**CONNECT**
YOUR BUSINESS

**SET UP**
YOUR INSTALLATIONS

**CONTROL**
YOUR SYSTEMS

**MAINTENANCE**
ORGANISED

**SERVICE**
SIMPLIFIED


# Catalogue 01 | 2024

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

Valid for the EU

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QUALITY
MADE IN GERMANY

# 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

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@ jacek.bak@paw.eu

# PAW CONNECTIVITY
## YOUR CONNECTION TO SMART HOME

Open to the world
All installation data at a glance

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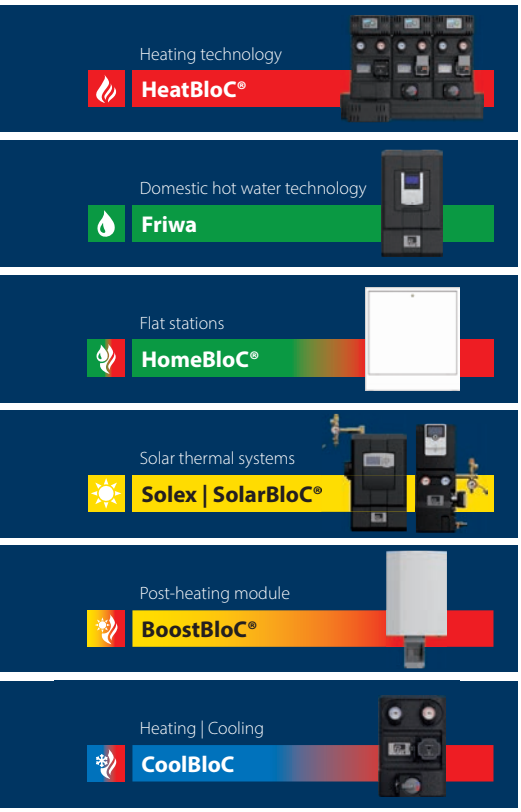
# PAW CONNECT APP
## YOUR CONTROL OF PAW PRODUCTS

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®**

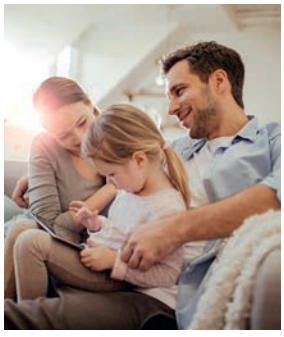
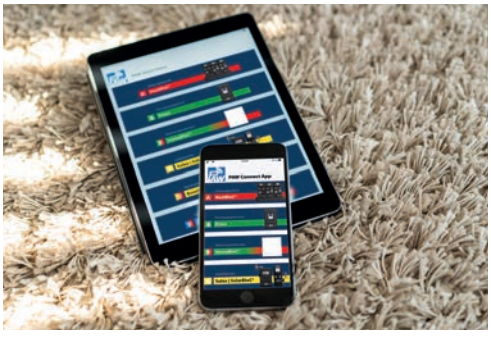
- display and adjustment of all installation parameters in the app: domestic hot water nominal temperature, circulation times, data logger, ECO and comfort operation
- supply station: Line balancing with certificate (dependent on the station)
- radiator balancing with certificate

**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**
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**SET UP**
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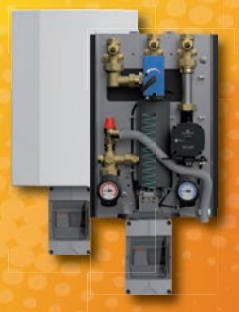
**CONTROL**
YOUR SYSTEMS

**Heating & Cooling**

**Domestic hot water technology**



**Heat pump post-heating module**



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## MAINTENANCE
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**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

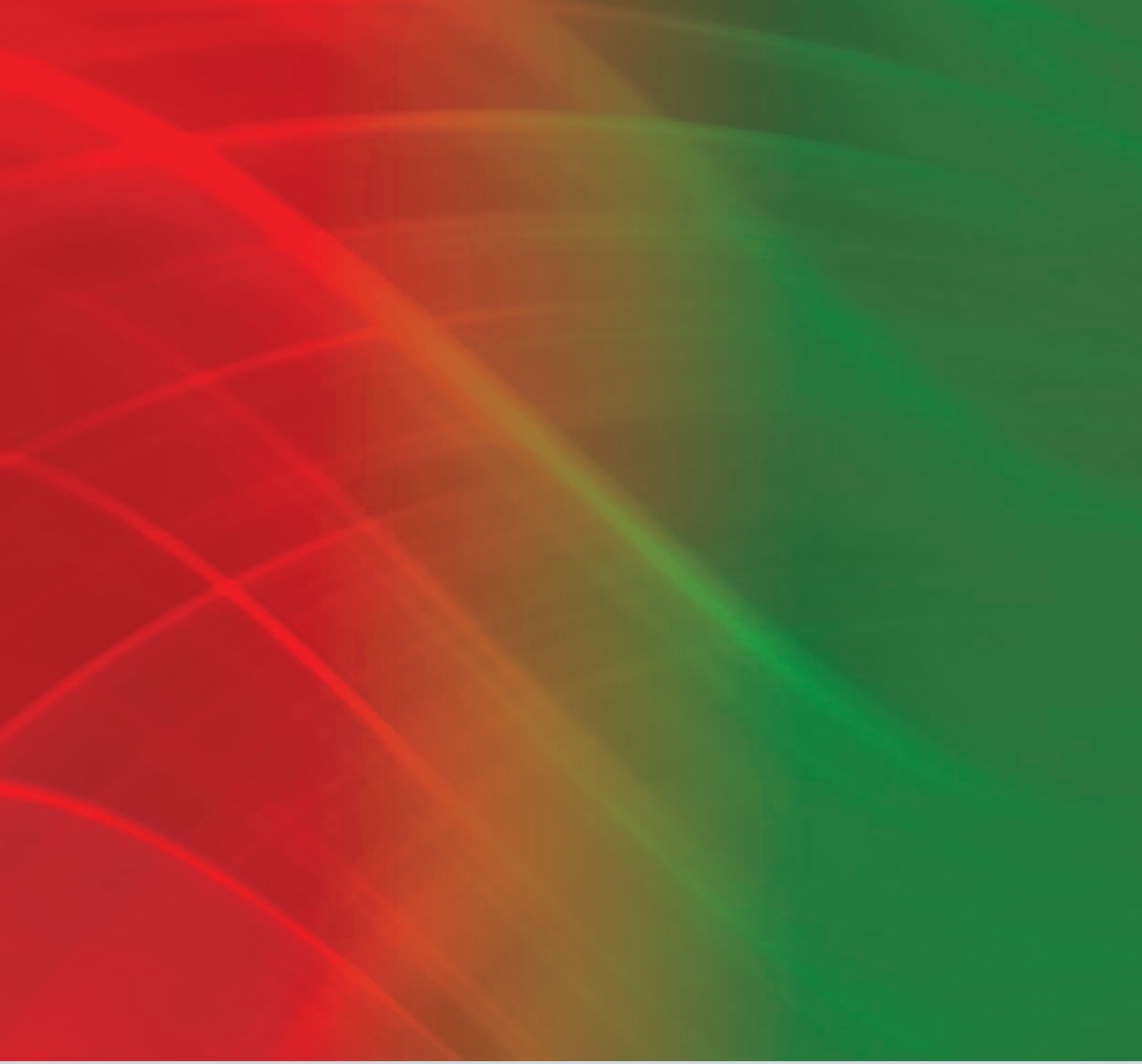
| Δ t | DN 20 (¾") | DN 25 (1") | DN 32 (1¼") | DN 40 (1½") | DN 50 (2") |
|---|---|---|---|---|---|
| 20 K | | 33 kW | 52 kW | | |
| 10 K | | 16.5 kW | 26 kW | | |
| 7.5 K | | 12 kW | 19.5 kW | | |
| 5 K | | 8 kW | 13 kW | | |

**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® Basic

## Catalogue 01/2024

Decentralised domestic hot water preparation
and comfortable heat supply

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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!
- ✓ Highly efficient combined with a PAW HeatBloC® MCom

***energy-efficient***
***comfortable***
***compact***



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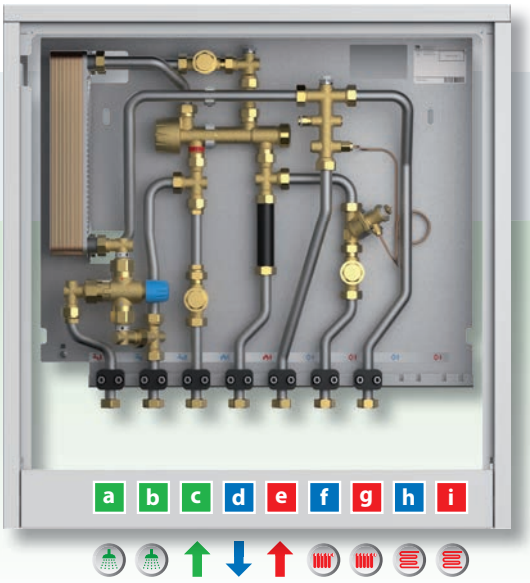
# PAW flat stations HomeBloC® Basic – great diversity according to your needs

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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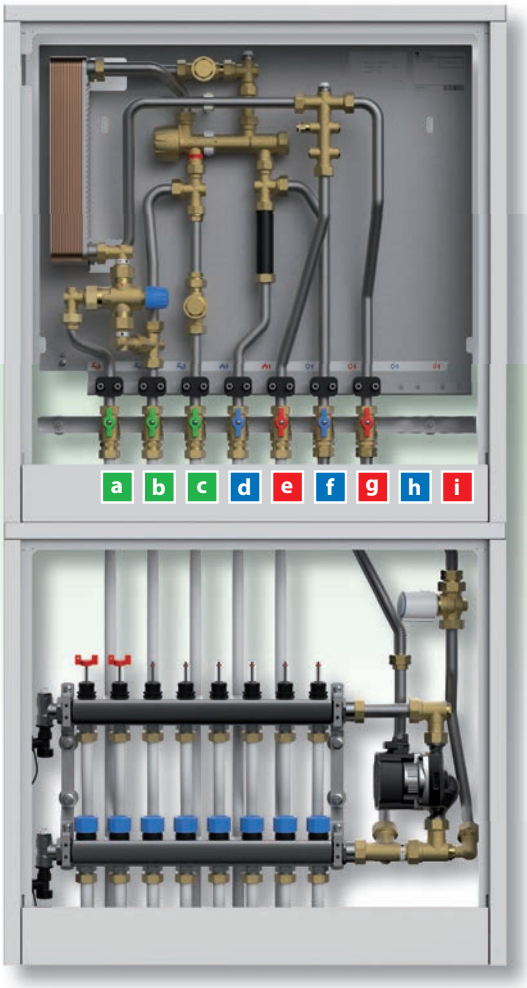
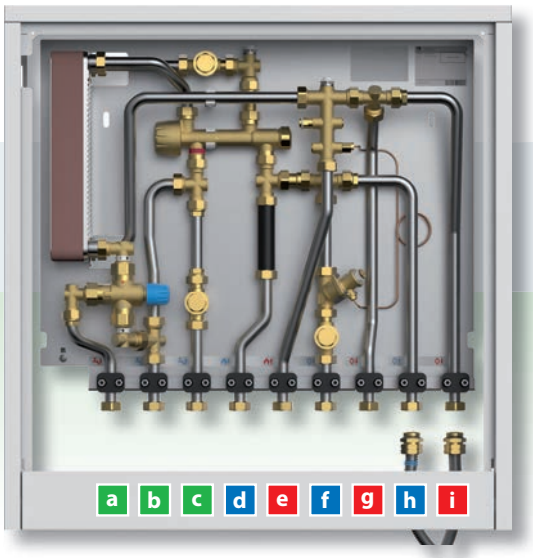



## HomeBloC® Basic WF: Radiant floor circuit (mixed)

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);<br>16 l/min (≙ 40 kW);<br>20 l/min (≙ 49 kW) |
| | Heating capacity | 8.5 kW<br>(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: Copper solder; Stainless steel plates<br>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);<br>16 l/min (≙ 40 kW);<br>20 l/min (≙ 49 kW) |
| | Heating capacity | 8.5 kW<br>(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: Copper solder; Stainless steel plates<br>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: Copper solder; Stainless steel plates<br>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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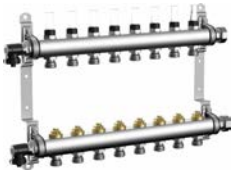
| | | |
|---|---|---|
|  | **7 ball valves with mounting rail** | **1280207101** |
| | **7 ball valves without mounting rail** | **1280107101** |
| | **9 ball valves with mounting rail** | **1280209101** |
| | **9 ball valves without mounting rail**<br><br>To shut off the lines during commissioning and 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.<br><br>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. | **1280109101** |
|  | **Thermal heat retaining**<br><br>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. | **1280301101** |
|  | **Pressure-depend.heat retaining**<br><br>Pressure-depending heat retaining for the installation in a HomeBloC® for a higher water convenience during summer operation<br><br>Pipe set ¾" union nut<br>overflow valve 350 mbar<br>polyamide hose 6 mm, up to 6.5 bar | **1280303101** |
|  | **Flush-mounted cupboard station** | **1282001101** |
| | **Wall-mounted cupboard station**<br><br>For mounting the station, powder-coated in RAL 9016, coin-operated lock for opening the cover.<br>Flush-mounted version with 110 mm installation depth, height-adjustable, ideal for partition walls.<br><br>Wall-mounted version with 150 mm installation depth, also height-adjustable.<br><br>Insulation on request. | **1282101101** |
|  | **Flush-mounted cupboard floor distribution manifold** | **1282601101** |
| | **Wall-mounted cupboard floor distribution manifold**<br><br>For mounting the floor distribution manifold, powder-coated in RAL 9016, coin-operated lock for opening the cover.<br>Flush-mounted version with 110 mm installation depth, height-adjustable, ideal for partition walls.<br><br>Wall-mounted version with 150 mm installation depth, also height-adjustable.<br><br>Insulation on request. | **1286101101** |

| | | |
|---|---|---|
|  | **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**<br><br>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.<br>The floor distribution manifold is available from a 2-fold version up to a 8-fold version.<br>For the versions WF and WRF, the injection-type circuit is mandatory.<br><br>Connections: ¾" ext. thread Eurocone | **1285008101** |
|  | **Thermostatic head for radiant floor circuit**<br><br>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 the radiant floor circuit**<br><br>To control the flow temperature and to ensure the supply and heat distribution in the (floor) heating circuits.<br>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**<br><br>To control the flow temperature and to ensure the supply and heat distribution in the (floor) heating circuits.<br>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**<br><br>To control the flow temperature and to ensure the supply and heat distribution in the (floor) heating circuits.<br>For the versions WF and WRF, this injection-type circuit is mandatory for the floor distribution manifold. | **1285501301** |



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| | | |
|---|---|---|
|  | **Thermoelectric actuator NC, 230 V, with connecting adapter for IMI valves or for differential pressure controller in the HomeBloC® Basic WR and HomeBloC® Basic WRF**<br><br>Thermoelectric actuator NC, 230 V, with connecting adapter for IMI valves or for differential pressure controller in the HomeBloC® Basic WR and HomeBloC® Basic WRF. The actuator is controlled by a 230 V standard room temperature controller with a 2-point output or a pulse width modulation. The actuator is controlled by a 230 V standard room temperature controller with a 2-point output or a pulse width modulation. | **1288601101** |
|  | **Thermoelectric actuator NC, 230 V, with connecting adapter for PAW floor distribution manifold valves**<br><br>Thermoelectric actuator NC, 230 V, with connecting adapter for PAW floor distribution manifold valves. The actuator is controlled by a 230 V standard room temperature controller with a 2-point output or a pulse width modulation. | **1288601102** |
|  | **Thermoelectric actuator NC, 230 V, with connecting adapter for PAW injection-type circuit**<br><br>Thermoelectric actuator NC, 230 V, with connecting adapter for PAW injection-type circuit. The actuator is controlled by a 230 V standard room temperature controller with a 2-point output or a pulse width modulation. | **1288601103** |
|  | **Controller Alpha Basis STD Plus** | **13526001** |
| | **Controller Alpha Basis Comfort**<br><br>Connection unit for single room controls of heating and cooling systems in combination with surface temperature regulation.<br>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.<br>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.<br>The power supply of the components is provided directly via the controller; minimised wiring effort.<br><br>Features:<br>• Signal input for temperature limitation or dew point sensor<br>• Connection for an external time switch<br>• Change Over connection for switching between heating and cooling<br>• Controller Alpha Basis STD Plus: control of the pump<br>• Controller Alpha Basis Comfort: extended control of boiler and pump, after-run time adjustable<br>• Direction of operation of the actuators "zero current closed" (NC); without pump control, also "zero current open" (NO) possible<br><br>Scope of delivery:<br>Wall bracket with mounting rail for an easy and direct installation in the wall-mounted or flush-mounted cupboard | **13536001** |



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**Award winner HeatBloC® MCom**

# HeatBloC® MCom DN 25 - 50

## Catalogue 01/2024

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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## 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
- ✓ up to 15 % subsidies for heating circuits and communication sets (heating optimisation)

## 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 approximately **50 % of the pump energy** compared to mechanical differential pressure controllers. With the **HeatBloC® MCom** it is also possible to **save up to 20 % of fuel**.

# 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!

The energy-efficient **HeatBloC® MCom** is **BAFA listed**, the **BAFA and KfW subsidies of 15 % (heating optimisation)** can thus be requested quickly and easily. Other countries (like Austria) have similar subsidy programmes.

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<br>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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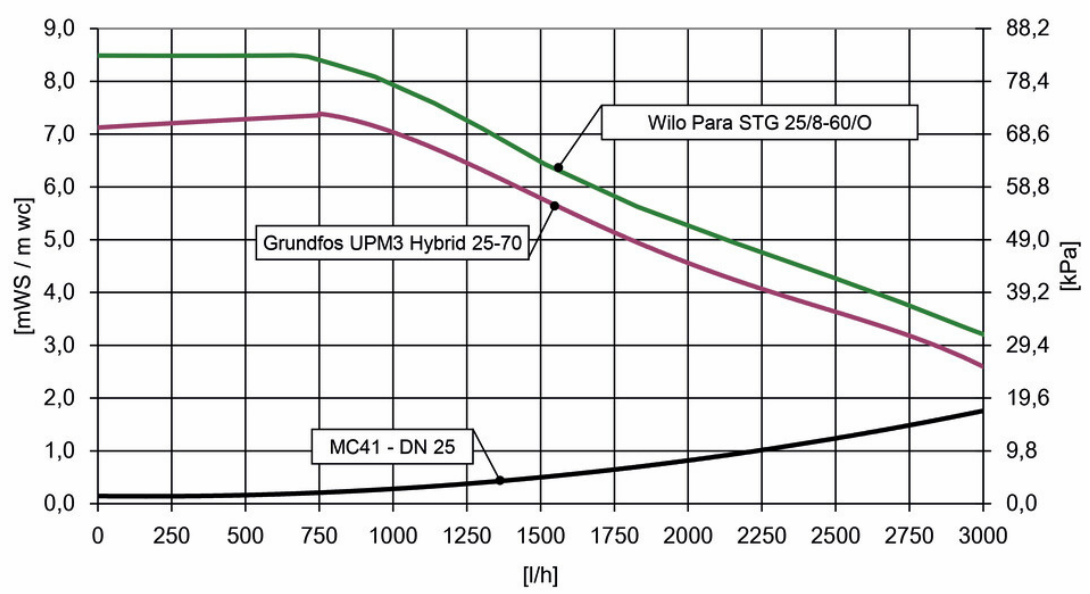
# HeatBloC® MC41 DN 25 (1")
# direct / unmixed






| HeatBloC® MC41 DN 25 (1") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 25-70, flow rate signal** | < 0.20 | ▲ | **4536013GU7** |
| | **Wilo Para STG 25/8/-60/O** | < 0.21 | ▲ | **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<br>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 | 5 Nm 230 V - 50 Hz<br>Setting time 90°: 140 s |

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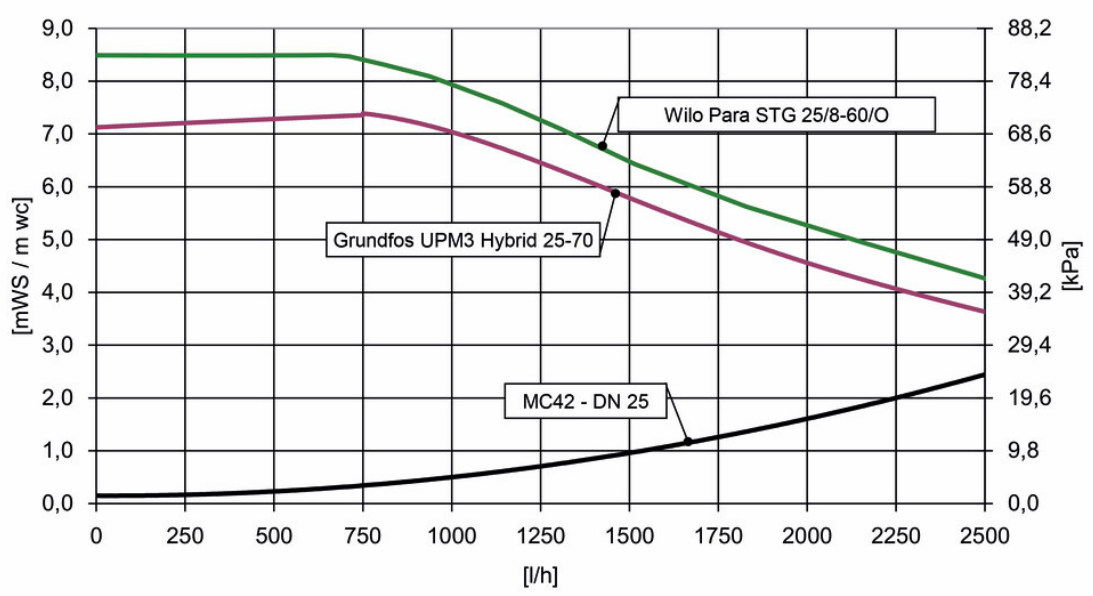
# HeatBloC® MC42 DN 25 (1")
# 3-way H-type mixing valve




| HeatBloC® MC42 DN 25 (1") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 25-70, flow rate signal** | < 0.20 | | **4536053MGU7** |
| | **Wilo Para STG 25/8/-60/O** | < 0.21 | | **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<br>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 | 10 Nm 24 V AC/DC<br>Setting time 90°: 140 s |

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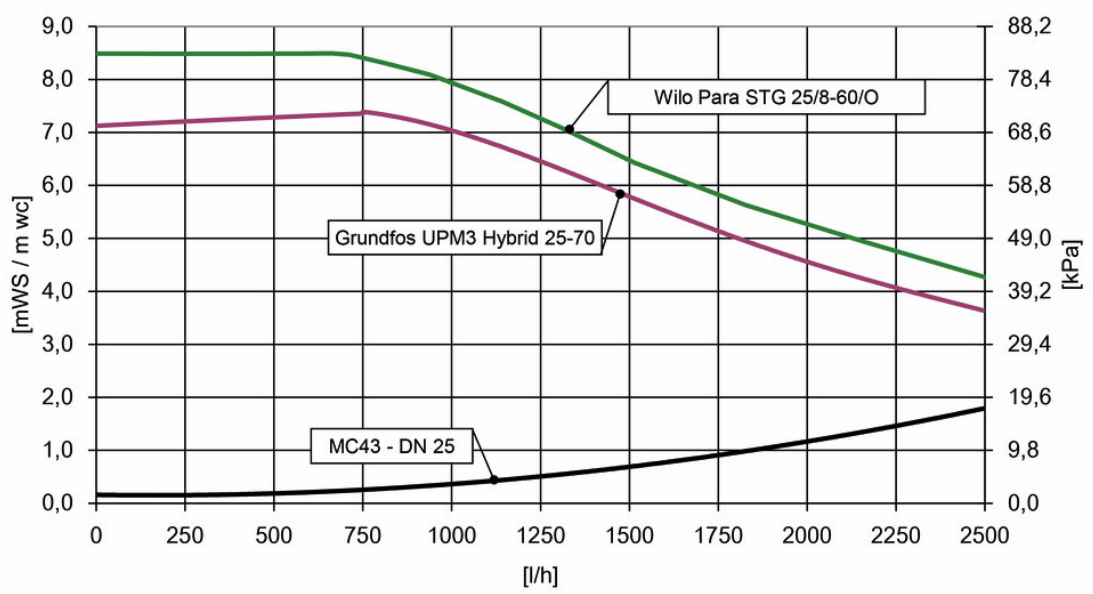
# HeatBloC® MC43 DN 25 (1")
## Controlled circuit, const. value, 3-way mixing valve with bypass




| HeatBloC® MC43 DN 25 (1") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 25-70, flow rate signal** | < 0.20 | | **4536073MGU7** |
| | **Wilo Para STG 25/8/-60/O** | < 0.21 | | **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<br>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 | 5 Nm 230 V - 50 Hz<br>Setting time 90°: 140 s |

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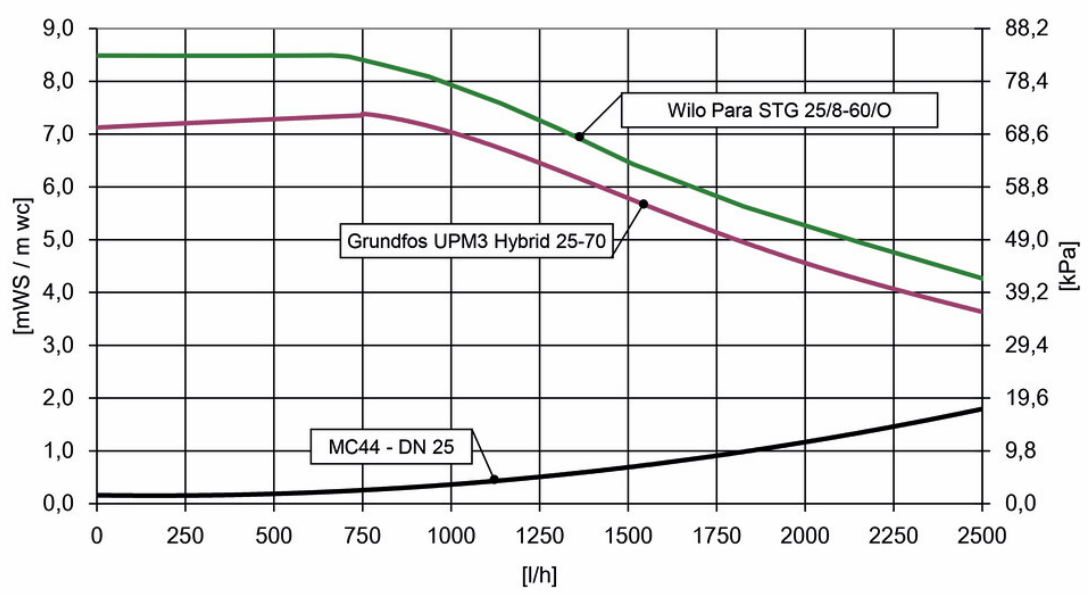
# HeatBloC® MC44 DN 25 (1")
# 3-way bypass mixing valve




| HeatBloC® MC44 DN 25 (1") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 25-70, flow rate signal** | < 0.20 | | **4536063MGU7** |
| | **Wilo Para STG 25/8/-60/O** | < 0.21 | | **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<br>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 | 5 Nm 230 V - 50 Hz<br>Setting time 90°: 140 s |

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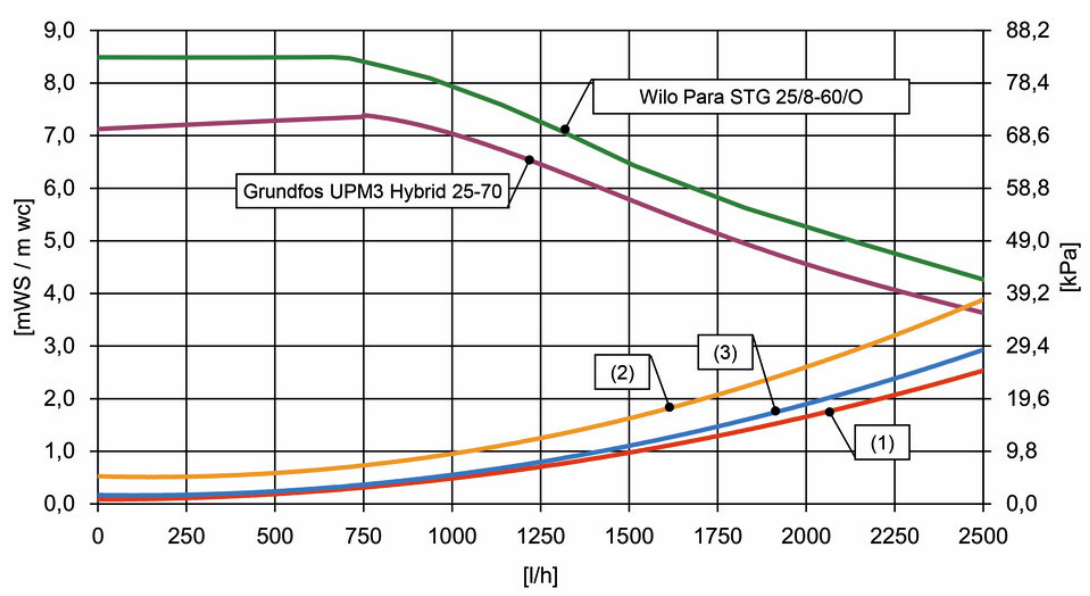
# HeatBloC® MC45 DN 25 (1")
# 3-temperatures mixing valve




(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** | < 0.20 | | **4536093MGU7** |
| | **Wilo Para STG 25/8/-60/O** | < 0.21 | | **4536093MWS08** |

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

# HeatBloC® MC46 DN 25 (1")
# Boiler charging set with 3-way mixing valve

**Application range**

- Return flow temperature maintenance for solid fuel boilers, wood firing and stove heating systems
- for a constant flow rate in the heat generator

**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® MC46 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<br>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 | 10 Nm 24 V AC/DC<br>Setting time 90°: 140 s |

**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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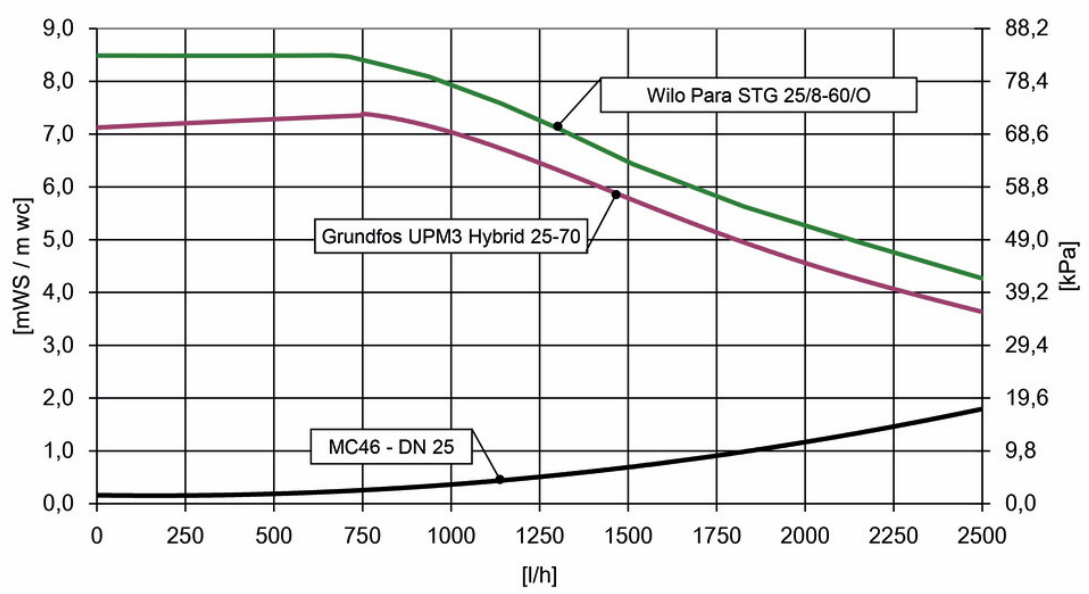
# HeatBloC® MC46 DN 25 (1")
## Boiler charging set with 3-way mixing valve




| HeatBloC® MC46 DN 25 (1") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 25-70, flow rate signal** | < 0.20 | | **45360333GU7** |
| | **Wilo Para STG 25/8/-60/O** | < 0.21 | | **45360333WS08** |

= 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<br>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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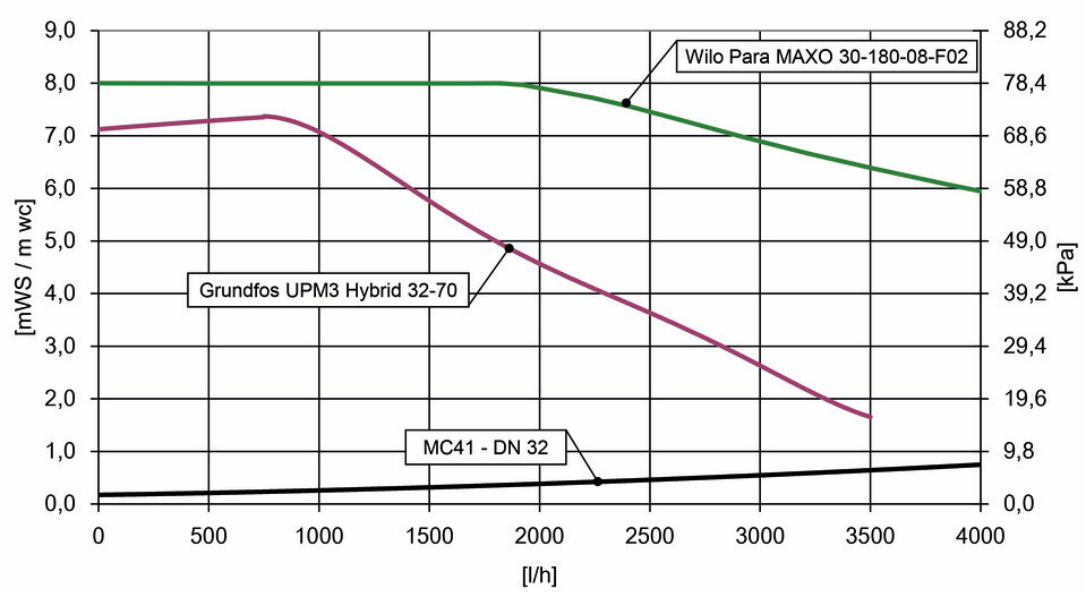
# HeatBloC® MC41 DN 32 (1¼")
# direct / unmixed






| HeatBloC® MC41 DN 32 (1¼") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 32-70, flow rate signal** | < 0.20 | ▲ | **4539013GU7** |
| | **Wilo Para MAXO 30-180-08-F02** | < 0.21 | ▲ | **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<br>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 | 5 Nm 230 V - 50 Hz<br>Setting time 90°: 140 s |

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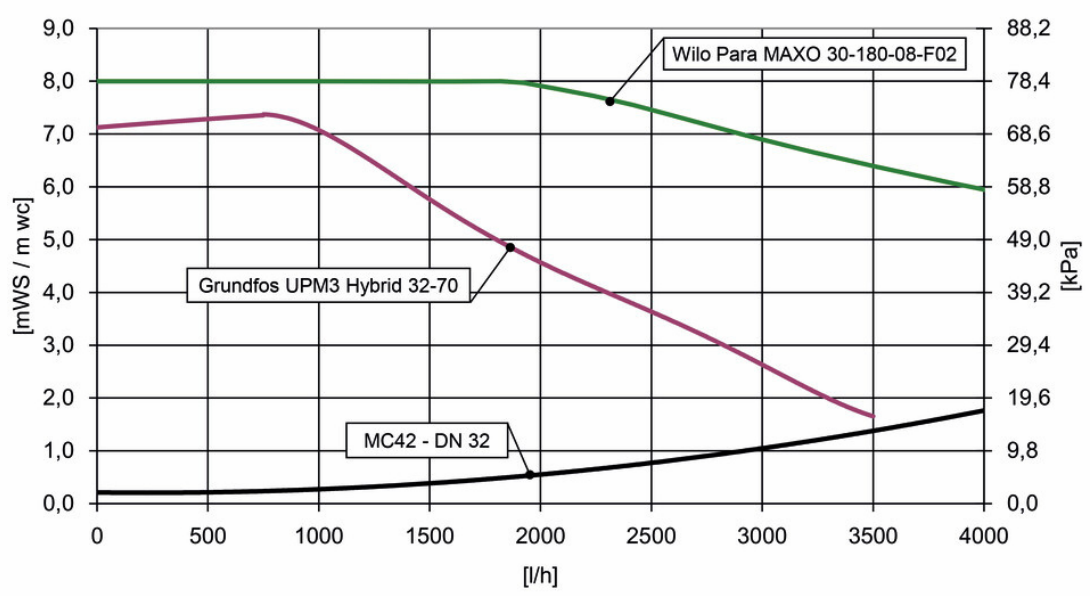
# HeatBloC® MC42 DN 32 (1¼")
# 3-way H-type mixing valve




| HeatBloC® MC42 DN 32 (1¼") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 32-70, flow rate signal** | < 0.20 | | **4539053MGU7** |
| | **Wilo Para MAXO 30-180-08-F02** | < 0.21 | | **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<br>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 | 10 Nm 24 V AC/DC<br>Setting time 90°: 140 s |

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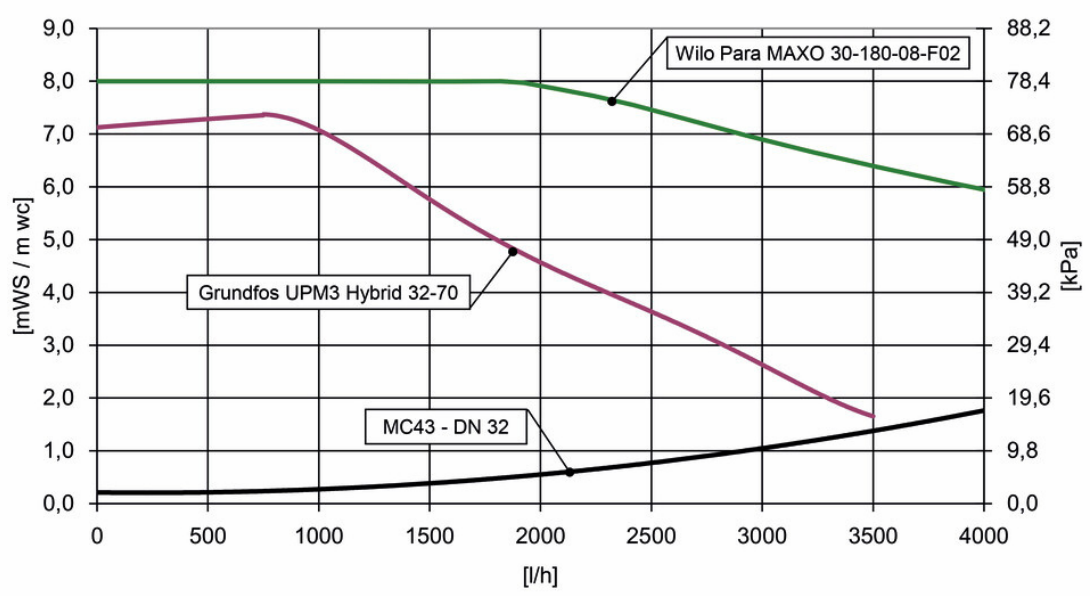
# HeatBloC® MC43 DN 32 (1¼")
## Controlled circuit with constant temperature, electronically




| HeatBloC® MC43 DN 32 (1¼") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 32-70, flow rate signal** | < 0.20 | | **4539073MGU7** |
| | **Wilo Para MAXO 30-180-08-F02** | < 0.21 | | **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<br>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 | 5 Nm 230 V - 50 Hz<br>Setting time 90°: 140 s |

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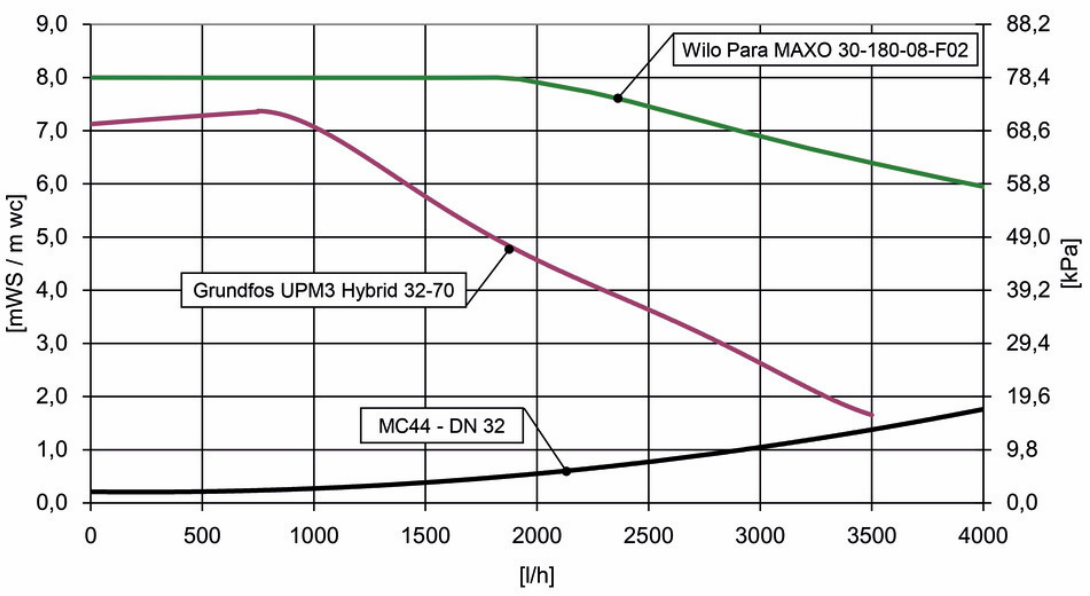
# HeatBloC® MC44 DN 32 (1¼")
## 3-way bypass mixing valve




| HeatBloC® MC44 DN 32 (1¼") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 32-70, flow rate signal** | < 0.20 | | **4539063MGU7** |
| | **Wilo Para MAXO 30-180-08-F02** | < 0.21 | | **4539063MWM08** |

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

# HeatBloC® MC46 DN 32 (1¼")
# Boiler charging set with 3-way mixing valve

**Application range**

- Return flow temperature maintenance for solid fuel boilers, wood firing and stove heating systems
- for a constant flow rate in the heat generator

**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® MC46 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<br>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 | 10 Nm 24 V AC/DC<br>Setting time 90°: 140 s |

