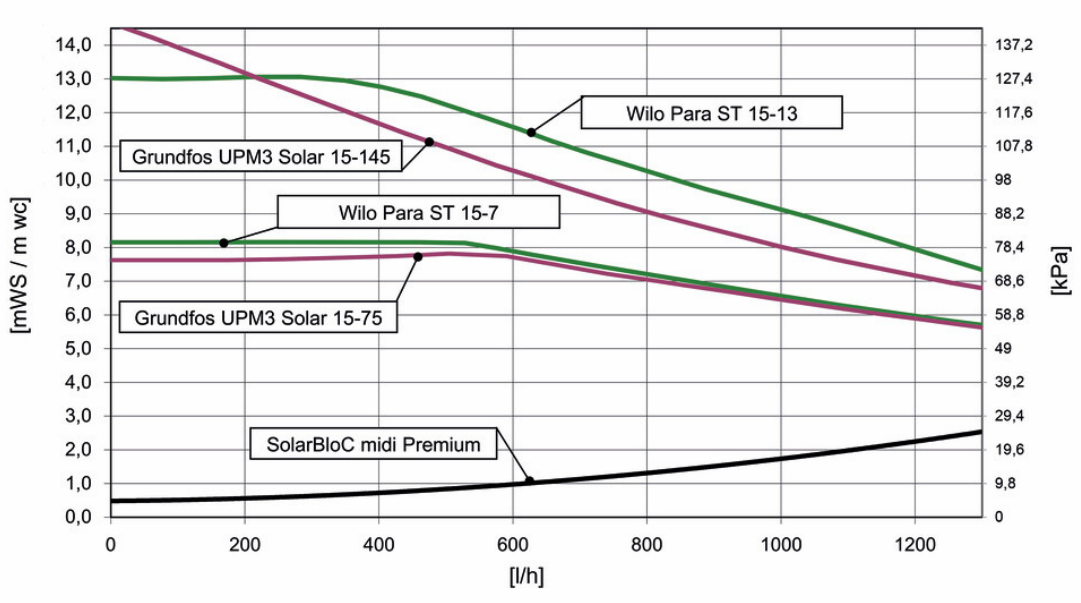
SolarBloC® midi Premium
up to a collector surface of 60 m²



SolarBloC® midi Premium - DN 20 (¾")		Item no.
	**Wilo Para ST 15/7, controller SC3.5**	**773313WP7**
	Wilo Para ST 15/13, controller SC3.5	**773313WP13**
	Grundfos UPM3 Solar 15-75, controller SC3.5	**773313GP7**
	Grundfos UPM3 Solar 15-145, controller SC3.5	**773313GP14**

SolarBloC® midi Basic
up to a collector surface of 60 m²





Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- up to a collector surface of 60 m²

Operating data

Max. operating pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m² of collector surface	up to a collector surface of 60 m²
High-flow = 0.5 l/min per m² of collector surface	up to a collector surface of 40 m²

For information on design data, see chapter "Product range SolarBloC®"

Technical data

Equipment

Check valves	2 x 200 mm wc
Controller	SC2.3
Sensors	2 x Pt1000 (enclosed, only for modules with controller)
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Airstop	yes
Flow meter (secondary)	3-22 l/min

Dimensions

Height	560 mm
Width	322 mm
Depth	150 mm
Installation length	296 mm
Centre distance	100 mm
Nominal diameter	DN 20 (¾")
Connections	¾" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Check valves	Brass

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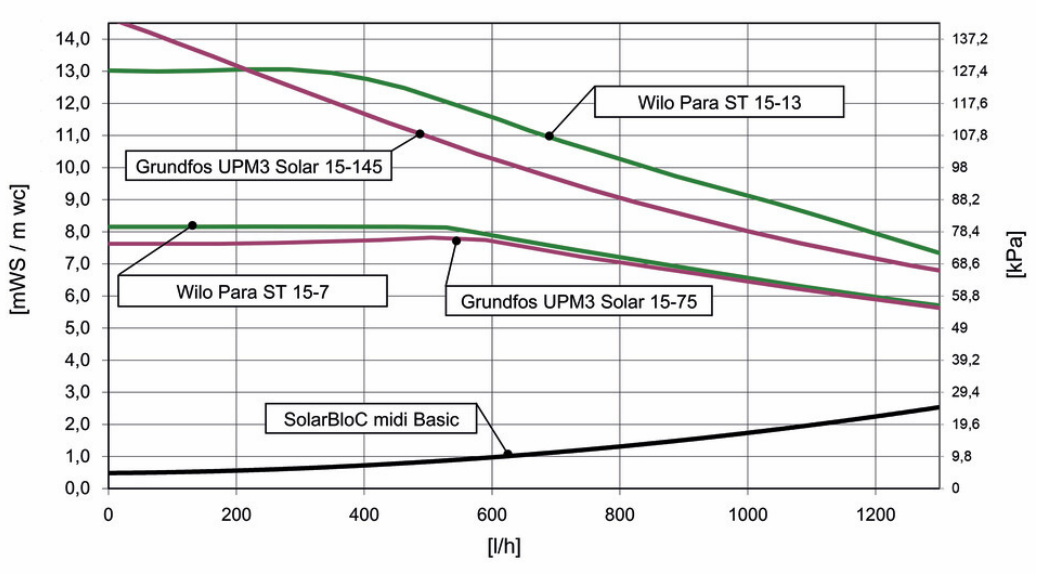
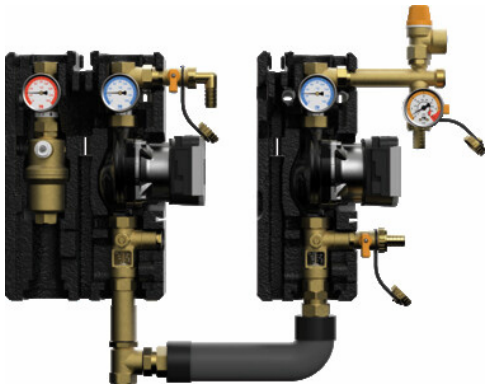
SolarBloC® midi Basic
up to a collector surface of 60 m²



