



SolarBloC®
Solar thermal systems



Product range SolarBloC®

Technical data and product information





Product range SolarBloC®

The **PAW SolarBloC®s** are used to circulate the solar fluid in the solar circuit efficiently. Solutions in the dimensions DN 20, DN 25 and DN 32 offer a broad application range up to 175 m² of collector surface. To obtain a maximum flexibility during system planning, PAW focuses on the two equipment versions Basic and Premium for its SolarBloC®s. The **SolarBloC® Basic** is an inexpensive entry level version with functional features. In contrast, the **SolarBloC® Premium** is fully equipped with additional temperature and flow rate sensors. Individual system requirements, such as heat quantity measurement and the operating modes high-flow and low-flow can be realised with the suitable SolarBloC® and the optionally integrated controller.

For a safe and quick commissioning, the solar stations SolarBloC® are equipped with pressure relief valves, ball valves as well as with fill and drain valves. SolarBloC® is a registered trademark in Germany.

Advantages of the PAW solar station:

- available in DN 20 up to DN 32
- comprehensive product portfolio guarantees flexible possibilities of application
- available as a budget-friendly Basic entry-level model or exclusive Premium model
- optional controller integration offers simple commissioning and safe operation
- controller can be connected to building control system via Modbus
- integrated USB port allows easy data logging