**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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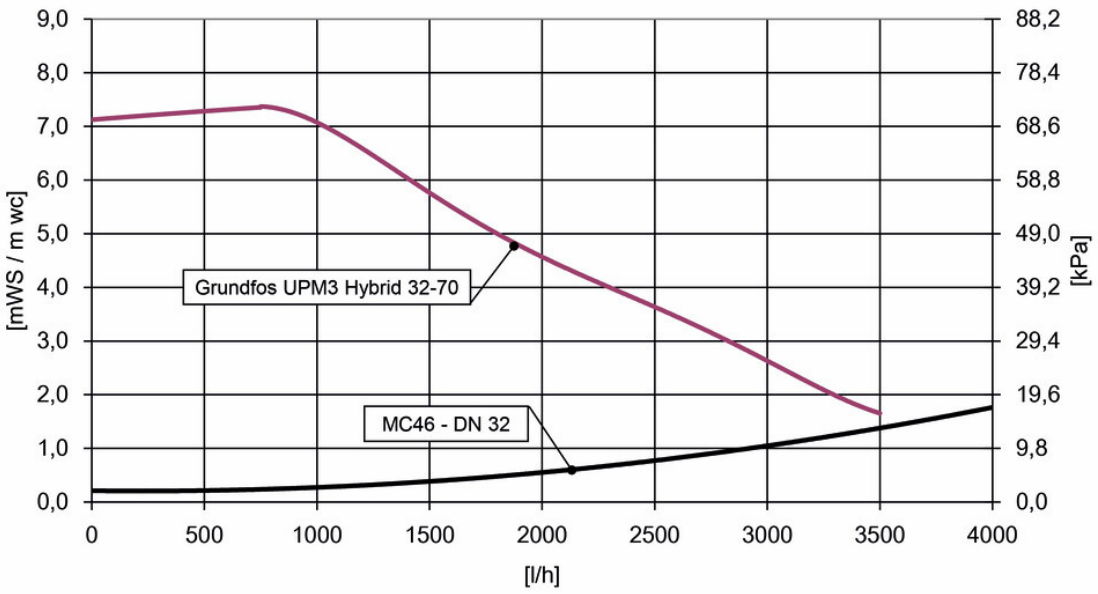
# HeatBloC® MC46 DN 32 (1¼")
## Boiler charging set with 3-way mixing valve




| HeatBloC® MC46 DN 32 (1¼") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPM3 Hybrid 32-70, flow rate signal** | < 0.20 | | **45390333GU7** |

= 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<br>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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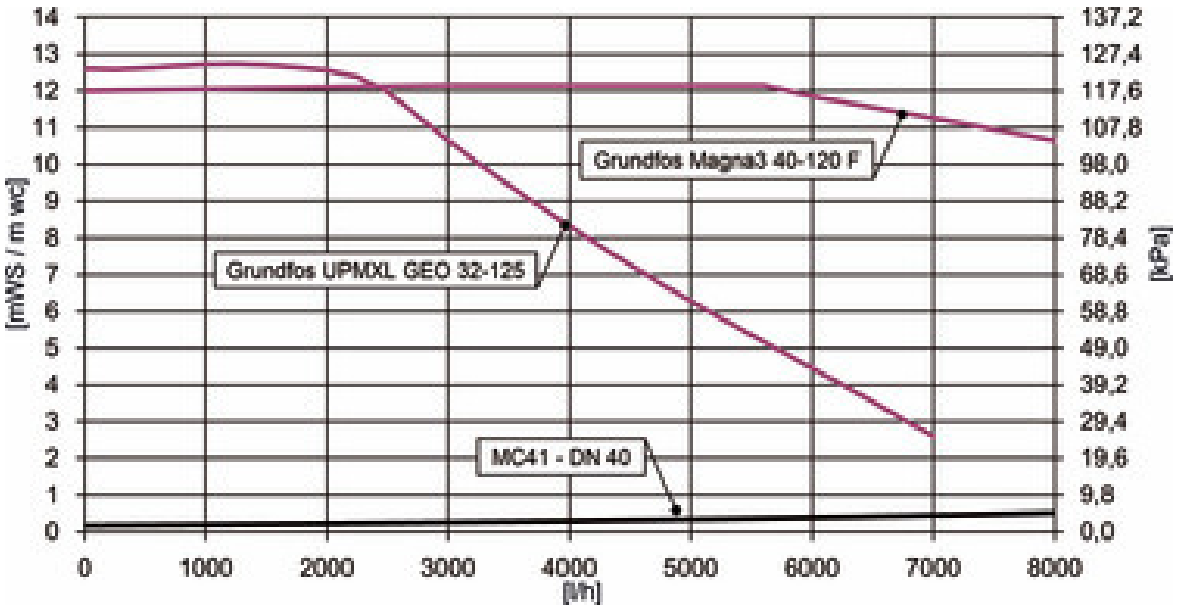
# HeatBloC® MC41 DN 40 (1½")
# direct / unmixed






| 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<br>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 | 10 Nm 230 V - 50 Hz<br>Setting time 90°: 140 s |

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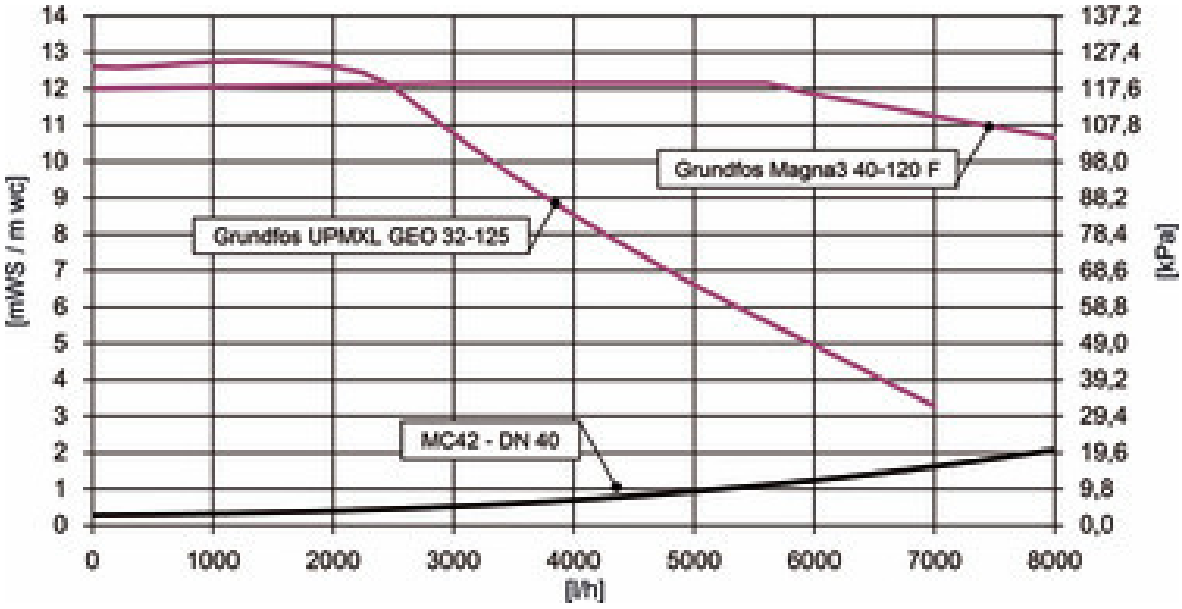
# HeatBloC® MC42 DN 40 (1½")
## 3-way H-type mixing valve




| 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<br>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 | 10 Nm 24 V AC/DC<br>Setting time 90°: 140 s |

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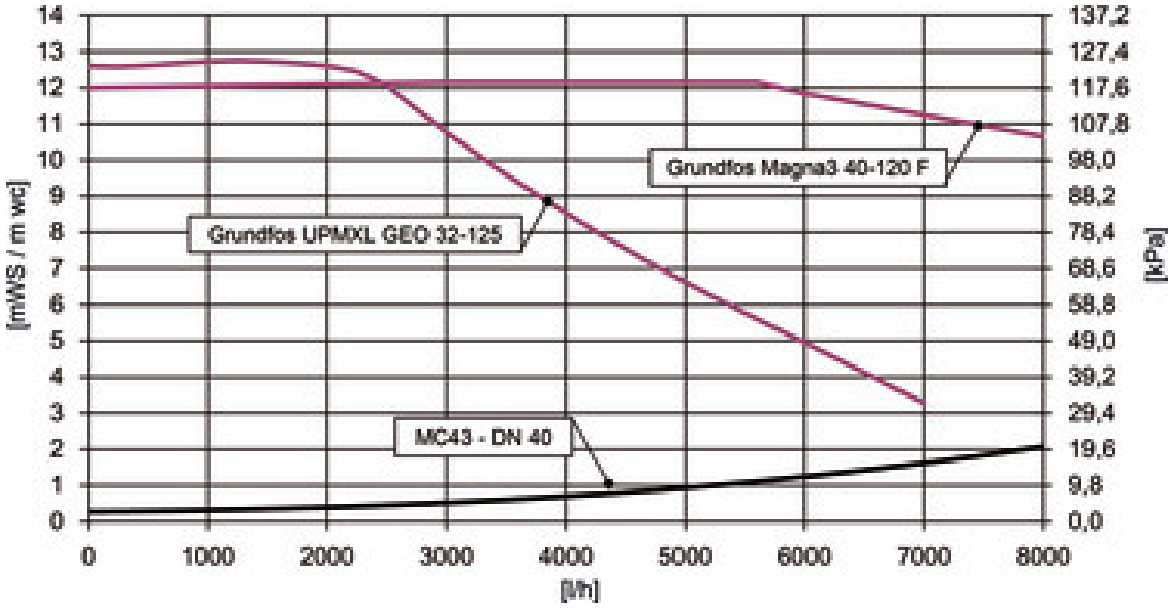
# HeatBloC® MC43 DN 40 (1½")
## Controlled circuit with constant value, 3-way mixing valve






| 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® MC46 DN 40 (1½")
# Boiler charging set with 3-way mixing valve

**Application range**

- Return flow temperature maintenance for solid fuel boilers, wood firing and stove 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® MC46 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<br>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 | 10 Nm 24 V AC/DC<br>Setting time 90°: 140 s |

**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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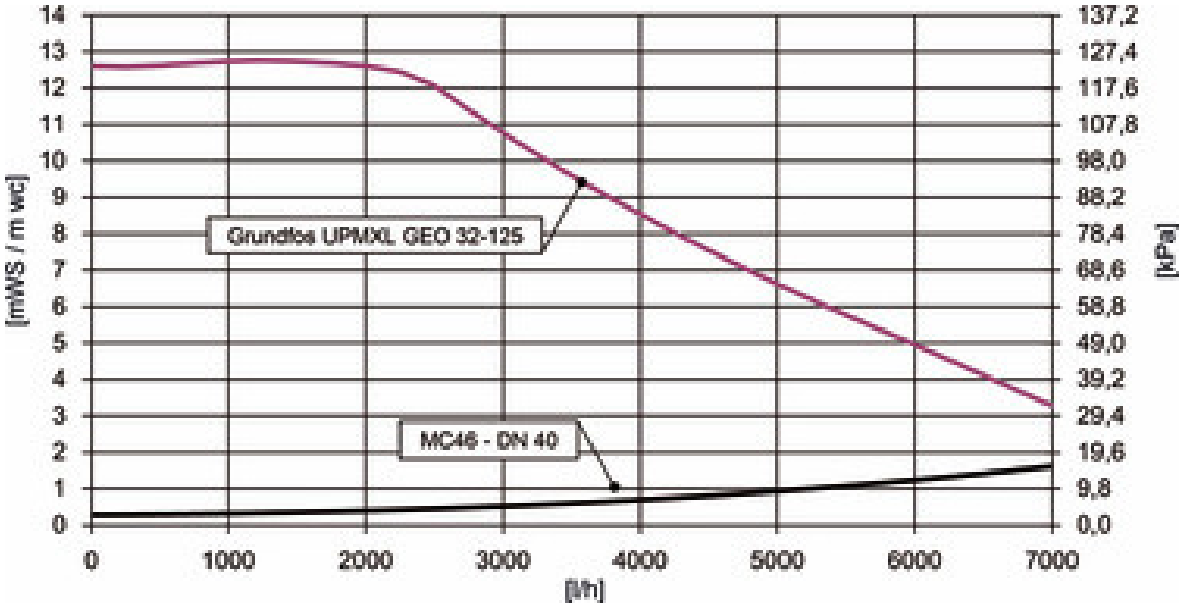
# HeatBloC® MC46 DN 40 (1½")
# Boiler charging set with 3-way mixing valve






| HeatBloC® MC46 DN 40 (1½") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos UPMXL GEO 32-125, flow estimation** | < 0.23 | | **45410331GX12** |

= 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<br>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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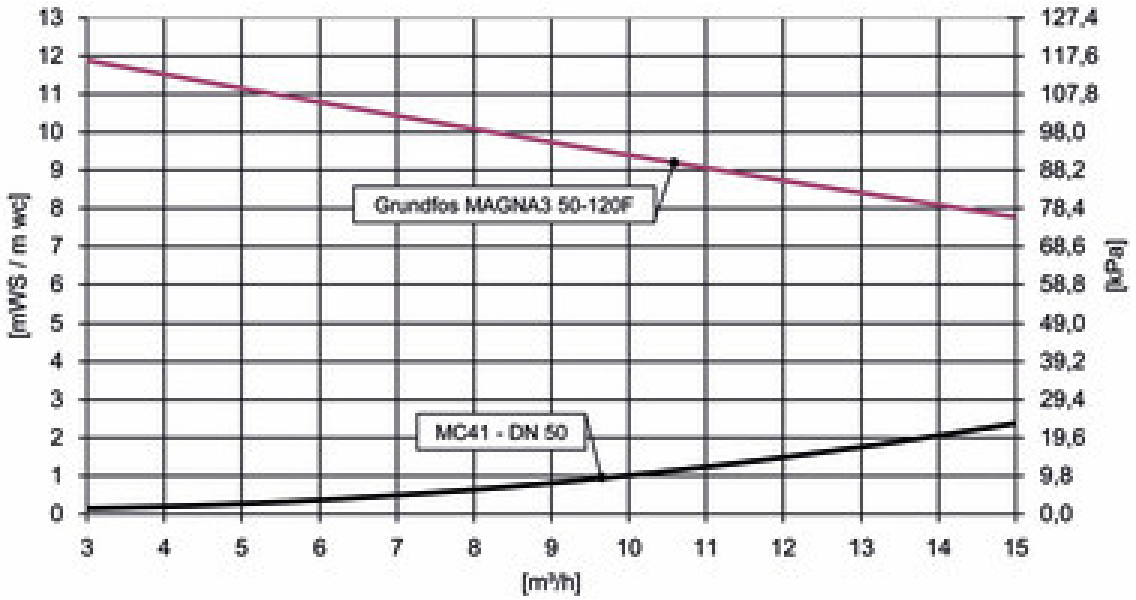
# HeatBloC® MC41 DN 50 (2")
# direct / unmixed






| 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<br>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 | 10 Nm 230 V - 50 Hz<br>Setting time 90°: 140 s |

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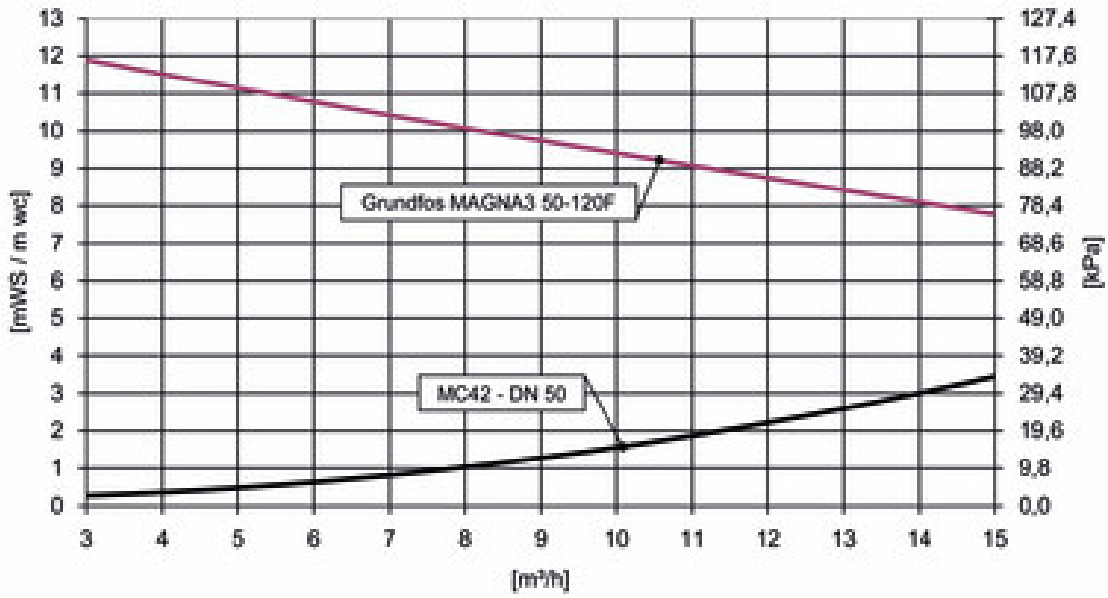
# HeatBloC® MC42 DN 50 (2")
# 3-way H-type mixing valve




| 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**<br><br>completely made of brass ; completely premounted<br>entirely insulated with EPP half-shells<br>extremely low resistance, free passage d = 36 mm<br>up to 6 groups, premounted, extendable<br>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**<br><br>completely made of brass; completely premounted<br>entirely insulated with EPP half-shells<br>extremely low resistance, free passage d = 50 mm<br>up to 6 groups, premounted, extendable<br>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**<br><br>modular distribution manifold made of brass<br>connecting flanges as slip-on flanges made of steel<br>gaskets and screws for boiler connection DN 50 included<br>completely premounted; entirely insulated with EPP shells<br>extremely low resistance, free passage d = 64 mm<br>up to 4 groups, premounted, extendable<br>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**<br><br>modular distribution manifold made of brass<br>connecting flanges as slip-on flanges made of steel<br>gaskets and screws for boiler connection DN 65 included<br>completely premounted; entirely insulated with EPP shells<br>extremely low resistance, free passage d = 84 mm<br>up to 4 groups, premounted, extendable<br>boiler connections DN 65 | **5114** |
|  | **MCom communication set**<br><br>For WiFi communication with an Apple or Android terminal.<br>The communication module is the condition for for the automatic hydraulic balancing of the radiators via the PAW app.<br>You can get the corresponding app in the App Store or Google Play Store by searching for "PAW MCom".<br><br>With insulation and device for the installation on the modular distribution manifold<br>Communication module Raspberry Pi with Modbus cable<br>WLAN adapter 802.11n nano<br>Wall power supply 5 V DC | **1398731** |
|  | **Connection set for MCom**<br><br>Mains cable (24 V DC, RJ12, RS485) for the connection of the MCom controllers to the power supply.<br>Please note: For the function of a MC system with up to 8 controllers, one connection set is necessary. | **1398700** |



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| | | |
|---|---|---|
|  | **PowerLine Case**<br><br>for extending the reach of the WiFi radio network during the hydraulic balancing | **1398736** |
|  | **Plug adapter**<br><br>RJ12 adapter, for connecting the MCom system as Modbus-RTU-Slave (GLT, Loxone) to external systems | **1398710** |
|  | **KM2 Interface adapter**<br><br>Modbus-IP client for visualising the system parameters in the Modbus-IP network or for system integration into VBus.NET.<br>- Optional accessory for SC5.14<br>- Optional accessory for FC4.13 | **1309001** |
|  | **Maintenance set DPS - DN 25 / DN 32 (1"/1¼")**<br><br>1x sealing cap<br>2x strainer | **N00257** |
|  | **Wall bracket for HeatBloC® DN 25 - DN 32**<br><br>Consisting of: wall bracket (galvanised steel), mounting equipment<br>DN 25 / DN 32: Possible wall distance: 155 mm<br><br>Not required for installation with a PAW modular distribution manifold | **34722** |
|  | **Wall bracket for modular distribution manifold - DN 25 (1") - DN 32 (1¼")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **34721** |
|  | **Wall bracket set for installation of single heating circuits - DN 25 (1")**<br><br>Components: 2 x 1½" nut, mounting plate, wall bracket<br><br>possible wall distance: 155 mm | **3422SET** |
|  | **Wall bracket set DN 32**<br><br>Components: 2 x 2" nut, mounting plate, wall bracket<br>possible wall distance: 155 mm | **3722SET** |

# Equipment HeatBloC® MCom DN 25 up to DN 50



| | | |
|---|---|---|
|  | **Wall bracket for HeatBloC® DN 40 (1½")**<br><br>Components: Wall bracket, 2 gaskets, mounting equipment,<br>distance of the pipe axis to the wall A = 270 mm | **41641** |
|  | **Wall bracket for HeatBloC®s - DN 50 (2")**<br><br>Components: Wall bracket (galvanised steel), 2 gaskets, mounting equipment,<br>distance of the pipe axis to the wall A = 400 mm | **41642** |
|  | **Wall bracket set for modular distribution manifold - DN 40 (1½")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **41651** |
|  | **Wall bracket set for modular distribution manifold - DN 50 (2")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **41652** |
|  | **Floor bracket set for modular distribution manifold - DN 40 / 50 (1½"/ 2")**<br><br>Components: 2 floor brackets (galvanized steel), 4 wall plugs, 4 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Height = adjustable 1,050 - 1,080 mm, for shortening simply cut off | **41671** |
|  | **Extension set HeatBloC® MCom - DN 25 / 32**<br><br>Required extension set for operating MCom heating circuits DN 25/32 when used in building cooling and heating.<br>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**<br><br>Required extension set for operating MCom heating circuits DN 40/50 when used in building cooling and heating.<br>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®
# Standard series DN 20-50

## Catalogue 01/2024

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

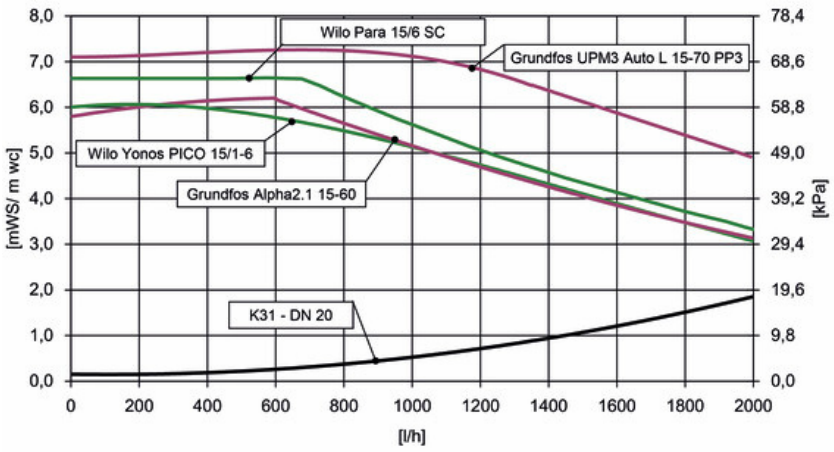
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 15-60** | < 0.17 | ▲ | **32013GH6** |
| | **Grundfos UPM3 Auto L 15-70** | < 0.20 | ▲ | **32013GM6** |
| | **Wilo Para SC 15/6-43** | < 0.20 | ▲ | **32013WP6** |
| | **Wilo Yonos PICO 15/1-6** | < 0.20 | ▲ | **32013WN06** |
| | **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

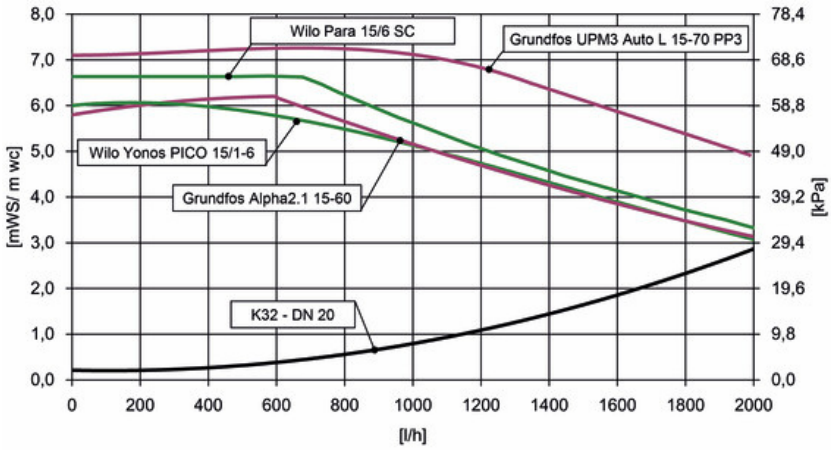
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




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

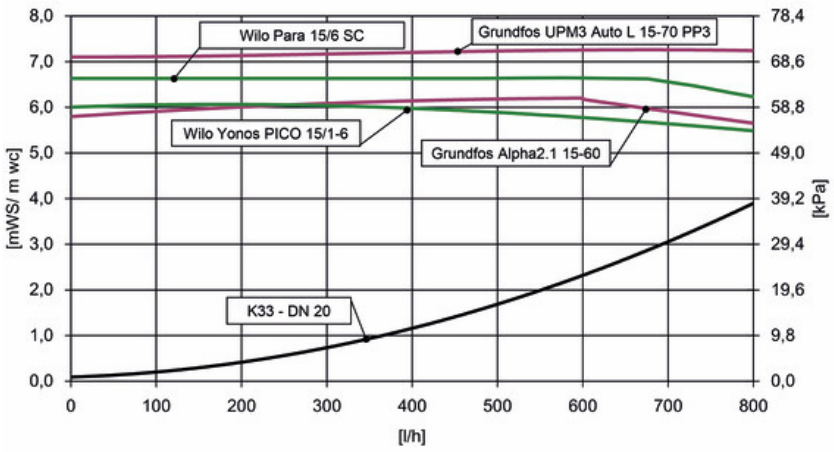
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 15-60** | < 0.17 | ▲ | **32073GH6** |
| | **Grundfos UPM3 Auto L 15-70** | < 0.20 | ▲ | **32073GM6** |
| | **Wilo Para SC 15/6-43** | < 0.20 | ▲ | **32073WP6** |
| | **Wilo Yonos PICO 15/1-6** | < 0.20 | ▲ | **32073WN06** |
| | **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

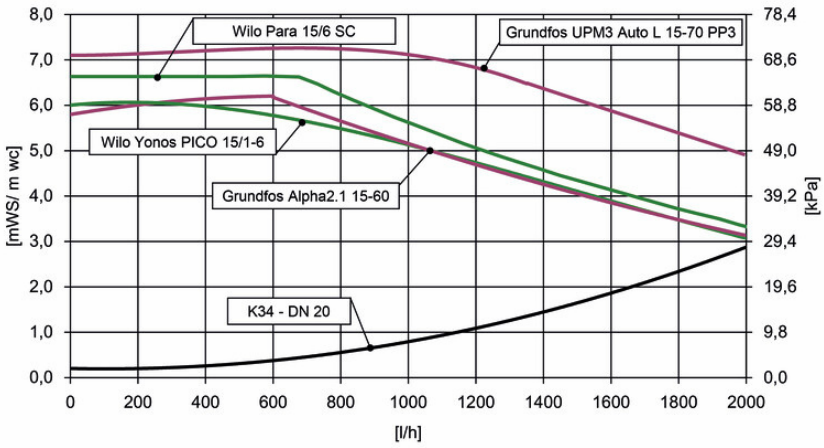
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




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

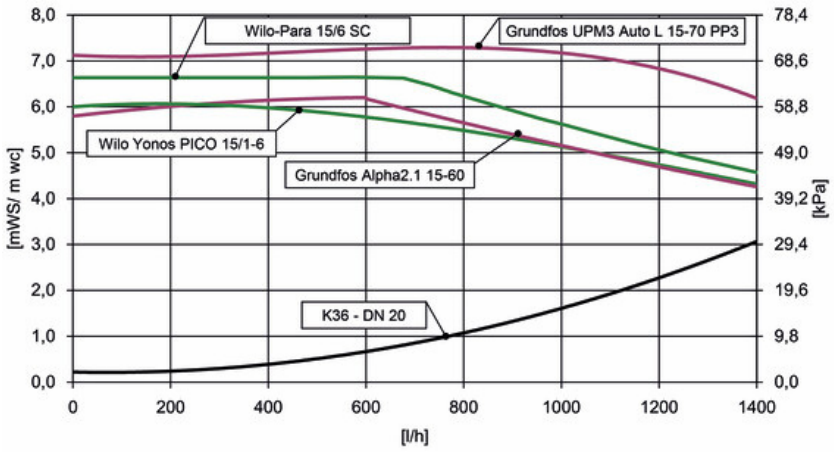
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 15-60** | Opening temperature: 45 °C | < 0.17 | ▲ | **320353GH6** |
| | **Grundfos UPM3 Auto L 15-70** | Opening temperature: 45 °C | < 0.20 | ▲ | **320353GM6** |
| | **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** |
| | **without pump - for pumps with 1" ext. thread x 130 mm** | Opening temperature: 45 °C | | ⊖ | **320353** |
| | **Grundfos ALPHA2.1 15-60** | Opening temperature: 60 °C | < 0.17 | ▲ | **320373GH6** |
| | **Grundfos UPM3 Auto L 15-70** | Opening temperature: 60 °C | < 0.20 | ▲ | **320373GM6** |
| | **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** |
| | **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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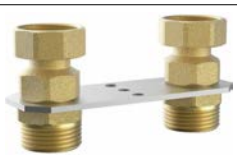
# Equipment for modular sytem DN 20

| | | |
|---|---|---|
|  | **Union nut DN 20 (¾")**<br><br>Brass, to screw insertion pieces for soldering below distribution manifolds DN 20 (¾") | **2055** |
|  | **Sealing for nut - DN 20 (¾")**<br><br>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**<br><br>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**<br><br>completely made of brass; completely premounted<br>flow and return chamber 95 % thermally separated<br>manifolds are delivered with insulation caps, the insulation for the manifold is integrated into the insulation of the HeatBloC®s<br>extremely low resistance, free passage d = 25 mm<br>up to 6 groups, premounted, extendable<br>several boiler connections possible, for higher outputs | **3116** |
|  | **Wall bracket for HeatBloC® DN 20 (¾")**<br><br>Components: 2 wall bracket sets, mounting equipment<br>Possible wall distance: 70-100 mm, distance: 15 mm<br>For 5-fold modular distribution manifolds, we recommend to use two wall bracket sets. | **3121** |
|  | **Wall bracket set DN 20**<br><br>Components: mounting plate, wall bracket, 2 x 1" nut,<br>possible centre distance: 55-115 mm<br>distance: 15 mm | **3122SET** |
|  | **Coupling piece for overhead installation - DN 20 (¾")**<br><br>Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing.<br><br>Please note:<br>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")**<br><br>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")**<br><br>For hydronic heating installations with standard circulation pumps and thermostatic or zone valves.<br>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).<br>The valve controls the flow rate in proportion to the thermostatic or zone valves.<br>The return temperature is increased as soon as the valve opens.<br><br>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")**<br><br>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**<br><br>Piping group for hydraulic separator, consisting of 2 pipe sections, union nuts and gaskets, for connection of a vertically mounted hydraulic separator below a PAW distribution manifold.<br>Flat-sealing connection, completely insulated, outlet on the right or on the left. | **3142KS1** |
|  | **Extension set for low-loss header - DN 20 (¾")**<br><br>for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header).<br>Range of application up to 950 l/h, max. up to a 3-fold distribution manifold MV3.<br>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")**<br><br>- for HeatBloC®s DN 20<br>- for heat flowmeters with the dimensions ¾" external thread x 110 mm<br>- to be mounted above the insulation<br><br>Scope of delivery:<br>- Thermo ball valve<br>- Screw-in fittings<br>- Union nuts<br>- Adapter pipe<br>- Flange fitting<br>- T-piece with counter nut and immersion sleeve<br>- Seals | **3145** |
|  | **Flush and drain set DN 20 (¾")**<br><br>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**<br><br>Set of adaptor pieces for the overhead installation of HeatBloC®s DN 25 below distribution manifolds DN 20,<br>centre distance changed from 90 mm to 125 mm,<br>connections 1" nut x 1" flange (for nut 1½") flat sealing. | **34352** |



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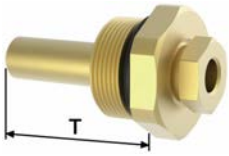
# Equipment for modular sytem DN 20

| | | |
|---|---|---|
|  | **Safety set DN 20 (¾"), up to 50 kW**<br><br>for distribution manifolds DN 20,<br>with self-sealing counter T-piece ¾" x ½",<br>outlet ¾" with cap for expansion tank,<br>pressure relief valve ½" x ¾", 3 bar, up to 50 kW,<br>pressure gauge 0-4 bar | **5257** |
|  | **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**<br><br>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**<br>self-sealing, with o-ring, polished brass, for sensor, T = 30 mm | **566001** |
| | **Immersion sleeve ¼" ext. thread x T = 60 mm**<br>standard, chromed brass, for sensor, T = 60 mm | **566002** |
| | **Immersion sleeve ½" ext. thread x T = 60 mm**<br>standard, chromed brass, with valve extension (25 mm), for sensor, T = 60 mm | **5660021** |
| | **Immersion sleeve ½" ext. thread x T = 100 mm**<br>standard, chromed copper, for sensor, T = 100 mm | **566003** |
| | **Immersion sleeve ½" ext. thread x T = 150 mm**<br>standard, chromed copper, for sensor, T = 150 mm<br><br>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.<br><br>Attention: suitable for ball valves until 2016! | **566004** |
|  | **PAW actuator SR2**<br><br>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<br><br>Electrical connection: 230 V - 50 Hz (705013), 24 V - 50/60 HZ, DC 24 V (705015)<br>Input power: 1 W (705013), 0.5 W (705015)<br>Torque: min. 2 Nm<br>Setting time for 90°: 105 s (705013), 100 s (705015) | **705013** |
|  | **Connection set for diaphragm expansion tank - DN 20 (¾")**<br><br>for assembly to distribution manifolds DN 20,<br>with tank connector ¾",<br>wall bracket and mounting equipment,<br>armoured hose with bend ¾" x 700 mm,<br>maximum tank diameter = 440 mm | **7509** |
|  | **Contact thermostat 20-60 °C**<br><br>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<br>direct / unmixed | K32<br>with 3-way mixing valve | K33<br>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<br>Controlled circuit with constant value, electronic, 3-way mixing valve with bypass 0-50% | K34<br>3-way mixing valve with bypass 0-50% | K35<br>3-temperature mixing valve |
|---|---|---|
|  |  |  |
| up to 22.5 kW*<br>(radiant panel heating, ΔT = 10 K)<br>up to 45 kW* (return flow temperature maintenance, ΔT = 20 K) | up to 45.5 kW* | up to 32.5 kW* |

| K36E<br>direct / unmixed | K38<br>with 4-way mixing valve | K34R,<br>weather compensated controller<br>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

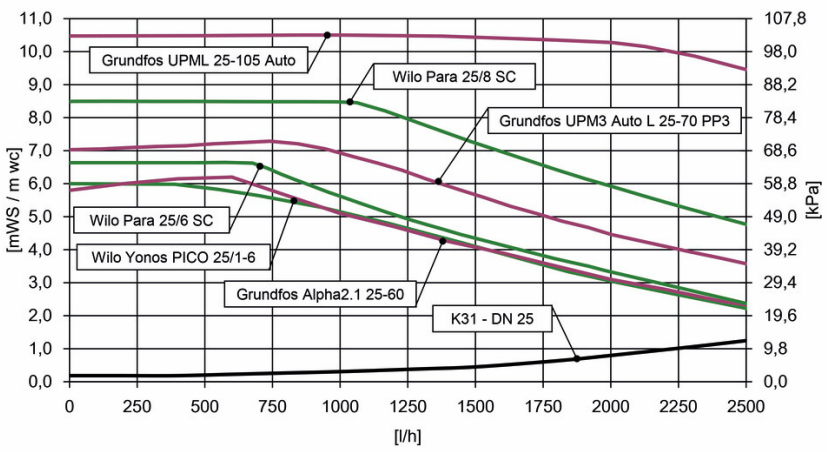
**Dimensions**

| | |
|---|---|
| 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 L 15-70** | < 0.20 | ▲ | **36013GM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲ | **36013GL9** |
| | **Wilo Para SC 25/6-43** | < 0.20 | ▲ | **36013WP6** |
| | **Wilo Para SC 25/8-60/O** | < 0.20 | ▲ | **36013WP8** |
| | **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

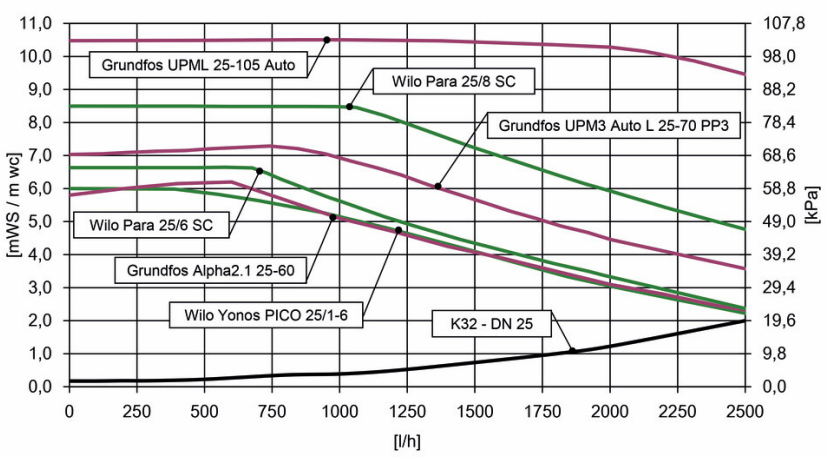
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




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

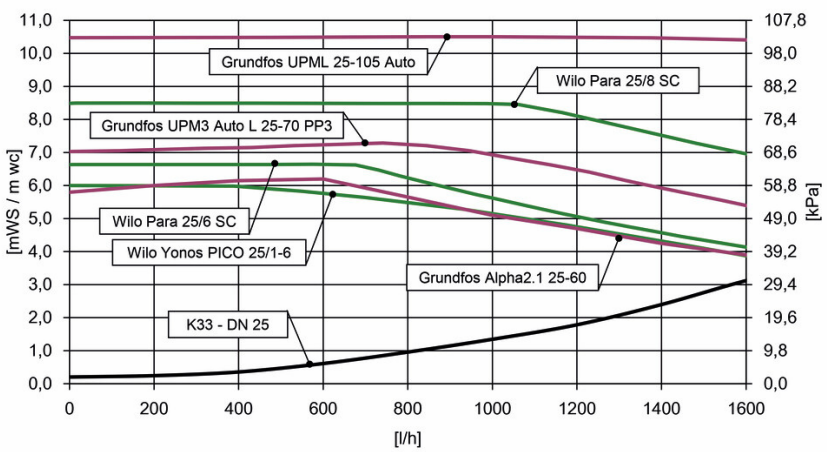
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 25-60** | < 0.17 | ▲ | **36073GH6** |
| | **Grundfos UPM3 Auto L 25-70** | < 0.20 | ▲ | **36073GM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲ | **36073GL9** |
| | **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** |
| | **without pump - for pumps with 1½" ext. thread x 180 mm** | | ⊖ | **36073** |

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



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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**

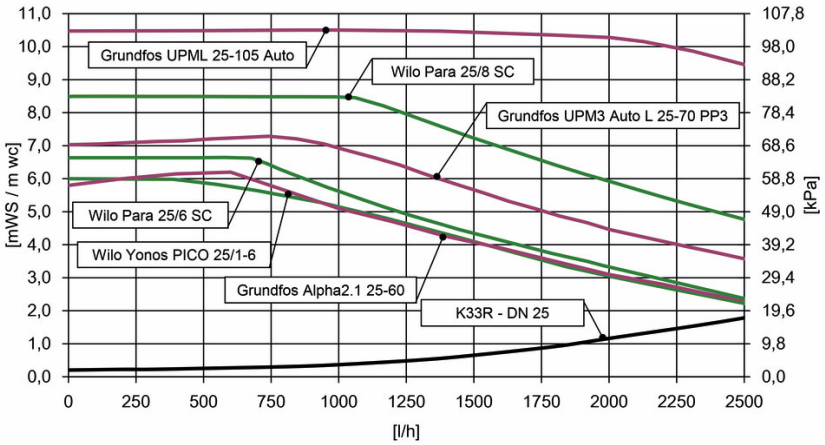
**Dimensions**

| | |
|---|---|
| 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 |

**Differential pressure diagram**




| HeatBloC® K33R DN 25 (1") | EEI* | with | Item no. |
|---|---|---|---|
| **Grundfos ALPHA2.1 25-60** | < 0.17 | ▲ | **360463GH6** |
| **Grundfos UPM3 Auto L 25-70** | < 0.20 | ▲ | **360463GM6** |
| **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲ | **360463GL9** |
| **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** |
| **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

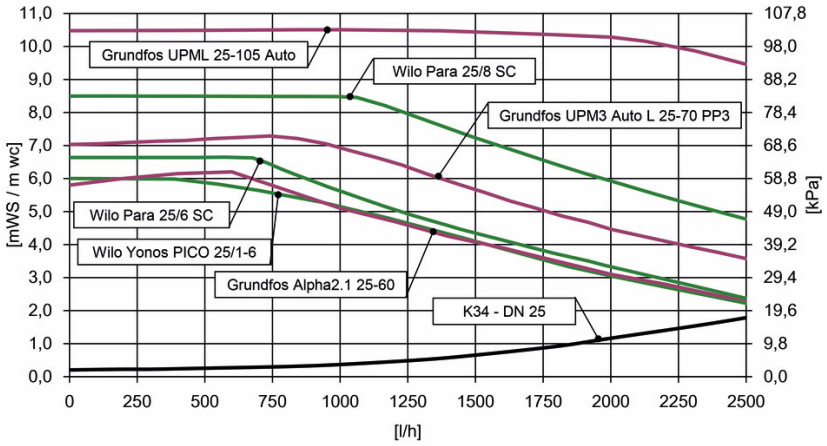
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




| HeatBloC® K34 DN 25 (1") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 25-60** | < 0.17 | ▲Ⓜ | **36063MGH6** |
| | **Grundfos UPM3 Auto L 25-70** | < 0.20 | ▲Ⓜ | **36063MGM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲Ⓜ | **36063MGL9** |
| | **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** |
| | **without pump - for pumps with 1½" ext. thread x 180 mm** | | ⊖Ⓜ | **36063M** |
| | **Grundfos ALPHA2.1 25-60** | < 0.17 | ▲ | **36063GH6** |
| | **Grundfos UPM3 Auto L 25-70** | < 0.20 | ▲ | **36063GM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲ | **36063GL9** |
| | **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** |
| | **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