SolarBloC® midi Basic - DN 20 (¾")		Item no.
	Wilo Para ST 15/7, controller SC2.3	775212WP7
	Wilo Para ST 15/13, controller SC2.3	775212WP13
	Grundfos UPM3 Solar 15-75, controller SC2.3	775212GP7
	Grundfos UPM3 Solar 15-145, controller SC2.3	775212GP14
	Wilo Para ST 15/7, controller on site	7655210WP7
	Wilo Para ST 15/13, controller on site	7655210WP13
	Grundfos UPM3 Solar 15-75, controller on site	7655210GP7
	Grundfos UPM3 Solar 15-145, controller on site	7655210GP14

SolarBloC® midi Basic, 3-line
up to a collector surface of 60 m²





Application range

- SolarBloC® 3-line station for installations with 2 tanks and 2 roofs

Application range

- up to a collector surface of 60 m²

Operating data

Max. operating pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m² of collector surface	up to a collector surface of 60 m²
High-flow = 0.5 l/min per m² of collector surface	up to a collector surface of 40 m²

For information on design data, see chapter "Product range SolarBloC®"

Technical data

Equipment

Check valves	3 x 200 mm wc
Controller	on site
Sensors	no
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Airstop	yes
Flow meter (secondary)	3-22 l/min

Dimensions

Height	429 mm
Width	572 mm
Depth	150 mm
Installation length	418 mm
Centre distance	100 mm; 250 mm
Nominal diameter	DN 20 (¾")
Connections	¾" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Check valves	Brass

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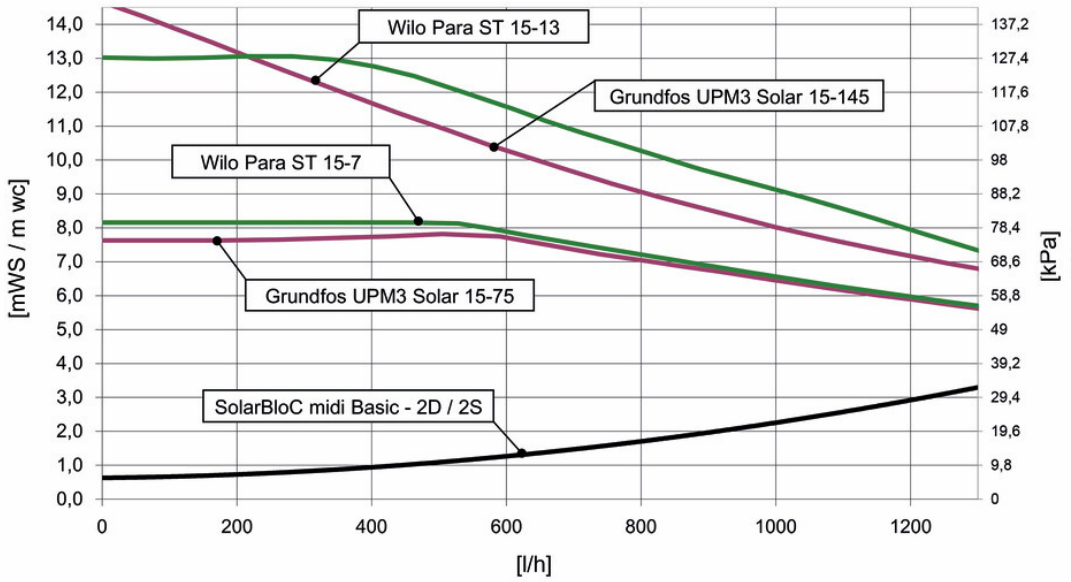
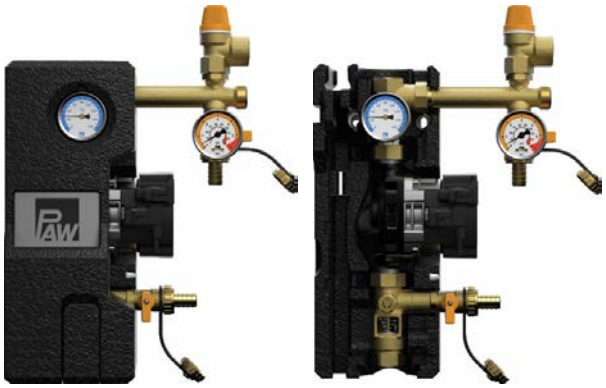
SolarBloC® midi Basic, 3-line
up to a collector surface of 60 m²



SolarBloC® midi Basic, 3-line - DN 20 (¾")		Item no.
	2x Wilo Para ST 15/7, controller on site	775810WP7
	2x Wilo Para ST 15/13, controller on site	775810WP13
	2x Grundfos UPM3 Solar 15-75, controller on site	775810GP7
	2x Grundfos UPM3 Solar 15-145, controller on site	775810GP14

SolarBloC® midi Basic return station up to a collector surface of 60 m²



Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- up to a collector surface of 60 m²

Operating data

Max. operating pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m² of collector surface	up to a collector surface of 60 m²
High-flow = 0.5 l/min per m² of collector surface	up to a collector surface of 40 m²

For information on design data, see chapter "Product range SolarBloC®"

Technical data

Equipment

Check valves	1 x 200 mm wc
Controller	on site
Sensors	no
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Airstop	no
Flow meter (secondary)	3-22 l/min

Dimensions

Height	383 mm
Width	244 mm
Depth	150 mm
Installation length	296 mm
Nominal diameter	DN 20 (¾")
Connections	¾" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Check valves	Brass