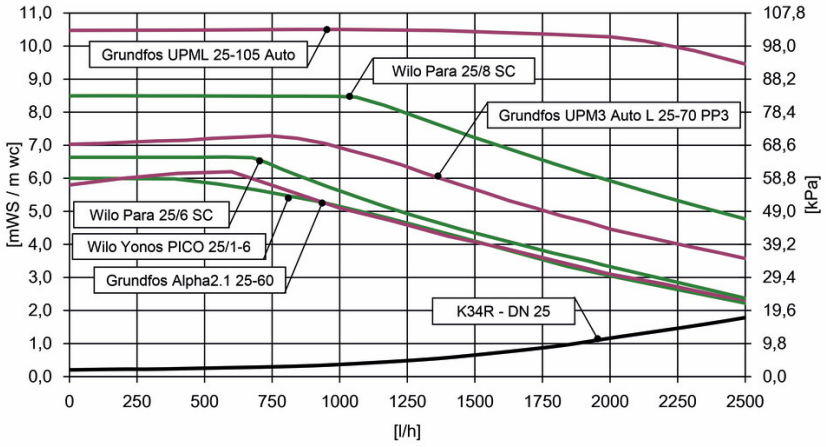
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




| HeatBloC® K34R DN 25 (1") | EEI* | with | Item no. |
|---|---|---|---|
| **Grundfos ALPHA2.1 25-60** | < 0.17 | | **360663MGH6** |
| **Grundfos UPM3 Auto L 25-70** | < 0.20 | | **360663MGM6** |
| **Grundfos UPML 25-105 AUTO** | < 0.23 | | **360663MGL9** |
| **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** |
| **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

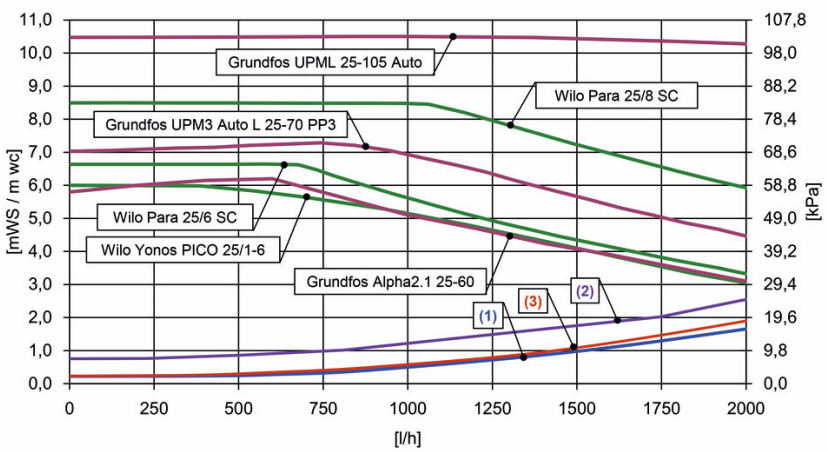
**Dimensions**

| | |
|---|---|
| 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 |

## 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. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 25-60** | < 0.17 | ▲Ⓜ | **36093MGH6** |
| | **Grundfos UPM3 Auto L 25-70** | < 0.20 | ▲Ⓜ | **36093MGM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲Ⓜ | **36093MGL9** |
| | **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** |
| | **without pump - for pumps with 1½" ext. thread x 180 mm** | | ⊖Ⓜ | **36093M** |
| | **Grundfos ALPHA2.1 25-60** | < 0.17 | ▲ | **36093GH6** |
| | **Grundfos UPM3 Auto L 25-70** | < 0.20 | ▲ | **36093GM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲ | **36093GL9** |
| | **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** |
| | **without pump - for pumps with 1½" ext. thread x 180 mm** | | ⊖ | **36093** |

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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

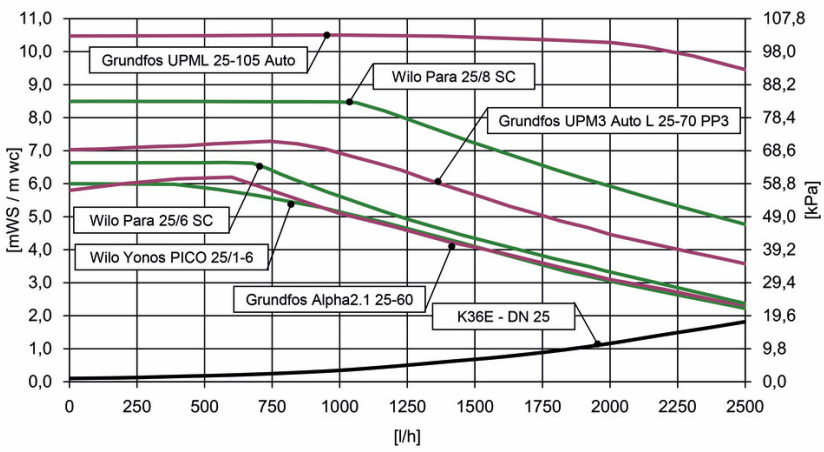
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 25-60** | Opening temperature: 45 °C | < 0.17 | ▲ | **360343GH6** |
| | **Grundfos UPM3 Auto L 25-70** | Opening temperature: 45 °C | < 0.20 | ▲ | **360343GM6** |
| | **Grundfos UPML 25-105 AUTO** | Opening temperature: 45 °C | < 0.23 | ▲ | **360343GL9** |
| | **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** |
| | **without pump - for pumps with 1½" ext. thread x 180 mm** | Opening temperature: 45 °C | | ⊖ | **360343** |
| | **Grundfos ALPHA2.1 25-60** | Opening temperature: 60 °C | < 0.17 | ▲ | **360373GH6** |
| | **Grundfos UPM3 Auto L 25-70** | Opening temperature: 60 °C | < 0.20 | ▲ | **360373GM6** |
| | **Grundfos UPML 25-105 AUTO** | Opening temperature: 60 °C | < 0.23 | ▲ | **360373GL9** |
| | **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** |
| | **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

# HeatBloC® K38 DN 25 (1")
# 4-way mixing valve

**Application range**

- Heating system controlled by a mixing valve in combination with a boiler temperature maintenance

**Recommended application range**

- up to 33 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

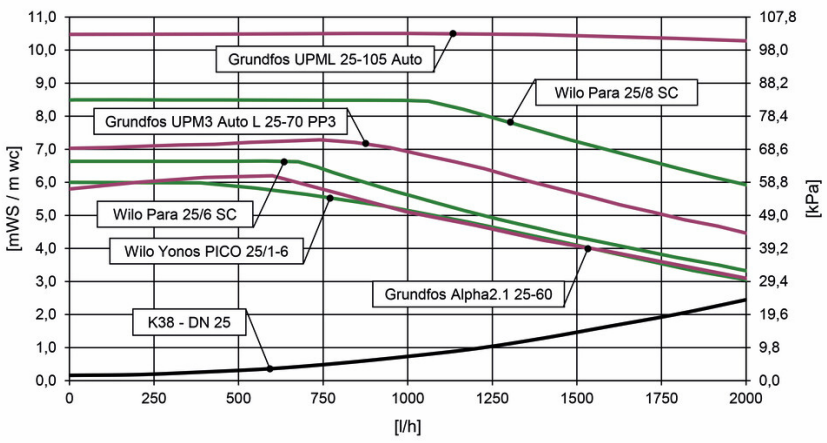
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




| HeatBloC® K38 DN 25 (1") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 25-60** | < 0.17 | ▲Ⓜ | **36083MGH6** |
| | **Grundfos UPM3 Auto L 25-70** | < 0.20 | ▲Ⓜ | **36083MGM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲Ⓜ | **36083MGL9** |
| | **Wilo Para SC 25/6-43** | < 0.20 | ▲Ⓜ | **36083MWP6** |
| | **Wilo Para SC 25/8-60/O** | < 0.20 | ▲Ⓜ | **36083MWP8** |
| | **Wilo Yonos PICO 25/1-6** | < 0.20 | ▲Ⓜ | **36083MWN06** |
| | **without pump - for pumps with 1½" ext. thread x 180 mm** | | ⊖Ⓜ | **36083M** |
| | **Grundfos ALPHA2.1 25-60** | < 0.17 | ▲ | **36083GH6** |
| | **Grundfos UPM3 Auto L 25-70** | < 0.20 | ▲ | **36083GM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | ▲ | **36083GL9** |
| | **Wilo Para 25/6-43** | < 0.20 | ▲ | **36083WP6** |
| | **Wilo Para 25/8-60/O** | < 0.20 | ▲ | **36083WP8** |
| | **Wilo Yonos PICO 25/1-6** | < 0.20 | ▲ | **36083WN06** |
| | **without pump - for pumps with 1½" ext. thread x 180 mm** | | ⊖ | **36083** |

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



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# Equipment for modular sytem DN 25



| | | |
|---|---|---|
|  | **Fitting for heat flowmeter - DN 25 for unmixed HeatBloC®s**<br><br>- for unmixed HeatBloC®s DN 25<br>- for heat flowmeters with the dimensions ¾" x 110 mm and 1" x 130 mm<br><br>Scope of delivery:<br>- Pump ball valve with check valve, can be opened (200 mm wc)<br>- Screw-in fittings<br>- Union nuts<br>- Adapter pipe<br>- Flange fitting<br>- 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)<br>- Seals | **34453** |
|  | **Fitting for heat flowmeter - DN 25 für mixed HeatBloC®s**<br><br>- for HeatBloC®s DN 25 with 3-way or 4-wax mixing valve<br>- for heat flowmeters with the dimensions ¾" ext. thread x 110 mm<br><br>Scope of delivery:<br>- Screw-in fittings<br>- Union nuts<br>- Adapter pipe<br>- 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)<br>- Non-return valve for mixing valve return<br>- Seals | **34463** |
|  | **HeatBloC® K31 DN 25 with fitting for heat meter**<br><br>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**<br><br>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**<br><br>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")**<br><br>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.<br><br>Careful: Flush and drain set is not compatible with the HeatBloC® MC system! | **3461** |

# 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**<br><br>completely made of brass ; completely premounted<br>entirely insulated with EPP half-shells<br>extremely low resistance, free passage d = 36 mm<br>up to 6 groups, premounted, extendable<br>several boiler connections possible, for higher outputs | **34163** |
|  | **Adapter pipe DN 25 (1")**<br><br>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**<br><br>for installation of HeatBloC®s DN 20 on modular distribution manifolds DN 25,<br>adapter set 1½" external thread, flat-sealing with nut on ¾" PAW flange,<br>reduction of the centre distance from 125 mm to 90 mm,<br>distance pipe 1" internal thread x 1" external thread, flat sealing, brass, with sealing.<br><br>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**<br><br>for the assembly of HeatBloC®s DN 32 on distribution manifolds DN 25,<br>set of distance rings for union nut 2" internal thread on 1" PAW flange,<br>made of brass, with special sealing, flat-sealing | **3436** |
|  | **Coupling piece for overhead installation - DN 25 (1")**<br><br>Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing.<br>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")**<br><br>Components: mounting plate, 2 gaskets, 2 x 1½" nut, 2 x housing of coupling F 1" x 1½" ext. thread<br>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")**<br><br>Galvanised mounting bracket for wall assembly of HeatBloC®s.<br>Mount HeatBloC®s on mounting bracket for an easy assembly. | **34723** |
|  | **Wall bracket for HeatBloC® DN 25 - DN 32**<br><br>Consisting of: wall bracket (galvanised steel), mounting equipment<br>DN 25 / DN 32: Possible wall distance: 155 mm<br><br>Not required for installation with a PAW modular distribution manifold | **34722** |



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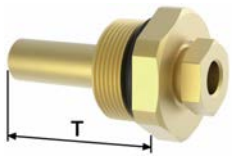
# Equipment for modular sytem DN 25

| | | |
|---|---|---|
|  | **Wall bracket for modular distribution manifold - DN 25 (1") - DN 32 (1¼")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **34721** |
|  | **Wall bracket set for installation of single heating circuits - DN 25 (1")**<br><br>Components: 2 x 1½" nut, mounting plate, wall bracket<br><br>possible wall distance: 155 mm | **3422SET** |
|  | **Immersion sleeve ½" ext. thread x T = 30 mm**<br>self-sealing, with o-ring, polished brass, for sensor, T = 30 mm | **566001** |
| | **Immersion sleeve ¼" ext. thread x T = 60 mm**<br>standard, chromed brass, for sensor, T = 60 mm | **566002** |
| | **Immersion sleeve ½" ext. thread x T = 60 mm**<br>standard, chromed brass, with valve extension (25 mm), for sensor, T = 60 mm | **5660021** |
| | **Immersion sleeve ½" ext. thread x T = 100 mm**<br>standard, chromed copper, for sensor, T = 100 mm | **566003** |
| | **Immersion sleeve ½" ext. thread x T = 150 mm**<br>standard, chromed copper, for sensor, T = 150 mm<br><br>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.<br><br>Attention: suitable for ball valves until 2016! | **566004** |
|  | **Union nut DN 25 (1")**<br><br>Brass, to screw insertion pieces for soldering below distribution manifolds DN 25 (1") | **2155** |
|  | **Sealing for nut - DN 25 (1")**<br><br>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**<br><br>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")**<br><br>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")**<br><br>2 brass screw-in fittings 1½" external thread x 1" internal thread, for connection of pipes with 1" external thread | **3432** |

# Equipment for modular sytem DN 25

| | | |
|---|---|---|
|  | **Non-return valve DN 25 (1")**<br><br>To be inserted into the PAW mixing valve.<br>Prevents unwanted circulation for example when various mixing valves are connected to one distribution manifold.<br>The shutoff valve can be simply inserted into the mixing valve.<br>For HeatBloC® K38 DN 25 | **34011** |
|  | **Non-return valve for the mixing valve return - DN 25 (1")**<br><br>To be inserted into the PAW mixing valve.<br>Prevents unwanted circulation for example when various mixing valves are connected to one distribution manifold.<br>The shutoff valve can be simply inserted into the mixing valve.<br>Not for HeatBloC® K38 DN 25. | **340112** |
|  | **Piping for two HeatBloC®s K35**<br><br>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**<br><br>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**<br><br>Pipe set DN 25 to connect a mixing valve to a HeatBloC® K35 | **36092KS4** |
|  | **Piping group for hydraulic separator - DN 25 (1")**<br><br>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.<br>Flat-sealing connection, completely insulated, outlet on the left or on the right. | **3442KS1** |



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# Equipment for modular sytem DN 25

| | | |
|---|---|---|
|  | **Extension set for low-loss header - DN 25 (1")**<br><br>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.<br>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**<br><br>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**<br><br>For the installation on modular distribution manifolds DN 25 (as of 2017),<br>with a connection of ¾" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7507),<br>pressure relief valve ½" x ¾", 3 bar, up to 50 kW, pressure gauge 0-4 bar | **52543** |
|  | **Safety set distribution manifold - DN 25 (1") up to 50 kW, counter elbow**<br><br>For the installation on modular distribution manifolds DN 25,<br>with self-sealing counter elbow ¾" x ½",<br>outlet ¾" for expansion tank with cap<br>pressure relief valve ½" x ¾", 3 bar, up to 50 kW,<br>pressure gauge 0-4 bar | **5254** |
|  | **Connection set for diaphragm expansion tank DN 20**<br><br>for assembly to safety group DN 25,<br>with self-sealing double nipple ¾" and mounting equipment, tank connector ¾",<br>armoured hose with bend ¾" x 700 mm, double nipple ¾", maximum tank diameter = 440 mm | **7507** |
|  | **Limit switch**<br><br>The limit switch is a micro switch. For the assembly in the actuators SR5 and SR10-24/3P. | **705101** |
|  | **Temperature sensor Pt1000-B**<br><br>Temperature sensor for the integration into the flow and return ball valve of products of the HeatBloC® range DN 25 and DN 32.<br><br>• The temperature sensor Pt1000 with plug connection measures the temperature directly in the fluid.<br>• ¼" external thread<br>• including matching connection cable (2.9 m) with wire end ferrules | **131934** |

# Equipment for modular sytem DN 25

| | | |
|---|---|---|
|  | **PAW actuator SR5**<br><br>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, due to the removable scale it is suited for flow on the right or left side<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 2.5 W<br>Torque: 5 Nm<br>Setting time for 90°: 140 s | **705001** |
|  | **PAW actuator SR10**<br><br>due 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<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 3.5 W<br>Torque: 10 Nm<br>Setting time for 90°: 140 s | **705002** |
|  | **PAW actuator SR10 24/3P**<br><br>Like PAW actuator 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**<br><br>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<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 1.5 W<br>Torque: 10 Nm<br>Setting time for 90°: 140 s | **70541** |
|  | **PAW constant temperature controller PKR6**<br><br>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<br><br>Power supply: 230 V - 50 Hz<br>Power consumption: 3 W<br>Torque: min. 6 Nm<br>Setting time 90°: 120 s | **703601** |
|  | **Weather compensated controller PWR6**<br><br>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.<br>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**<br><br>Room remote control RCD 2.0 for weather compensated controller PWR6 | **1359501** |



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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, 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

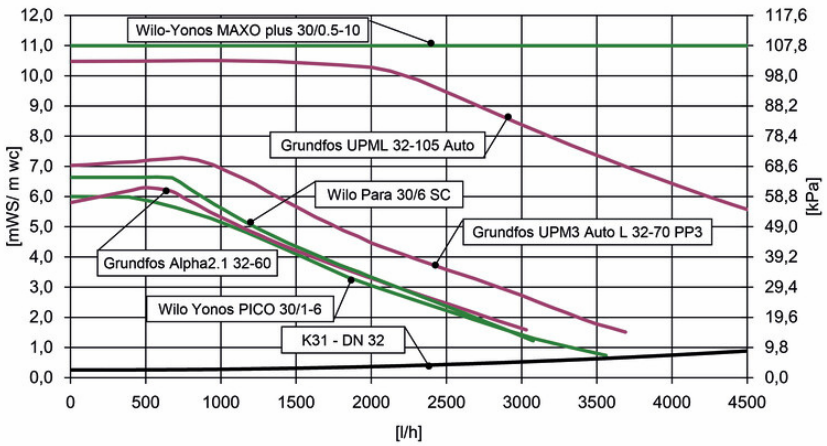
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 32-60** | < 0.17 | ▲ | **39013GH6** |
| | **Grundfos UPM3 Auto L 32-70** | < 0.20 | ▲ | **39013GM6** |
| | **Grundfos UPML 32-105 AUTO** | < 0.23 | ▲ | **39013GL9** |
| | **Wilo Para SC 30/6-43** | < 0.20 | ▲ | **39013WP6** |
| | **Wilo Yonos PICO 30/1-6** | < 0.20 | ▲ | **39013WN06** |
| | **Wilo Yonos MAXO plus 30/0.5-10** | < 0.20 | ▲ | **39013WY10** |
| | **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

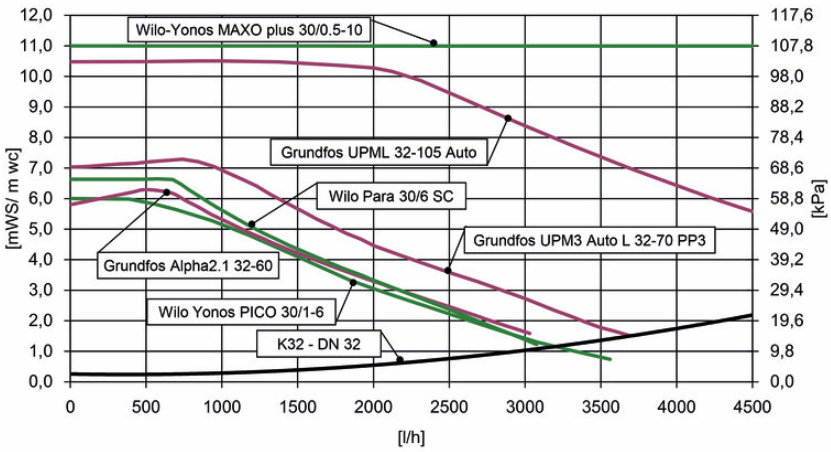
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




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

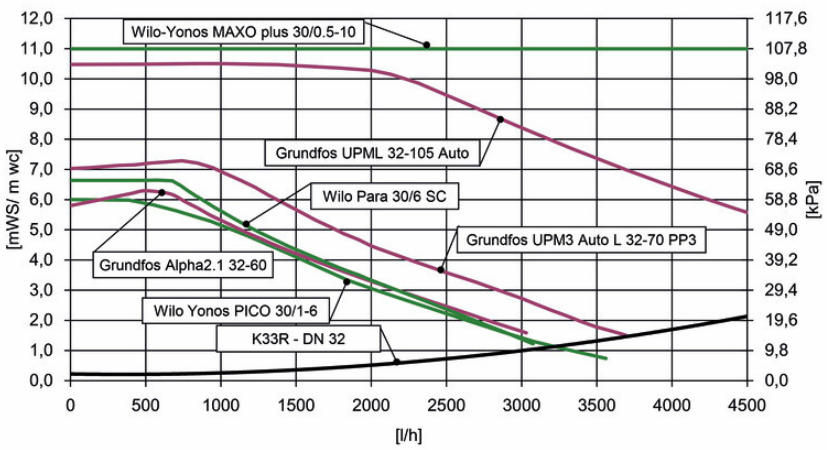
**Dimensions**

| | |
|---|---|
| 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 |

**Differential pressure diagram**




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

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



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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

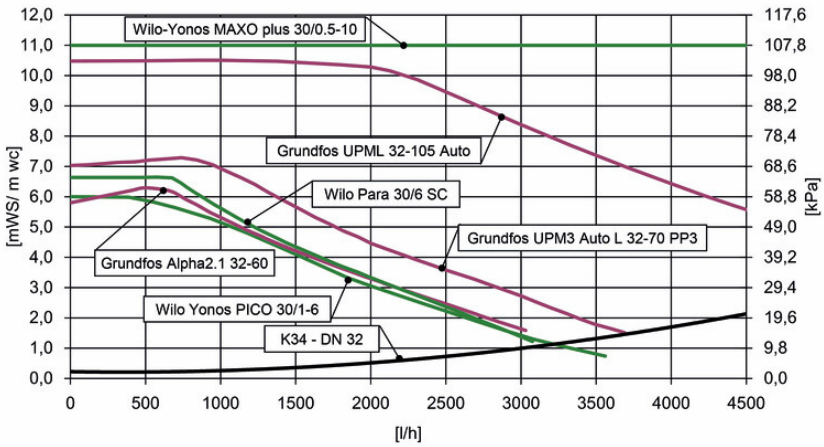
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




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

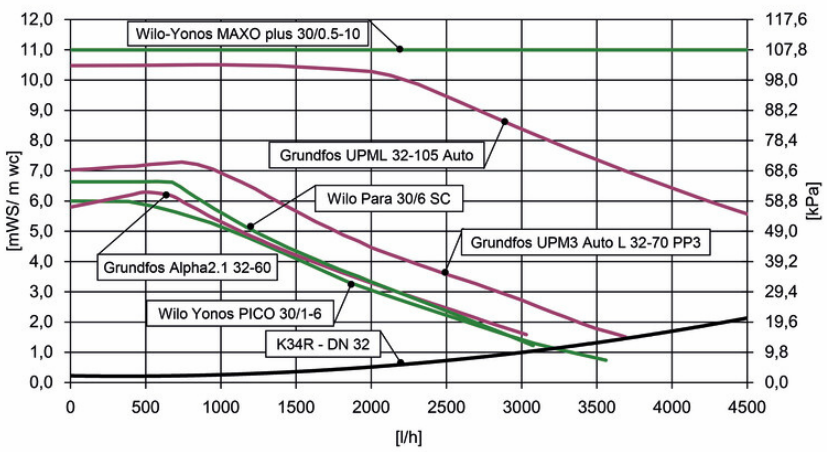
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




| HeatBloC® K34R DN 32 (1¼") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 32-60** | < 0.17 | | **390663MGH6** |
| | **Grundfos UPM3 Auto L 32-70** | < 0.20 | | **390663MGM6** |
| | **Grundfos UPML 32-105 AUTO** | < 0.23 | | **390663MGL9** |
| | **Wilo Para 30/6-43** | < 0.20 | | **390663MWP6** |
| | **Wilo Yonos PICO 30/1-6** | < 0.20 | | **390663MWN06** |
| | **Wilo Yonos MAXO plus 30/0.5-10** | < 0.20 | | **390663MWY10** |
| | **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**

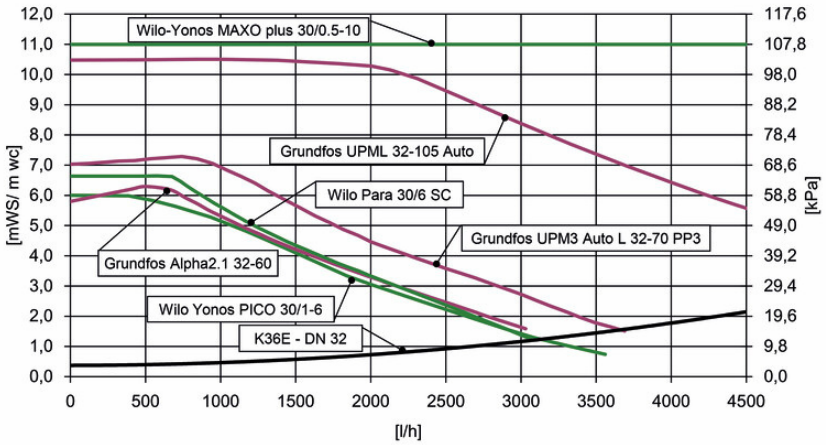
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 32-60** | Opening temperature: 45 °C | < 0.17 | ▲ | **390343GH6** |
| | **Grundfos UPM3 Auto L 32-70** | Opening temperature: 45 °C | < 0.20 | ▲ | **390343GM6** |
| | **Grundfos UPML 32-105 AUTO** | Opening temperature: 45 °C | < 0.23 | ▲ | **390343GL9** |
| | **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** |
| | **without pump - for pumps with 2" ext. thread x 180 mm** | Opening temperature: 45 °C | | ⊖ | **390343** |
| | **Grundfos ALPHA2.1 32-60** | Opening temperature: 60 °C | < 0.17 | ▲ | **390373GH6** |
| | **Grundfos UPML 32-105 AUTO** | Opening temperature: 60 °C | < 0.23 | ▲ | **390373GL9** |
| | **Grundfos UPM3 Auto L 32-70** | Opening temperature: 60 °C | < 0.20 | ▲ | **390373GM6** |
| | **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** |
| | **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

# HeatBloC® K38 DN 32 (1¼")
# 4-way mixing valve

**Application range**

- Heating system controlled by a mixing valve in combination with a boiler temperature maintenance

**Recommended application range**

- up to 52 kW
- 20 K up to 2240 l/h

**Operating data**

| | |
|---|---|
| Max. operating pressure | 6 bar |
| Max. operating temperature | 110 °C |
| Kvs value | 6.1 |

## Technical data

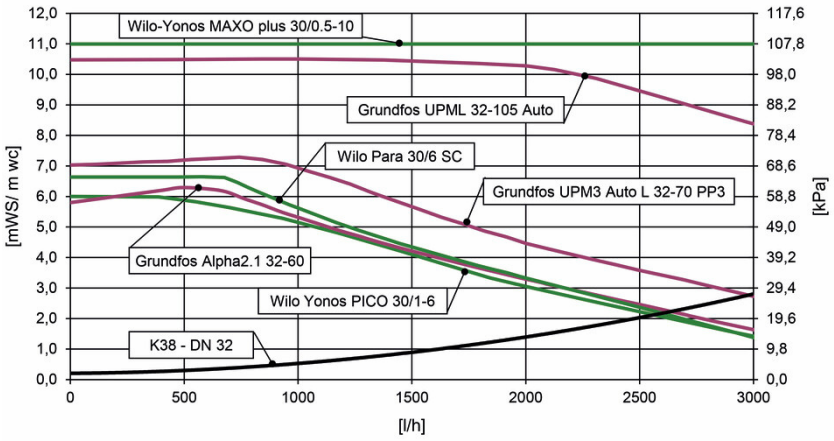
**Dimensions**

| | |
|---|---|
| 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® K38 DN 32 (1¼") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos ALPHA2.1 32-60** | < 0.17 | ▲Ⓜ | **39083MGH6** |
| | **Grundfos UPM3 Auto L 32-70** | < 0.20 | ▲Ⓜ | **39083MGM6** |
| | **Grundfos UPML 32-105 AUTO** | < 0.23 | ▲Ⓜ | **39083MGL9** |
| | **Wilo Para SC 30/6-43** | < 0.20 | ▲Ⓜ | **39083MWP6** |
| | **Wilo Yonos PICO 30/1-6** | < 0.20 | ▲Ⓜ | **39083MWN06** |
| | **Wilo Yonos MAXO plus 30/0.5-10** | < 0.20 | ▲Ⓜ | **39083MWY10** |
| | **without pump - for pumps with 2" ext. thread x 180 mm** | | ⊖Ⓜ | **39083M** |
| | **Grundfos ALPHA2.1 32-60** | < 0.17 | ▲ | **39083GH6** |
| | **Grundfos UPM3 Auto L 32-70** | < 0.20 | ▲ | **39083GM6** |
| | **Grundfos UPML 32-105 AUTO** | < 0.23 | ▲ | **39083GL9** |
| | **Wilo Para SC 30/6-43** | < 0.20 | ▲ | **39083WP6** |
| | **Wilo Yonos PICO 30/1-6** | | ▲ | **39083WN06** |
| | **Wilo Yonos MAXO plus 30/0.5-10** | < 0.20 | ▲ | **39083WY10** |
| | **without pump - for pumps with 2" ext. thread x 180 mm** | | ⊖ | **39083** |

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



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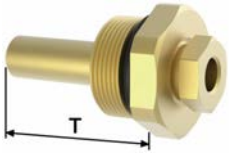
# Equipment for modular sytem DN 32



| | | |
|---|---|---|
|  | **Fitting for heat flowmeter - DN 32 for unmixed HeatBloC®s**<br><br>- for unmixed HeatBloC®s DN 32<br>- for heat flowmeters with the dimensions ¾" x 110 mm and 1" x 130 mm<br><br>Scope of delivery:<br>- Pump ball valve with check valve, can be opened (200 mm wc)<br>- Screw-in fittings, flat sealing<br>- Union nut<br>- Adapter pipe<br>- 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)<br>- Seals | **37453** |
|  | **Fitting for heat flowmeter - DN 32 for mixed HeatBloC®s**<br><br>- for HeatBloC®s DN 32 with 3-way or 4-wax mixing valve<br>- for heat flowmeters with the dimensions 1" ext. thread x 130 mm<br><br>Scope of delivery:<br>- Screw-in fittings flat sealing<br>- Adapter pipe<br>- 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)<br>- Non-return valve for mixing valve return<br>- Seals | **37463** |
|  | **Immersion sleeve ½" ext. thread x T = 30 mm**<br>self-sealing, with o-ring, polished brass, for sensor, T = 30 mm | **566001** |
| | **Immersion sleeve ¼" ext. thread x T = 60 mm**<br>standard, chromed brass, for sensor, T = 60 mm | **566002** |
| | **Immersion sleeve ½" ext. thread x T = 60 mm**<br>standard, chromed brass, with valve extension (25 mm), for sensor, T = 60 mm | **5660021** |
| | **Immersion sleeve ½" ext. thread x T = 100 mm**<br>standard, chromed copper, for sensor, T = 100 mm | **566003** |
| | **Immersion sleeve ½" ext. thread x T = 150 mm**<br>standard, chromed copper, for sensor, T = 150 mm<br><br>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.<br><br>Attention: suitable for ball valves until 2016! | **566004** |
|  | **Adapter pipe DN 32 (1¼")**<br><br>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")**<br><br>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.<br>Careful: Flush and drain set is not compatible with the HeatBloC® MC system! | **3761** |
|  | **Union nut DN 32 (1¼")**<br><br>Brass, to screw insertion pieces for soldering below distribution manifolds DN 32 (1¼") | **2156** |

# Equipment for modular sytem DN 32

| | | |
|---|---|---|
|  | **Sealing for nut - DN 32 (1¼")**<br><br>asbestos-free, outside diameter: 50 mm, inside diameter: 38 mm, height: 2 mm | **2158** |
|  | **Connection set DN 32 (1¼")**<br><br>Consisting of 2 insertion pieces for connection of pipes with 1¼" external thread below HeatBloC®s | **3731** |
|  | **Connection set DN 32 (1¼")**<br><br>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")**<br><br>To be inserted into the PAW mixing valve.<br>Prevents unwanted circulation for example when various mixing valves are connected to one distribution manifold.<br>The shutoff valve can be simply inserted into the mixing valve. | **37011** |
|  | **Coupling piece for overhead installation - DN 32 (1¼")**<br><br>Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing.<br>Please note:<br>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")**<br><br>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")**<br><br>Galvanised mounting bracket for wall assembly of HeatBloC®s.<br>Mount HeatBloC®s on mounting bracket for an easy assembly. | **34723** |
|  | **Wall bracket for HeatBloC® DN 25 - DN 32**<br><br>Consisting of: wall bracket (galvanised steel), mounting equipment<br>DN 25 / DN 32: Possible wall distance: 155 mm<br><br>Not required for installation with a PAW modular distribution manifold | **34722** |
|  | **Wall bracket for modular distribution manifold - DN 25 (1") - DN 32 (1¼")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **34721** |
|  | **Wall bracket set DN 32**<br><br>Components: 2 x 2" nut, mounting plate, wall bracket<br>possible wall distance: 155 mm | **3722SET** |



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# Equipment for modular sytem DN 32

| | | |
|---|---|---|
|  | **Reducer set DN 32 - DN 25**<br><br>for the installalation of DN 25 HeatBloC®s on DN 32 distribution manifolds,<br>adapter set 2" external thread, flat-sealing with nut on 1½" internal thread, flat-sealing,<br>made of brass, with gaskets, 2 types | **37351** |
| | **Reducer set DN 32 - DN 25**<br><br>for installation of modular heating circuits DN 20 on modular distribution manifolds DN 25,<br>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.<br>The required union nuts 1" internal thread are dismounted from the heating circuit. | **3735** |
|  | **Piping group for hydraulic separator - DN 32 (1¼")**<br><br>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.<br>Flat-sealing connection, completely insulated, outlet on the left or on the right. | **34742KS1** |
|  | **Extension set for low-loss header - DN 32 (1¼")**<br><br>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.<br>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**<br><br>completely made of brass; completely premounted<br>entirely insulated with EPP half-shells<br>extremely low resistance, free passage d = 50 mm<br>up to 6 groups, premounted, extendable<br>several boiler connections possible, for higher outputs | **37163** |
|  | **Contact thermostat 20-60 °C**<br><br>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**<br><br>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** |

# Equipment for modular sytem DN 32

| | | |
|---|---|---|
|  | **Connection set DN 25 for diaphragm expansion tank**<br><br>for assembly to a safety group DN 32,<br>with self-sealing double nipple 1", cap valve 1", armoured hose with bend 1" x 700 mm. | **7508** |
|  | **Temperature sensor Pt1000-B**<br><br>Temperature sensor for the integration into the flow and return ball valve of products of the HeatBloC® range DN 25 and DN 32.<br><br>• The temperature sensor Pt1000 with plug connection measures the temperature directly in the fluid.<br>• ¼" external thread<br>• including matching connection cable (2.9 m) with wire end ferrules | **131934** |
|  | **PAW actuator SR5**<br><br>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, due to the removable scale it is suited for flow on the right or left side<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 2.5 W<br>Torque: 5 Nm<br>Setting time for 90°: 140 s | **705001** |
|  | **PAW actuator SR10**<br><br>due 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<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 3.5 W<br>Torque: 10 Nm<br>Setting time for 90°: 140 s | **705002** |
|  | **PAW actuator SR10 24/3P**<br><br>Like PAW actuator 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**<br><br>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<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 1.5 W<br>Torque: 10 Nm<br>Setting time for 90°: 140 s | **70541** |
|  | **PAW constant temperature controller PKR6**<br><br>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<br><br>Power supply: 230 V - 50 Hz<br>Power consumption: 3 W<br>Torque: min. 6 Nm<br>Setting time 90°: 120 s | **703601** |



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| | | |
|---|---|---|
|  | **Weather compensated controller PWR6**<br><br>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.<br>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**<br><br>Room remote control RCD 2.0 for weather compensated controller PWR6 | **1359501** |

## 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

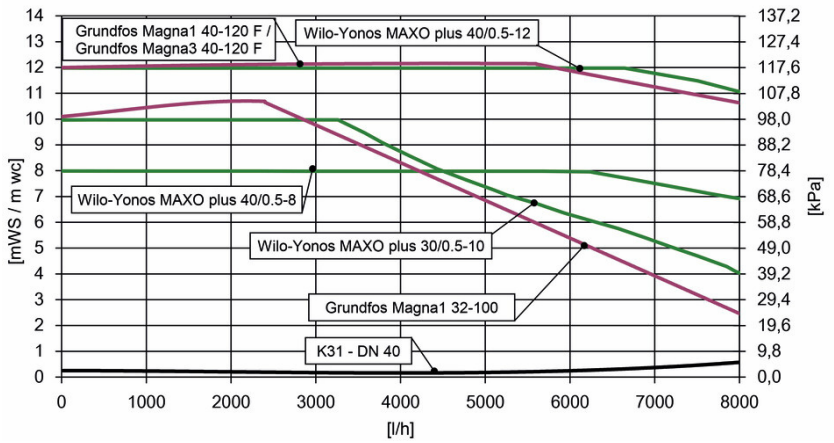
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|
|  | **Grundfos MAGNA3 40-120 F** | < 0.18 | ▲ | **41211GH12** |
| | **Grundfos MAGNA1 32-100** | < 0.21 | ▲ | **41211GL10** |
| | **Grundfos MAGNA1 40-120 F** | < 0.21 | ▲ | **41211GL12** |
| | **Wilo Yonos MAXO plus 30/0.5-10** | < 0.20 | ▲ | **41211WY10** |
| | **Wilo Yonos MAXO plus 40/0.5-8** | < 0.20 | ▲ | **41211WY8** |
| | **Wilo Yonos MAXO plus 40/0.5-12** | < 0.20 | ▲ | **41211WY12** |
| | **without pump - for pumps with flange DN 40/PN6 x 250 mm** | | ⊖ | **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

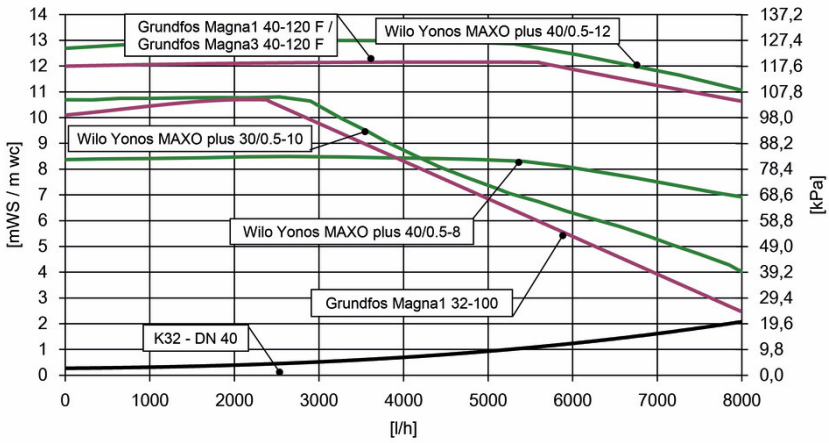
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




| HeatBloC® K32 DN 40 (1½") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos MAGNA3 40-120 F** | < 0.18 | | **41221MGH12** |
| | **Grundfos MAGNA1 32-100** | < 0.21 | | **41221MGL10** |
| | **Grundfos MAGNA1 40-120 F** | < 0.21 | | **41221MGL12** |
| | **Wilo Yonos MAXO plus 30/0.5-10** | < 0.20 | | **41221MWY10** |
| | **Wilo Yonos MAXO plus 40/0.5-8** | < 0.20 | | **41221MWY8** |
| | **Wilo Yonos MAXO plus 40/0.5-12** | < 0.20 | | **41221MWY12** |
| | **without pump - for pumps with flange DN 40/PN6 x 250 mm** | | | **41221M** |
| | **Wilo Yonos MAXO plus 30/0.5-10** | < 0.20 | | **41051WY10** |
| | **Wilo Yonos MAXO plus 40/0.5-12** | < 0.20 | | **41051WY12** |
| | **Grundfos MAGNA3 40-120 F** | < 0.18 | | **41221GH12** |

= 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

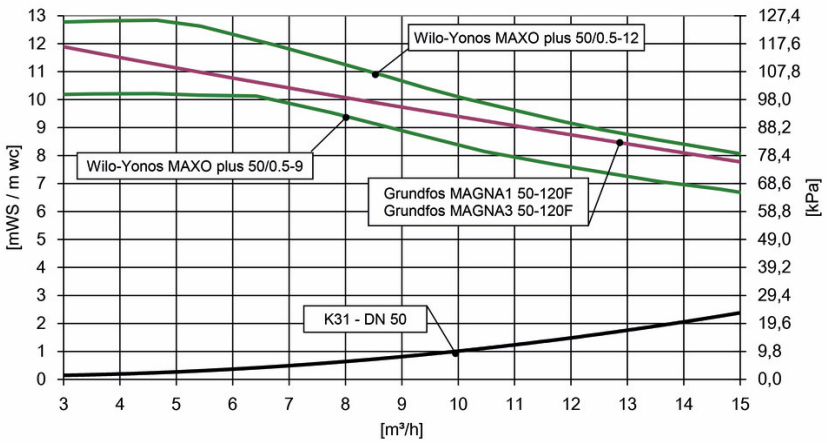
**Dimensions**

| | |
|---|---|
| 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. |
|---|---|---|---|---|
|  | **Grundfos MAGNA3 50-120 F** | < 0.18 | ▲ | **51211GH12** |
| | **Grundfos MAGNA1 50-120 F** | < 0.21 | ▲ | **51211GL12** |
| | **Wilo Yonos MAXO plus 50/0.5-12** | < 0.23 | ▲ | **51211WM12** |
| | **Wilo Yonos MAXO plus 50/0.5-9** | < 0.20 | ▲ | **51211WY9** |
| | **without pump - for pumps with flange DN 50/PN6 x 280 mm** | | ⊖ | **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

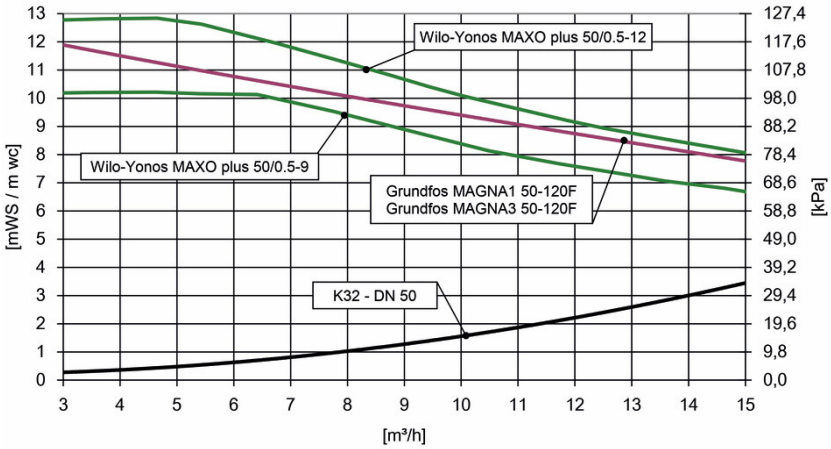
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




| HeatBloC® K32 DN 50 (2") | | EEI* | with | Item no. |
|---|---|---|---|---|
|  | **Grundfos MAGNA3 50-120 F** | < 0.18 | | **51221MGH12** |
| | **Grundfos MAGNA1 50-120 F** | < 0.21 | | **51221MGL12** |
| | **Wilo Yonos MAXO plus 50/0.5-12** | < 0.23 | | **51221MWM12** |
| | **Wilo Yonos MAXO plus 50/0.5-9** | < 0.20 | | **51221MWY9** |
| | **Wilo Yonos MAXO plus 50/0.5-9** | < 0.20 | | **51051WY9** |
| | **without pump - for pumps with flange DN 50/PN6 x 280 mm** | | | **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**<br><br>modular distribution manifold made of brass<br>connecting flanges as slip-on flanges made of steel<br>gaskets and screws for boiler connection DN 50 included<br>completely premounted; entirely insulated with EPP shells<br>extremely low resistance, free passage d = 64 mm<br>up to 4 groups, premounted, extendable<br>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**<br><br>modular distribution manifold made of brass<br>connecting flanges as slip-on flanges made of steel<br>gaskets and screws for boiler connection DN 65 included<br>completely premounted; entirely insulated with EPP shells<br>extremely low resistance, free passage d = 84 mm<br>up to 4 groups, premounted, extendable<br>boiler connections DN 65 | **5114** |
|  | **Floor bracket set for modular distribution manifold - DN 40 / 50 (1½"/ 2")**<br><br>Components: 2 floor brackets (galvanized steel), 4 wall plugs, 4 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Height = adjustable 1,050 - 1,080 mm, for shortening simply cut off | **41671** |
|  | **Wall bracket set for modular distribution manifold - DN 40 (1½")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **41651** |
|  | **Wall bracket set for modular distribution manifold - DN 50 (2")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **41652** |
|  | **Wall bracket for HeatBloC® DN 40 (1½")**<br><br>Components: Wall bracket, 2 gaskets, mounting equipment,<br>distance of the pipe axis to the wall A = 270 mm | **41641** |
|  | **Wall bracket for HeatBloC®s - DN 50 (2")**<br><br>Components: Wall bracket (galvanised steel), 2 gaskets, mounting equipment,<br>distance of the pipe axis to the wall A = 400 mm | **41642** |



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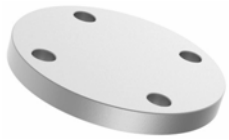
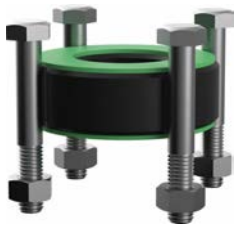
# Equipment for modular sytem DN 40 / 50



| | | |
|---|---|---|
|  | **Extension module DN 40 (1½"), for the standard and MC series** | **4111** |
| | **Extension module DN 50 (2"), for the standard and MC series**<br><br>Completely made of brass<br>Completely preassembled<br>Flow and return chamber 95 % thermally separated | **5111** |
|  | **Blind flange DN 40 (1½") / PN 6** | **41611** |
| | **Blind flange 50 (2") / PN 6**<br><br>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**<br><br>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**<br><br>PN 6, acc. to DIN 2631, steel, black | **51613** |
|  | **Set reducer flanges DN 40 - DN 32 (1½" - 1¼")**<br><br>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.<br>One side flange DN 40 - PN 6, other side flange for 2" union nut, flat sealing.<br>Reduction of the centre distance from 160 mm to 125 mm, installation height = 35 mm.<br><br>*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")**<br><br>2 reducing flanges made of steel, zinced/brass for connecting a DN 32 HeatBloC® on a DN 50 modular distribution manifold.<br>One side DN 50 flange with PN 6, other side flange DN 32 - 1¼".<br>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")**<br><br>2 reducing flanges made of zinced steel for connecting a DN 40 HeatBloC® on a DN 50 modular distribution manifold.<br>For the assembly of a DN 40 pump, installation length 250 mm, in a DN 50 HeatBloC®.<br>One side DN 50 flange (PN 6), other side DN 40 flange (PN 6).<br>Reduction of the centre distance from 180 mm to 160 mm, with seals and screws, installation height = 13 mm<br>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")**<br><br>for conversion into a distribution manifold with integrated hydraulic separator (low-loss header).<br>Consisting of: 1 distance ring for a resistance-free connection of flow and return chamber, incl. screws and o-rings. | **5143** |
|  | **PAW actuator SR10**<br><br>due 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<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 3.5 W<br>Torque: 10 Nm<br>Setting time for 90°: 140 s | **705002** |

# Equipment for modular sytem DN 40 / 50

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



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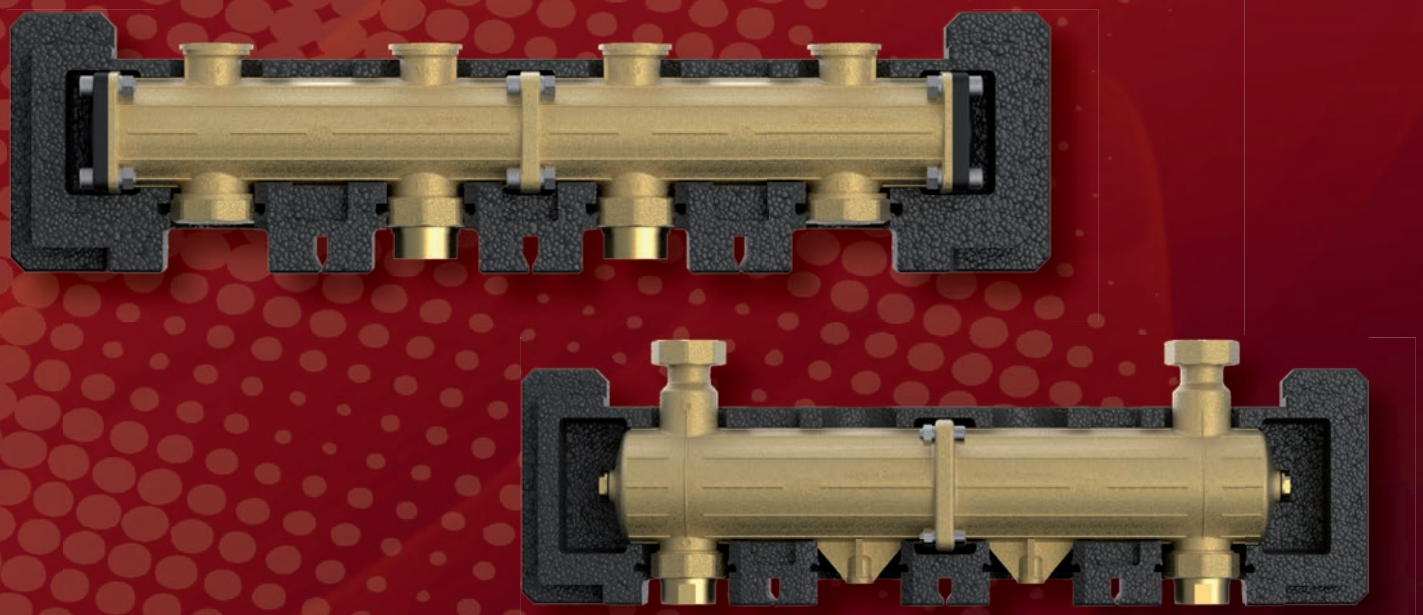

# Modular distribution manifolds / hydraulic separators

## Catalogue 01/2024

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

Valid for the EU

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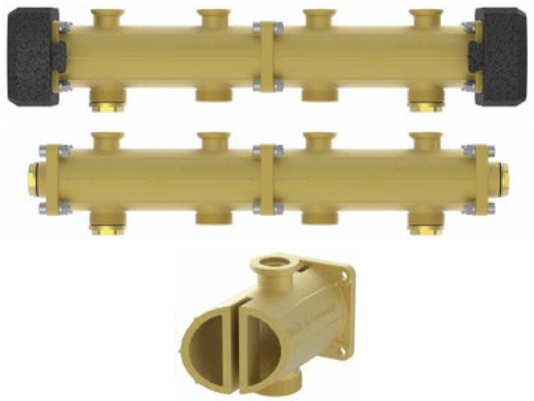
# Distribution manifold DN 20 (¾")



**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

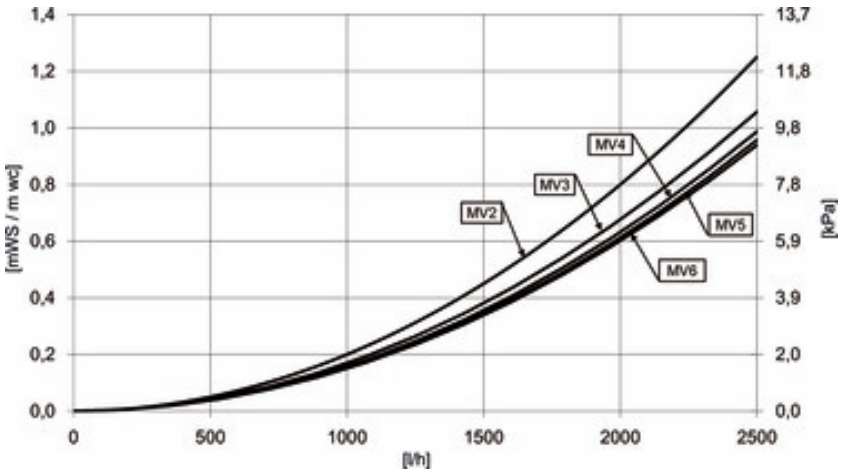
**Dimensions**

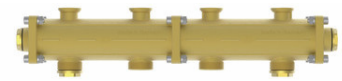
| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Height | 80 mm |
| Height insulation | 85 mm |
| Centre distance | 90 mm |
| Connection generator | ¾" int. thread x 1" ext. thread, flat-sealing (bottom), 2 x for boiler connection, others plugged |
| Connection consumer | ¾" PAW flange for nut 1" (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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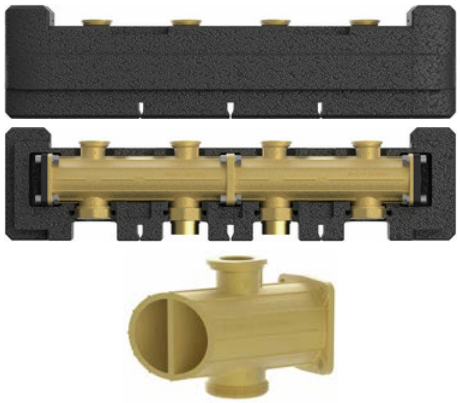
# Distribution manifold DN 25 (1")





**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

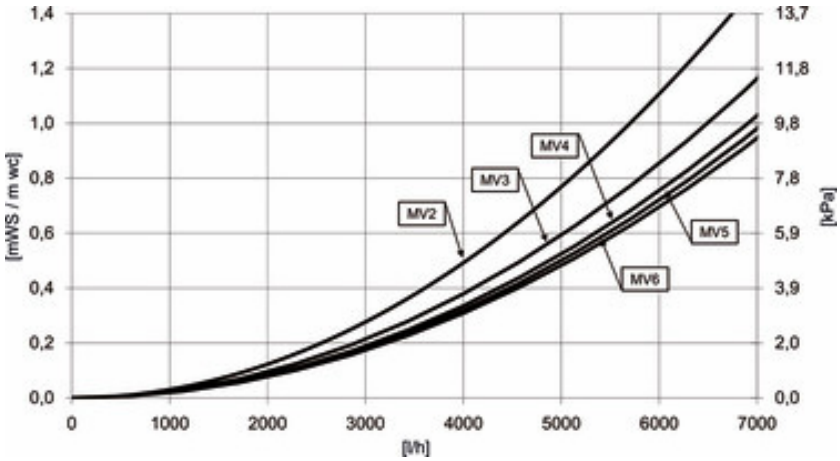
**Dimensions**

| | |
|---|---|
| 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**

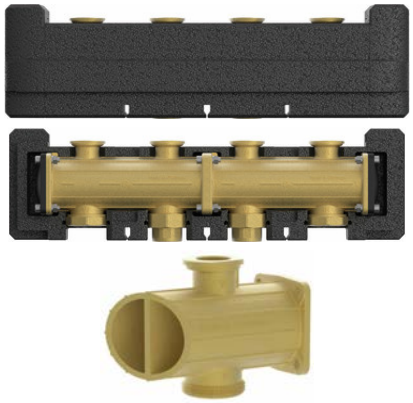
| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |

## 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** |

# 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

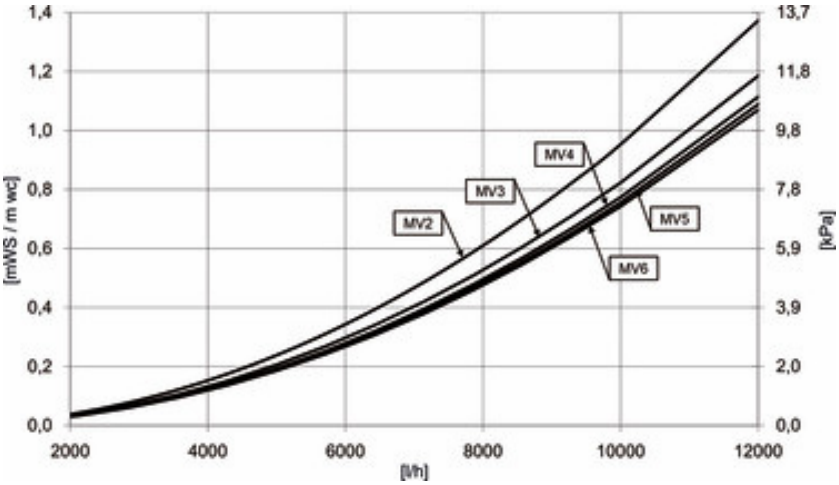
**Dimensions**

| | |
|---|---|
| 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** |



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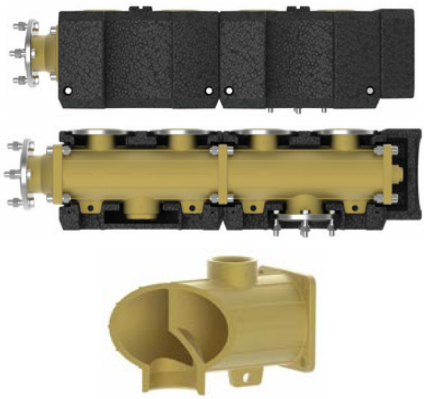
# Distribution manifold DN 40 (1½")





**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

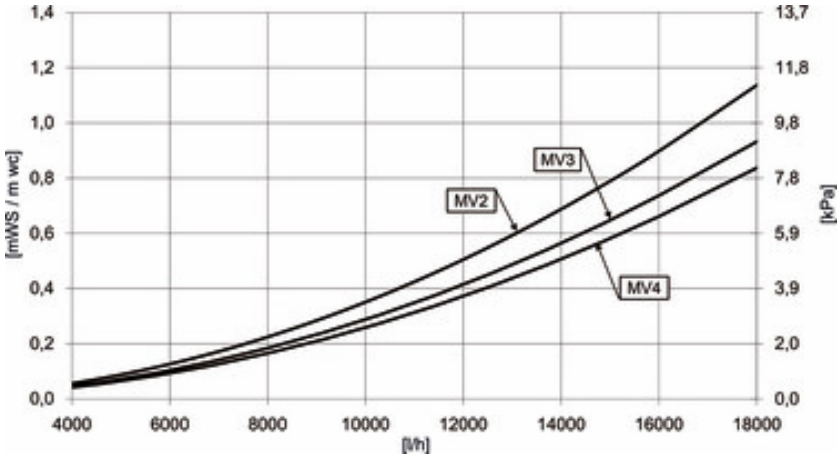
**Dimensions**

| | |
|---|---|
| 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**

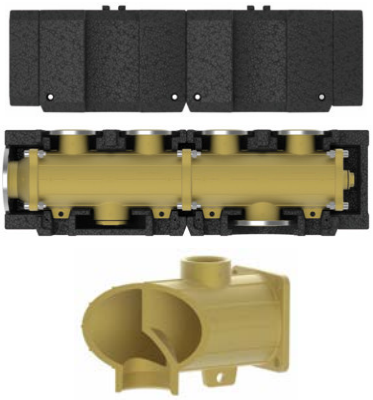
| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |

## 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** |

# 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

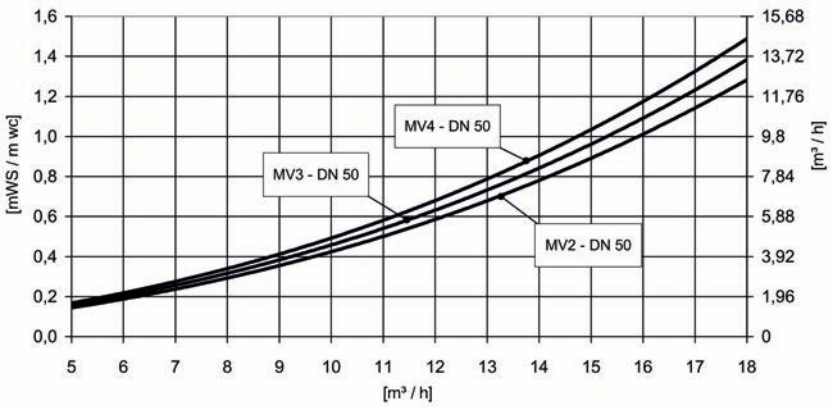
**Dimensions**

| | |
|---|---|
| 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** |



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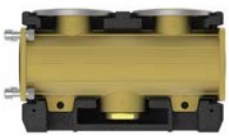
# Mounting equipment modular distribution manifold DN 20-50



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

# Mounting equipment modular distribution manifold DN 20-50



| | | |
|---|---|---|
|  | **Set extension pieces DN 25 - DN 32**<br><br>for the assembly of HeatBloC®s DN 32 on distribution manifolds DN 25,<br>set of distance rings for union nut 2" internal thread on 1" PAW flange,<br>made of brass, with special sealing, flat-sealing | **3436** |
|  | **Coupling piece for overhead installation - DN 25 (1")**<br><br>Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing.<br>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")**<br><br>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")**<br><br>Components: mounting plate, 2 gaskets, 2 x 1½" nut, 2 x housing of coupling F 1" x 1½" ext. thread<br>for installation with flat sealings under a modular distribution manifold and for attaching wall brackets | **3425** |
|  | **Mounting plate DN 32 (1¼")**<br><br>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**<br><br>Completely made of brass<br>Completely preassembled<br>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**<br><br>Number of connections for HeatBloC®s = 1<br>Width: 251 mm<br>Completely made of brass<br>Completely preassembled<br>Flow and return chamber 95 % thermally separated<br>For the extension of already existing modular distribution manifolds DN 25.<br>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**<br><br>Number of connections for HeatBloC®s = 1<br>Width: 251 mm<br>Completely made of brass<br>Completely preassembled<br>Flow and return chamber 95 % thermally separated<br>For the extension of already existing modular distribution manifolds DN 32.<br>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**<br><br>Completely made of brass<br>Completely preassembled<br>Flow and return chamber 95 % thermally separated | **5111** |



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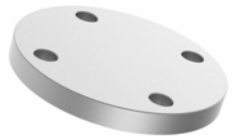
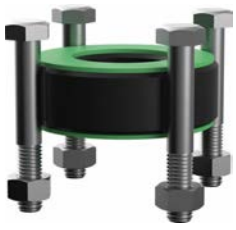
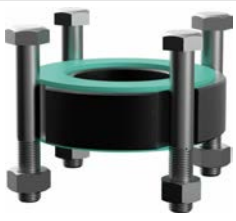
# Mounting equipment modular distribution manifold DN 20-50



| | | |
|---|---|---|
|  | **Extension set for low-loss header - DN 25 (1")**<br><br>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.<br>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")**<br><br>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.<br>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")**<br><br>for conversion into a distribution manifold with integrated hydraulic separator (low-loss header).<br>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**<br><br>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**<br><br>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**<br><br>PN 6, acc. to DIN 2631, steel, black | **51613** |
|  | **Wall bracket set for modular distribution manifold - DN 40 (1½")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **41651** |
|  | **Wall bracket set for modular distribution manifold - DN 50 (2")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **41652** |
|  | **Floor bracket set for modular distribution manifold - DN 40 / 50 (1½"/ 2")**<br><br>Components: 2 floor brackets (galvanized steel), 4 wall plugs, 4 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Height = adjustable 1,050 - 1,080 mm, for shortening simply cut off | **41671** |

# Mounting equipment modular distribution manifold DN 20-50

| | | |
|---|---|---|
|  | **Reducer set DN 25 - DN 20**<br><br>for installation of HeatBloC®s DN 20 on modular distribution manifolds DN 25,<br>adapter set 1½" external thread, flat-sealing with nut on ¾" PAW flange,<br>reduction of the centre distance from 125 mm to 90 mm,<br>distance pipe 1" internal thread x 1" external thread, flat sealing, brass, with sealing.<br><br>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")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **34721** |
|  | **Safety set DN 20 (¾"), up to 50 kW**<br><br>for distribution manifolds DN 20,<br>with self-sealing counter T-piece ¾" x ½",<br>outlet ¾" with cap for expansion tank,<br>pressure relief valve ½" x ¾", 3 bar, up to 50 kW,<br>pressure gauge 0-4 bar | **5257** |
|  | **Safety set for distribution manifold - DN 25 (1") up to 50 kW**<br><br>For the installation on modular distribution manifolds DN 25 (as of 2017),<br>with a connection of ¾" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7507),<br>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**<br><br>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")**<br><br>Coupling piece for installation of a HeatBloC® below a distribution manifold with flat sealing.<br>Please note:<br>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")**<br><br>DN 40 x 30 mm<br>for flange pumps DN 40<br>Installation length from 220 to 250 mm | **12397** |
|  | **Adapter pipe DN 50 (2")**<br><br>for flange pumps DN 50<br>DN 50 x 30 mm<br>Installation length from 250 to 280 mm | **12395** |





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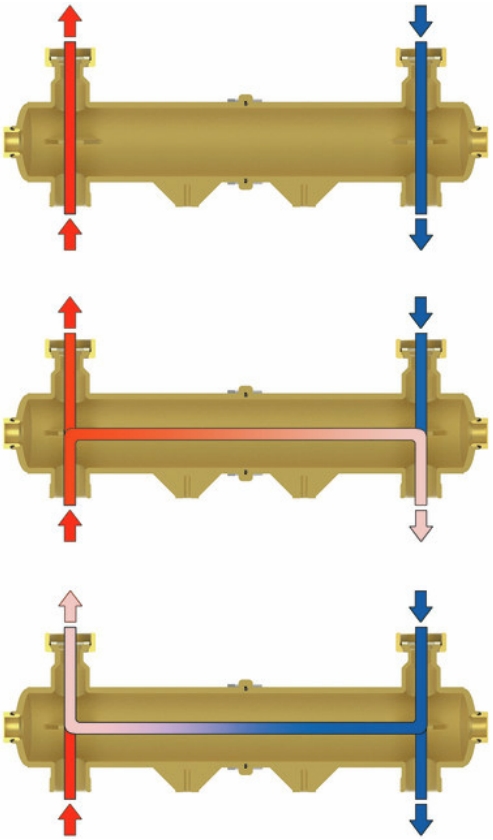
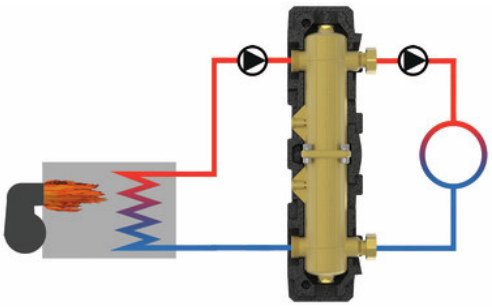
| | | |
|---|---|---|
|  | **Adaptor pieces DN 50 (2")**<br><br>for flange pumps DN 50<br>DN 50 x 20 mm<br>Installation length from 240 to 280 mm | **12396** |
|  | **Reducer set DN 32 - DN 25**<br><br>for installation of modular heating circuits DN 20 on modular distribution manifolds DN 25,<br>adapter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

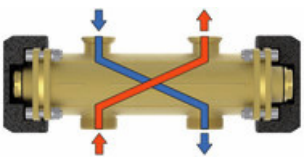
# Hydraulic separator DN 20 (¾")



**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: 950 l/h**<br><br>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.<br>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.<br><br>Connections:<br>¾" PAW flange for nut 1" nut (top),<br>¾" internal thread x 1" external thread flat-sealing (bottom),<br>2 x ¾" internal thread, closed with plug (on the side),<br>width = 260 mm,<br>installation height = 80 mm,<br>centre distance = 90 mm | **3142** |
|  | **Flow rate: 2200 l/h**<br><br>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.<br><br>Connections:<br>¾" PAW flange for nut 1" nut (top),<br>¾" internal thread x 1" external thread flat-sealing (bottom), 2 x for boiler connection, others closed with plug,<br>2 × ½" internal thread for immersion sleeve and fill and drain valve<br>width = 435 mm,<br>installation height = 120 mm,<br>centre distance = 270 mm | **31421** |



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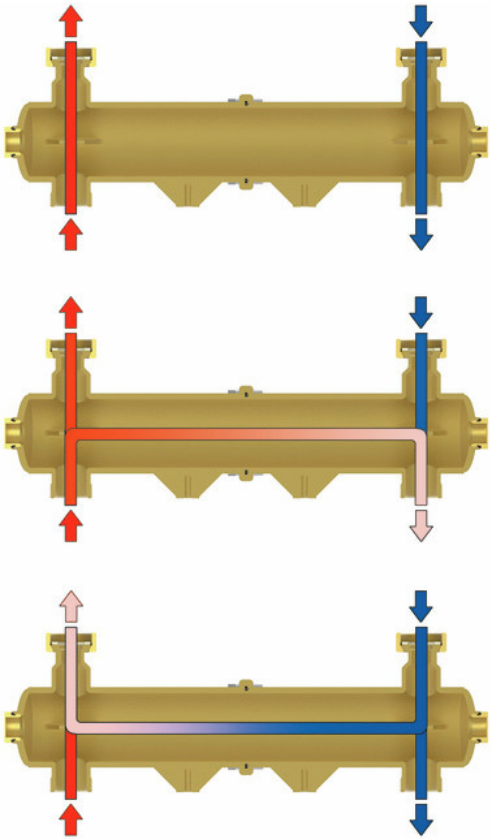
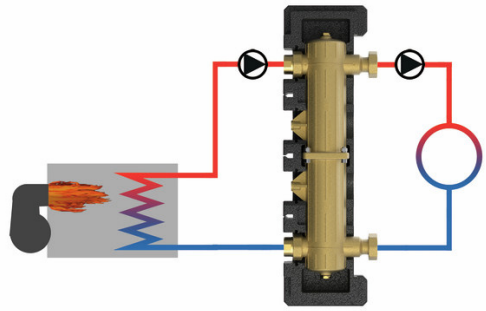
# Hydraulic separator DN 25 (1")

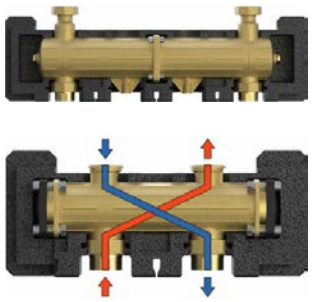




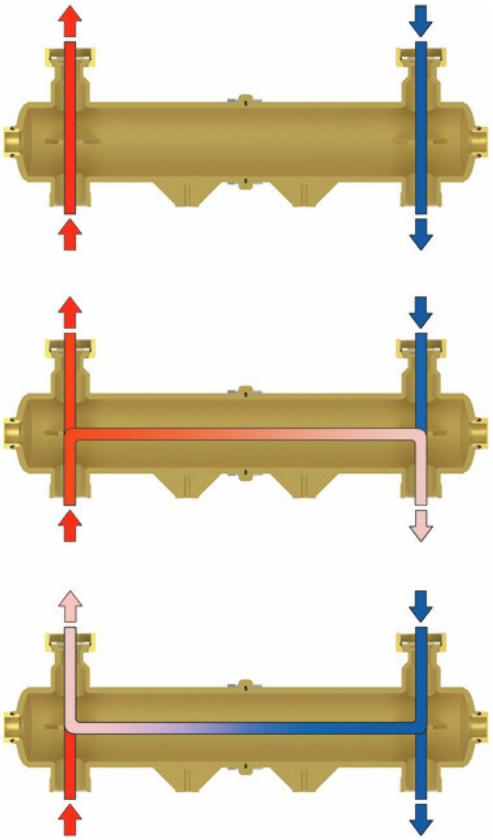
**Description**

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.



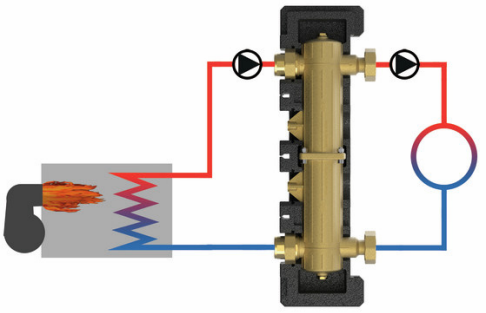
| Hydraulic separator DN 25 (1") | | Item no. |
|---|---|---|
|  | **Flow rate: 1600 /h**<br><br>Completely made of brass, with separate flow and return line, for the installation under an individual HeatBloC® DN 25. With EPP insulation.<br>Can also be installed under a modular distribution manifold 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.<br><br>Connections:<br>1" PAW flange for 1½" nut (top),<br>1½" external thread, flat-sealing with fitting,<br>width = 375 mm<br>installation height = 128 mm<br>centre distance = 125 mm | **344203** |
| | **Flow rate: 3500 l/h**<br><br>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.<br><br>Connections:<br>1" PAW flange for 1½" nut (top),<br>1½" external thread / 1" internal thread, flat-sealing with fitting,<br>2 x ½" internal thread for immersion sleeve and fill and drain valve,<br>width = 625 mm,<br>installation height = 180 mm<br>centre distance = 375 mm | **344213** |

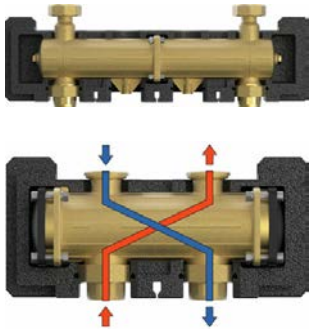
# Hydraulic separator DN 32 (1¼")



**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: 2600 l/h**<br><br>Completely made of brass, with separate flow and return line, for the installation under an individual HeatBloC® DN 32. With EPP insulation.<br>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.<br><br>Connections:<br>1¼" PAW flange for 2" nut (top),<br>2" external thread, flat-sealing with fitting,<br>width = 330 mm<br>installation height = 125 mm<br>centre distance = 125 mm | **374203** |
| | **Flow rate: 4800 l/h**<br><br>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.<br><br>Connections:<br>1¼" PAW flange for 2" nut (top),<br>1¼" internal thread / 2" external thread, flat-sealing (bottom) with fitting,<br>2 x ½" internal thread for immersion sleeve and fill and drain valve,<br>width = 600 mm<br>installation height = 200 mm<br>centre distance = 375 mm | **374213** |



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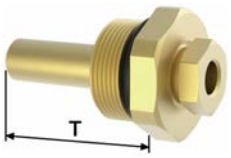
| | | |
|---|---|---|
|  | **Immersion sleeve ¼" ext. thread x T = 60 mm**<br>standard, chromed brass, for sensor, T = 60 mm | **566002** |
|  | **Wall bracket for HeatBloC® DN 20 (¾")**<br><br>Components: 2 wall bracket sets, mounting equipment<br>Possible wall distance: 70-100 mm, distance: 15 mm<br>For 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")**<br><br>Components: 2 floor brackets (galvanized steel), 8 wall plugs, 8 screws, 2 screws for fixing the distribution manifold onto the floor brackets<br>Distance of the pipe axis to the wall: A = 400 mm | **34721** |
|  | **Mounting plate DN 20 (¾")**<br><br>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")**<br><br>Components: mounting plate, 2 gaskets, 2 x 1½" nut, 2 x housing of coupling F 1" x 1½" ext. thread<br>for installation with flat sealings under a modular distribution manifold and for attaching wall brackets | **3425** |
|  | **Mounting plate DN 32 (1¼")**<br><br>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")**<br><br>solid design, with hose connector and cap, completely made of brass, ½" with self-sealing counter nut | **2260** |
|  | **Union nut DN 20 (¾")**<br><br>Brass, to screw insertion pieces for soldering below distribution manifolds DN 20 (¾") | **2055** |
| | **Union nut DN 25 (1")**<br><br>Brass, to screw insertion pieces for soldering below distribution manifolds DN 25 (1") | **2155** |
| | **Union nut DN 32 (1¼")**<br><br>Brass, to screw insertion pieces for soldering below distribution manifolds DN 32 (1¼") | **2156** |
|  | **Sealing for nut - DN 20 (¾")**<br><br>asbestos-free, outside diameter: 30 mm, inside diameter: 21 mm, height: 2 mm | **2057** |
| | **Sealing for nut - DN 25 (1")**<br><br>asbestos-free, outside diameter: 44 mm, inside diameter: 32 mm, height: 2 mm | **2157** |
| | **Sealing for nut - DN 32 (1¼")**<br><br>asbestos-free, outside diameter: 50 mm, inside diameter: 38 mm, height: 2 mm | **2158** |

# Mounting equipment hydraulic separators DN 20-32

| | | |
|---|---|---|
|  | **Low-loss header DN 20, 2-fold**<br><br>Number of connections for HeatBloC®s = 3<br>Width = 440 mm | **31422** |
|  | **Low-loss header DN 20, 3-fold**<br><br>Number of connections for HeatBloC®s = 5<br>Width = 620 mm | **31423** |
|  | **Low-loss header DN 25, 2-fold**<br><br>Number of connections for HeatBloC®s = 3<br>Width = 580 mm | **344223** |
|  | **Low-loss header DN 25, 3-fold**<br><br>Number of connections for HeatBloC®s = 5<br>Width = 830 mm | **344233** |
|  | **Low-loss header DN 32, 2-fold**<br><br>Number of connections for HeatBloC®s = 3<br>Width = 600 mm | **374223** |
|  | **Low-loss header DN 32, 3-fold**<br><br>Number of connections for HeatBloC®s = 5<br>Width = 850 mm<br><br>for boilers with integrated pump<br><br>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).<br>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.<br><br>For all low-loss headers, please note:<br>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")**<br><br>for a subsequent conversion into a distribution manifold with integrated hydraulic separator (low-loss header).<br>Range of application up to 950 l/h, max. up to a 3-fold distribution manifold MV3.<br>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")**<br><br>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.<br>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")**<br><br>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.<br>Consisting of two distance rings for a resistance-free connection of flow and return chamber, incl. screws and o-rings. | **37431** |



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



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# CoolBloC DN 25 / DN 32

## Catalogue 01/2024

Systems, valves and fittings
for modern heating and cooling

Valid for the EU

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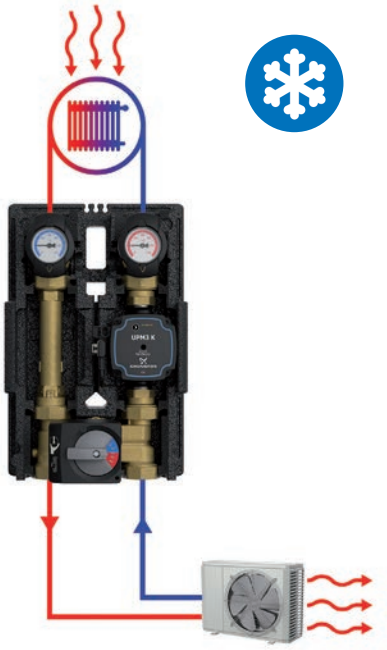
## All CoolBloCs offer the following advantages:



**Pump group for heating and cooling**

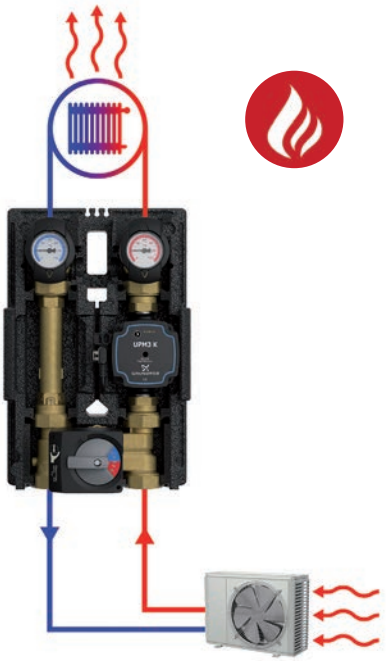
**Condensation-resistant valves and fittings:**
high-quality components to avoid oxidation

**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

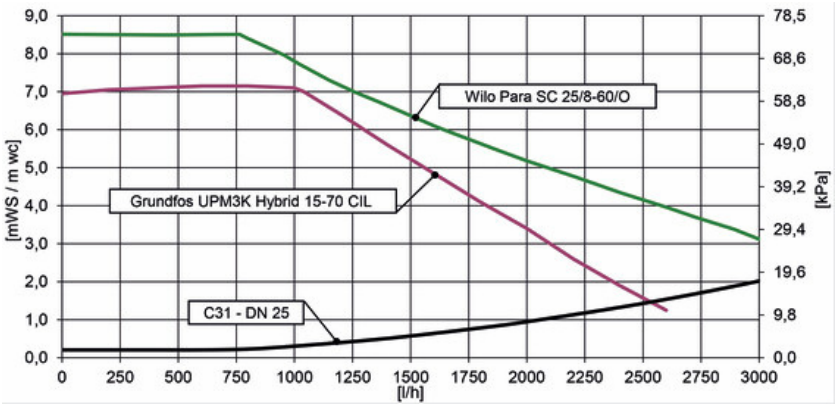
**Dimensions**

| | |
|---|---|
| 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

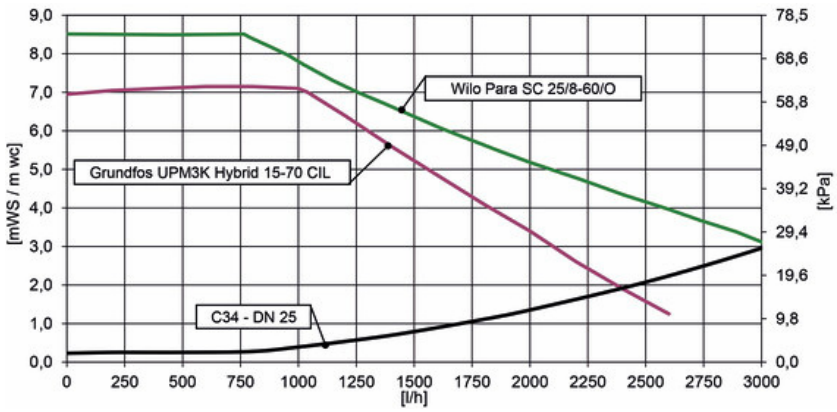
**Dimensions**

| | |
|---|---|
| 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 |

## 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

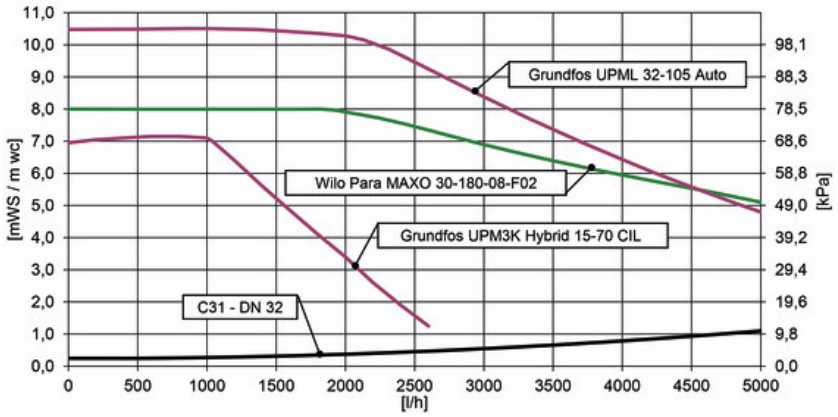
**Dimensions**

| | |
|---|---|
| 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

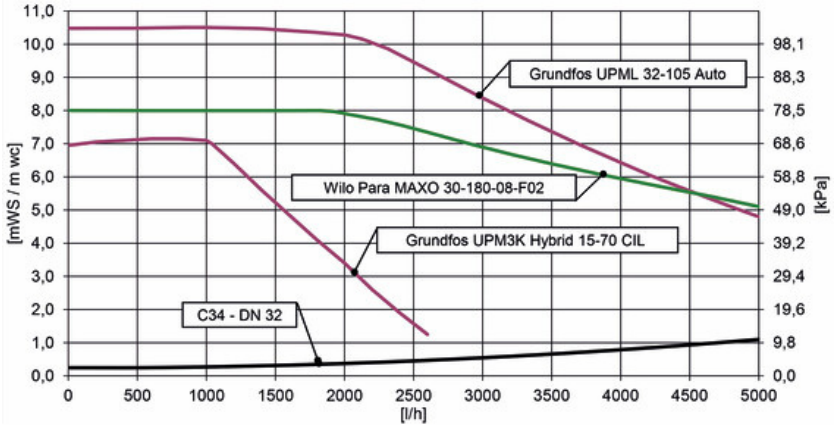
**Dimensions**

| | |
|---|---|
| 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 |

## 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**<br><br>Components:<br>2 x clip spring, 2 x acoustic decoupling | **Z3445** |
|  | **Connection set - DN 25 (1")**<br><br>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")**<br><br>Consisting of 2 insertion pieces for connection of pipes with 1¼" external thread below HeatBloC®s | **3731** |
|  | **Connection set DN 32 (1¼")**<br><br>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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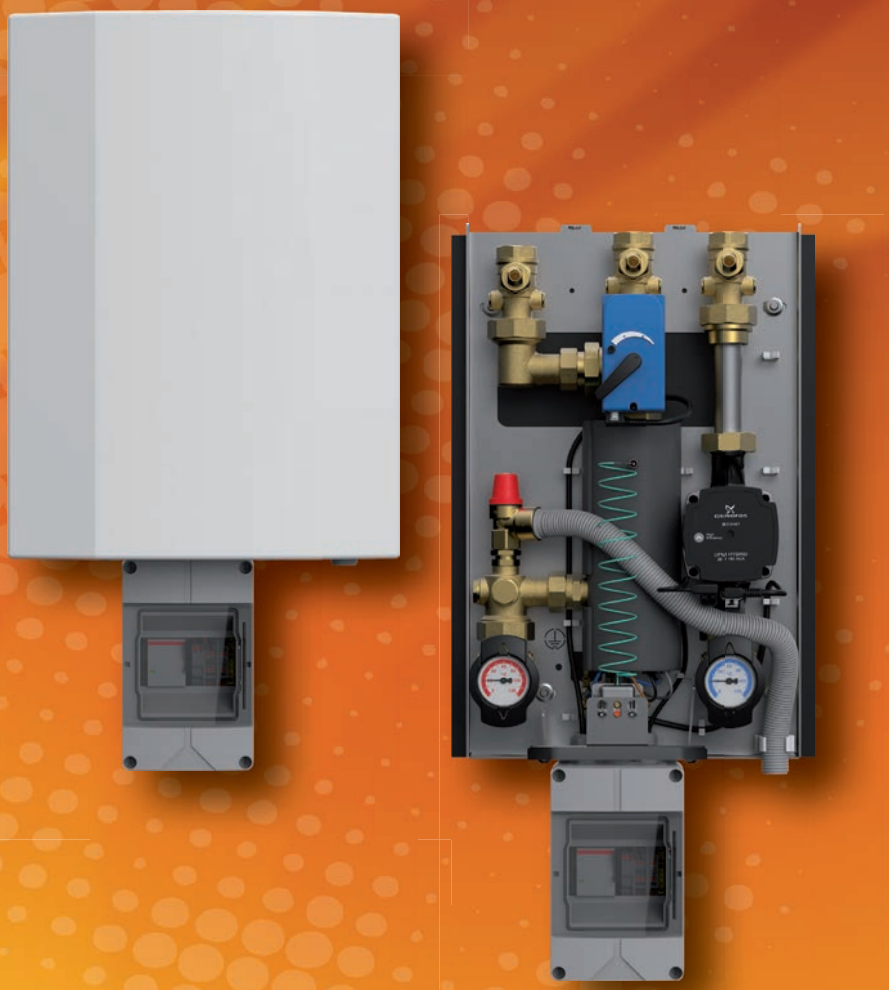