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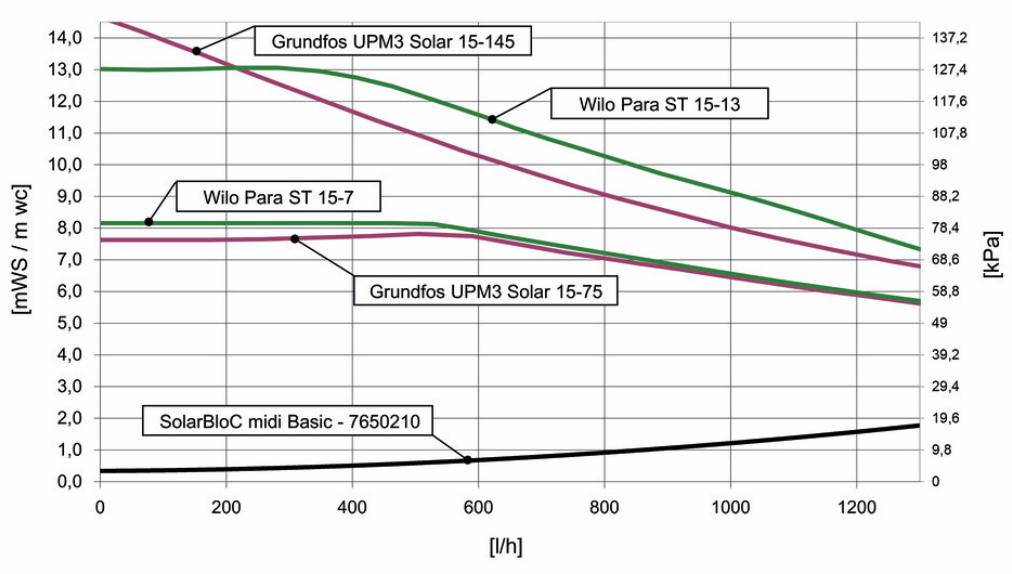
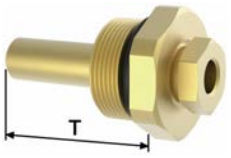
SolarBloC® midi Basic return station up to a collector surface of 60 m²



SolarBloC® midi Basic return station - DN 20 (¾")		Item no.
	Wilo Para ST 15/7, controller on site	7650210WP7
	Wilo Para ST 15/13, controller on site	7650210WP13
	Grundfos UPM3 Solar 15-75, controller on site	7650210GP7
	Grundfos UPM3 Solar 15-145, controller on site	7650210GP14

Mounting equipment solar DN 20

	**Connection set for diaphragm expansion tank - DN 20 (¾")**	**437509**
	Connection set for diaphragm expansion tank DN 20 (¾") with cap valve ¾" for connection to the safety set ¾", for tank diameter up to 440 mm, max. 35 kg, with stainless steel corrugated hose ¾" internal thread - internal thread x 500 mm, wall bracket with mounting equipment, solar tank connector ¾"	**437510**
	**Connection piece for immersion sleeves** Connection piece for immersion sleeve with ½" external thread, for a length up to 45 mm 1" union nut with gasket, ¾" internal thread, with sleeve	**5660**
	**Immersion sleeve ½" ext. thread x T = 30 mm**	**566001**
	Immersion sleeve ¼" ext. thread x T = 60 mm	**566002**
	Immersion sleeve ½" ext. thread x T = 60 mm	**5660021**
	Immersion sleeve ½" ext. thread x T = 100 mm	**566003**
	Immersion sleeve ½" ext. thread x T = 150 mm For all immersion sleeves: for the installation of the temperature sensors (d = 6 mm) in the storage tank, in the collector and the hydraulic separator. Attention: suitable for ball valves until 2016!	**566004**
	**Accessory kit for storage tank installation DN 20 (¾")** Flange bracket made of brass with fill and drain valve and insulation for direct assembly of the return station to the storage tank	**172706201**
	**Solar check valve RSS - DN 20 (¾")** can be opened, up to 150 °C	**1211**
	Solar check valve RSS - DN 20 (¾") without possibility for manual opening, up to 220 °C with brass valve plate, all installation positions possible, opening pressure 200 mm wc, ¾" internal thread, length = 50 mm	**12111**
	**Hand filling pump** ½" external thread, 15 mm hose connection, attainable pressure up to approx. 4 bar, length 225 mm	**7061**
	**Hand filling pump with fill and drain valve** ½" external thread, 15 mm hose connection, attainable pressure up to approx. 4 bar, length 225 mm	**7062**
	**Hose connector for hand filling and injection pump** Hose connector for hand filling and injection pump ½" x 15 mm	**70611**

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Mounting equipment solar DN 20

	**Stainless-steel corrugated hose Solarflex, L=18-800 mm**	**840180**
	Stainless-steel corrugated hose Solarflex, L=22-800 mm Ideal for the roof part leading to the collector. Two soldered connections for clamping-ring compression fittings, for diameters of 18 mm or 22 mm. Temperature: -30 °C ... 260 °C; max. admissible pressure: 12 bar; bursting pressure: 120 bar; bending radius: 45 mm; wall width: 0,2 mm; inside diameter: 12 mm or 16 mm; length: 500 mm or 800 mm	**840280**
	**Flush and drain unit DN 20 (¾")** Counter T-piece, self-sealing with fill and drain valve. For extending the solar station with a flush and drain connection, installation at the lowest point (drain unit).	**31611**
	**Flush and fill unit DN 20 (¾")**	**56500**
	Flush and fill unit DN 20 (¾") for 22 mm copper pipe consisting of: Brass ball valve internal thread ¾", with red butterfly handle, with 2 fill and drain valves with hose connector 15 mm 565221: additionally with 2 cutting-ring compression fittings with support sleeve, premounted	**565221**
	**Double nipple ¾" x ¾"**	**548310**
	Double nipple 1 x 1 for assembly of corrugated stainless steel hoses 548310: ¾" ext. thread, self-sealing with o-ring x outlet ¾" ext. thread, flat-sealing 548340: ¾" ext. thread, self-sealing with o-ring x outlet 1" ext. thread, flat-sealing	**548340**
	**Cutting-ring compression fitting DN 20 (¾"), d = 15 mm**	**561215**
	Cutting-ring compression fitting DN 20 (¾"), d = 18 mm	**561218**
	Cutting-ring compression fitting DN 20 (¾"), d = 22 mm ¾" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C.	**561222**
	**2-way zone valve - DN 20 (¾")** for connecting and disconnecting single storage tanks, DN 20, ¾" int. thread, setting time for 90°: 30 sec., Kvs value = 41	**563532**
	**3-way zone valve - DN 20 (¾")** for switching between single storage tanks, DN 20, ¾" int. thread, setting time for 90°: 18 sec., Kvs value = 7	**563533**

SolarBloC® maxi Premium
up to a collector surface of 125 m²





Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- up to a collector surface of 125 m²

Operating data

Max. operating pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m² of collector surface	up to a collector surface of 125 m²
High-flow = 0.5 l/min per m² of collector surface	up to a collector surface of 80 m²

For information on design data, see chapter "Product range SolarBloC®"

Technical data

Equipment

Check valves	2 x 200 mm wc
Controller	SC3.5
Sensors	2 x Pt1000 (integrated) / 3 x Pt1000 (enclosed)
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Airstop	yes
FlowRotor	1-35 l/min

Dimensions

Height	652 mm
Width	324 mm
Depth	158 mm
Installation length	394 mm
Centre distance	100 mm
Nominal diameter	DN 25 (1")
Connections	1" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Check valves	Brass

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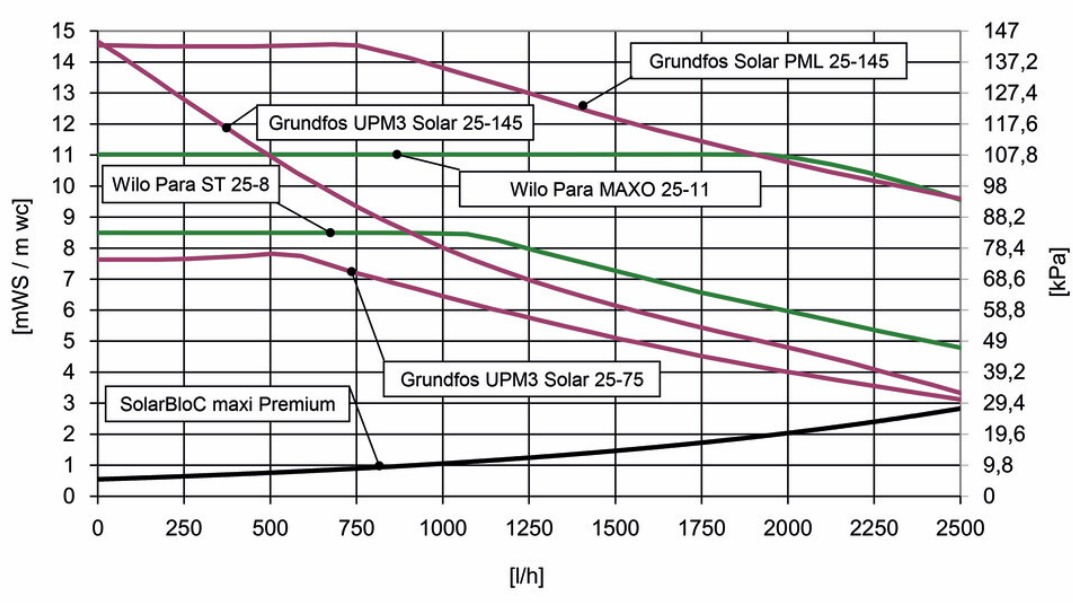
SolarBloC® maxi Premium
up to a collector surface of 125 m²



SolarBloC® maxi Premium - DN 25 (1")		Item no.
	Wilo Para ST 25/8, controller SC3.5	783313WP8
	Wilo Para MAXO 25-180-11-F02, controller SC3.5	783313WM11
	Grundfos UPM3 Solar 25-75, controller SC3.5	783313GP7
	Grundfos UPM3 Solar 25-145, controller SC3.5	783313GP14
	Grundfos Solar PML 25-145, controller SC3.5	783313GH14

SolarBloC® maxi Basic
up to a collector surface of 125 m²





Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- up to a collector surface of 125 m²

Operating data

Max. operating pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m² of collector surface	up to a collector surface of 125 m²
High-flow = 0.5 l/min per m² of collector surface	up to a collector surface of 80 m²

For information on design data, see chapter "Product range SolarBloC®"

Technical data

Equipment

Check valves	2 x 200 mm wc
Controller	SC2.3
Sensors	2 x Pt1000 (enclosed, only for modules with controller)
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Airstop	yes
Flow meter (secondary)	5-40 l/min

Dimensions

Height	653 mm
Width	324 mm
Depth	158 mm
Installation length	394 mm
Centre distance	100 mm
Nominal diameter	DN 25 (1")
Connections	1" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Check valves	Brass

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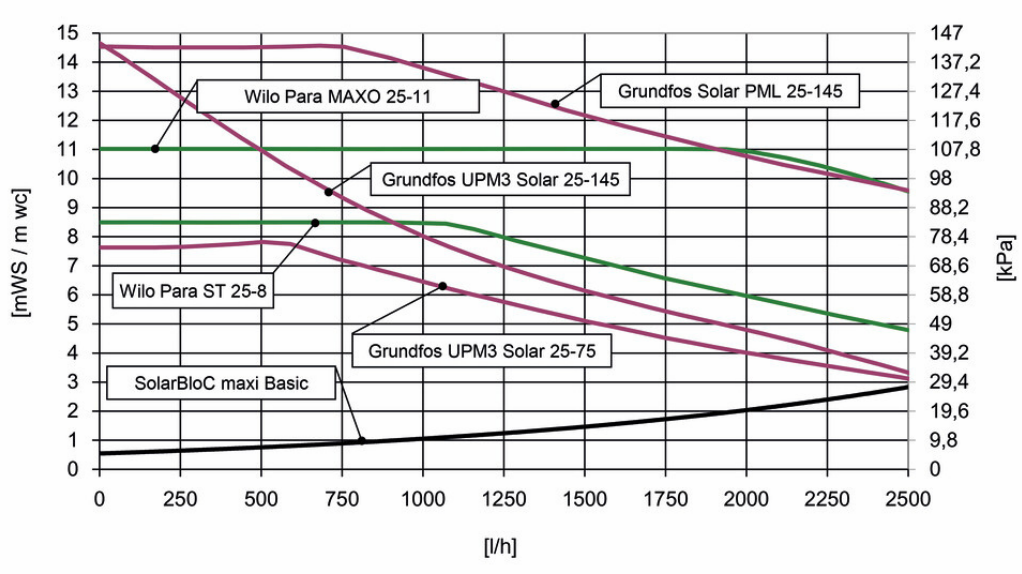
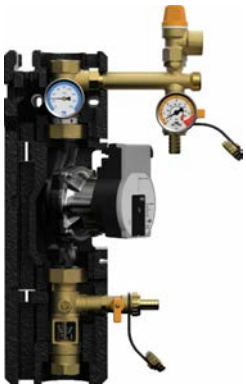
SolarBloC® maxi Basic
up to a collector surface of 125 m²