# BoostBloC® DN 25

## Catalogue 01/2024

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

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# BoostBloC® DN 25

**Application range**

- Post-heating at low flow temperatures (e.g. for solar thermal systems)
- Optionally for the thermal disinfection of domestic water installations in combination with heat pumps
- Air-to-water heat pumps, for very low outdoor temperatures
- Absorbing of peak loads in the consumer circuit

**Application range**

- at flow rates of 500 l/h up to 2000 l/h

**Operating data**

| | |
|---|---|
| Max. operating pressure | 5 bar |
| Electrical power heating cartridge | 8.8 kW |
| Max. inlet temperature | 60 °C at 500 l/h |
| Max. operating temperature | 85 °C |
| Temperature difference | 10 K bei 700 l/h;<br>5 K bei 1.400 l/h |
| Setting time 90° actuator | 20 s |

## Technical data

**Hydraulic connections**

| | |
|---|---|
| Flow / return consumer | 1" int. thread |
| Flow / return heat pump | 1" int. thread |

**Electrical connections**

| | |
|---|---|
| Heating cartridge | 3 x 230 V, 50 Hz, AC-1; P1=2600 W; P2 = 3000 W; P3 = 3200 W |
| Pump | 1 x 230 V, 50 Hz, P1 = 52 W, I1 = 0.52 A |
| External control | PWM A/C signal |
| Internal control | PP/CP/CC/AA |
| Actuator | 230 V, 50 Hz, P1 = 9 W, 2-point |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 25 |
| Width | 370 mm |
| Height | 520 mm |
| Depth | 190 mm |
| Installation length | 453 mm |

**Materials**

| | |
|---|---|
| Ball valve | Brass |
| Return pipe | Steel |
| Gaskets | AFM 34 |
| Cover | |
| Insulation | Armaflex |



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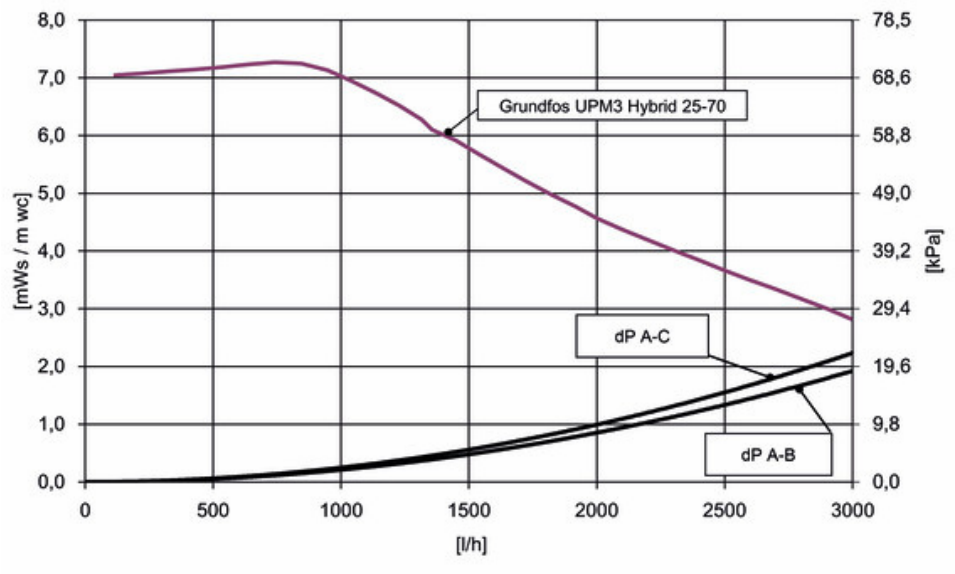


| BoostBloC® DN 25 | | Item no. |
|---|---|---|
|  | **Grundfos UPM3 Hybrid 25-70**<br>Other pump versions on request. | **67410GM6** |



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**Thermax**
Heating technology

# Distribution system Thermax

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for the use in hot water heating systems

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# Distrib. 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

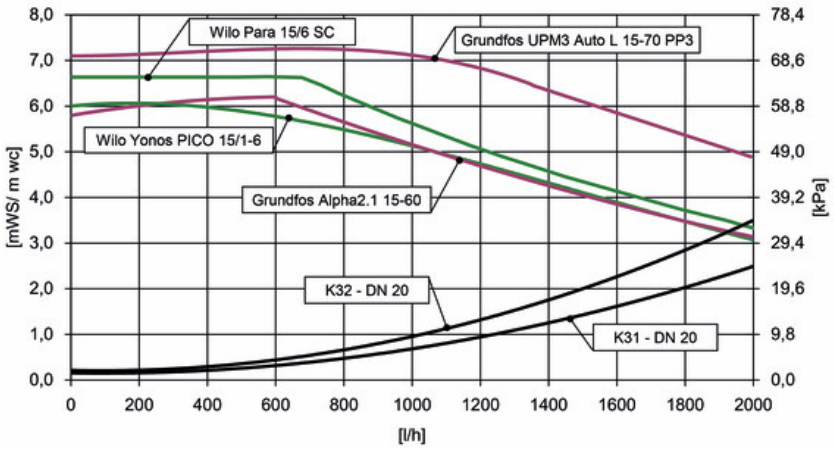
**Dimensions**

| | |
|---|---|
| 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 |

## Differential pressure diagram




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

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



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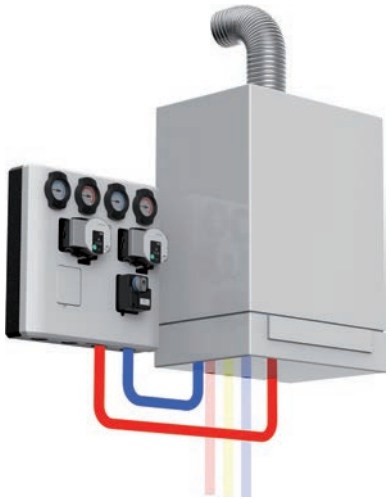
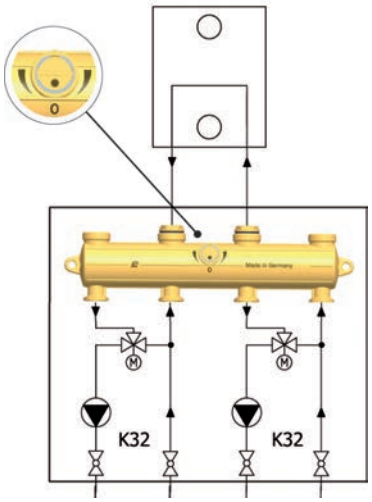
# Description of function
# Thermax DN 20 (¾")



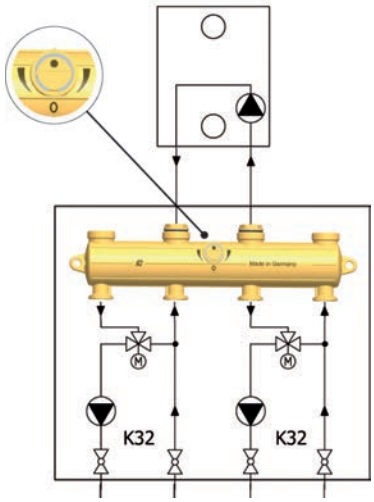
**Installation beside the boiler:**
Thermax is directly mounted to the wall without distance pieces

**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).

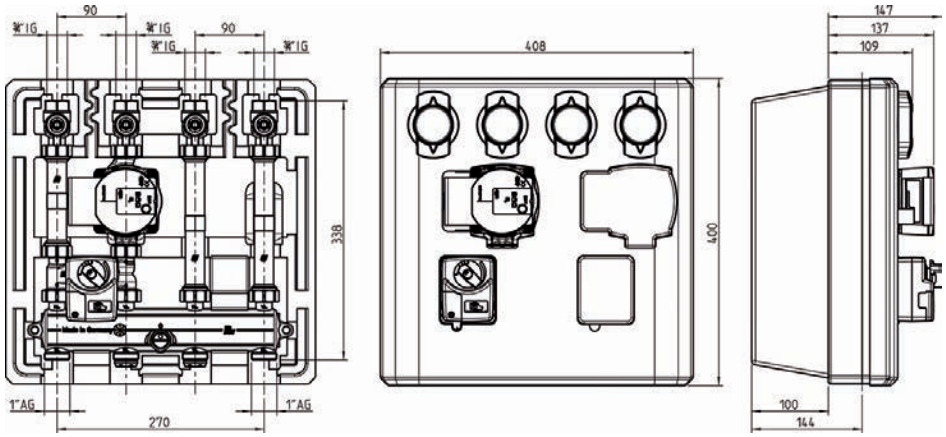



**Bypass closed**




**Bypass open**

## Dimensions





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# System separation DN 25

## Catalogue 01/2024

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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 |

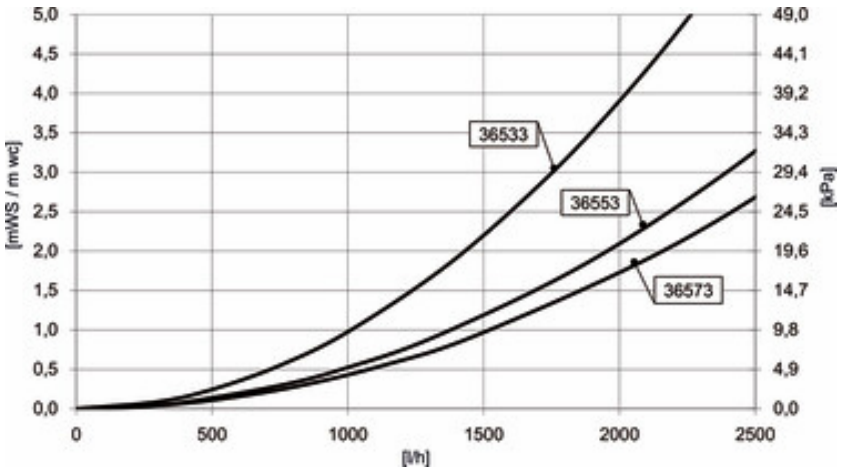
**Equipment**

| | |
|---|---|
| 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 01/2024

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

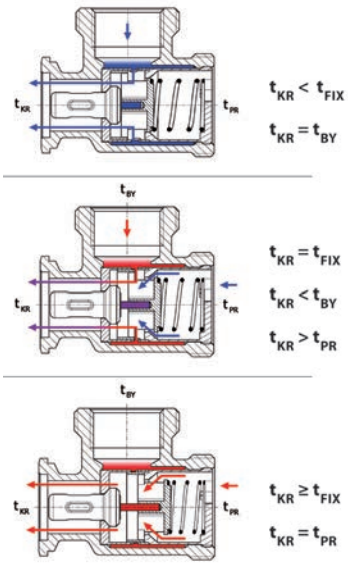
## Application range

- **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**

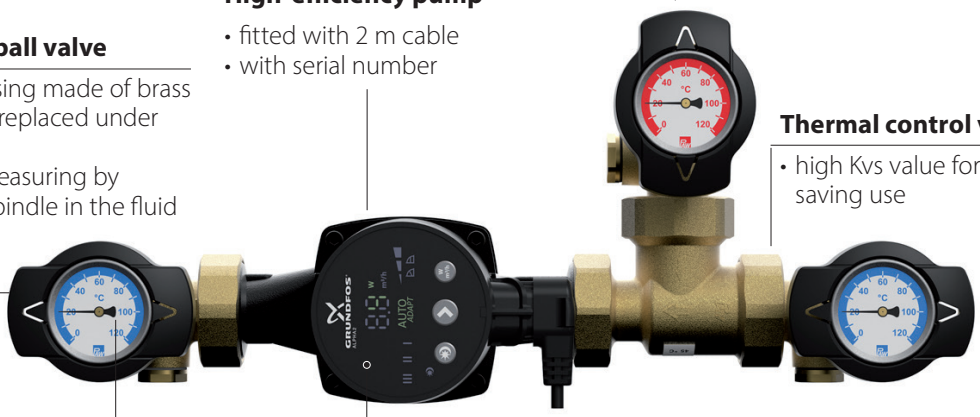
- fitted with 2 m cable
- with serial number

**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**

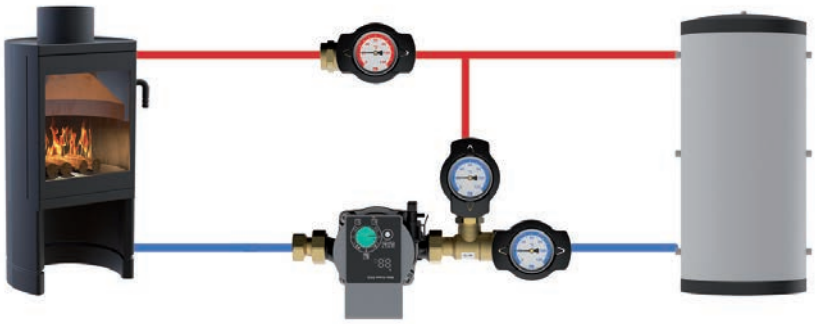
- with handle, 0 - 120 °C

**Serial numbers Return flow temperature maintenance and pump**

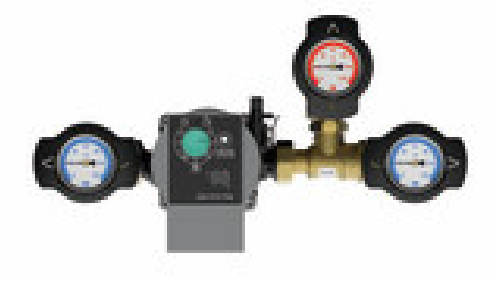
- reliable identification, fast service

**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)

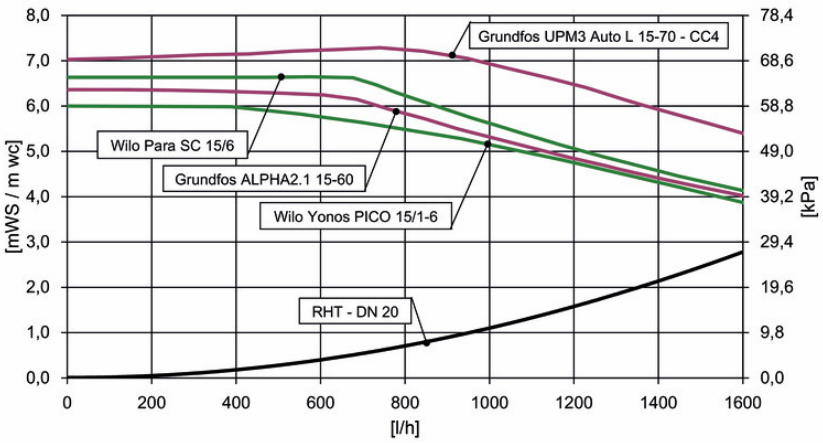
**Dimensions**

| | |
|---|---|
| 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 L 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 L 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 |

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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)

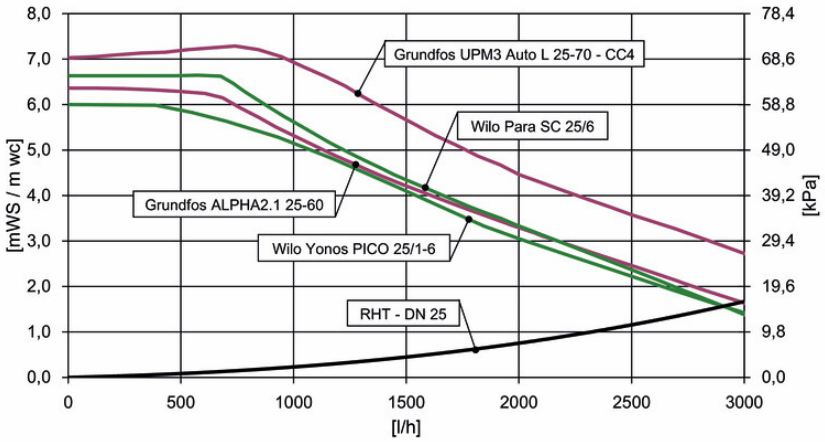
**Dimensions**

| | |
|---|---|
| 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 L 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 L 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** |

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# 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)

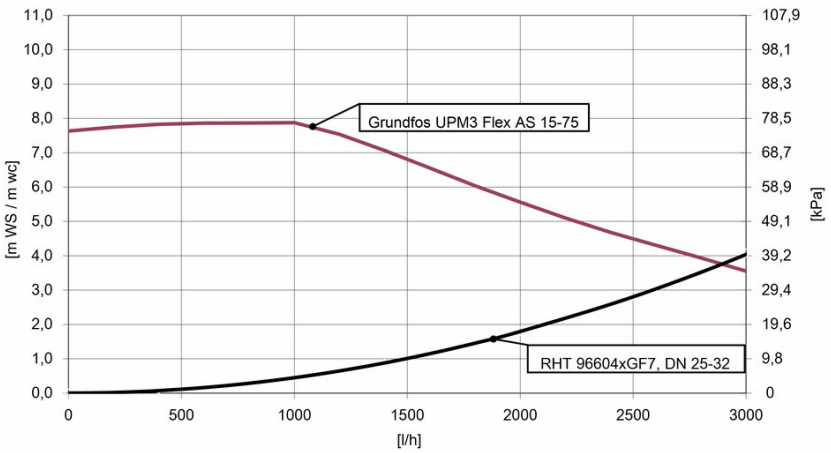
**Dimensions**

| | |
|---|---|
| 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")

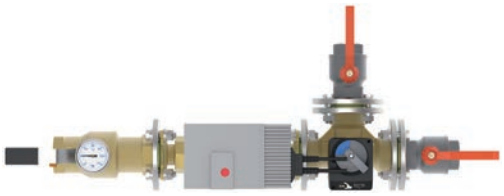


## Application range

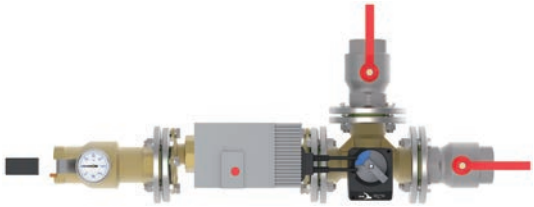
DN 20 (¾")

DN 25 (1")

DN 32 (1¼")



DN 40 (1½")



DN 50 (2")

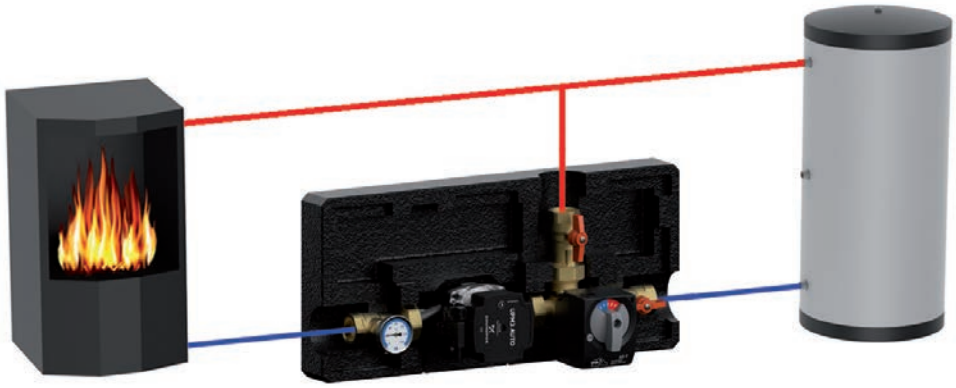
- **Heating systems with return flow temperature maintenance**
- **Solid fuel boilers, wood firing / stove heating systems**

**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**

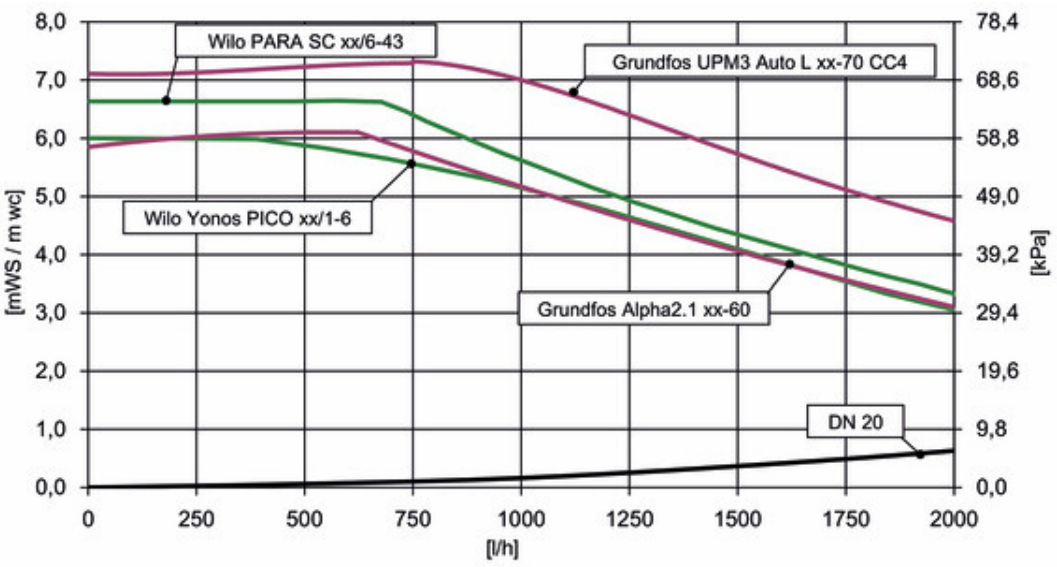
- up to 19,5 W
- 10 K up to 1650 l/h

**Operating data**

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

## Technical data

| | | | |
|---|---|---|---|
| **Equipment** | with actuator | **Dimensions** | |
| **Actuator** | | Nominal diameter | DN 20 (¾") |
| Electrical data | 230 V / 50 Hz | Connection generator | ¾" int. thread |
| Power consumption | 19,5 W | Connection consumer | ¾" int. thread |
| Torque | 2 Nm | Installation height | 134 mm |
| Setting time 90° | 105 s | Installation length | 359 mm |
| **Materials** | | | |
| Valves and fittings | Brass | | |
| Gaskets | AFM 34 | | |
| Insulation | -- | | |




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

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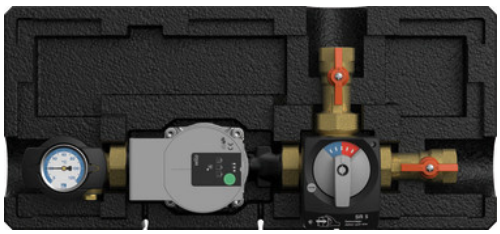
# Return flow temperature maintenance RHM with actuator DN 25 (1")





**Application range**

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

**Recommended application range**

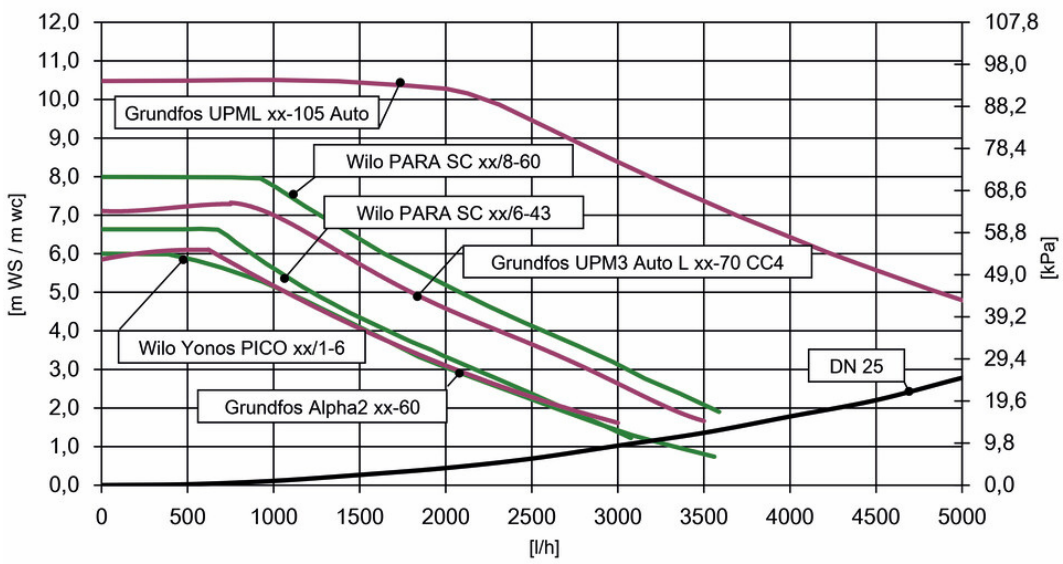
- up to 31 W
- 10 K up to 2670 l/h

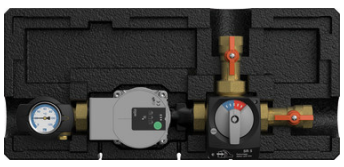
**Operating data**

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

## Technical data

| | | | |
|---|---|---|---|
| **Equipment** | with actuator | **Dimensions** | |
| **Actuator** | | Nominal diameter | DN 25 (1") |
| Electrical data | 230 V / 50 Hz | Connection generator | 1" int. thread |
| Power consumption | 31 W | Connection consumer | 1" int. thread |
| Torque | 5 Nm | Installation height | 187 mm |
| Setting time 90° | 140 s | Installation length | 437 mm |
| **Materials** | | | |
| Valves and fittings | Brass | | |
| Gaskets | AFM 34 | | |
| Insulation | EPP | | |




| Return flow temperature maintenance with actuator - DN 25 (1") | | EEI* | Item no. |
|---|---|---|---|
|  | **Grundfos ALPHA2.1 25-60** | < 0.17 | **960841GH6** |
| | **Grundfos UPM3 Auto L 25-70** | < 0.20 | **960841GM6** |
| | **Grundfos UPML 25-105 AUTO** | < 0.23 | **960841GL9** |
| | **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** |

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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**

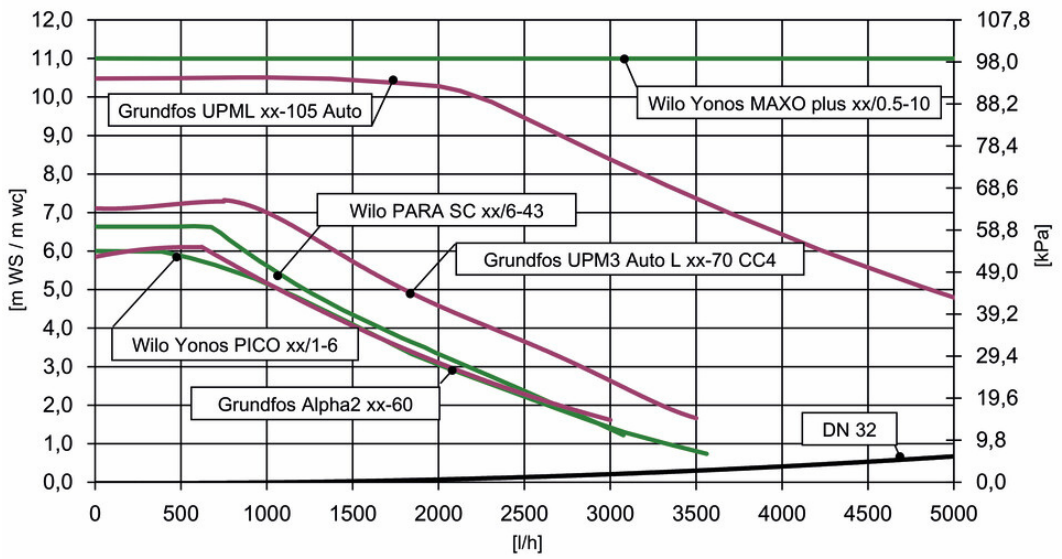
- up to 50 W
- 10 K up to 4310 l/h

**Operating data**

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

## Technical data

| | | | |
|---|---|---|---|
| **Equipment** | with actuator | **Dimensions** | |
| **Actuator** | | Nominal diameter | DN 32 (1¼") |
| Electrical data | 230 V / 50 Hz | Connection generator | 1¼" int. thread |
| Power consumption | 50 W | Connection consumer | 1¼" int. thread |
| Torque | 5 Nm | Installation height | 217 mm |
| Setting time 90° | 140 s | Installation length | 497 mm |
| **Materials** | | | |
| Valves and fittings | Brass | | |
| Gaskets | AFM 34 | | |
| Insulation | EPP | | |




| Return flow temperature maintenance with actuator - DN 32 (1¼") | | EEI* | Item no. |
|---|---|---|---|
|  | **Grundfos ALPHA2.1 32-60** | < 0.20 | **960851GH6** |
| | **Grundfos UPM3 Auto L 32-70** | < 0.20 | **960851GM6** |
| | **Grundfos UPML 32-105 AUTO** | < 0.23 | **960851GL9** |
| | **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** |

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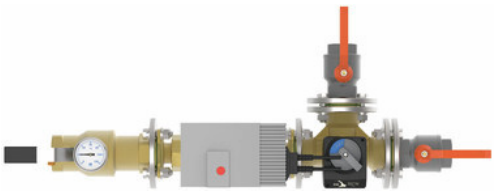
# Return flow temperature maintenance RHM with actuator DN 40 (1½")





**Application range**

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

**Recommended application range**

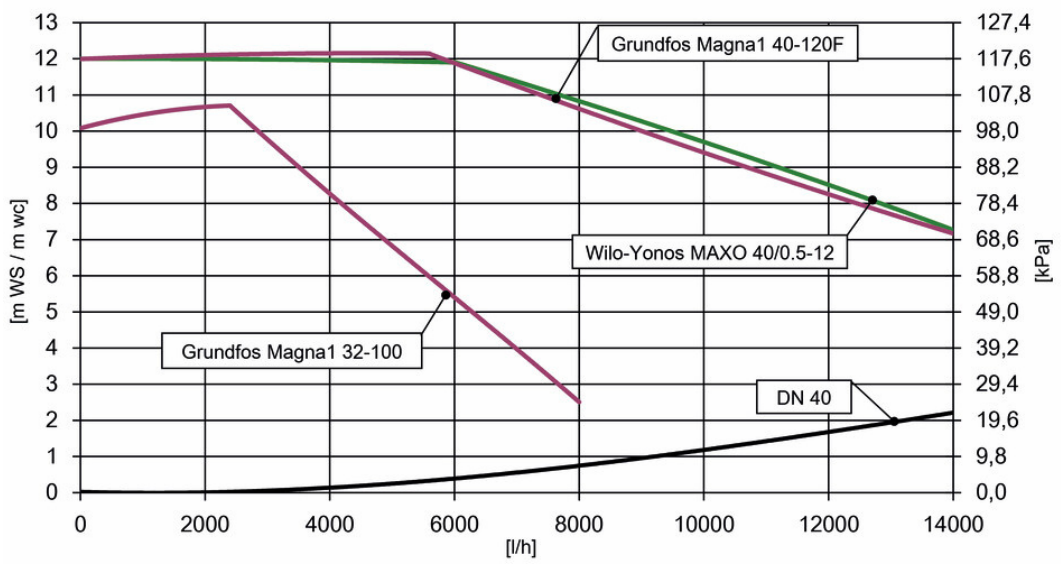
- up to 80 W
- 10 K up to 6890 l/h

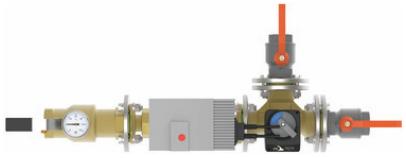
**Operating data**

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

**Technical data**

| | | | |
|---|---|---|---|
| **Equipment** | with actuator | **Dimensions** | |
| **Actuator** | | Nominal diameter | DN 40 (1½") |
| Electrical data | 230 V / 50 Hz | Connection generator | 1½" int. thread |
| Power consumption | 80 W | Connection consumer | 1½" int. thread |
| Torque | 5 Nm | Installation height | 266 mm |
| Setting time 90° | 140 s | Installation length | 735 mm |
| **Materials** | | | |
| Valves and fittings | Brass | | |
| Gaskets | AFM 34 | | |
| Insulation | -- | | |




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

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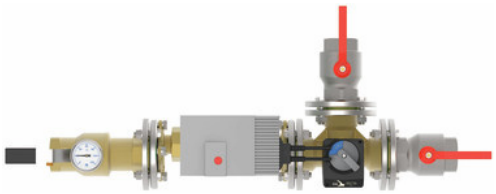
# Return flow temperature maintenance RHM with actuator DN 50 (2")





**Application range**

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

**Recommended application range**

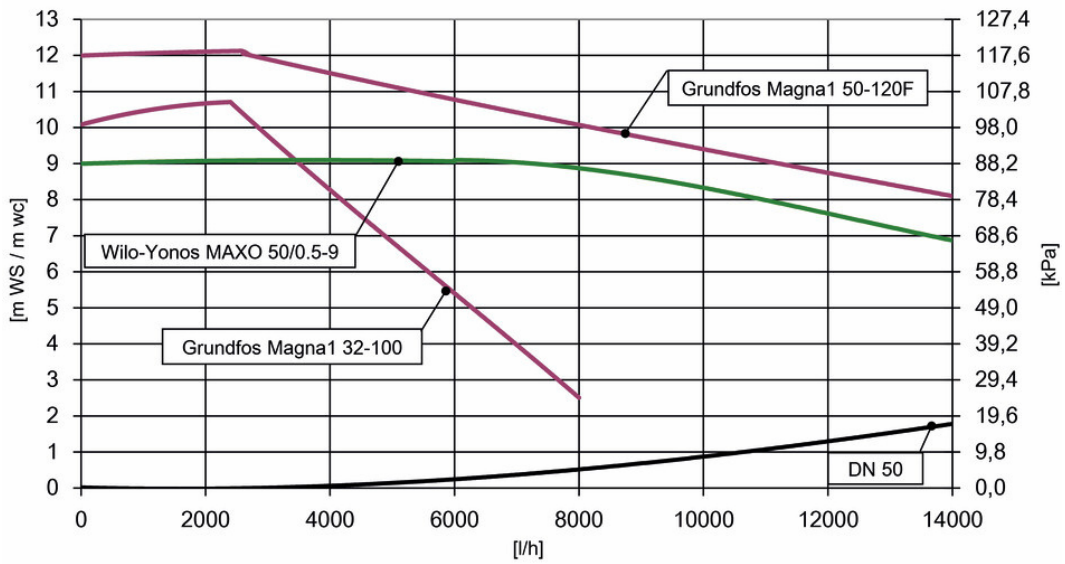
- up to 120 W
- 10 K up to 10340 l/h

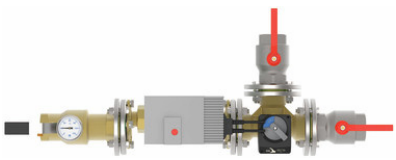
**Operating data**

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

## Technical data

| | | | |
|---|---|---|---|
| **Equipment** | with actuator | **Dimensions** | |
| **Actuator** | | Nominal diameter | DN 50 (2") |
| Electrical data | 230 V / 50 Hz | Connection generator | 2" int. thread |
| Power consumption | 120 W | Connection consumer | 2" int. thread |
| Torque | 5 Nm | Installation height | 296 mm |
| Setting time 90° | 140 s | Installation length | 792 mm |
| **Materials** | | | |
| Valves and fittings | Brass | | |
| Gaskets | EPDM / AFM34 | | |
| Insulation | -- | | |




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

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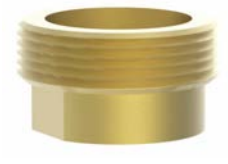
| | | |
|---|---|---|
|  | **Sealing for nut - DN 20 (¾")**<br>asbestos-free, outside diameter: 30 mm, inside diameter: 21 mm, height: 2 mm | **2057** |
| | **Sealing for nut - DN 25 (1")**<br>asbestos-free, outside diameter: 44 mm, inside diameter: 32 mm, height: 2 mm | **2157** |
|  | **Screw-in fitting DN 20 (¾")**<br>1" external thread, flat-sealing x ¾" internal thread | **2053** |
| | **Screw-in fitting 25 (1")**<br>1½" external thread, flat-sealing x 1" internal thread | **2153** |
|  | **Pump fitting DN 20 (¾")**<br>with union nut, insert fitting and gasket, length: 30 mm | **2049** |
|  | **Pump fitting 25 (1")**<br>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**<br>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**<br>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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| | | |
|---|---|---|
|  | **Extension set for 3-way mixing valve DN 20 (¾“) / DN 25 (1")**<br><br>Before: mixing valve K33 (with bypass on the back), DN 20/DN 25<br>After: mixing valve K32, DN 20/DN 25, flow on the right + flow on the left | **34012** |
|  | **Conversion kit from K31 to K32 DN 25 (1")**<br><br>1x return pipe DN 25 (1"), with check valve 200 mm wc<br>1x 3-way mixing valve DN 25 (1")<br>1x union nut G 1½"<br>1x gasket 1", for thread connection 1½"<br>1x actuator with stop bolt and rotation lock | **N00064** |
| | **Conversion kit from K31 to K32 DN 32 (1¼")**<br><br>1x return pipe DN 32 (1¼"), with check valve 200 mm wc<br>1x 3-way mixing valve DN 32 (1¼")<br>1x union nut G2"<br>1x gasket 1¼", for thread connection 2"<br>1x actuator with stop bolt and rotation lock | **N00065** |
| | **Conversion kit from K31 to K32 DN 40 (1½")**<br><br>1x return pipe DN 40 (1½"), with check valve (200 mm wc, can be opened)<br>1x 3-way mixing valve<br>1x union nut<br>1x gasket<br>1x actuator with stop bolt and rotation lock | **N00066** |
|  | **Extension set for 3-way mixing valve DN 25 (1") / DN 32 (1¼")**<br><br>Before: mixing valve K33 (with bypass on the front), DN 25<br>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")**<br><br>4x gaskets<br>2x union nuts<br>1x coupling piece for mixing valve shaft<br>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")**<br><br>4x gaskets<br>2x union nuts<br>1x coupling piece for mixing valve shaft<br>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**<br><br>Before: mixing valve K33 (with bypass on the front), DN 25, flow on the left<br>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**<br><br>Before: mixing valve K33 (with bypass on the front), DN 25, flow on the right<br>mixing valve K34 (with bypass on the front), DN 25, flow on the right + flow on the left<br>After: mixing valve K33 (with bypass on the front), DN 25, flow on the left | **340722** |



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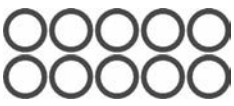
| | | |
|---|---|---|
|  | **Take off the thermometer handles (solar)**<br><br>Dial thermometer (red, blue); measuring range 0-160 °C,<br>immersion shaft 25 mm, with self-sealing immersion sleeve,<br>d = 50 mm; field of application: Solar | **N00134** |
|  | **Thermometer handles (heating)**<br><br>Dial thermometer (red, blue); measuring range 0 - 120 °C,<br>immersion shaft 25 mm, with self-sealing immersion sleeve,<br>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**<br><br>Gaskets (EPDM)<br>O-rings (EPDM)<br>Hexagon socket head cap screw<br>Spring washer<br>Hexagon nut<br>Tube of grease for o-rings (Synteso Glep1) | **N00062** |
|  | **Sets of gaskets for mixing valve - DN 20-32 (¾" - 1¼")**<br><br>may only be used in:<br>- 3- and 4-way mixing valves DN 20, 25, 32<br>- mixing valves with bypass DN 25 | **37013** |
| | **Sets of gaskets for mixing valve - DN 32-40 (1¼" - 1½")**<br><br>may only be used in:<br>- mixing valves DN 40<br>- mixing valves with bypass DN 32 | **41013** |
| | **Sets of gaskets for mixing valve - DN 50 (2")**<br><br>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"**<br><br>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**<br><br>Material: EPDM | **N00133** |
|  | **Rotary knob for mixing valve**<br><br>1 x rotary knob<br>1 x lens head screw<br><br>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")**<br><br>Replaceable spindle for thermometer ball valve | **N00007** |

# Spare parts



| | | |
|---|---|---|
|  | **Reducer set for immersion sensor**<br><br>1 x ¼" external thread (self-sealing) x M10 x 1" internal thread<br>1 x ¼" external thread (self-sealing) x M12 x 1.5" external thread | **3444** |
|  | **Control valve input for K33 DN 20/25**<br><br>Control valve input for the HeatBloC® K33 DN 20 and K33 DN 25 (until 2005). | **N00011** |
|  | **Thermostatic head 20-50 °C**<br><br>Thermostatic head 20 - 50 °C, with contact sensor<br>spare part for K33 | **N00042** |
|  | **Thermostatic head 40-70 °C**<br><br>Thermostatic head 40 - 70 °C, with contact sensor<br>spare part for K33 | **N00044** |
|  | **Contact thermostat 20-60 °C**<br><br>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**<br><br>1x PAW flange (with nut)<br>1x gasket 1"<br>1x internal thread ½"<br>1x sleeve<br><br>For heating circuits DN 25 until 2017! | **N00015** |
|  | **Thermo ball valve TK - DN 25 (1"), F1" x 1" int. thread, ½", sleeve left**<br><br>1x PAW flange (with nut)<br>1x gasket 1"<br>1x internal thread ½"<br>1x sleeve<br><br>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**<br><br>1 x Brass pipe with check valve (200 mm wc, can be opened) for the return<br>2 x seal (EPDM) | **N00140** |