SolarBloC® maxi Basic - DN 25 (1")		Item no.
	Wilo Para ST 25/8, controller SC2.3	782212WP8
	Wilo Para MAXO 25-180-11-F02, controller SC2.3	782212WM11
	Grundfos UPM3 Solar 25-75, controller SC2.3	782212GP7
	Grundfos UPM3 Solar 25-145, controller SC2.3	782212GP14
	Grundfos Solar PML 25-145, controller SC2.3	782212GH14
	Wilo Para ST 25/8, controller on site	607052WP8
	Wilo Para MAXO 25-180-11-F02, controller on site	782210WM11
	Grundfos UPM3 Solar 25-75, controller on site	607052GP8
	Grundfos UPM3 Solar 25-145, controller on site	607052GP14
	Grundfos Solar PML 25-145, controller on site	607052GH14

SolarBloC® maxi Basic return station up to a collector surface of 125 m²





Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- up to a collector surface of 125 m²

Operating data

Max. operating pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m² of collector surface	up to a collector surface of 125 m²
High-flow = 0.5 l/min per m² of collector surface	up to a collector surface of 80 m²

For information on design data, see chapter "Product range SolarBloC®"

Technical data

Equipment

Check valves	1 x 200 mm wc
Controller	on site
Sensors	no
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Airstop	no
Flow meter (secondary)	5-40 l/min

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Check valves	Brass

Dimensions

Height	474 mm
Width	246 mm
Depth	155 mm
Installation length	394 mm
Nominal diameter	DN 25 (1")
Connections	1" int. thread

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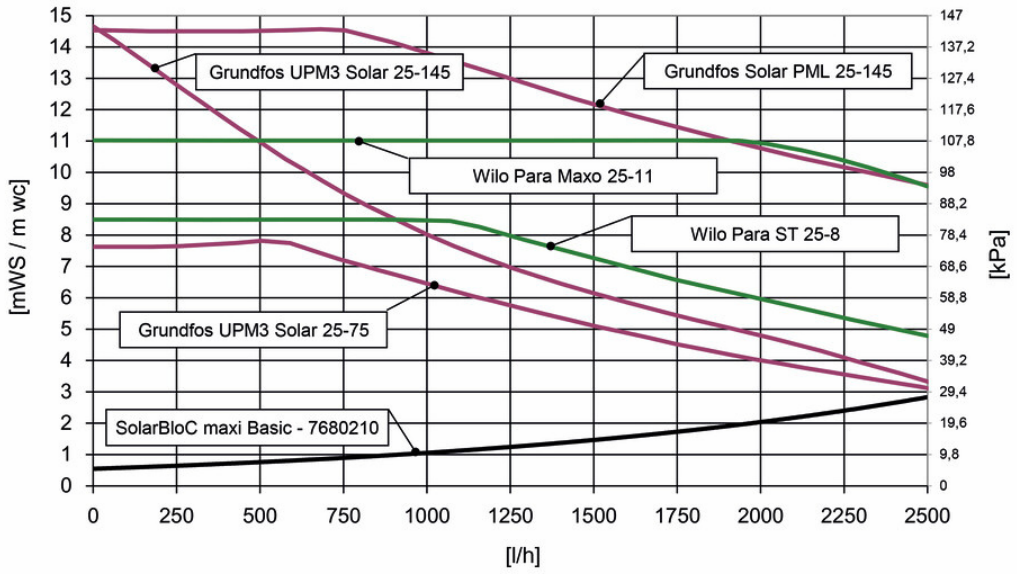
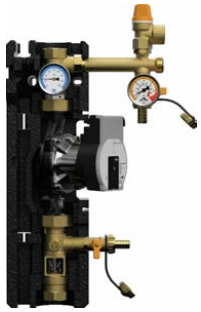
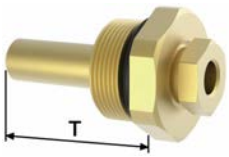
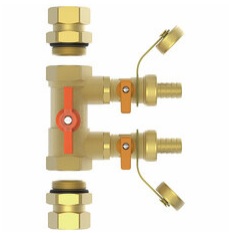
SolarBloC® maxi Basic return station up to a collector surface of 125 m²



SolarBloC® maxi Basic return station - DN 25 (1")		Item no.
	Wilo Para ST 25/8, controller on site	7680210WP8
	Wilo Para MAXO 25-180-11-F02, controller on site	780210WM11
	Grundfos UPM3 Solar 25-75, controller on site	7680210GP8
	Grundfos UPM3 Solar 25-145, controller on site	7680210GP14
	Grundfos Solar PML 25-145, controller on site	7680210GH14

Mounting equipment solar DN 25

	**Immersion sleeve ½" ext. thread x T = 30 mm**	**566001**
	Immersion sleeve ¼" ext. thread x T = 60 mm	**566002**
	Immersion sleeve ½" ext. thread x T = 60 mm	**5660021**
	Immersion sleeve ½" ext. thread x T = 100 mm	**566003**
	Immersion sleeve ½" ext. thread x T = 150 mm For all immersion sleeves: for the installation of the temperature sensors (d = 6 mm) in the storage tank, in the collector and the hydraulic separator. Attention: suitable for ball valves until 2016!	**566004**
	**Hand filling pump** ½" external thread, 15 mm hose connection, attainable pressure up to approx. 4 bar, length 225 mm	**7061**
	**Hand filling pump with fill and drain valve** ½" external thread, 15 mm hose connection, attainable pressure up to approx. 4 bar, length 225 mm	**7062**
	**Hose connector for hand filling and injection pump** Hose connector for hand filling and injection pump ½" x 15 mm	**70611**
	**Stainless-steel corrugated hose Solarflex, L=18-800 mm**	**840180**
	Stainless-steel corrugated hose Solarflex, L=22-800 mm Ideal for the roof part leading to the collector. Two soldered connections for clamping-ring compression fittings, for diameters of 18 mm or 22 mm. Temperature: -30 °C ... 260 °C; max. admissible pressure: 12 bar; bursting pressure: 120 bar; bending radius: 45 mm; wall width: 0,2 mm; inside diameter: 12 mm or 16 mm; length: 500 mm or 800 mm	**840280**
	**Flush and fill unit DN 25 (1")**	**5640**
	Flush and fill unit DN 25 (1") for 15 mm copper pipe	**56431**
	Flush and fill unit DN 25 (1") for 22 mm copper pipe consisting of: Brass ball valve internal thread 1", with red butterfly handle, with 2 outlets ½" before and after the ball, 2 self-sealing fill and drain valves with hose connector 15 mm 56431 and 56451: additionally with 2 cutting-ring compression fittings with support sleeve, premounted	**56451**
	**Flush and drain unit DN 25 (1")** Counter T-piece with self-sealing fill and drain valve. For extending the solar station with a flush and drain connection or for installation at the lowest point (drain unit).	**34611**
	**Cutting-ring compression fitting DN 25 (1"), d = 15 mm**	**562915**
	Cutting-ring compression fitting DN 25 (1"), d = 18 mm	**562918**
	Cutting-ring compression fitting DN 25 (1"), d = 22 mm 1" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C.	**562922**