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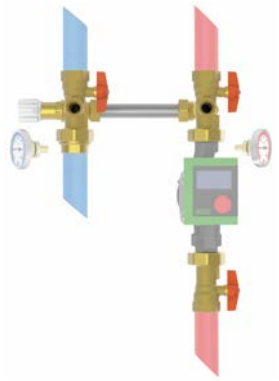
|  | **Charging pump set K1 - DN 25 (1")** | **2701** |
| | **Charging pump set K1- DN 32 (1¼")**<br><br>Pressure side:<br>- PAW pump ball valve, with red butterfly handle<br>- Check valve, can be opened manually<br>- Automatic air passage<br>- With 2 nuts and 2 gaskets for a pump DN 25 (without pump)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

# Pump sets



| | | |
|---|---|---|
|  | **Bypass set K7 - DN 25**<br><br>pump can be isolated<br><br>Pressure side:<br>- PAW multifunctional valve, with red butterfly handle<br>- Check valve, can be opened manually<br>- Automatic air passage<br>- With 2 nuts and 2 gaskets for a pump DN 25 (without pump, without dial thermometer)<br><br>Suction side:<br>- PAW pump ball valve, with red butterfly handle<br><br>Return:<br>- PAW multifunctional valve, with red butterfly handle<br>- Thread connection<br><br>Bypass:<br>- Differential pressure overflow valve ¾" with scale and thread connection<br>- Zinced bypass pipe with elbow gland<br><br>A min = 80 mm<br>A max = 200 mm<br>for 1": H = 360 mm<br>for 1¼": H = 395 mm<br><br>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**<br><br>- Measuring range 0-120 °C,<br>- immersion shaft 25 mm, with self-sealing immersion sleeve,<br>- d = 50 mm | **21721** |
|  | **Flow set TK2 - DN 20 (¾")**<br><br>Pressure side:<br>- Thermometer ball valve with red scale thermometer integrated in the handle<br>(d = 50 mm, red scale)<br>- integrated check valve, can be opened manually<br><br>Suction side:<br>- pump ball valve, key-actuated<br><br>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")**<br><br>Pressure side:<br>- Thermometer ball valve with red scale thermometer integrated in the handle<br>(d = 50 mm, red scale)<br>- integrated check valve, can be opened manually<br>- connection to the left with ½" internal thread for overflow valve or sensor, plugged<br><br>Suction side:<br>- pump ball valve with butterfly handle<br><br>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")**<br><br>consisting of:<br>- Thermometer valve with dial thermometer (d = 50 mm, blue scale), can be pulled off, integrated in the handle<br>- DN 25 and DN 32: connection to the left with ½" internal thread for overflow valve or sensor, plugged<br><br>Delivery with thread connection | **9613** |
|  | **Pump set TK5 - DN 20**<br><br>Pressure side:<br>- thermometer valve with red scale, dial thermometer (d = 50 mm) integrated in handle, can be pulled off<br>- integrated check valve, can be opened manually<br><br>Suction side:<br>- pump ball valve, key-actuated<br><br>Return:<br>- thermometer valve with blue scale, dial thermometer (d = 50 mm) integrated in the handle, can be pulled off<br>- thread connection<br><br>Delivery with 2 nuts and 2 gaskets for a pump (without pump) | **9631** |
| | **Pump set TK5 - DN 25** | **9632** |
|  | **Pump set TK5 - DN 32**<br><br>Pressure side:<br>- thermometer valve with red scale, dial thermometer (d = 50 mm) integrated in handle, can be pulled off<br>- integrated check valve, can be opened manually<br>- with connection to the left, ½" internal thread for overflow valve or sensor connection, plugged<br><br>Suction side:<br>- pump ball valve, with butterfly handle<br><br>Return:<br>- thermometer valve with blue scale, dial thermometer (d = 50 mm) integrated in the handle, can be pulled off<br>- with connection to the right, ½" internal thread for overflow valve or sensor connection, plugged<br>- thread connection<br><br>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)**<br><br>For hydronic heating installations with standard circulation pumps and thermostatic or zone valves.<br>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.<br>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** |

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|  | **PAW actuator SR2**<br><br>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<br><br>Electrical connection: 230 V - 50 Hz (705013), 24 V - 50/60 HZ, DC 24 V (705015)<br>Input power: 1 W (705013), 0.5 W (705015)<br>Torque: min. 2 Nm<br>Setting time for 90°: 105 s (705013), 100 s (705015) | **705013** |
|  | **PAW actuator SR5**<br><br>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, due to the removable scale it is suited for flow on the right or left side<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 2.5 W<br>Torque: 5 Nm<br>Setting time for 90°: 140 s | **705001** |
|  | **PAW actuator SR10**<br><br>due 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<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 3.5 W<br>Torque: 10 Nm<br>Setting time for 90°: 140 s | **705002** |
|  | **PAW actuator SR10 24/3P**<br><br>Like PAW actuator 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**<br><br>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<br><br>Electrical connection: 230 V / 50 Hz<br>Input power: 1.5 W<br>Torque: 10 Nm<br>Setting time for 90°: 140 s | **70541** |
|  | **PAW constant temperature controller PKR6**<br><br>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<br><br>Power supply: 230 V - 50 Hz<br>Power consumption: 3 W<br>Torque: min. 6 Nm<br>Setting time 90°: 120 s | **703601** |
|  | **Weather compensated controller PWR6**<br><br>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.<br>In addition, it is possible to set the room temperature centrally in the flat via a room based remote control (art.no. 1359501). | **723681** |

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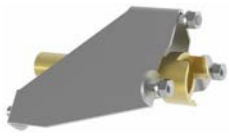
|  | **Limit switch**<br><br>The limit switch is a micro switch. For the assembly in the actuators SR5 and SR10-24/3P. | **705101** |
|  | **Accessory kit for Viessmann actuators**<br><br>Accessory kit for PAW actuators with 3-point suspension (Dekamatik and Vitotronic) to PAW mixing valves DN 20 - DN 50 with short shaft.<br><br>Please consider the width of the actuator when mounting it to the HeatBloC®s DN 20.<br>Not to be mounted to transfer systems TE3. | **705610** |
|  | **Adapter set for mixing valve shaft**<br><br>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")**<br><br>for connecting and disconnecting single storage tanks,<br>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**<br><br>for connecting and disconnecting single storage tanks,<br>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**<br><br>for connecting and disconnecting single storage tanks,<br>DN 32, 1¼" internal thread, setting time for 90°: 30 sec., Kvs value = 123 | **563552** |
|  | **3-way zone valve - DN 20 (¾")**<br><br>for switching between single storage tanks,<br>DN 20, ¾" int. thread, setting time for 90°: 18 sec., Kvs value = 7 | **563533** |
| | **3-way zone valve - DN 25 (1")**<br><br>for switching between single storage tanks,<br>DN 25, 1" int. thread, setting time for 90°: 18 sec., Kvs value =11 | **563543** |
| | **3-way zone valve - DN 32 (1¼")**<br><br>for switching between single storage tanks,<br>DN 32, 1¼" int. thread, setting time for 90°: 18 sec., Kvs value =15<br><br>can be used in solar and heating installations, to switch between different zones or to connect and disconnect different parts of the system.<br>The actuator is equipped with a relay which is actuated by a 2-point signal, if need be it can also be manually operated.<br>The 3-way zone valves can be operated in both directions.<br><br>Electric supply: 230 V / 50 Hz<br>Casing protection type: IP 44; protection class II<br>Input power: 3 VA (standby), 7.5 VA (operation)<br>Ambient temperature: -10 °C ...+60 °C<br>Medium temperature: 0 °C ...100 °C, short-term 115 °C<br>Equipment: with 1.8 m cable 4 x 0.5 mm² | **563553** |

# Ball valves



| | | Connection | Length | Item no. |
|---|---|---|---|---|
|  | **Multivalve MK - DN 25** | int.: 1" | 94 mm | **2301** |
| | **Multivalve MK - DN 32**<br><br>2 x sleeves ½" (on the side)<br>1 x self-sealing blind plug ½"<br>1 x PAW flange 1" (DN 25) / 1¼" (DN 32) (without nut)<br>1 x 1" int thread (DN 25) / 1¼" int. thread (DN 32)<br>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**<br><br>2 x sleeves ½" (on the side)<br>1 x self-sealing blind plug ½"<br>1 x 1" (DN 25) / 1¼" (DN 32) PAW flange (without nut)<br>1 x 1" (DN 25) / 1¼" (DN 32) int. thread<br>with automatic air passage and check valve (can be opened)<br>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**<br><br>1 x PAW flange (without nut)<br>1 x internal thread<br>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**<br><br>1 x PAW flange (without nut) 1" (DN 25) / 1¼" (DN 32)<br>1 x internat thread 1" (DN 25) / 1¼" (DN 32)<br>with automatic air passage and check valve (can be opened)<br>with red butterfly handle | int.: 1¼" | 100 mm | **2130** |
|  | **Pump ball valve PKA - DN 25**<br><br>1 x 1" PAW flange (without nut)<br>1 x 1" external thread<br>material: brass<br>with red butterfly handle | ext.: 1" | 93 mm | **2105** |



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| | | Connection | Length | Item no. |
|---|---|---|---|---|
|  | **Pump ball valve with check valve PKAS - DN 25**<br><br>1 x 1" PAW flange (without nut)<br>1 x 1" external thread<br>with automatic air passage and check valve (can be opened)<br>with red butterfly handle | ext.: 1" | 93 mm | **2107** |
|  | **Pump ball valve PKV - DN 25 (1")** | ext.: 1½" | 80 mm | **2109** |
| | **Pump ball valve PKV - DN 32 (1¼")**<br><br>1 x PAW flange (without nut) 1½" (DN 25) / 2" (DN 32)<br>1 x external thread 1" (DN 25) / 1¼" (DN 32)<br>material: brass<br>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**<br><br>1 x PAW flange (without nut) 1½" (DN 25) / 2" (DN 32)<br>1 x 1" F (DN 25) / 1¼" external thread (DN 32)<br>with automatic air passage and check valve (can be opened)<br>with red butterfly handle | ext.: 1¼" | 110 mm | **2112** |
|  | **Thermo ball valve TK - DN 20**<br><br>1 x ¾" PAW flange (without nut)<br>1 x ¾" internal thread<br>diameter thermometer = 50 mm<br>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**<br><br>1 x PAW flange (without nut)<br>1 x internal thread<br>1 x sleeve (on the side) ½", for overflow valve<br>1 x self-sealing blind plug ½"<br>diameter thermometer = 50 mm<br>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**<br><br>1 x ¾" PAW flange (without nut)<br>1 x ¾" internal thread<br>diameter thermometer = 50 mm<br>dial thermometer with red scale in the handle, handle with thermometer can be pulled off,<br>check valve 200 mm wc, can be opened | int.: ¾" | 65 mm | **96541** |

# Ball valves



| | | Connection | Length | Item no. |
|---|---|---|---|---|
|  | **Thermometer valve with flow check valve TKS - DN 25** | int.: 1" | 81 mm | **96551** |
| | **Thermometer valve with flow check valve TKS - DN 32**<br><br>1 x PAW flange (without nut) 1" (DN 25) / 1¼" (DN 32)<br>1 x internal thread 1" (DN 25) / 1¼" (DN 32)<br>1 x sleeve (on the side) ½", for overflow valve or immersion sleeve/sensor connection<br>1 x self-sealing blind plug ½"<br>diameter thermometer = 50 mm<br>dial thermometer with red scale in the handle, handle can be pulled off with thermometer,<br>check valve 200 mm wc, can be opened | int.: 1¼" | 104 mm | **96561** |
|  | **Ball valve - DN 25**<br><br>1 x external thread<br>1 x nut G = 1"<br>key actuated, ideal to shut off armoured hoses as it is flat-sealing | ext.: 1" | 50 mm | **905003** |
|  | **Elbow ball valve DN 25**<br><br>1 x 1" external thread<br>1 x nut G = 1"<br>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**<br><br>Function: for thick insulation of the ball valve<br>Material: Brass, chromed<br>Can be replaced under pressure when the ball valve is closed.<br>available for: MK, PK, TK, KMM, KMV.<br>nominal diameter: DN 20, 25, 32, 40, 50<br>Please state the type of ball valve and the nominal diameter when ordering! | | 95 mm | **2165** |
|  | **Full port ball valve KMA - DN 15**<br>1 x ½" external thread<br>1 x ½" internal thread | int.: ½"<br>ext.: ½" | 48,5 mm | **2218** |
| | **Full port ball valve KMA - DN 20**<br>1 x ¾" external thread<br>1 x ¾" internal thread | int.: ¾"<br>ext.: ¾" | 64 mm | **2219** |
| | **Full port ball valve KMA - DN 25**<br>1 x 1" external thread<br>1 x 1" internal thread<br><br>Material: Brass, nickel-plated,<br>Max. operating temperature = 100 °C<br>with red butterfly handle | int.: 1"<br>ext.: 1" | 66 mm | **2220** |



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

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



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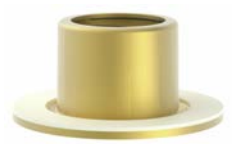
| | | Connection | Length | Item no. |
|---|---|---|---|---|
|  | **Check valve SBA - DN 25 (1")** | ext.: 1½"<br>Flange (w/ nut): 1" | 48 mm (IL) | **1003** |
| | **Check valve SBA with automatic air passage - DN 25 (1")**<br><br>Check valve, can be opened, with union nut, gasket and PAW flange for warm water central heating, PN 10, 120 °C, suited for horizontal and vertical installation, to be screwed directly on the pump.<br>Opening pressure 200 mm wc<br><br>IL = Installation length | ext.: 1½"<br>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")**<br><br>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.<br>Opening pressure 200 mm wc<br><br>IL = Installation length | int.: 2" ext.: 2" | 38 mm (IL) | **1106** |
|  | **Check valve SBE - int. thread DN 20 (¾")** | int.: ¾"<br>Flange: 1" | 41 mm | **1019** |
| | **Check valve SBE - int. thread DN 25 (1")** | int.: 1"<br>Flange: 1" | 45 mm | **1017** |
| | **Check valve SBE - int. thread DN 25 (1")** | int.: 1"<br>Flange: 1" | 57 mm | **1007** |
| | **Check valve SBE with automatic air passage - int. thread DN 25 (1")** | int.: 1"<br>Flange: 1" | 45 mm | **1117** |
| | **Check valve SBE with automatic air passage - int. thread DN 25 (1")**<br><br>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.<br>Opening pressure 200 mm wc | int.: 1"<br>Flange: 1" | 57 mm | **1107** |
|  | **Check valve SBE - ext. thread DN 25 (1")** | ext.: 1"<br>Flange: 1" | 57 mm | **1010** |
| | **Check valve SBE with automatic air passage - ext. thread DN 25 (1")**<br><br>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.<br>Opening pressure 200 mm wc | ext.: 1"<br>Flange: 1" | 57 mm | **1110** |

# Check valves

| | | Connection | Length | Item no. |
|---|---|---|---|---|
|  | **Elbow check valve - DN 25 (1")**<br><br>- with check valve, can be opened manually, automatic air passage<br>- with connection for automatic air vent (½" sleeve)<br>- opening pressure 200 mm wc | int.: ½"<br>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")**<br><br>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")**<br><br>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")**<br><br>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")**<br><br>Flow in the direction of the internal thread | int.: 1¼" ext.: 1¼" | 74 mm | **10941** |
|  | **Solar check valve RSS - DN 20 (¾")**<br>can be opened, up to 150 °C | int.: ¾" | 50 mm | **1211** |
| | **Solar check valve RSS - DN 20 (¾")**<br>without possibility for manual opening, up to 220 °C<br><br>with brass valve plate, all installation positions possible, opening pressure 200 mm wc, ¾" internal thread,<br>length = 50 mm | int.: ¾" | 50 mm | **12111** |



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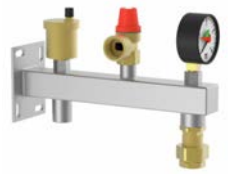
| | | |
|---|---|---|
|  | **Boiler safety group KSG - DN 25 (1") up to 50 kW** | **5201** |
| | **Boiler safety group KSG - DN 25 (1") up to 100 kW** | **52021** |
| | **Boiler safety group KSG - DN 25 (1") up to 200 kW** | **5203** |
| | **Boiler safety group KSG - DN 32 (1¼") up to 300 kW**<br><br>completely mounted, consisting of:<br>1 wall bracket<br>1 heating manometer d = 63 mm, 0-4 bar with automatic isolation<br>1 pressure relief valve 3 bar, firmly sealed<br>1 automatic air vent ⅜", with automatic isolation 1 EPS insulation<br><br>5201: pressure relief valve ½", brass bracket, 1" int. thread<br>52021: pressure relief valve ¾", brass bracket, 1" int. thread<br>5203: pressure relief valve 1", steel bracket, 1" int. thread<br>5204: pressure relief valve 1¼", steel bracket, 1¼" int. thread | **5204** |
|  | **Tank connection group ¾" GAG/heating**<br><br>completely mounted, consisting of:<br>1 wall bracket ¾" female thread<br>1 heating manometer d = 63 mm, 0-4 bar with automatic isolation<br>1 pressure relief valve ½", 3 bar,<br>1 automatic air vent ⅜", with automatic isolation<br>1 tank connector ¾", 2 screws and wall plugs | **5205** |
|  | **Safety group SID - DN 25 up to 50 kW**<br><br>for straight piping<br>- with pressure relief valve ½", opening pressure 3 bar<br>- with pressure gauge 0 - 4 bar, with shut-off valve | **5208** |
|  | **Safety set for distribution manifold - DN 25 (1") up to 50 kW**<br><br>For the installation on modular distribution manifolds DN 25 (as of 2017),<br>with a connection of ¾" int. thread (sealed with plug) for the installation of the connection set for the expansion tank (item no. 7507),<br>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**<br><br>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**<br>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. | **523103** |
| | **Pressure relief valve ¾" x 1", up to 100 kW**<br><br>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** |

# Safety sets and heating equipment



| | | |
|---|---|---|
|  | **Pressure relief valve with pressure gauge up to 50 kW**<br><br>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** |
|  | **Flush and drain set DN 20 (¾")**<br><br>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")**<br><br>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.<br><br>Careful: Flush and drain set is not compatible with the HeatBloC® MC system! | **3461** |
|  | **Flush and drain set DN 32 (¼")**<br><br>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.<br>Careful: Flush and drain set is not compatible with the HeatBloC® MC system! | **3761** |
|  | **Dial thermometer 0-120 °C, with red scale** | **21711** |
| | **Dial thermometer 0-120 °C, with blue scale**<br><br>- Measuring range 0-120 °C,<br>- immersion shaft 25 mm, with self-sealing immersion sleeve,<br>- d = 50 mm | **21721** |
|  | **Pressure gauge ⅜" d = 50 mm**<br><br>Pressure gauge with automatic isolation,<br>measuring range: 0-4 bar<br>diameter: d = 50 mm<br>shut-off valve: ½" x ⅜" | **523204** |
|  | **Automatic air vent ⅜" external thread** | **5234** |
| | **Automatic air vent ½" external thread**<br><br>Automatic air vent, vertical, with automatic shut-off valve<br><br>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** |
|  | **Counter cross DN 25 (1")**<br><br>Connection top: 1" external thread, self-sealing with o-ring and counter nut<br>Connection bottom: 1" internal thread<br>Connections side: ¾" internal thread<br>Connection front: ⅜" internal thread | **5251** |
|  | **Counter elbow**<br><br>¾" external thread, self-sealing with O-ring and counter nut<br>½" external thread, self-sealing with O-ring and counter nut | **5252** |



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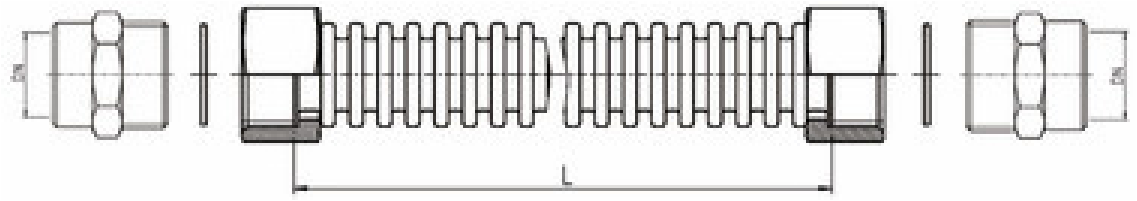
| | | |
|---|---|---|
|  | **Connection set for diaphragm expansion tank DN 20**<br><br>for assembly to safety group DN 25,<br>with self-sealing double nipple ¾" and mounting equipment, tank connector ¾",<br>armoured hose with bend ¾" x 700 mm, double nipple ¾", maximum tank diameter = 440 mm | **7507** |
|  | **Connection set DN 25 for diaphragm expansion tank**<br><br>for assembly to a safety group DN 32,<br>with self-sealing double nipple 1", cap valve 1", armoured hose with bend 1" x 700 mm. | **7508** |
|  | **Microbubble resorber 1¼"**<br><br>with automatic air vent<br>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<br><br>52374: L = 110 mm, up to 35.3 l/min or 2.12 $m^3$/h<br>52375: L = 124 mm; up to 57.8 l/min or 3.47 $m^3$/h | **52375** |
|  | **Tank connection coupling DN 20 (¾"), max. operating temperature 100 °C** | **5300** |
| | **Tank connection coupling DN 20 (¾"), max. operating temperature 130 °C**<br><br>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")**<br><br>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")**<br><br>solid design, with hose connector and cap, completely made of brass, ½" with self-sealing counter nut | **2260** |

# 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")**<br><br>Material 1.4404<br>Minimum length 5 m per roll<br>more than 50 m per roll on request<br>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**<br><br>Scope of delivery:<br>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**<br><br>Scope of delivery:<br>1 stainless-steel holding ring, 1 screw-in fitting, 1 union nut, 1 seal | **825401** |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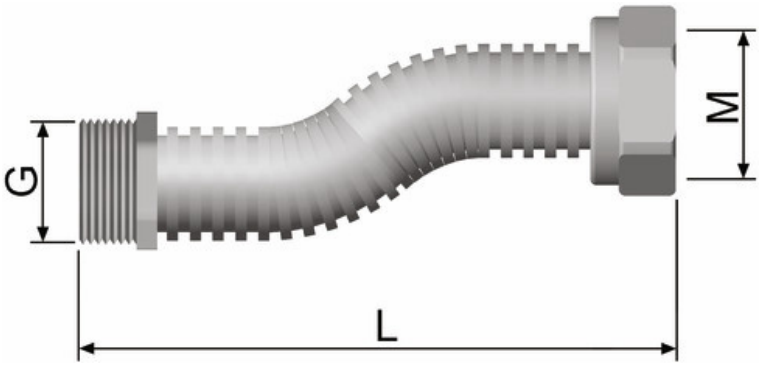
# Flexan



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

## Catalogue 01/2024

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** | 19 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** | 28 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** | 52 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** | 81 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** | 132 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

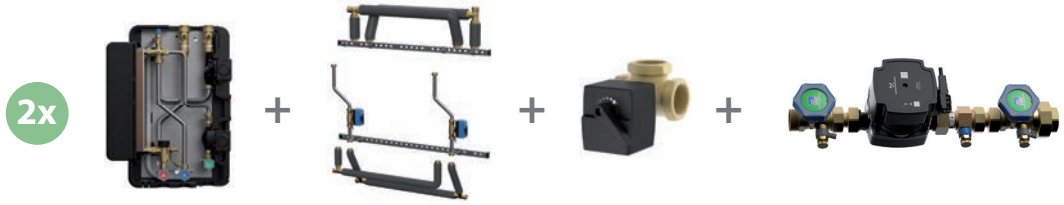
**Example:**


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** | 640425 | | | |
| **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:**

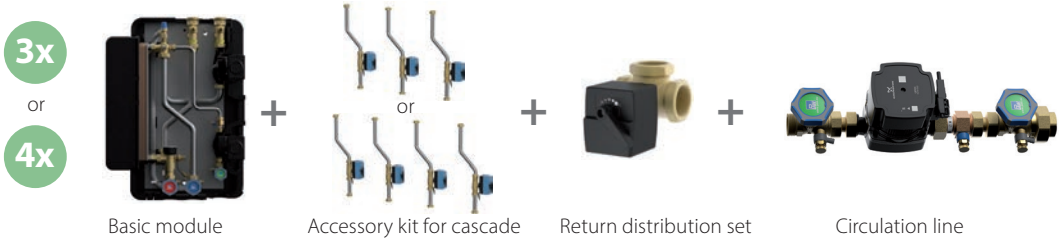



Basic module | Pipe set for cascade | Return distribution set | Circulation line

| | | 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** | | 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** | | | |

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

**Example:**




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)<br>64042632 (3-fold)<br>64042642 (4-fold) | 64042722 (2-fold)<br>64042732 (3-fold)<br>64042742 (4-fold) | 64042820 (2-fold)<br>64042830 (3-fold)<br>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<br>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 | Solder: copper;<br>Plates + connecting pieces: stainless steel;<br>coating (optional): based on silica |

**Dimensions**

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



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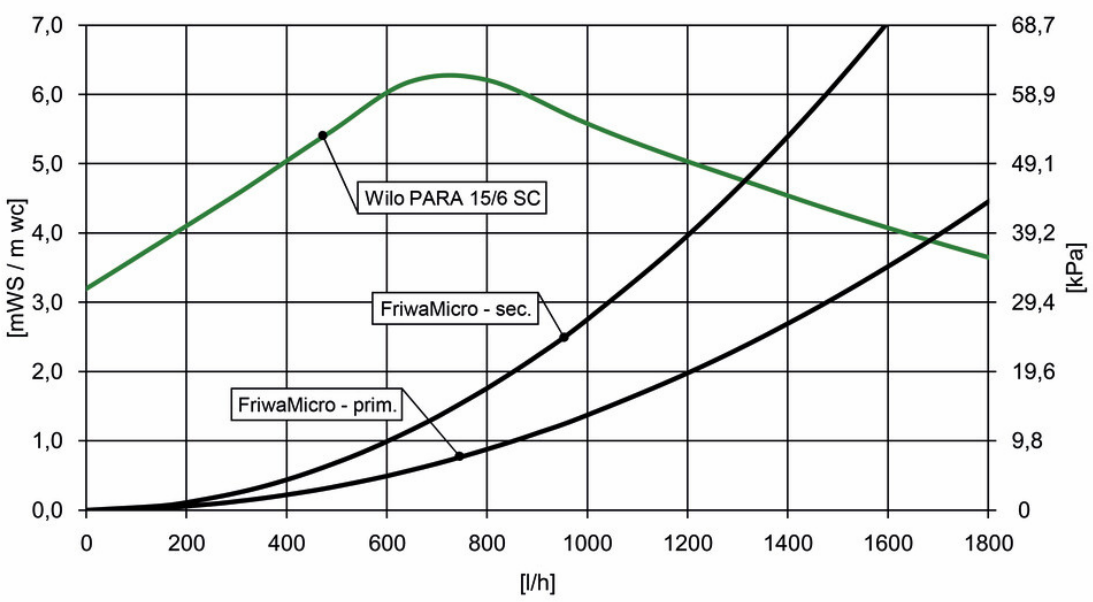
# FriwaMicro, thermally controlled up to 20 l/min (as per SPF LK1)*






| FriwaMicro - DN 15 (½") | | Item no. |
|---|---|---|
|  | **FriwaMicro, thermally controlled**<br>Wilo Para SC 15/6-43 | **6400010** |
| | **FriwaMicro, thermally controlled, coated heat exchanger**<br>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<br>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<br>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 |
| Heat exchanger | E8ASW-N, 32 plates |
| Sensors | 2 x Pt1000 |
| Controller | FC3.10 |
| Circulation line | optional |

**Materials**

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

**Dimensions**

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



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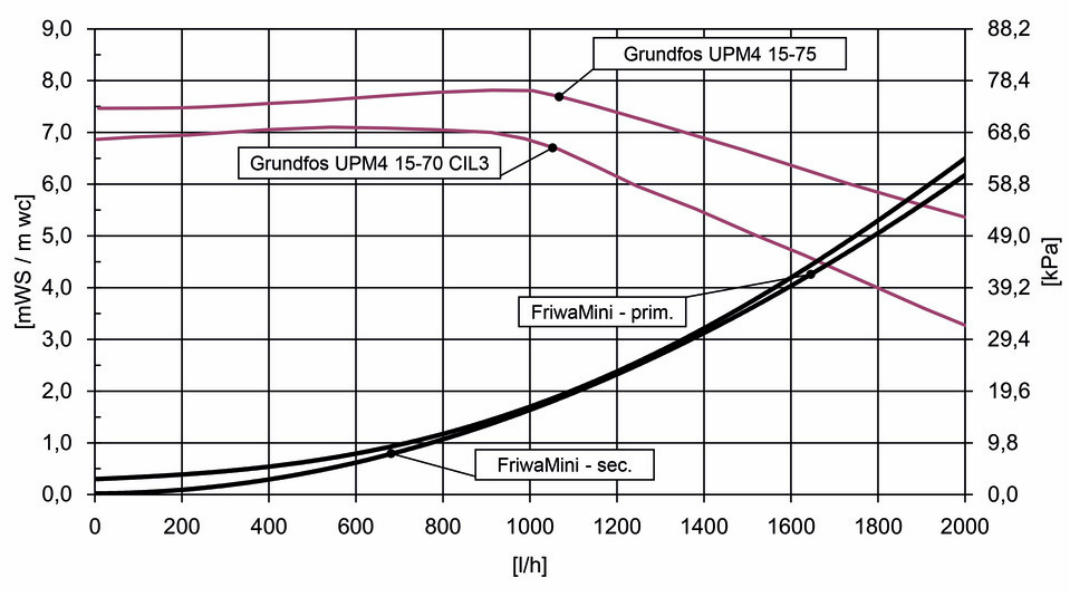
# FriwaMini
## up to 28 l/min (as per SPF LK1)*




| FriwaMini - DN 15 (½") | | Item no. |
|---|---|---|
|  | **FriwaMini, without circulation**<br>Primary pump: Grundfos UPM4 15-75 | **6401510** |
| | **FriwaMini, with circulation**<br>Primary pump: Grundfos UPM4 15-75<br>Secondary pump: Grundfos UPM4 15-70 CIL3 | **6401515** |
| | **FriwaMini, without circulation, coated heat exchanger**<br>Primary pump: Grundfos UPM4 15-75 | **6401530** |
| | **FriwaMini, with circulation, coated heat exchanger**<br>Primary pump: Grundfos UPM4 15-75<br>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<br>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<br>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 /<br>secondary: 2 x Pt1000 /<br>1 x flow meter |
| Controller | FC3.10 |
| Circulation line | optional |

**Materials**

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

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Connections | primary: 1½" ext. thread<br>secondary: 1" ext. thread |
| Width | 602 mm |
| Centre distance prim. | 120 mm |
| Centre distance sec. | 100 mm |
| Height | 795 mm |
| Installation length | 757 mm |
| Depth | 298 mm |



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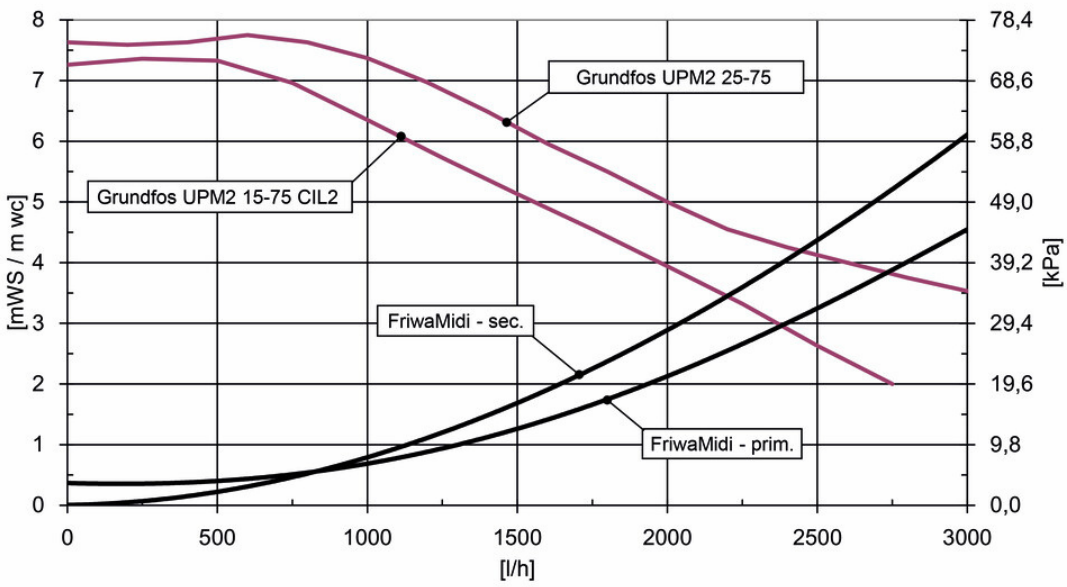
# FriwaMidi
## up to 50 l/min (as per SPF LK1)*




| FriwaMidi - DN 20 (¾") | | Item no. |
|---|---|---|
|  | **FriwaMidi, without circulation**<br>Primary pump: Grundfos UPM2 25-75 LowFlow | **6405511** |
| | **FriwaMidi, with circulation**<br>Primary pump: Grundfos UPM2 25-75 LowFlow<br>Secondary pump: Grundfos UPM2 15-75 CIL2 | **6405516** |
| | **FriwaMidi, without circulation, coated heat exchanger**<br>Primary pump: Grundfos UPM2 25-75 LowFlow | **6405531** |
| | **FriwaMidi, with circulation, coated heat exchanger**<br>Primary pump: Grundfos UPM2 25-75 LowFlow<br>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<br>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<br>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 /<br>secondary: 2 x Pt1000 /<br>1 x flow meter |
| Controller | FC3.10 |
| Circulation line | optional |

**Materials**

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

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 25 (1") |
| Connections | primary: 2" ext. thread<br>secondary: 1 ¼" ext. thread |
| Width | 602 mm |
| Centre distance prim. | 120 mm |
| Centre distance sec. | 100 mm |
| Height | 795 mm |
| Installation length | 769 mm |
| Depth | 298 mm |



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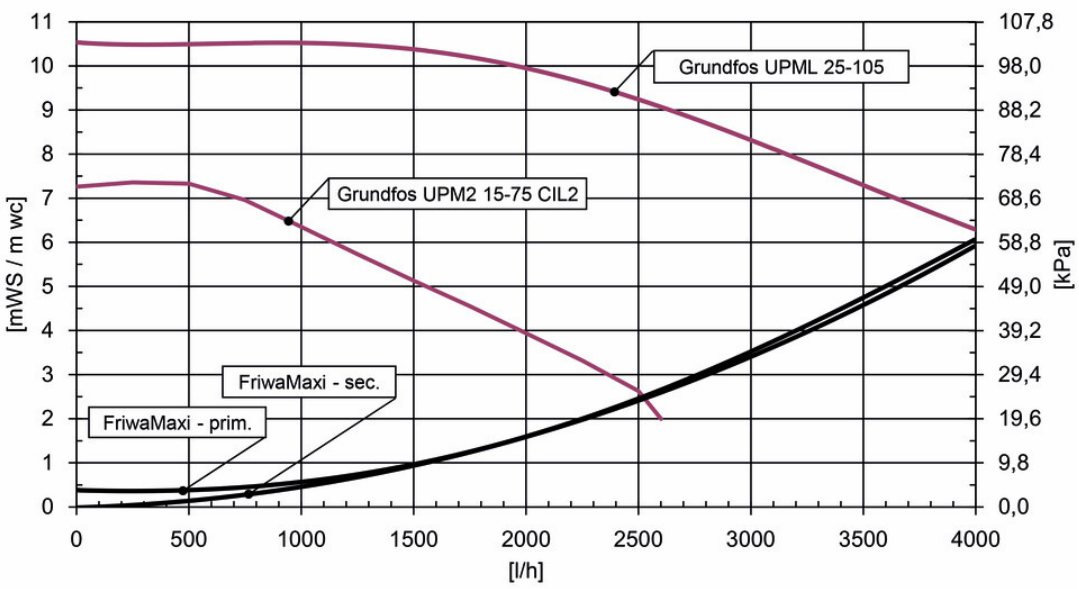
# FriwaMaxi
## up to 77 l/min (as per SPF LK1)*




| FriwaMaxi - DN 25 (1") | | Item no. |
|---|---|---|
|  | **FriwaMaxi, without circulation**<br>Primary pump: Grundfos UPML 25-105 | **6406511** |
| | **FriwaMaxi, with circulation**<br>Primary pump: Grundfos UPML 25-105<br>Secondary pump: Grundfos UPM2 15-75 CIL2 | **6406516** |
| | **FriwaMaxi, without circulation, coated heat exchanger**<br>Primary pump: Grundfos UPML 25-105 | **6406531** |
| | **FriwaMaxi, with circulation, coated heat exchanger**<br>Primary pump: Grundfos UPML 25-105<br>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<br>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<br>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 /<br>secondary: 2 x Pt1000 /<br>2 x flow meter |
| Controller | FC3.10 |
| Circulation line | optional |

**Materials**

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

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 32 (1¼") |
| Connections | primary: 1½" int. thread<br>secondary: 1½“ ext. thread |
| Width | 710 mm |
| Centre distance prim. | 158 mm |
| Centre distance sec. | 158 mm |
| Height | 1 423 mm |
| Installation length | 1 205 mm |
| Depth | 920 mm |



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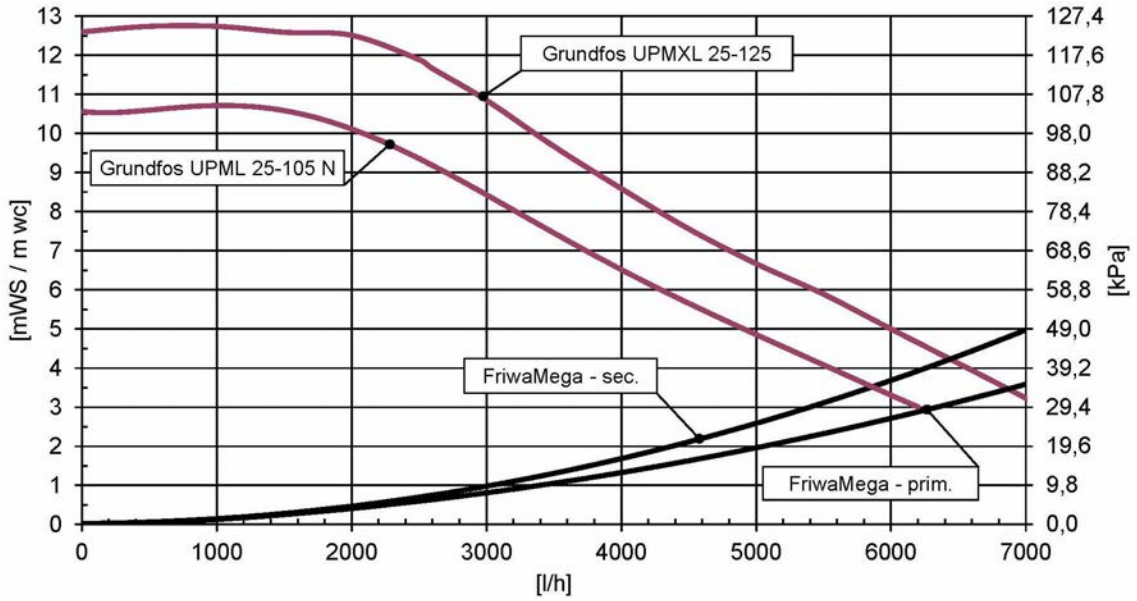
# FriwaMega
## up to 123 l/min (as per SPF LK1)*




| FriwaMega - DN 32 (1¼") | | Item no. |
|---|---|---|
|  | **FriwaMega, without circulation**<br>Primary pump: Grundfos UPMXL GEO 25-125 | **6407511** |
| | **FriwaMega, with circulation**<br>Primary pump: Grundfos UPMXL GEO 25-125<br>Secondary pump: Grundfos UPM2 15-75 CIL2 | **6407517** |
| | **FriwaMega, without circulation, coated heat exchanger**<br>Primary pump: Grundfos UPMXL GEO 25-125 | **6407530** |
| | **FriwaMega, with circulation (internal), coated heat exchanger**<br>Primary pump: Grundfos UPMXL GEO 25-125<br>Secondary pump: Grundfos UPML 25-105 N | **6407535** |



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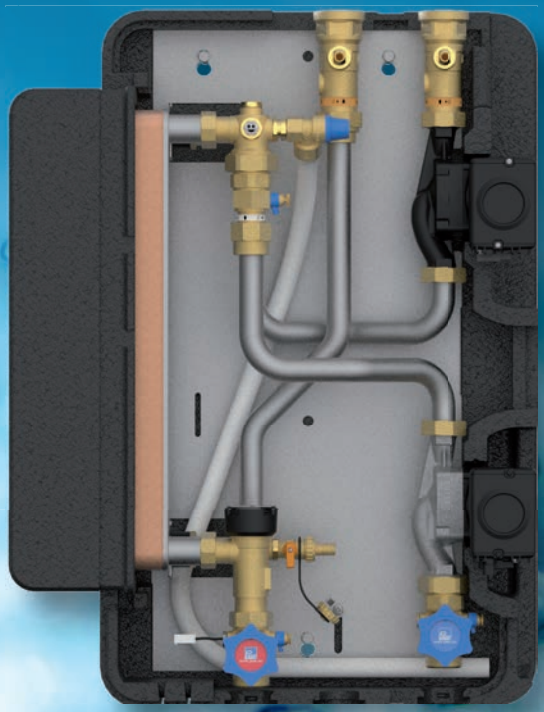

# Tank heat transfer modules DN 20-25

## Catalogue 01/2024

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<br>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<br>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;<br>Plates + connecting pieces: stainless steel |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Connections | primary: 1½" ext. thread<br>secondary: 1" ext. thread |
| Width | 602 mm |
| Centre distance prim. | 120 mm |
| Centre distance sec. | 220 mm |
| Height | 795 mm |
| Installation length | 757 mm |
| Depth | 298 mm |



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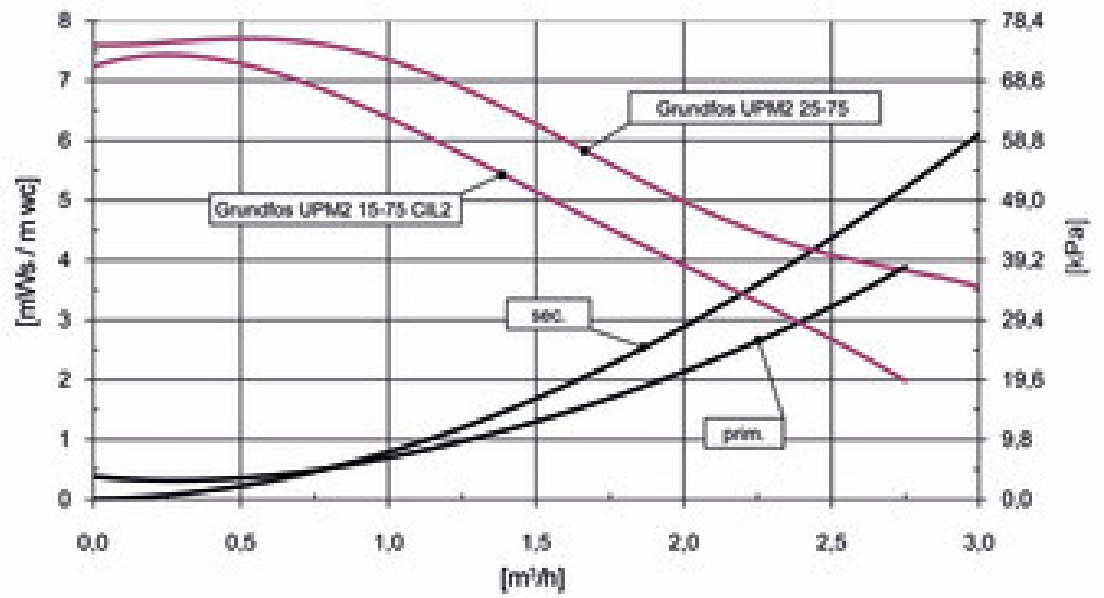
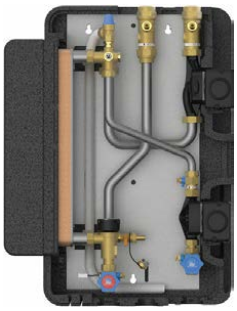
# Tank heat transfer module Midi up to 33 l/min (as per SPF LK1)*






| Tank heat transfer module Midi - DN 20 (¾") | | Item no. |
|---|---|---|
|  | **Tank heat transfer module Midi up to 33 l/min**<br>Primary pump: Grundfos UPM2 25-75 LowFlow<br>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<br>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<br>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;<br>Plates + connecting pieces: stainless steel |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 25 (1") |
| Connections | primary: 2" ext. thread<br>secondary: 1 ¼" ext. thread |
| Width | 602 mm |
| Centre distance prim. | 120 mm |
| Centre distance sec. | 220 mm |
| Height | 795 mm |
| Installation length | 769 mm |
| Depth | 298 mm |



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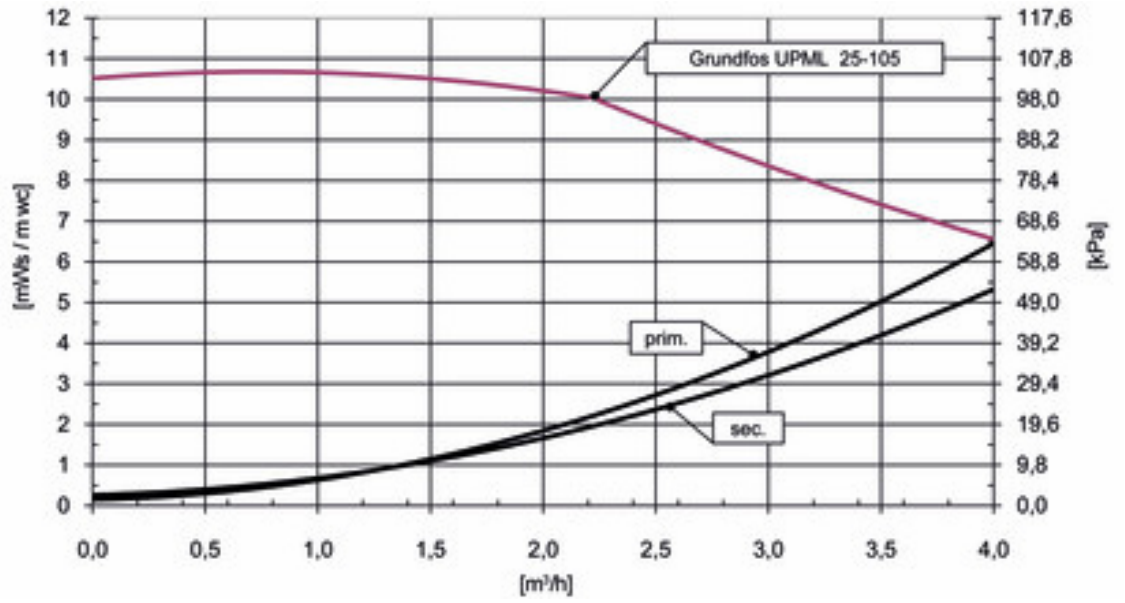
# Tank heat transfer module Maxi
# up to 63 l/min (as per SPF LK1)*






| Tank heat transfer module Maxi - DN 25 (1") | | Item no. |
|---|---|---|
|  | **Tank heat transfer module Maxi up to 63 l/min**<br>Primary pump: Grundfos UPML 25-105<br>Secondary pump: Grundfos UPML 25-105 N | **6436465** |

# Domestic hot water equipment



| | | |
|---|---|---|
|  | **Service water mixing valve - DN 20**<br><br>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.<br>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.<br><br>Housing: Brass, insensitive to calcification, resistant to dezincification<br>Precision of settings: +/- 2 °C<br>Max. operating temperature: 98 °C<br>Max. operating pressure: PN 10<br>Range of setting: 30-70 °C<br>Withdrawal: 39 l/min (DP = 1.5 bar)<br>Connections: thread connection with ¾" external thread | **56311** |
|  | **Domestic hot water safety group ¾"**<br><br>Safety group for hot water storage tank, with shut-off valve and adjustable check valve.<br>For horizontal installation. With seat made of stainless steel.<br>Brass housing. Chromed.<br>Certified in conformity to EN 1487.<br>Opening pressure 7 bar, max. power 10 kW | **563907** |
|  | **Withdrawal valve**<br><br>Flame-treated valves for sterile withdrawal of water.<br>For the subsequent installation inside the Friwa module, on each piston valve of the domestic hot water circuit. | **640422** |
|  | **Accessory set FriwaMicro**<br><br>3x ball valve DN 15<br>Authorisation according to DVGW<br>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**<br><br>The accessory set is for cascading of two, three or four identically constructed Friwa modules.<br>The two-way valves are prefitted and can be easily mounted in the cold water line.<br>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**<br><br>The accessory set is for cascading of two, three or four identically constructed Friwa modules.<br>The two-way valves are prefitted and can be easily mounted in the cold water line.<br>Due to the short opening time of the valve there is no loss of comfort when connecting or disconnecting of single cascade modules. | **64042742** |



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| | | |
|---|---|---|
|  | **Accessory set FriwaMega-Kaskade 2-fold** | **64042820** |
| | **Accessory set FriwaMega-Kaskade 3-fold** | **64042830** |
| | **Accessory set FriwaMega-Kaskade 4-fold**<br><br>The set ist for cascading of two, three or four identically constructed Friwa modules.<br>The two-way valves are prefitted and can be easily mounted in the cold water line.<br>Due to the short opening time of the valve there is no loss of comfort<br>when connecting or disconnecting of single cascade modules. | **64042840** |
|  | **Circulation set for internal retrofitting for FriwaMini FC3.10**<br><br>- with high-efficiency pump Grundfos UPM4 15-70 CIL3<br>- with piston valve and non-return valve<br>Connection: 1" ext. thread | **6404111** |
|  | **Circulation set for FriwaMidi/Maxi**<br><br>- with high-efficiency pump Grundfos UPM3 15-70 CIL3<br>- with piston valve and non-return valve<br>Connection: 1" ext. thread | **6404123** |
|  | **Circulation set for internal retrofitting of FriwaMega**<br><br>- with high-efficiency pump Grundfos UPML 25-105 N<br>- with piston valve and non-return valve<br>Connection: 1¼" ext. thread | **6404135GH10** |
|  | **Circulation set for Friwa-Kaskade (Midi, Maxi, Mega) and for tank heat transfer module Midi, Maxi**<br><br>- with high-efficiency pump Grundfos UPM4 15-70 CIL3<br>- with piston valves, non-return valve and draining<br>Connection: 1" ext. thread | **6404136GM7** |

# Domestic hot water equipment



| | | |
|---|---|---|
|  | **Circulation set for Friwa-Kaskade (Midi, Maxi, Mega) and for tank heat transfer module Midi, Maxi**<br><br>- with high-efficiency pump Grundfos UPML 25-105 N<br>- with piston valves, non-return valve and draining<br>Connection: 1½" ext. thread | **6404136GH10** |
|  | **Circulation set for Friwa-Kaskade (Maxi/Mega-Kaskade)**<br><br>- with high-efficiency pump Grundfos UPMXL 25-125 N<br>- with piston valves, non-return valve and draining<br>Connection: 1½" ext. thread | **6404136GH12** |
|  | **Return distribution set for FriwaMini - DN 25 (1")**<br><br>3-way valve with actuator, Kvs value: 11<br>3 x 1" int. thread | **640425** |
| | **Return distribution set FriwaMidi, Tank heat transfer module Midi - DN 32**<br><br>3-way valve with actuator, setting time for 90°: 18 sec., Kvs value: 15<br>3 x 1¼" int. thread | **640423** |
|  | **Return distribution set for FriwaMaxi, tank heat transfer module Maxi - DN 32**<br><br>3-way valve with actuator, setting time for 90°: 35 sec., Kvs value: 16<br>3 x 1½" int. thread | **640424** |
| | **Return distribution set for FriwaMidi/Maxi-Kaskade, FriwaMega, SolexMega HZ - DN 40**<br><br>3-way valve with actuator, setting time for 90°: 35 sec., Kvs value: 25<br>3 x 1½" int. thread | **6404242** |
| | **Return distribution set 2" int. thread - DN 50 (2")**<br><br>3-way valve with actuator, setting time for 90°: 35 sec., Kvs value: 40<br>3 x 2" int. thread | **6404244** |
|  | **Pipe set for FriwaMini-Kaskade**<br><br>Insulated pipe set for cascading of two Friwa modules (item no. 6401510)<br>- with 2 two-way valves for switching<br>- with mounting rail for an easy wall assembly | **64042933** |



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| | | |
|---|---|---|
|  | **Pipe set for FriwaMidi-Kaskade**<br><br>Insulated pipe set for cascading of two Friwa modules (item no. 6405511)<br>- with 2 two-way valves for switching<br>- with mounting rail for an easy wall assembly | **64042943** |
| | **Pipe set for FriwaMaxi-Kaskade**<br><br>Insulated pipe set for cascading of two Friwa modules (item no. 6406511)<br>- with 2 two-way valves for switching<br>- with mounting rail for an easy wall assembly | **64042953** |
|  | **Pipe set for FriwaMega-Kaskade**<br><br>Insulated pipe set for cascading of two Friwa modules (item no. 6407511)<br>- with two 2-way valves for switching | **64042963** |
|  | **WiFi3.10 Internet Gateway Module**<br><br>Communication module to connect PAW systems with domestic hot water controllers FC3.10 or solar controllers SC3.10 with the Internet visualisation platform emodul.eu. The communication module WiFi3.10 is connected to the FC3.10 or SC3.10 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<br><br>Operating voltage: 115-230 V/50-60 Hz<br>Protection type: IP 20 | **1339003** |
|  | **MB3.10**<br><br>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**<br><br>for connecting and disconnecting single storage tanks,<br>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**<br><br>for connecting and disconnecting single storage tanks,<br>DN 32, 1¼" internal thread, setting time for 90°: 30 sec., Kvs value = 123 | **563552** |



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**Solex**
Solar thermal systems

# Solar transfer stations DN 15-50

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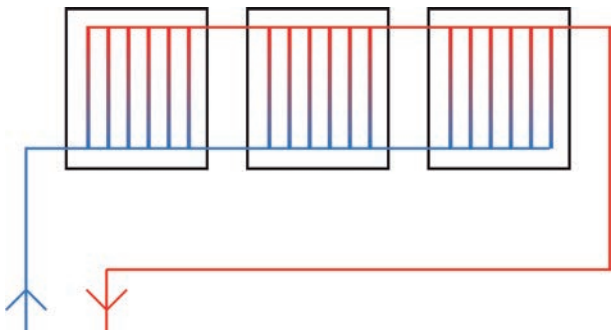
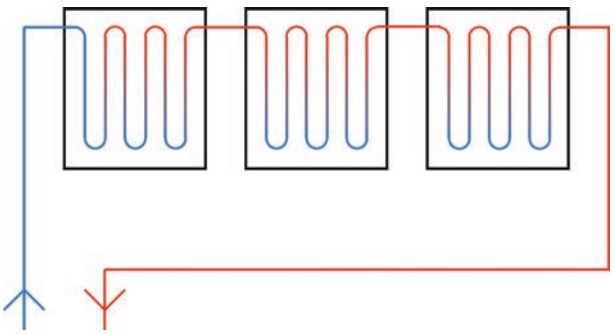
**High-Flow system with harp collectors**



**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.
In reality, 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 to 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.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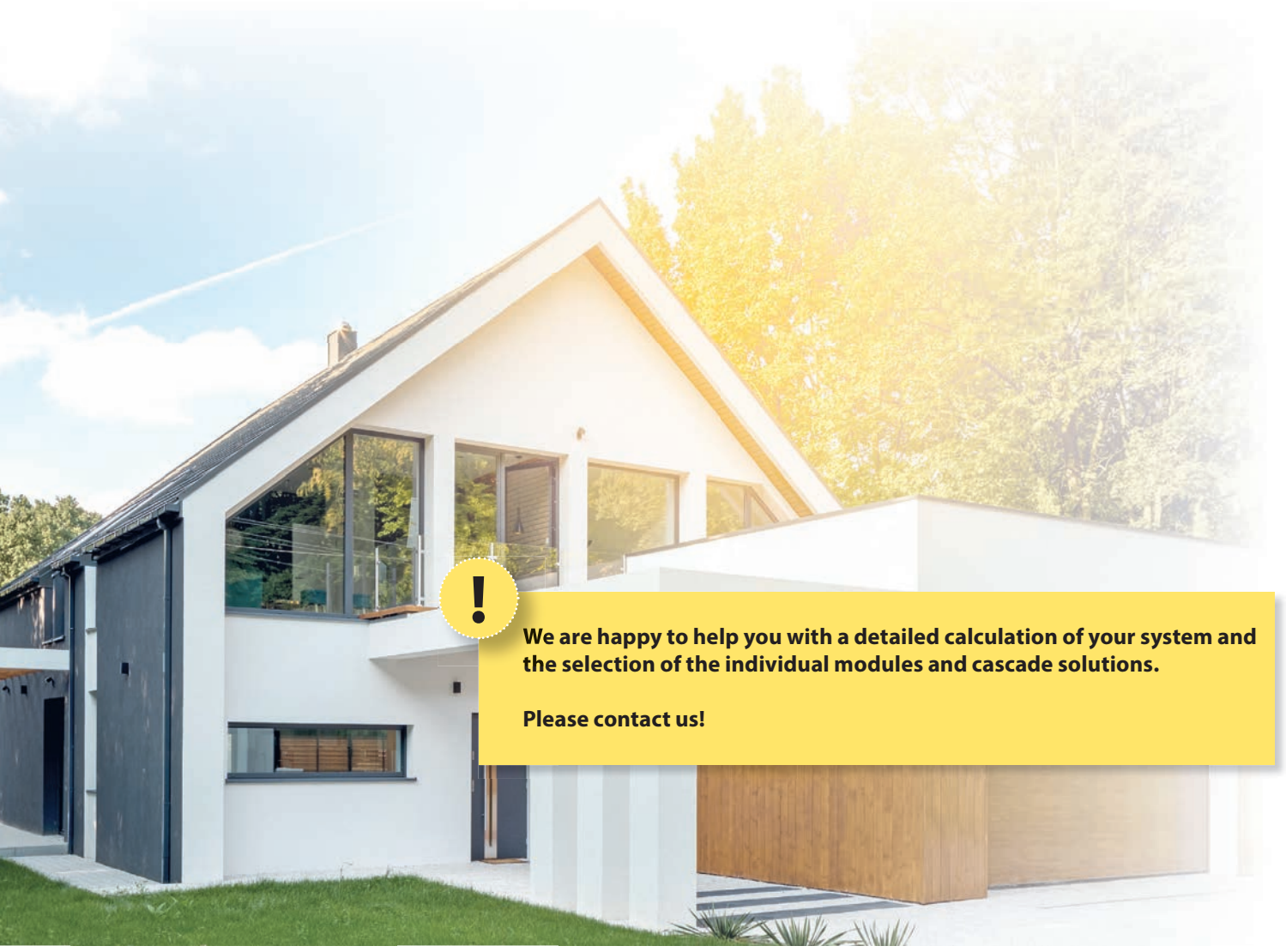
## Selection table solar transfer stations - Solex

| 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 | Mini | Midi | Midi | Midi | Maxi | Maxi | Maxi | Mega | Mega | Mega | 2x Mega | 2x Mega | 2x Mega | 2x Mega |
| 20 | Mini | Mini | Mini | Mini | 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



**We are happy to help you with a detailed calculation of your system and the selection of the individual modules and cascade solutions.**

**Please contact us!**

# 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

**Application range**

- up to 36 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 3 bar |
| Operating temperature | primary: 120 °C<br>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 /<br>secondary: 1 x 200 mm wc |
| Heat exchanger | E8ASH, 24 plates |
| Controller | SC5.14 |
| Sensors | 2 x Pt1000 (integrated) /<br>3 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 3 bar |
| 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 |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 15 (½") |
| Connections | primary: ¾" int. thread<br>secondary: ¾" int. thread |
| Width | 427 mm |
| Height | 664 mm |
| Installation length | 600 mm |
| Depth | 313 mm |



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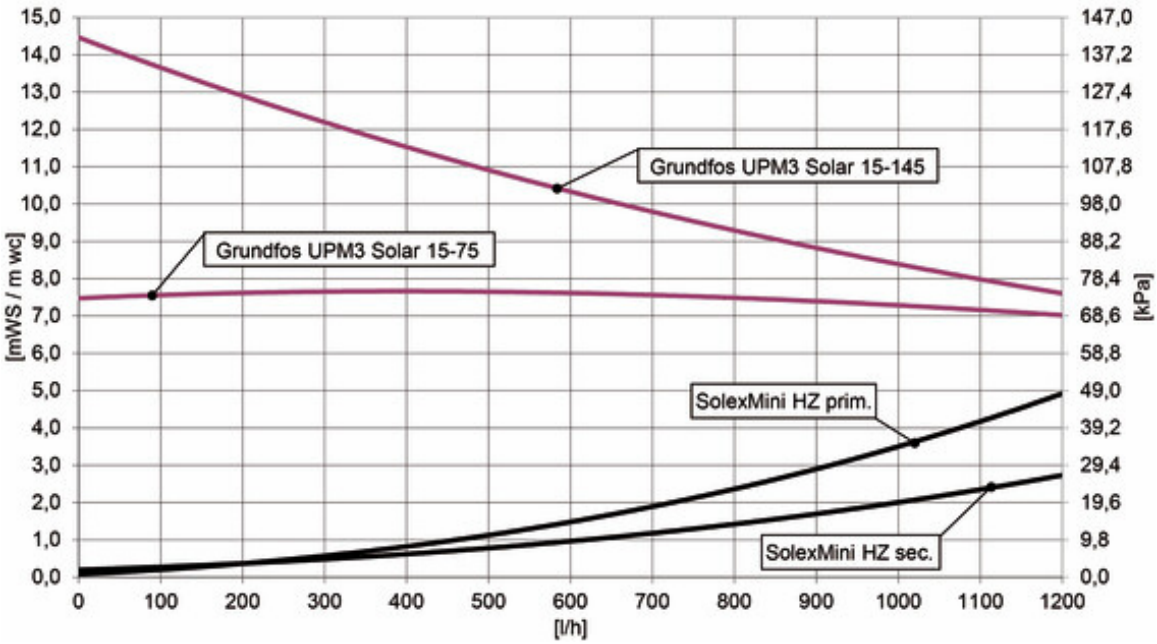
# SolexMini HZ (heating system)
# up to 36 m² of collector surface






| SolexMini HZ - DN 15 (½") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos UPM3 Solar 15-145**<br>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

**Application range**

- up to 60 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 6 bar |
| Operating temperature | primary: 120 °C<br>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 350 mm wc /<br>secondary: 2 x 200 mm wc |
| Heat exchanger | B25TH, 30 plates |
| Controller | SC5.14 |
| Sensors | 2 x Pt1000 (integrated) /<br>3 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 6 bar |
| FlowRotor (primary) | 2-50 l/min |
| Flow meter (secondary) | 3-22 l/min |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Connections | primary: ¾" int. thread<br>secondary: ¾" int. thread |
| Width | 674 mm |
| Height | 795 mm |
| Installation length | 670 mm |
| Depth | 298 mm |
| Centre distance | 120 mm |



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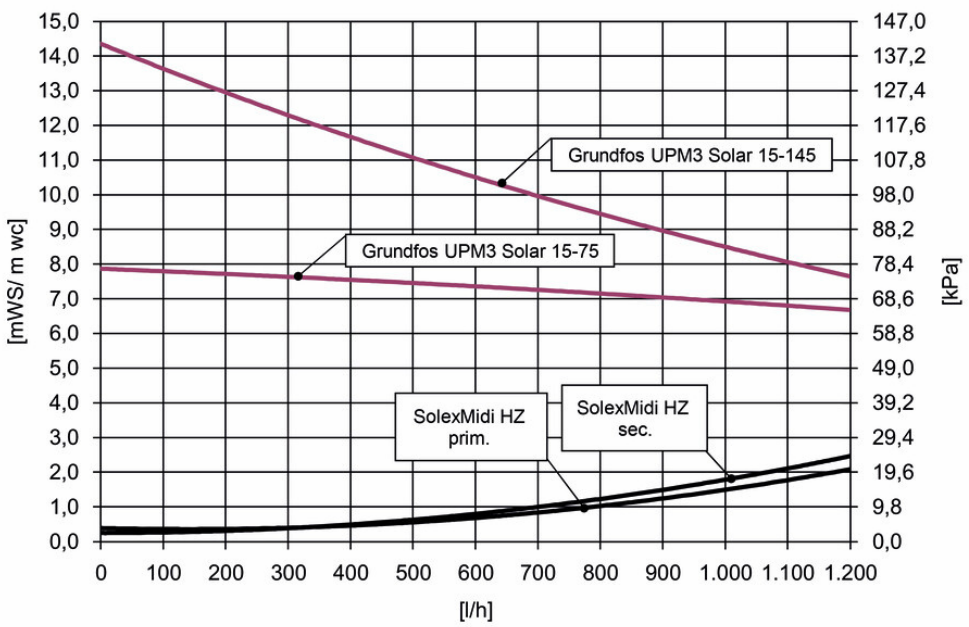
# SolexMidi HZ (heating system)
# up to 60 m² of collector surface






| SolexMidi HZ - DN 20 (¾") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos UPM3 Solar 15-145**<br>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

**Application range**

- up to 100 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 6 bar |
| Operating temperature | primary: 120 °C<br>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 /<br>secondary: 1 x 200 mm wc |
| Heat exchanger | B25TH, 60 plates |
| Controller | SC5.14 |
| Sensors | 2 x Pt1000 (integrated) /<br>3 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 6 bar |
| FlowRotor (primary) | 2-50 l/min |
| Flow meter (secondary) | 5-40 l/min |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 25 (1") |
| Connections | primary: 1" int. thread<br>secondary: 1" int. thread |
| Width | 674 mm |
| Height | 828 mm |
| Installation length | 709 mm |
| Depth | 298 mm |
| Centre distance | 120 mm |



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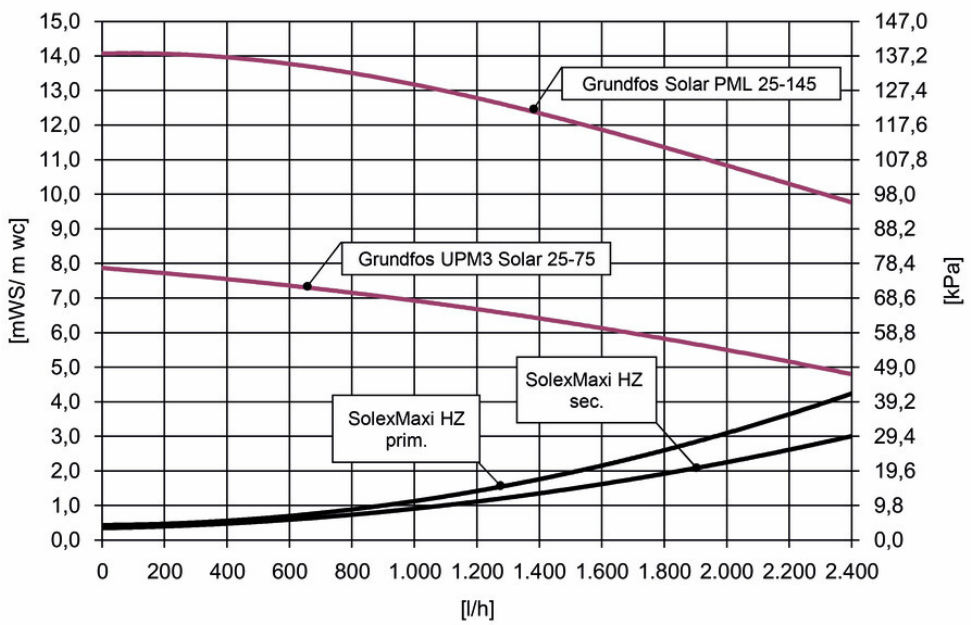
# SolexMaxi HZ (heating system)
# up to 100 m² of collector surface






| SolexMaxi HZ - DN 25 (1") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos Solar PML 25-145**<br>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

**Application range**

- up to 200 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 6 bar |
| Operating temperature | primary: 120 °C<br>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 /<br>secondary: 2 x 250 mm wc |
| Heat exchanger | XB37M-1, 2x 50 plates |
| Controller | SC5.14 |
| Sensors | 2 x Pt1000 (integrated) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 6 bar |
| FlowRotor (primary) | 5-100 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 32 (1¼") |
| Connections | primary: 1½" int. thread<br>secondary: 1½" int. thread |
| Width | 710 mm |
| Height | 1 654 mm |
| Installation length | 1 205 mm |
| Depth | 920 mm |
| Centre distance | 158 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |



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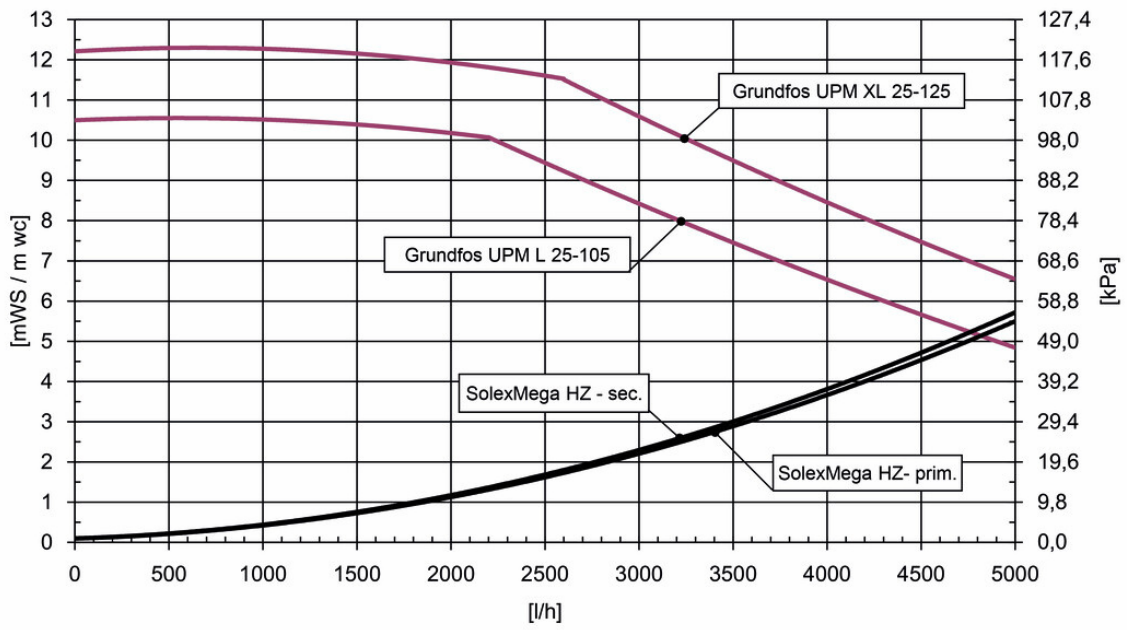
# SolexMega HZ (heating system)
# up to 200 m² of collector surface






| SolexMega HZ - DN 32 (1¼") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos UPMXL GEO 25-125**<br>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

**Application range**

- up to 400 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 6 bar |
| Operating temperature | primary: 120 °C<br>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 /<br>secondary: 4 x 250 mm wc |
| Heat exchanger | XB37M-1, 4x 50 plates |
| Controller | SC5.14 |
| Sensors | 4 x Pt1000 (integrated) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 6 bar |
| FlowRotor (primary) | 2 x 5-100 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 50 (2") |
| Connections | primary: 2" ext. thread / flange DN 50<br>secondary: 2" ext. thread / flange DN 50 |
| Width | 1 420 mm |
| Height | 1 672 mm |
| Installation length | 1 672 mm |
| Depth | 920 mm |
| Centre distance | 158 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |



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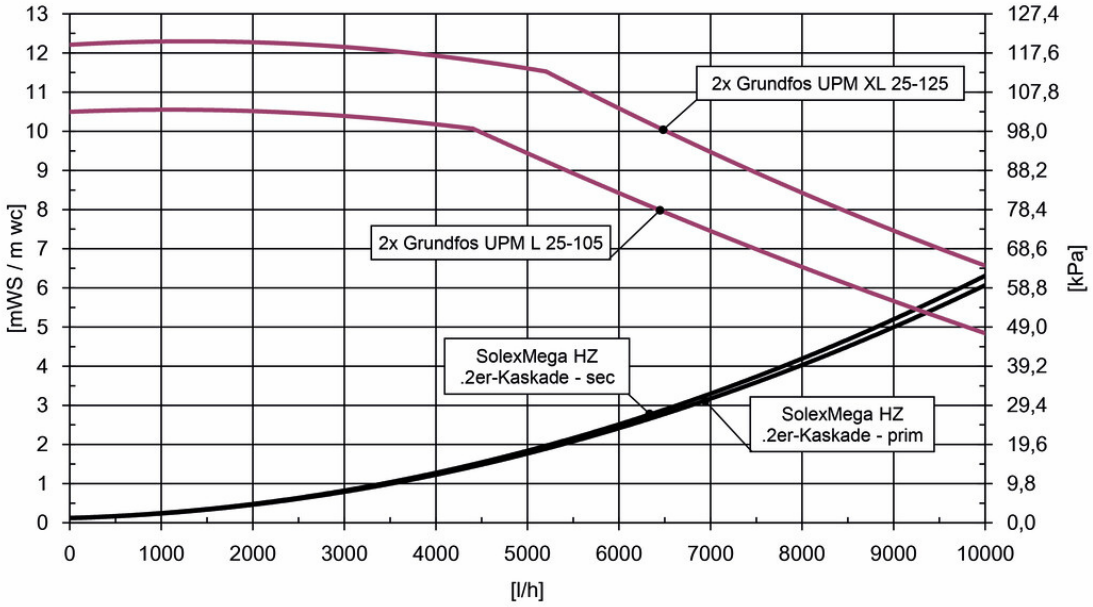
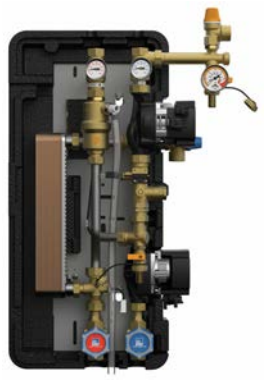
# SolexMega-Kaskade HZ (heating system) up to 400 m² of collector surface




| SolexMega-Kaskade HZ - DN 50 (2") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos UPMXL GEO 25-125**<br>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

**Application range**

- up to 36 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 10 bar |
| Operating temperature | primary: 120 °C<br>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 |
| Heat exchanger | E8ASH, 24 plates |
| Controller | SC5.14 |
| Sensors | 3 x Pt1000 (integrated) /<br>2 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 10 bar |
| FlowRotor (primary) | 0.5-15 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 15 (½") |
| Connections | primary: ¾" int. thread<br>secondary: ¾" int. thread |
| Width | 417 mm |
| Height | 681 mm |
| Installation length | 686 mm |
| Depth | 249 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |



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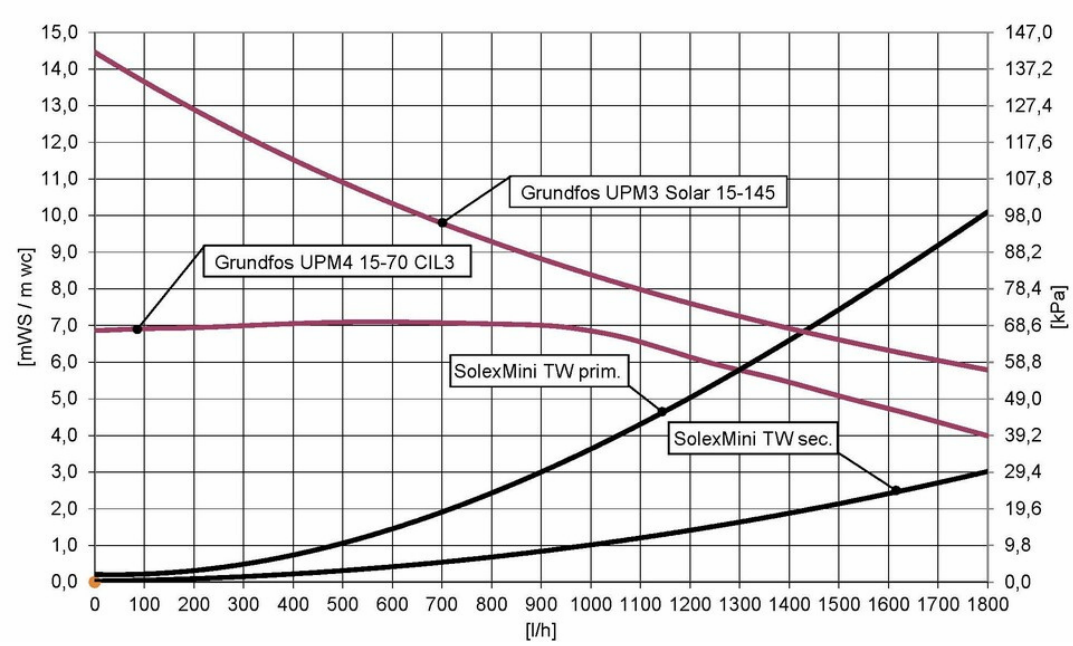
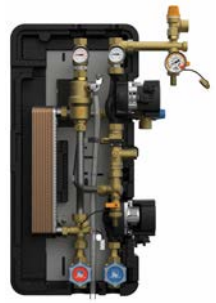
# SolexMini TW (domestic hot water system) up to 36 m² of collector surface






| SolexMini TW - DN 15 (½") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos UPM3 Solar 15-145**<br>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

**Application range**

- up to 60 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 10 bar |
| Operating temperature | primary: 120 °C<br>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 350 mm wc /<br>secondary: 1 x 150 mm wc |
| Heat exchanger | B25TH, 30 plates |
| Controller | SC5.14 |
| Sensors | 2 x Pt1000 (integrated) /<br>2 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 10 bar |
| FlowRotor (primary) | 2-50 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Connections | primary: ¾" int. thread<br>secondary: 1" ext. thread |
| Width | 674 mm |
| Height | 795 mm |
| Installation length | 678 mm |
| Depth | 298 mm |
| Centre distance | 120 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |



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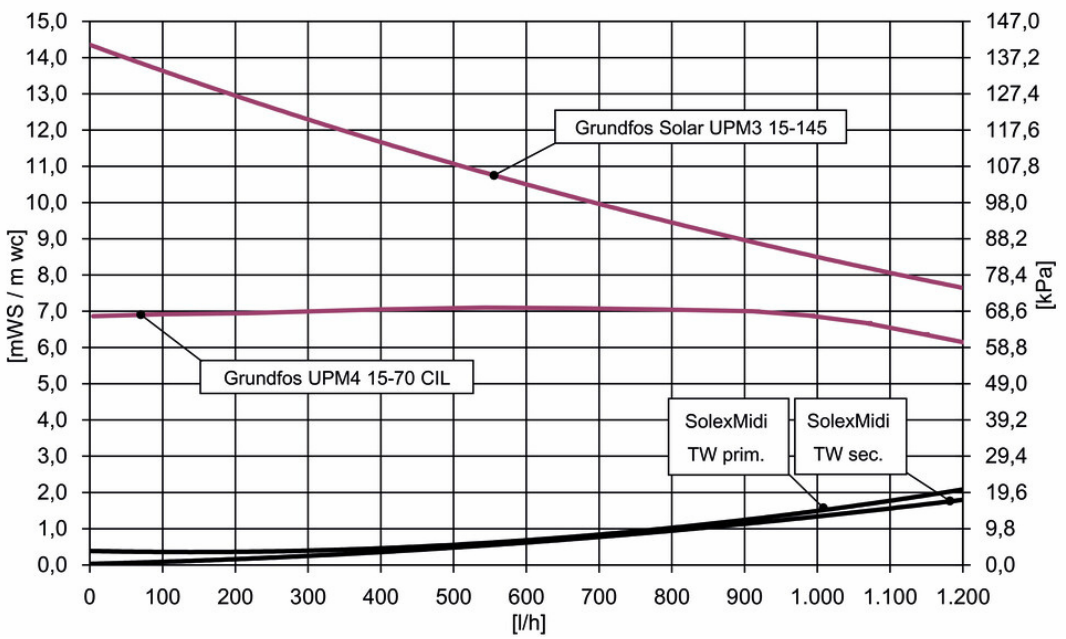
# SolexMidi TW (domestic hot water system) up to 60 m² of collector surface






| SolexMidi TW - DN 20 (¾") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos UPM3 Solar 15-145**<br>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

**Application range**

- up to 100 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 10 bar |
| Operating temperature | primary: 120 °C<br>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 /<br>secondary: 1 x 150 mm wc |
| Heat exchanger | B25TH, 60 plates |
| Controller | SC5.14 |
| Sensors | 2 x Pt1000 (integrated) /<br>2 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 10 bar |
| FlowRotor (primary) | 2-50 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 25 (1") |
| Connections | primary: 1" int. thread<br>secondary: 1 ¼" ext. thread |
| Width | 674 mm |
| Height | 829 mm |
| Installation length | 716 mm |
| Depth | 298 mm |
| Centre distance | 120 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |



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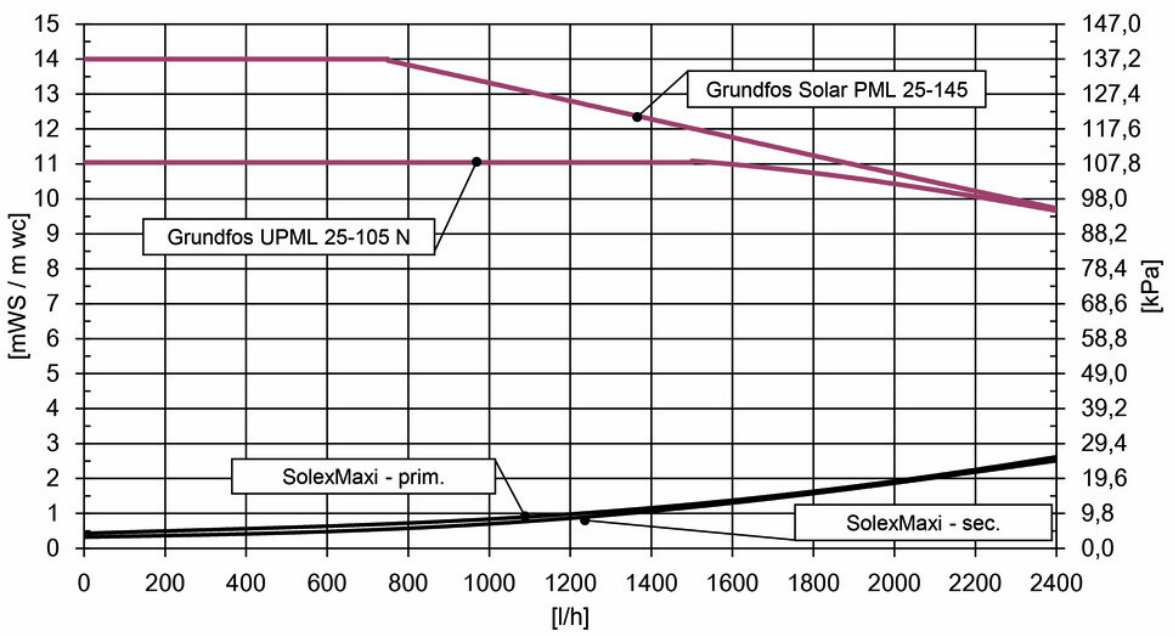
# SolexMaxi TW (domestic hot water system) up to 100 m² of collector surface






| SolexMaxi TW - DN 25 (1") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos Solar PML 25-145**<br>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

**Application range**

- up to 200 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 10 bar |
| Operating temperature | primary: 120 °C<br>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 /<br>secondary: 1 x 150 mm wc |
| Heat exchanger | XB37M-1, 2x 50 plates |
| Controller | SC5.14 |
| Sensors | 2 x Pt1000 (integrated) /<br>2 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 10 bar |
| FlowRotor (primary) | 5-100 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 32 (1¼") |
| Connections | primary: 1½" int. thread<br>secondary: 1½“ ext. thread |
| Width | 710 mm |
| Height | 1 654 mm |
| Installation length | 1 175 mm |
| Depth | 920 mm |
| Centre distance | 158 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |