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Mounting equipment solar DN 25

	**2-way zone valve - DN 25 (1") for tank heat transfer module Midi** for connecting and disconnecting single storage tanks, DN 25, 1" int. thread, setting time for 90°: 30 sec., Kvs value = 68	**563542**
	2-way zone valve - DN 32 (1¼") for tank heat transfer module Maxi for connecting and disconnecting single storage tanks, DN 32, 1¼" internal thread, setting time for 90°: 30 sec., Kvs value = 123	**563552**
	**3-way valve PV3 - DN 25 (1")**	**5675431**
	3-way valve PV3 with union nut - DN 25 (1") Can be used in solar and heating installations, to switch between different zones or to connect and disconnect different parts of the system. The actuator is equipped with a relay which is actuated by a 2-point signal, if need be it can also be manually operated. The 3-way zone PV3 valve can be operated in both directions. Power supply: 230 V - 50 Hz Power consumption: 5 Nm Setting time 90°: 13 s Kvs value: 15.5	**5675432**
	**Solar pressure gauge 0-6 bar**	**523206**
	Solar pressure gauge 0-10 bar with automatic isolation, solar version up to 130 °C, measuring range: 0-6 bar / 0-10 bar diameter: d = 50 mm	**523210**
	**Hand refractometer** The hand refractometer measures the anti-freeze safety of water-propylene glycol and water-ethylene glycol mixtures in solar thermal installations. It can also be used to determine the density of water-battery acid mixtures.Only one or two drops of the fluid are sufficient. Measuring ranges: propylene glycol: 0 - 50 °C ethylene glycol: 0 - 50 °C battery acid: 1.10 - 1.40 g/cm^3	**58055**

SolarBloC® mega
up to a collector surface of 175 m²





Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- up to a collector surface of 175 m²

Operating data

Max. operating pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m² of collector surface	up to a collector surface of 175 m²
High-flow = 0.5 l/min per m² of collector surface	up to a collector surface of 115 m²

For information on design data, see chapter "Product range SolarBloC®"

Technical data

Equipment

Check valves	2 x 200 mm wc
Controller	on site
Sensors	no
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Airstop	no

Dimensions

Height	671 mm
Width	366 mm
Depth	240 mm
Installation length	600 mm
Centre distance	125 mm
Nominal diameter	DN 32 (1¼")
Connections	1¼" int. thread

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP
Check valves	Brass

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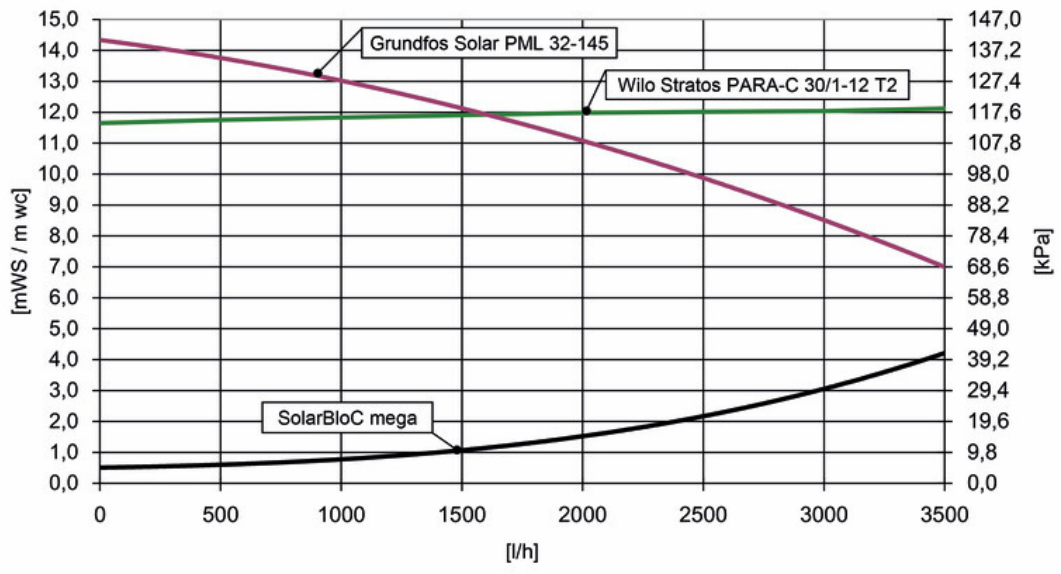
SolarBloC® mega
up to a collector surface of 175 m²



SolarBloC® mega - DN 32 (1¼")		Item no.
	Wilo Stratos PARA-C 30/1-12 T2, controller on site	791010WH12
	Grundfos Solar PML 32-145, controller on site	791010GH14



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DrainBloC® DN 20

Catalogue 04/2025

Drainback systems
for solar thermal installations

Valid for the EU

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DrainBloC® DN 20 (¾")
Drain-back system



Application range

- Drain-back system for small and medium solar thermal installations

Recommended application range

- Vapour and over-pressure formation as well as stagnation is avoided, as there is no solar fluid in the collector field

Operating data

Max. operating pressure	10 bar
Operating temperature	95 °C, short-term 130 °C
Head of the pump	14.5 m
Container volume	20 l (usable up to 15 litres)

Technical data

Equipment

Controller	SC2.3
Safety valve	6 bar
Pressure gauge	0-6 bar, resistant to high temperatures
Flow meter	0.5-10 l/min
PWM pump	2-60 W, PWM control

Materials

Valves and fittings	Brass
Gaskets	EPDM / AFM34
Insulation	EPP

Dimensions

Height container	603 mm
Height DrainBloC®	577 mm
Total width	at least 721 mm
Width DrainBloC®	334 mm
Total depth	365 mm
Ø container	280 mm
Centre distance	var., min.400 mm

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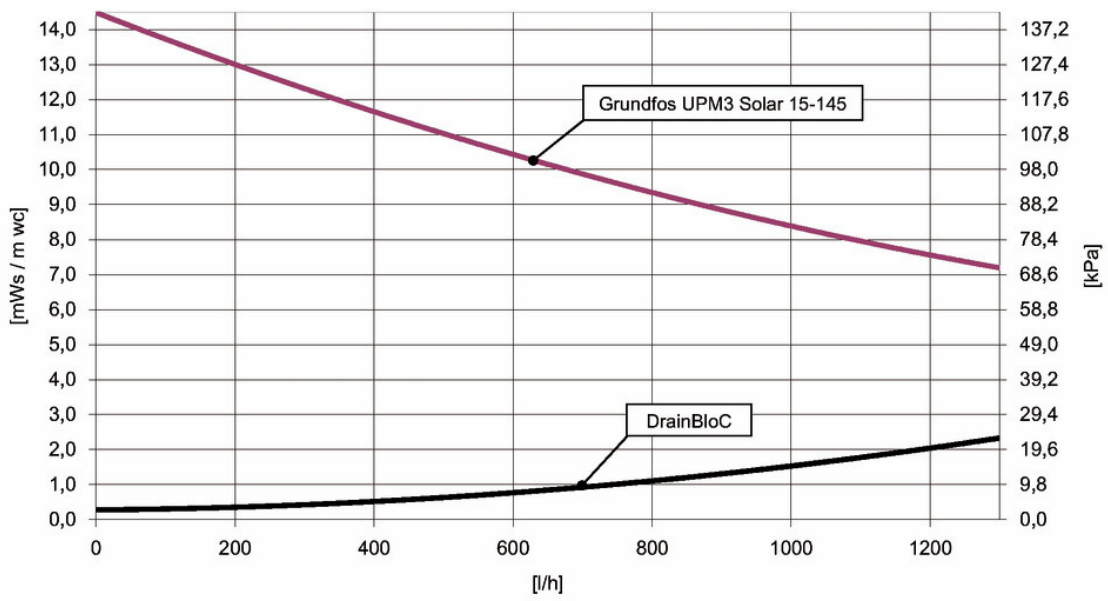
DrainBloC® DN 20 (¾")
Drain-back system



DrainBloC® DN 20 (¾")		Item no.
	**Grundfos UPM3 Solar 15-145**	**6104425**

General Terms and Conditions

General Terms and Conditions
of the company PAW GmbH & Co. KG, Böcklerstr. 11, 31789 Hameln - Germany
(RA_SD/Vers. 12.12.14)

1. Scope

The following General Terms and Conditions (GTC) apply to all goods and services rendered by PAW GmbH & Co. KG (referred to as PAW in the following). Deviations from the GTC are only binding for PAW if explicitly acknowledged by PAW in writing. For foreign business transactions, the definitions of INCOTERMS prevailing at the time of conclusion of the contract apply in addition to the GTC.

2. Conclusion of Contract/Quotes and Acceptance

1. The Customer is bound to orders (quotes) for four weeks upon receipt by PAW. Orders become legally binding only upon written order confirmation by PAW. Agreements, verbal or by telephone, can only form part of the contract if confirmed in writing by PAW. The same applies to orders per Internet or email.
2. Cost estimates with drawings and other documentation given to the Customer by PAW prior to any contractual agreement, remain the property of PAW until signing of the contract and - if a contract is not concluded - must be returned to PAW upon request. PAW retains all copyrights pertaining to the documentation. Duplication and passing thereof to Third Parties requires advance consent by PAW.

3. Prices and Terms of Payment

1. Prices quoted are net „ex works" including packaging and excluding VAT (sales tax), freight and transport insurance, customs, postage and other transport costs. Deliveries within the EU market (Intra-trade) are exempt from VAT (sales tax) only if the Customer quotes his valid VAT ID number when placing the order with PAW.
2. If delivery periods in excess of three months are agreed upon, PAW is entitled to subsequently increase the prices for material and/or labour which formed the basis of the original cost estimate by an appropriate amount, if the increase in costs was not foreseeable at the time the contract was concluded.
3. Payment is due within 30 days from the date of invoice without any deductions. Bills of exchange and cheques are precluded. Receipt of payment determines on time payment. In case of delayed payment PAW has the right to charge interest on arrears at nine percent above the prevailing base rate. In the case of several outstanding accounts, PAW is entitled to freely determine the set-off against individual invoices. The Customer is given an appropriate set-off statement.
4. If, following written order confirmation, PAW receives knowledge of a significant deterioration in the assets of the Customer or if other justified doubts as to the creditworthiness of the Customer arise, PAW is entitled to make deliveries only against appropriate securities or pre-payment.
5. If the Customer is in default of payment, PAW can withhold further deliveries and services until all due receivables are balanced, unless the Customer pays in advance.

4. Delivery, Passing of Risk, Storage Costs

1. The transport of goods occurs at the risk of the Customer - even when the freight order was placed and paid for by PAW. Fixed delivery dates are only legally binding if contractually agreed or confirmed by PAW. Relevant for on time delivery is the time the goods were consigned to the carrier or other company handling the transport/shipment.
2. If a delivery date is exceeded at the Customer's request or other reasons for which PAW is not responsible, the Customer bears the resulting storage costs, commencing 30 days after availability for dispatch. For storage on site, a flat-rate of 0.5% of the net invoice value is payable per month or 1/30th per calendar day respectively. The Customer is entitled to prove that PAW incurred considerably lower storage costs.