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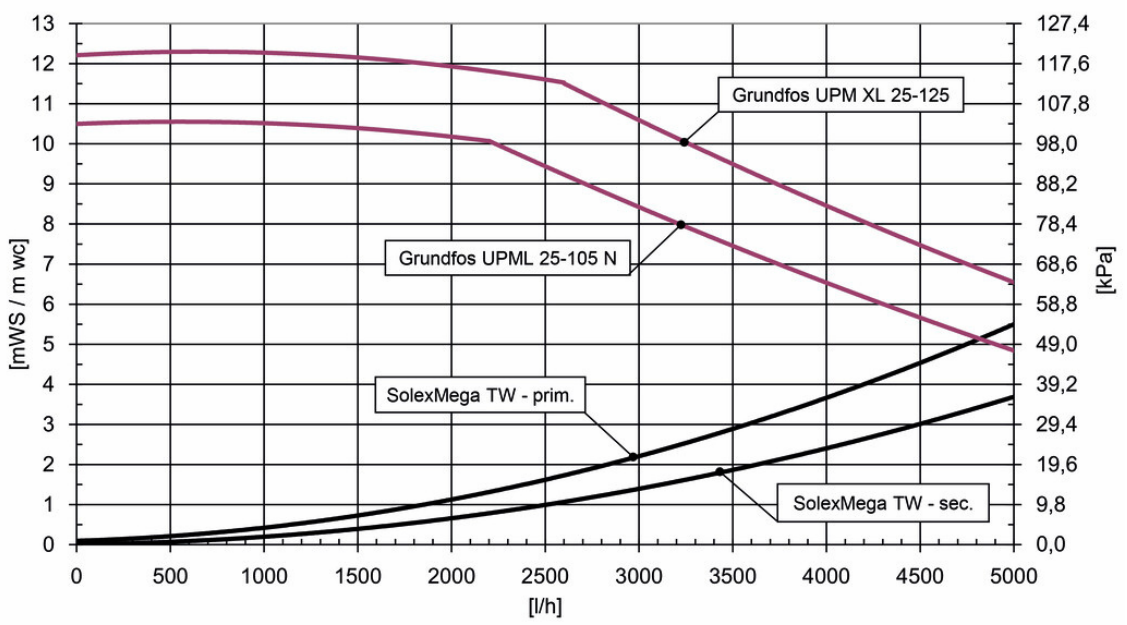
# SolexMega TW (domestic hot water system) up to 200 m² of collector surface






| SolexMega TW - DN 32 (1¼") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos UPMXL GEO 25-125**<br>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

**Application range**

- up to 400 m² of collector surface

**Operating data**

| | |
|---|---|
| Max. operating pressure | primary: 6 bar<br>secondary: 10 bar |
| Operating temperature | primary: 120 °C<br>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 /<br>secondary: 2 x 150 mm wc |
| Heat exchanger | XB37M-1, 4x 60 plates |
| Controller | SC5.14 |
| Sensors | 2 x Pt1000 (integrated) /<br>4 x Pt1000 (enclosed)) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Safety valve | primary: 6 bar / secondary: 10 bar |
| FlowRotor (primary) | 2 x 5-100 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 50 (2") |
| Connections | primary: 1½" int. thread<br>secondary: 1½“ ext. thread |
| Width | 1 420 mm |
| Height | 1 672 mm |
| Installation length | 1 672 mm |
| Depth | 920 mm |
| Centre distance | 158 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | |
| Heat exchanger | Solder: copper;<br>Plates + connecting pieces: stainless steel |



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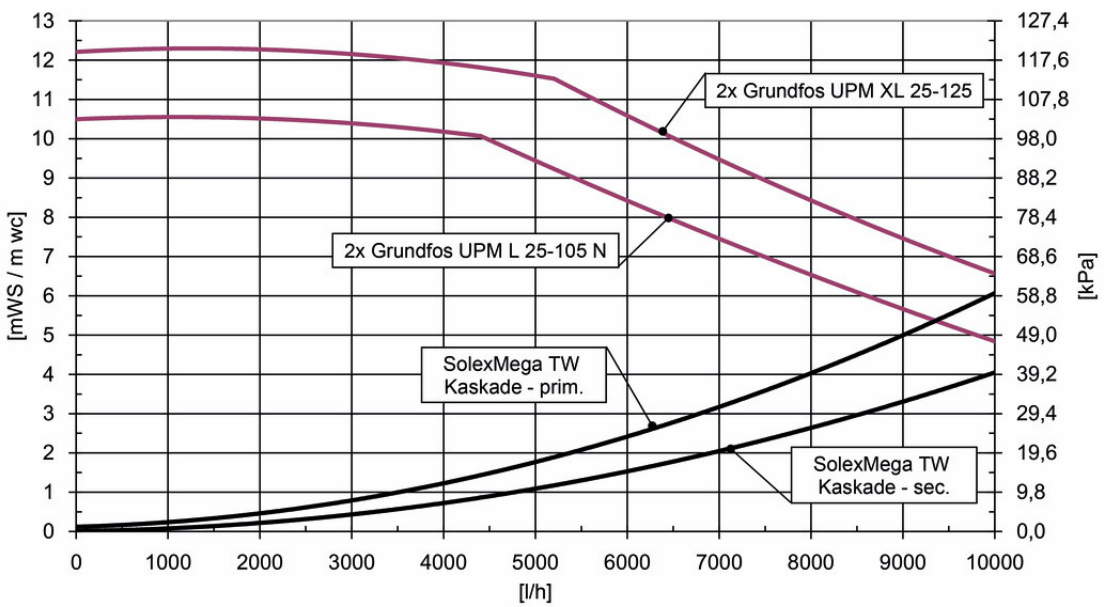
# SolexMega-Kaskade TW (domestic hot water system) up to 400 m² of collector surface






| SolexMega-Kaskade TW - DN 50 (2") | | Item no. |
|---|---|---|
|  | Primary pump **Grundfos UPMXL GEO 25-125**<br>Secondary pump **Grundfos UPML 25-105 N** | **6098465** |



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# Solar stations DN 20 - 32

## Catalogue 01/2024

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/$m^2$h) | 40 | 80 | 115 |
| Max. collector surface [$m^2$] Low-Flow (15 l/$m^2$h) | 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

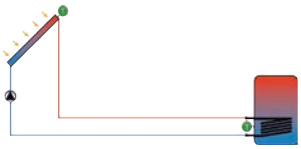
**Optional accessories SC3.5 and SC2.3:**
data logger (can be connected via VBus interface, DL2 Plus)

**Optional accessories SGC36HV and SGC26H:**
communication interface GWD

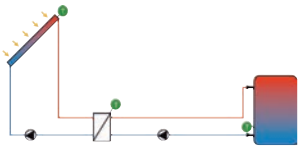
### Function overview controller

| | |
|---|---|
| Display | graphic LCD display |
| Operation | 4 (5) push buttons |
| Relay outputs | 3 x 230 V, semiconductor relay<br>1 x 230 V, switching relay<br>1 x SELV (max. 24 V), potential-free relay<br>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 |

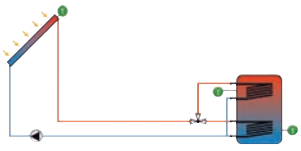
### Preset systems:



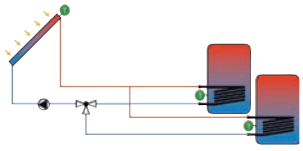
Internal heat exchanger, pump logic



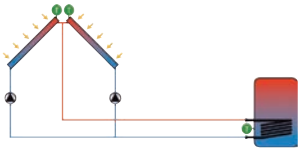
External heat exchanger, pump logic (1 x E13170 additionally required)



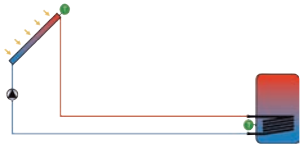
Internal heat exchanger, zone charging, valve logic
(1 x E13170 additionally required)



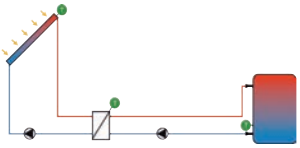
2 storage tanks, internal heat exchanger, valve logic
(1 x E13170 additionally required)



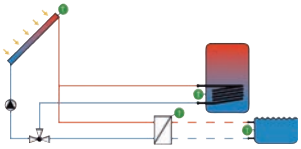
2 collector fields, internal heat exchanger, pump logic
(1 x E13170 additionally required)



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<br>= 0.25 l/min per m² of collector surface | up to a collector surface of 60 m² |
| High-flow<br>= 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**

| | |
|---|---|
| Airstop | yes |
| Check valves | 2 x 200 mm wc |
| Safety valve | 6 bar |
| Controller | SC3.5 |
| Sensors | 2 x Pt1000 (integrated) / 3 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| FlowRotor | 0.5-15 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Connections | ¾" int. thread |
| Width | 322 mm |
| Height | 557 mm |
| Installation length | 298 mm |
| Depth | 150 mm |
| Centre distance | 100 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |



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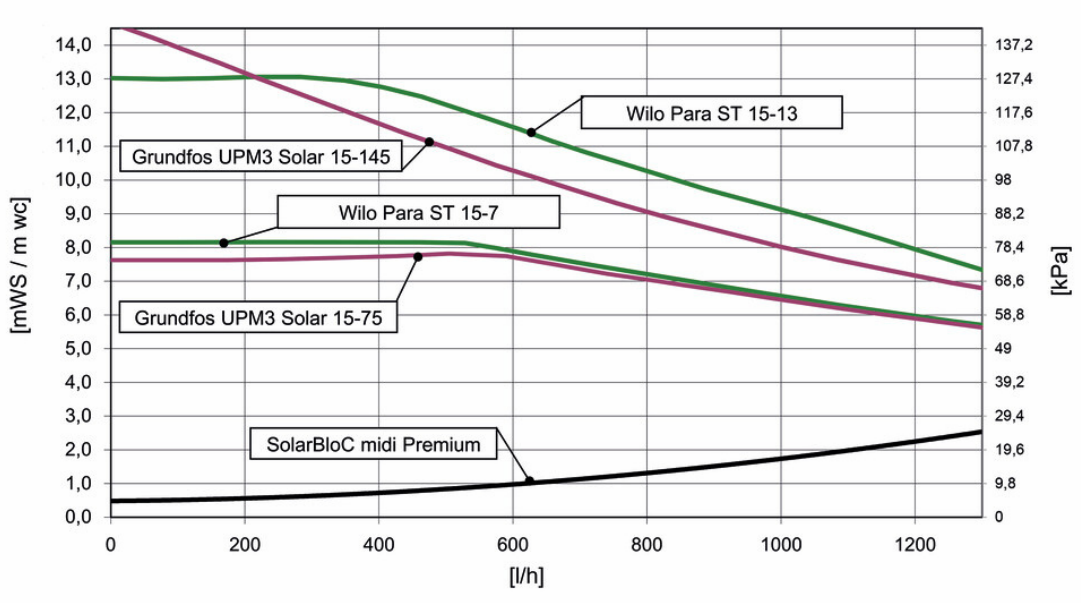
# SolarBloC® midi Premium
# up to a collector surface of 60 m²






| 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<br>= 0.25 l/min per m² of collector surface | up to a collector surface of 60 m² |
| High-flow<br>= 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**

| | |
|---|---|
| Airstop | yes |
| Check valves | 2 x 200 mm wc |
| Safety valve | 6 bar |
| Controller | SC2.3 |
| Sensors | 2 x Pt1000 (enclosed, only for modules with controller) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Flow meter (secondary) | 3-22 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Connections | ¾" int. thread |
| Width | 322 mm |
| Height | 557 mm |
| Installation length | 296 mm |
| Depth | 150 mm |
| Centre distance | 100 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |



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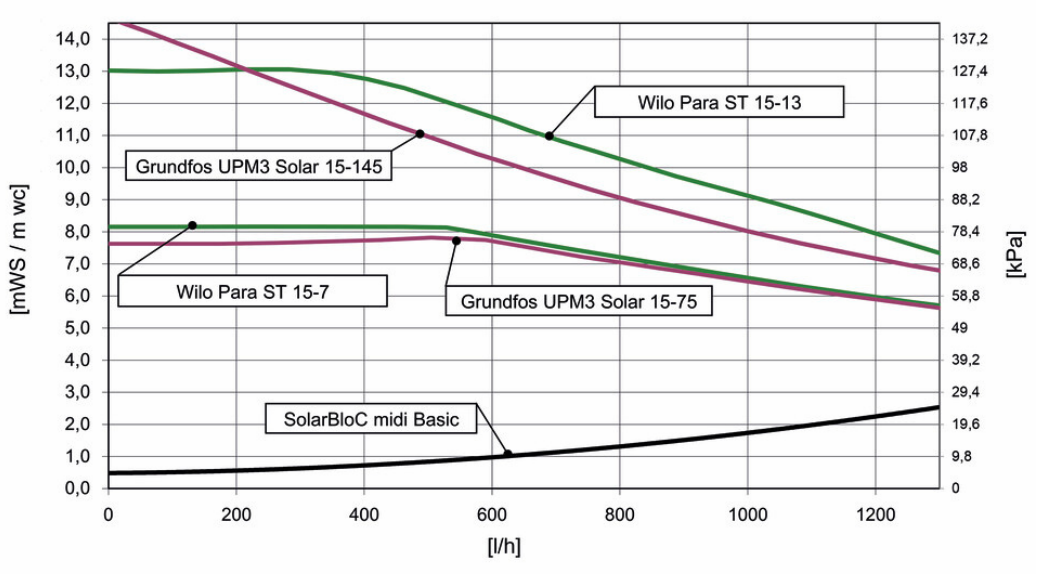
# SolarBloC® midi Basic
# up to a collector surface of 60 m²






| 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<br>= 0.25 l/min per m² of collector surface | up to a collector surface of 60 m² |
| High-flow<br>= 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**

| | |
|---|---|
| Airstop | yes |
| Check valves | 3 x 200 mm wc |
| Safety valve | 6 bar |
| Controller | on site |
| Sensors | no |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Flow meter (secondary) | 3-22 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Connections | ¾" int. thread |
| Width | 572 mm |
| Height | 429 mm |
| Installation length | 418 mm |
| Depth | 150 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |



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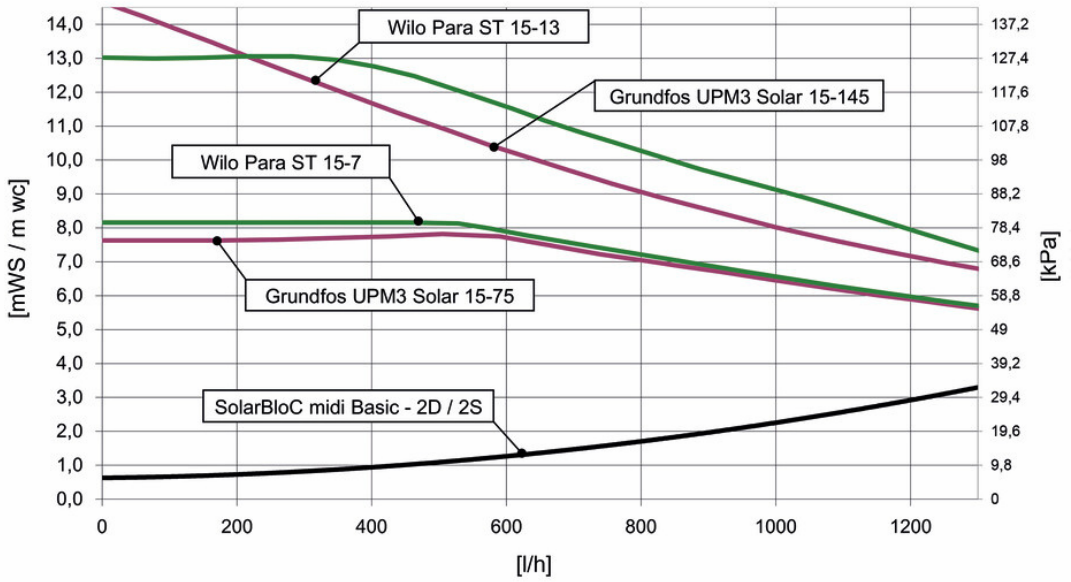
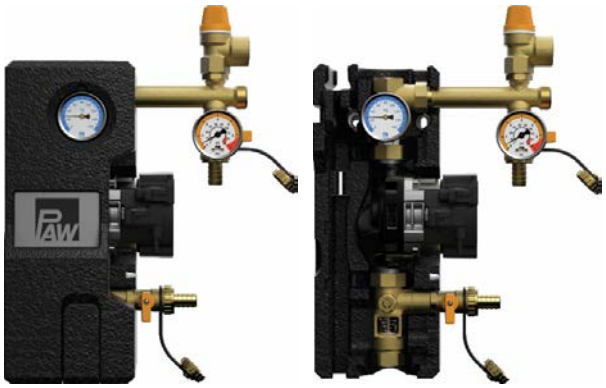
# SolarBloC® midi Basic, 3-line
# up to a collector surface of 60 m²






| 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<br>= 0.25 l/min per m² of collector surface | up to a collector surface of 60 m² |
| High-flow<br>= 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**

| | |
|---|---|
| Airstop | no |
| Check valves | 1 x 200 mm wc |
| Safety valve | 6 bar |
| Controller | on site |
| Sensors | no |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Flow meter (secondary) | 3-22 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 20 (¾") |
| Connections | ¾" int. thread |
| Width | 244 mm |
| Height | 383 mm |
| Installation length | 296 mm |
| Depth | 150 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |



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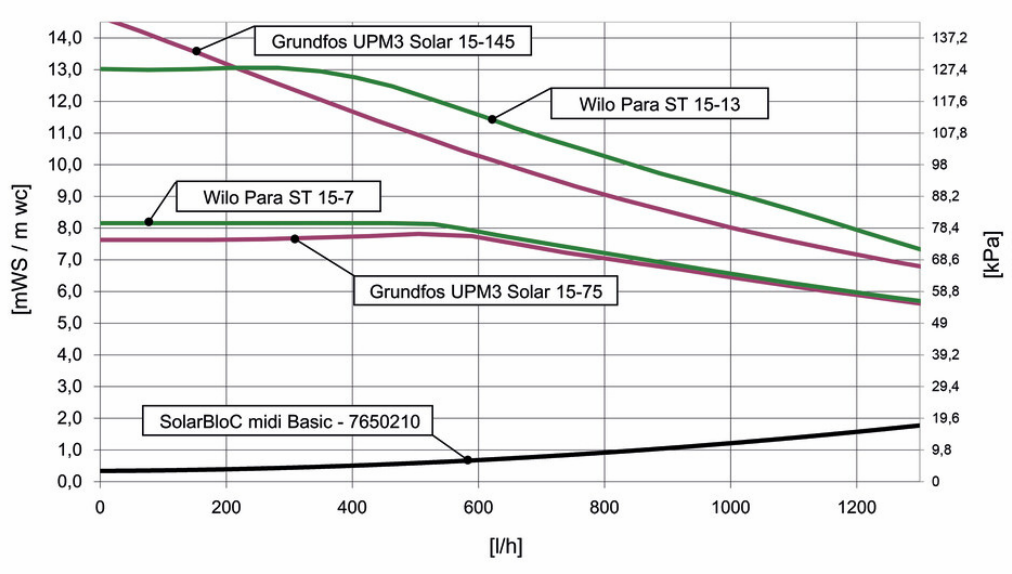
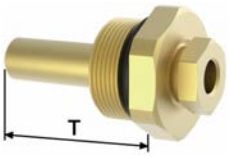
# SolarBloC® midi Basic return station up to a collector surface of 60 m²






| 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"**<br><br>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**<br><br>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**<br>self-sealing, with o-ring, polished brass, for sensor, T = 30 mm | **566001** |
| | **Immersion sleeve ¼" ext. thread x T = 60 mm**<br>standard, chromed brass, for sensor, T = 60 mm | **566002** |
| | **Immersion sleeve ½" ext. thread x T = 60 mm**<br>standard, chromed brass, with valve extension (25 mm), for sensor, T = 60 mm | **5660021** |
| | **Immersion sleeve ½" ext. thread x T = 100 mm**<br>standard, chromed copper, for sensor, T = 100 mm | **566003** |
| | **Immersion sleeve ½" ext. thread x T = 150 mm**<br>standard, chromed copper, for sensor, T = 150 mm<br><br>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.<br><br>Attention: suitable for ball valves until 2016! | **566004** |
|  | **Accessory kit for storage tank installation DN 20 (¾")**<br><br>Flange bracket made of brass with fill and drain valve and insulation<br>for direct assembly of the return station to the storage tank | **172706201** |
|  | **Solar check valve RSS - DN 20 (¾")**<br>can be opened, up to 150 °C | **1211** |
| | **Solar check valve RSS - DN 20 (¾")**<br>without possibility for manual opening, up to 220 °C<br><br>with brass valve plate, all installation positions possible, opening pressure 200 mm wc, ¾" internal thread,<br>length = 50 mm | **12111** |
|  | **Hand filling pump**<br><br>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**<br><br>½" external thread, 15 mm hose connection, attainable pressure up to approx. 4 bar, length 225 mm | **7062** |



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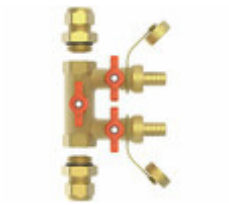
# Mounting equipment solar DN 20



| | | |
|---|---|---|
|  | **Hose connector for hand filling and injection pump**<br><br>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**<br><br>Ideal for the roof part leading to the collector.<br>Two soldered connections for clamping-ring compression fittings, for diameters of 18 mm or 22 mm.<br><br>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")**<br><br>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**<br><br>consisting of: Brass ball valve internal thread ¾", with red butterfly handle, with 2 fill and drain valves with hose connector 15 mm<br><br>565221: additionally with 2 cutting-ring compression fittings with support sleeve, premounted | **565221** |
|  | **Double nipple ¾" x ¾"** | **548310** |
| | **Double nipple 1 x 1**<br><br>for assembly of corrugated stainless steel hoses<br><br>548310: ¾" ext. thread, self-sealing with o-ring x outlet ¾" ext. thread, flat-sealing<br>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**<br><br>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")**<br><br>for connecting and disconnecting single storage tanks,<br>DN 20, ¾" int. thread, setting time for 90°: 30 sec., Kvs value = 41 | **563532** |
|  | **3-way zone valve - DN 20 (¾")**<br><br>for switching between single storage tanks,<br>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<br>= 0.25 l/min per m² of collector surface | up to a collector surface of 125 m² |
| High-flow<br>= 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**

| | |
|---|---|
| Airstop | yes |
| Check valves | 2 x 200 mm wc |
| Safety valve | 6 bar |
| Controller | SC3.5 |
| Sensors | 2 x Pt1000 (integrated) / 3 x Pt1000 (enclosed) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| FlowRotor | 1-35 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 25 (1") |
| Connections | 1" int. thread |
| Width | 324 mm |
| Height | 653 mm |
| Installation length | 394 mm |
| Depth | 158 mm |
| Centre distance | 100 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |



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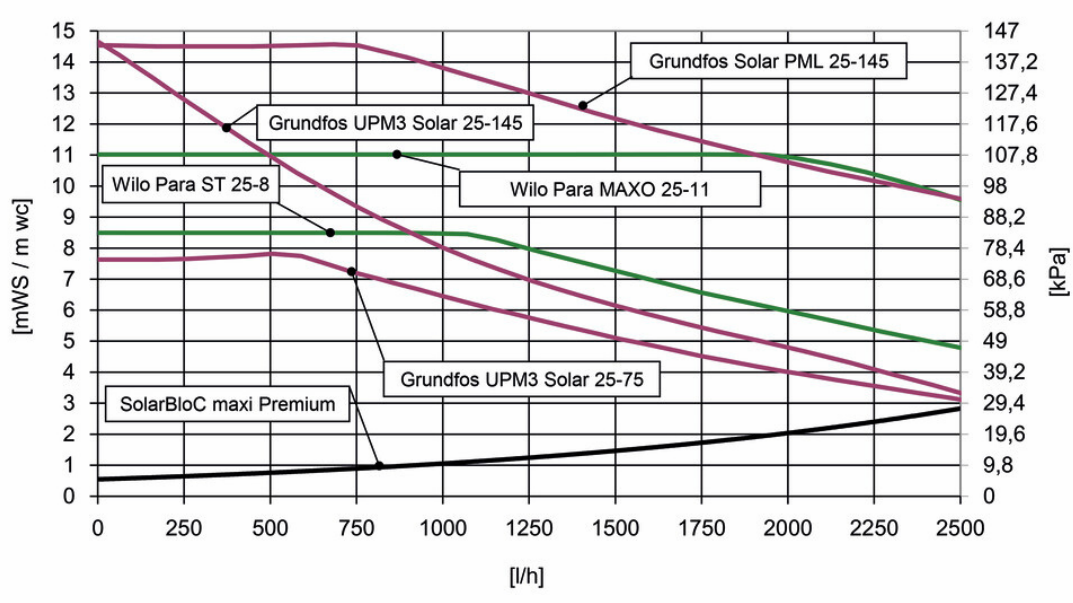
# SolarBloC® maxi Premium
# up to a collector surface of 125 m²






| 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<br>= 0.25 l/min per m² of collector surface | up to a collector surface of 125 m² |
| High-flow<br>= 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**

| | |
|---|---|
| Airstop | yes |
| Check valves | 2 x 200 mm wc |
| Safety valve | 6 bar |
| Controller | SC2.3 |
| Sensors | 2 x Pt1000 (enclosed, only for modules with controller) |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Flow meter (secondary) | 5-40 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 25 (1") |
| Connections | 1" int. thread |
| Width | 324 mm |
| Height | 653 mm |
| Installation length | 394 mm |
| Depth | 160 mm |
| Centre distance | 100 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |



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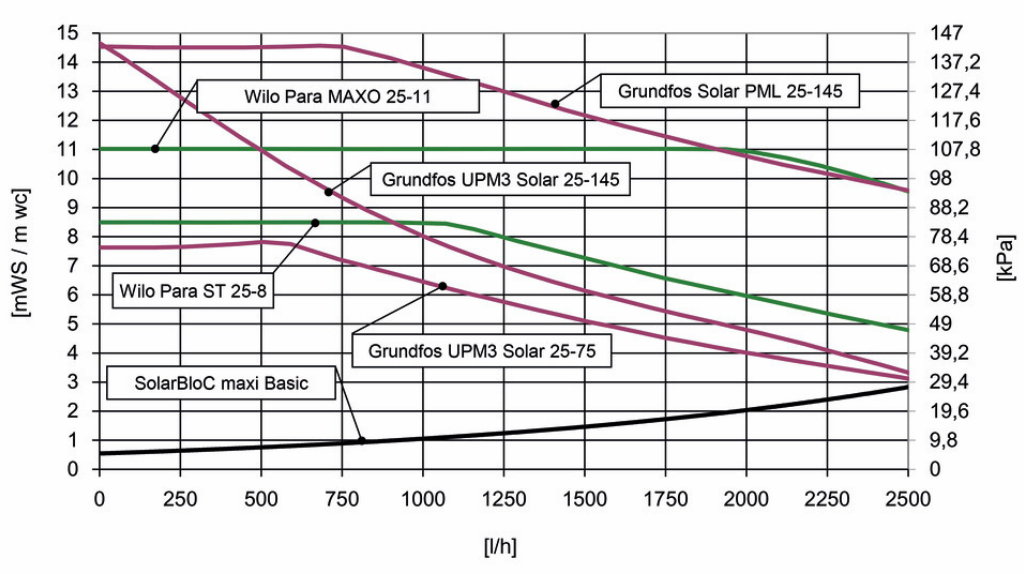
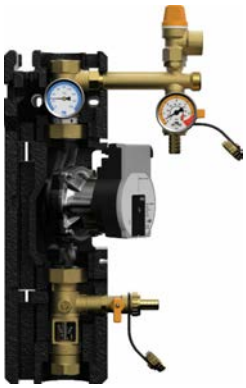
# SolarBloC® maxi Basic
# up to a collector surface of 125 m²






| 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<br>= 0.25 l/min per m² of collector surface | up to a collector surface of 125 m² |
| High-flow<br>= 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**

| | |
|---|---|
| Airstop | no |
| Check valves | 1 x 200 mm wc |
| Safety valve | 6 bar |
| Controller | on site |
| Sensors | no |
| Pressure gauge | 0-6 bar, resistant to high temperatures |
| Flow meter (secondary) | 5-40 l/min |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 25 |
| Connections | 1" int. thread |
| Width | 244 mm |
| Height | 474 mm |
| Installation length | 394 mm |
| Depth | 150 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |



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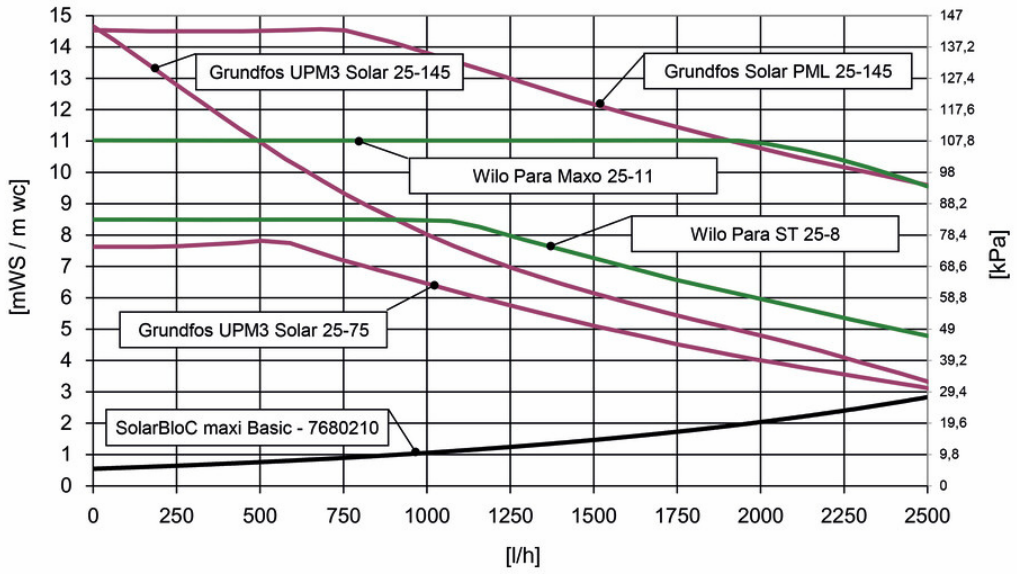
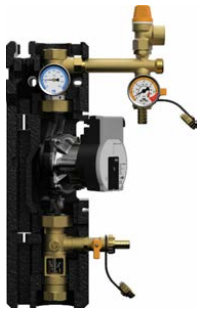
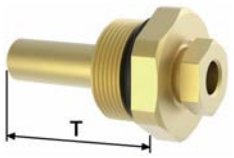
# SolarBloC® maxi Basic return station up to a collector surface of 125 m²






| SolarBloC® maxi Basic return station - DN 25 | | 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

| | | |
|---|---|---|
|  | **Hand filling pump**<br><br>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**<br><br>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**<br><br>Hose connector for hand filling and injection pump ½" x 15 mm | **70611** |
|  | **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**<br><br>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<br><br>56431 and 56451: additionally with 2 cutting-ring compression fittings with support sleeve, premounted | **56451** |
|  | **Flush and drain unit DN 25 (1")**<br><br>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**<br><br>1" external thread, self-sealing with o-ring, with support sleeve, suitable for soft copper pipes. For temperatures up to 150 °C. | **562922** |
|  | **Immersion sleeve ½" ext. thread x T = 30 mm**<br>self-sealing, with o-ring, polished brass, for sensor, T = 30 mm | **566001** |
| | **Immersion sleeve ¼" ext. thread x T = 60 mm**<br>standard, chromed brass, for sensor, T = 60 mm | **566002** |
| | **Immersion sleeve ½" ext. thread x T = 60 mm**<br>standard, chromed brass, with valve extension (25 mm), for sensor, T = 60 mm | **5660021** |
| | **Immersion sleeve ½" ext. thread x T = 100 mm**<br>standard, chromed copper, for sensor, T = 100 mm | **566003** |
| | **Immersion sleeve ½" ext. thread x T = 150 mm**<br>standard, chromed copper, for sensor, T = 150 mm<br><br>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.<br><br>Attention: suitable for ball valves until 2016! | **566004** |



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# Mounting equipment solar DN 25



| | | |
|---|---|---|
|  | **Stainless-steel corrugated hose Solarflex, L=18-800 mm** | **840180** |
| | **Stainless-steel corrugated hose Solarflex, L=22-800 mm**<br><br>Ideal for the roof part leading to the collector.<br>Two soldered connections for clamping-ring compression fittings, for diameters of 18 mm or 22 mm.<br><br>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** |
|  | **Hand refractometer**<br><br>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.<br><br>Measuring ranges:<br>propylene glycol: 0 - 50 °C<br>ethylene glycol: 0 - 50 °C<br>battery acid: 1.10 - 1.40 g/cm³ | **58055** |
|  | **Solar pressure gauge 0-6 bar** | **523206** |
| | **Solar pressure gauge 0-10 bar**<br><br>with automatic isolation,<br>solar version up to 130 °C,<br>measuring range: 0-6 bar / 0-10 bar<br>diameter: d = 50 mm | **523210** |
|  | **2-way zone valve - DN 25 (1") for tank heat transfer module Midi**<br><br>for connecting and disconnecting single storage tanks,<br>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**<br><br>for connecting and disconnecting single storage tanks,<br>DN 32, 1¼" internal thread, setting time for 90°: 30 sec., Kvs value = 123 | **563552** |
|  | **3-way zone valve - DN 25 (1")**<br><br>for switching between single storage tanks,<br>DN 25, 1" int. thread, setting time for 90°: 18 sec., Kvs value =11 | **563543** |
| | **3-way zone valve - DN 32 (1¼")**<br><br>for switching between single storage tanks,<br>DN 32, 1¼" int. thread, setting time for 90°: 18 sec., Kvs value =15<br><br>can be used in solar and heating installations, to switch between different zones or to connect and disconnect different parts of the system.<br>The actuator is equipped with a relay which is actuated by a 2-point signal, if need be it can also be manually operated.<br>The 3-way zone valves can be operated in both directions.<br><br>Electric supply: 230 V / 50 Hz<br>Casing protection type: IP 44; protection class II<br>Input power: 3 VA (standby), 7.5 VA (operation)<br>Ambient temperature: -10 °C ...+60 °C<br>Medium temperature: 0 °C ...100 °C, short-term 115 °C<br>Equipment: with 1.8 m cable 4 x 0.5 mm² | **563553** |

# 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<br>= 0.25 l/min per m² of collector surface | up to a collector surface of 175 m² |
| High-flow<br>= 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**

| | |
|---|---|
| Airstop | no |
| Check valves | 2 x 200 mm wc |
| Safety valve | 6 bar |
| Controller | on site |
| Sensors | no |
| Pressure gauge | 0-6 bar, resistant to high temperatures |

**Dimensions**

| | |
|---|---|
| Nominal diameter | DN 32 |
| Connections | 1¼" int. thread |
| Width | 366 mm |
| Height | 671 mm |
| Installation length | 603 mm |
| Depth | 240 mm |
| Centre distance | 125 mm |

**Materials**

| | |
|---|---|
| Valves and fittings | Brass |
| Gaskets | EPDM / AFM34 |
| Insulation | EPP |
| Check valves | Brass |



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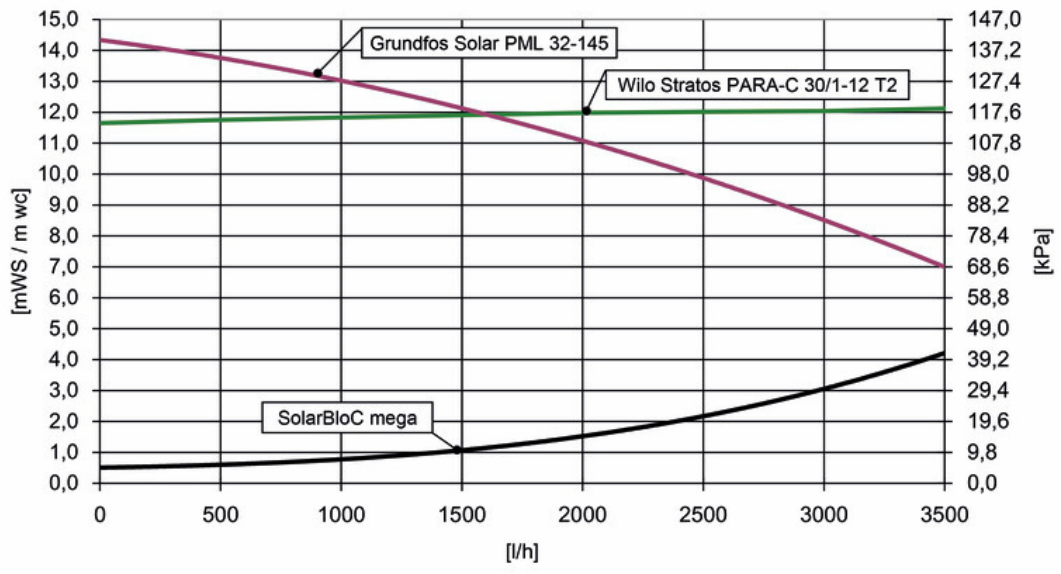
# SolarBloC® mega
# up to a collector surface of 175 m²






| SolarBloC® mega - DN 32 | | 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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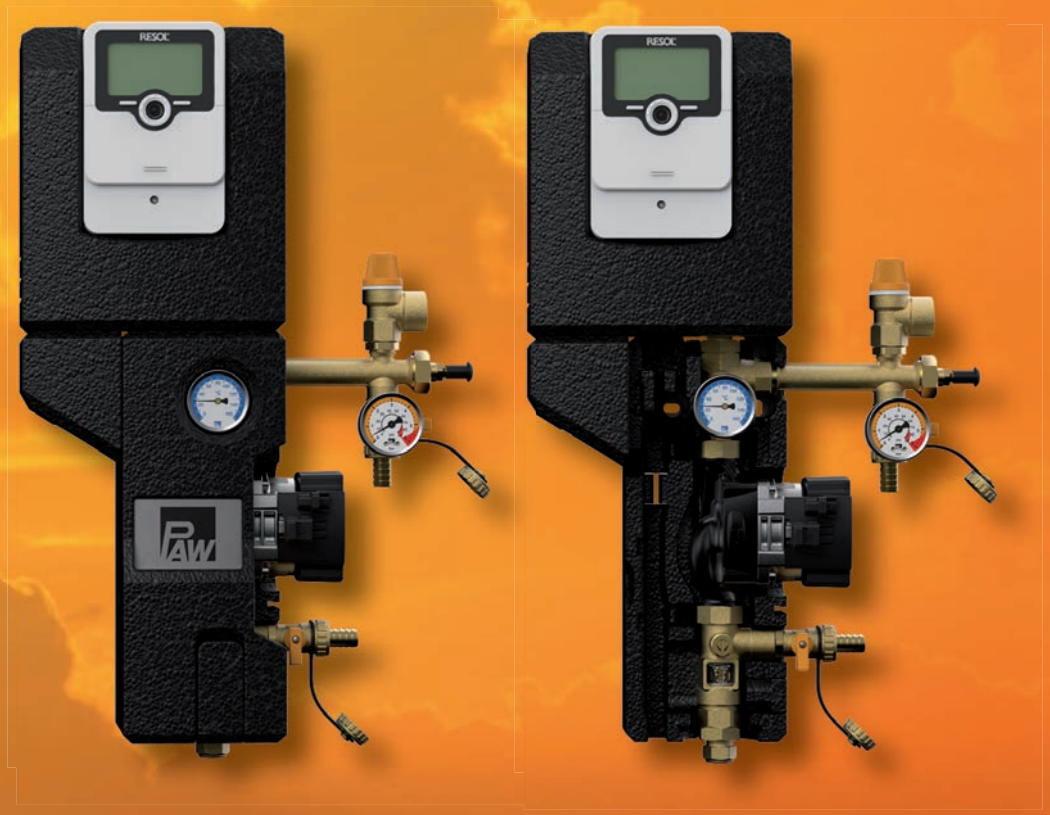


# DrainBloC DN 20

## Catalogue 01/2024

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** | | **Dimensions** | |
|---|---|---|---|
| PWM pump | 2-60 W, PWM control | Height container | 603 mm |
| Flow meter | 0.5-10 l/min | Ø container | 280 mm |
| Safety valve | 6 bar | Total width | at least 721 mm |
| Pressure gauge | 0-6 bar, resistant to high temperatures | Width DrainBloC | 334 mm |
| Controller | SC2.3 | Height DrainBloC | 577 mm |
| **Materials** | | Centre distance | var., min.400 mm |
| Valves and fittings | Brass | Total depth | 365 mm |
| DGaskets | Klingersil / EPDM | | |
| Insulation | EPP | | |



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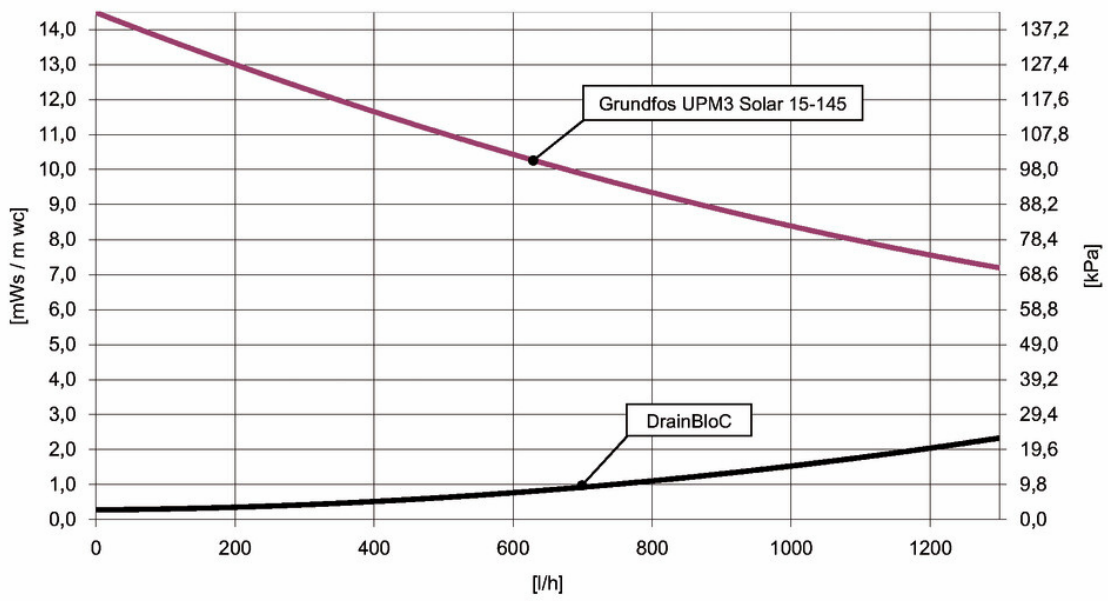
# DrainBloC® DN 20 (¾")
# Drain-back system






| DrainBloC® DN 20 (¾") | | Item no. |
|---|---|---|
|  | **Grundfos UPM3 Solar 15-145** | **6104425** |

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