5. Reservation of Proprietary Rights

1. PAW retains the right to all supplied goods until complete payment of all invoices resulting from the business relation with the Customer. This also applies when the purchase price has been paid for certain goods specified by the Customer, as the reserved property acts as security against the overall receivables balance due to PAW. The processing of goods supplied by PAW - and which are still retained as property of PAW - is always on behalf of PAW, without any commitments resulting therefrom for PAW. If the goods so retained by PAW are mixed or incorporated with/into other goods, the Customer herewith assigns his proprietary or co-proprietary rights on the new article to PAW and will store said articles with due diligence. The Customer may sell goods to which PAW has the proprietary rights under normal business transactions, as long as the Customer is not in arrears with payment.
2. Protective conveyance, pledging or selling of stock „enbloc" by the Customer to Third Parties is not permissible, in as far as the proprietary rights of PAW are affected. With conclusion of the purchase contract between the Customer and PAW the Customer assigns, as security, the full amount - not only the pro rata sum - of any claim due against a buyer resulting from a purchase or other legal reasons including all subsidiary rights. The Customer remains entitled to collect these claims as long as he is not in arrears to PAW. If the value of the object supplied under retention of title as a security interest exceeds the total receivables of PAW by more than 20 %, PAW shall be obliged to release the collateral to which it is entitled upon request by the customer insofar as the realizable value is secured by another collateral of equal value (e.g. bond).
3. If PAW takes back goods from the Customer – without incurring any legal commitment – this does not constitute a cancellation of the contract. In the case of such returns of goods PAW will issue the Customer with a credit note less compensatory handling charge of 20% of the net invoice value, with a minimum charge of €10.00. Freight costs for the return of goods to PAW are to be paid for by the Customer.

The customer is entitled to prove that PAW incurred significantly lower costs.

6. Warranty

1. The Customer is obliged to inspect goods delivered by PAW immediately upon receipt for visible transport damage and also to inform PAW immediately in writing of any defects/faults found during goods inwards inspection.
In case of complaints or when ordering spare parts, specification of the PAW serial number is mandatory. Processing will not be possible without this information. Exceptions: auxiliary material, accessory parts (no electronic components).
If the complaints are justified, PAW is obliged to either rework or replace the faulty goods - according to choice by PAW. If reworking or replacement fail, the Customer may only claim redhibition, any reduction is precluded.
2. Minor changes in the construction, shape and design of the delivered goods are permissible and comply with the contract as long as they do not adversely affect the intended use, quality and functionality. The same applies to spare parts.
3. If the Customer supplies components for a product to be manufactured and supplied by PAW as part of a Customer order, then PAW is exempted from any liability for material defects, in as far as the goods supplied by PAW are faulty due to defects arising from the components supplied by the Customer. PAW is not obliged to test the components supplied by the Customer for defects or functionality prior to processing/assembly. The same applies to components supplied to PAW by Third Parties ordered by and paid for by the Customer.
4. Claims for damages against PAW, regardless of legal provisions, including infringements of pre- and collateral contracts relating to information, reference and due care as well as definite breaches of contract and tortious acts are excluded, in as far as damages are not due to malicious intent or gross negligence. This preceeding exemption from liability does not apply if properties are lacking which PAW had explicitly guaranteed or confirmed in writing with the express purpose of protecting the Customer against said damages. Additional claims by the Customer against PAW, such as consequential damages, installation costs and lost profits, are excluded.
5. The liability of PAW for faulty products in accordance with the Law on Product Liability remains untouched by the preceeding conditions. If PAW is made liable for damages by a Third Party in accordance with the Law on Product Liability or other legal liability regulations or if PAW incurs damage for other reasons (i.e. a recall), then the Customer has to exempt PAW against Third Parties if the damage is due to a mistake or fault in the Customer's area of responsibility. 6. The warranty period is defined by statutory regulations (§438 BGB - German Civil Code).

7. Set-off, Right of Retention, Assignment

The customer is only entitled to set-off rights, if his/her counterclaims have been legally established, are undisputed or accepted by PAW. The same applies to the right of retention.

8. Place of Performance, Court of Jurisdiction

Place of performance and court of jurisdiction for all disputes arising from the contractual arrangements between Customer and PAW is the domicile of PAW or – if PAW so chooses – the Customer's domicile. The contractual arrangements between PAW and Customer are subject to German Law (as priority), alternatively to EU Law.

9. Severability Clause

Should individual provisions of this GTC be or become void, the remaining provisions of the GTC will remain unaffected and valid.In place of the void provisions those legal regulations will apply, which economically come closest to the purpose of the void provision(s) in the GTC.

Manufacturer‘s warranty

5-years manufacturer‘s warranty

I.

Due to the high quality of our products, we issue a 5-year warranty – irrespective of the statutory provisions – under the following conditions:

II.

The warranty includes all PAW fittings, except for pumps, controllers and actuators.

The warranty covers the delivered devices with all components, except for such components that are subject to natural use and wear.

The warranty covers the replacement of material but not the costs for mounting and dismounting and other costs that are not costs of the replacement of the material.

Furthermore, the warranty implies that the PAW products have been used according to the generally acknowledged rules of engineering. If maintenance work is necessary, it shall be proven in case of warranty that the maintenance work has been carried out properly and professionally.

III.

The warranty is a 5-year warranty and starts with the date of delivery. The date specified on the delivery note is decisive. The warranty claims shall be submitted at the latest 12 months after the case of warranty. Any warranty claims will be void after this period.

IV.

Should there be any defects of material or manufacture or problems with the performance of the device within the warranty period, the customer shall return the warranty object at his own risk to the warrantor.

V.

The warranty shall not be considered if the warranty object is not operated according to the specifications; if it gets damaged or destroyed due to force majeure or environmental influences (frost, overvoltage, inadmissible media); if it gets damaged due to improper use (in particular, non-observance of the operating or mounting instructions or due to deferred maintenance); if it has been opened or repaired by a company or craftsman not authorized for it; if the warranty object has external mechanical damages of any type.

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PAW GmbH & Co. KG
Böcklerstraße 11
31789 Hameln
Germany
+49-5151-9856-0
+49-5151-9856-98
info@paw.eu
www.paw.eu

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