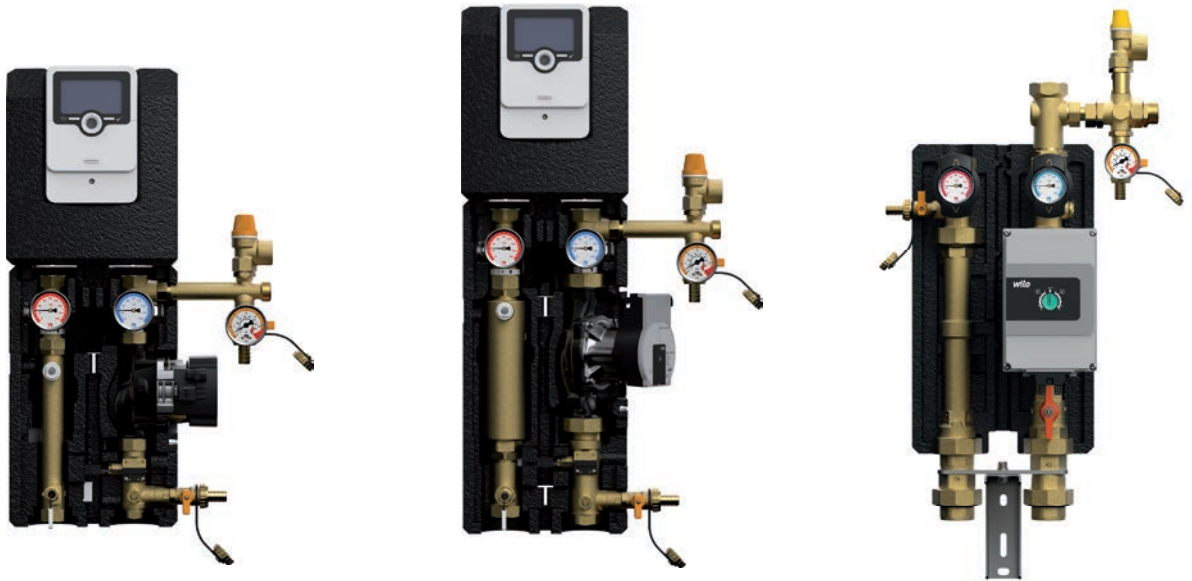
SolarBloC® midi

SolarBloC® mega

Performance data			
Type	SolarBloC® midi	SolarBloC® maxi	SolarBloC® mega
Nominal diameter	DN 20	DN 25	DN 32
Max. flow rate [l/h]	1,200	2,500	3,500
Max. collector surface [m ²] High-flow (25 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:						
	Controller		Pump		Sensor technology	
	on site	Premium: SC3.5 SGC36HV Basic: SC2.3 SGC26H	Wilo	Grundfos	Basic	Premium
					P _{FL} = pressure gauge V _{RET} = Flowmeter T = Thermometer	P _{FL} = digital sensor V = Impulse T _{FL} = digital sensor T _{RET} = Pt1000
2-line Premium DN 20 / DN 25	—	•	PWM	PWM	—	•
2-line Basic DN 20 / DN 25	•	•			•	—
3-line Basic DN 20	•	—	•		—	
2-line Basic DN 32	•	—	0-10V		•	—
1-line return DN 20 / DN 25	•	—	PWM	•	—	

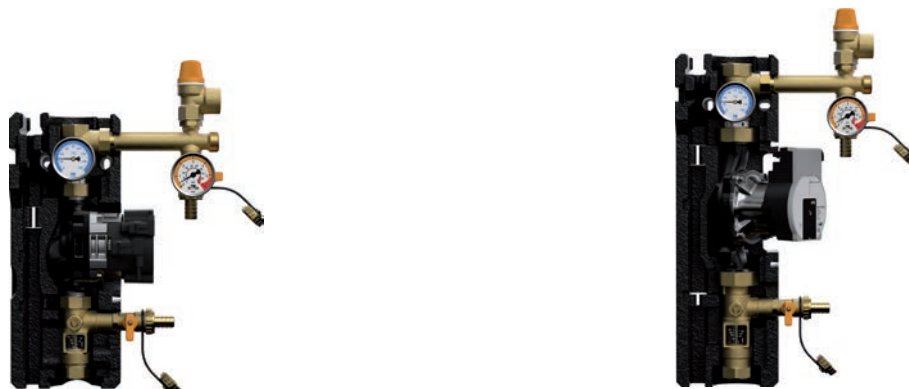
• = available, — = not available



SolarBloC® midi	SolarBloC® maxi	SolarBloC® mega
Premium: item no.: 773313xx	Premium: item no.: 783313xx	Item no.: 791010xx
Basic, with controller: item no.: 775212xx	Basic, with controller: item no.: 782212xx	
Basic, without controller: item no.: 7655210xx	Basic, without controller: item no.: 607052xx	



SolarBloC® midi 3-line station 2-tank solution	SolarBloC® midi 3-line station 2-roof-solution
Item no.: 7655810xx	



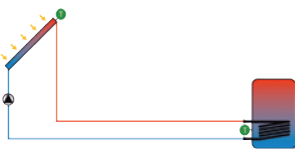
SolarBloC® midi Basic return station	SolarBloC® maxi Basic return station
Item no.: 7650210xx	Item no.: 7680210xx



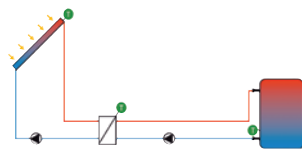
Controller for solar stations

- 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

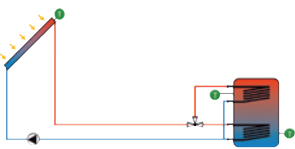
Preset systems:



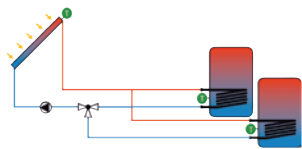
Internal heat exchanger, pump logic



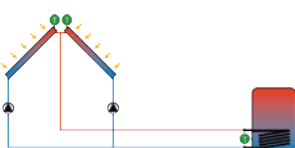
External heat exchanger, pump logic
(1 x E13170 additionally required)



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



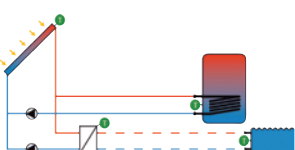
2 storage tanks, internal heat exchanger, valve logic
(1 x E13170 additionally required)



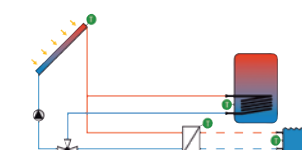
2 collector fields, internal heat exchanger, pump logic
(1 x E13170 additionally required)



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)



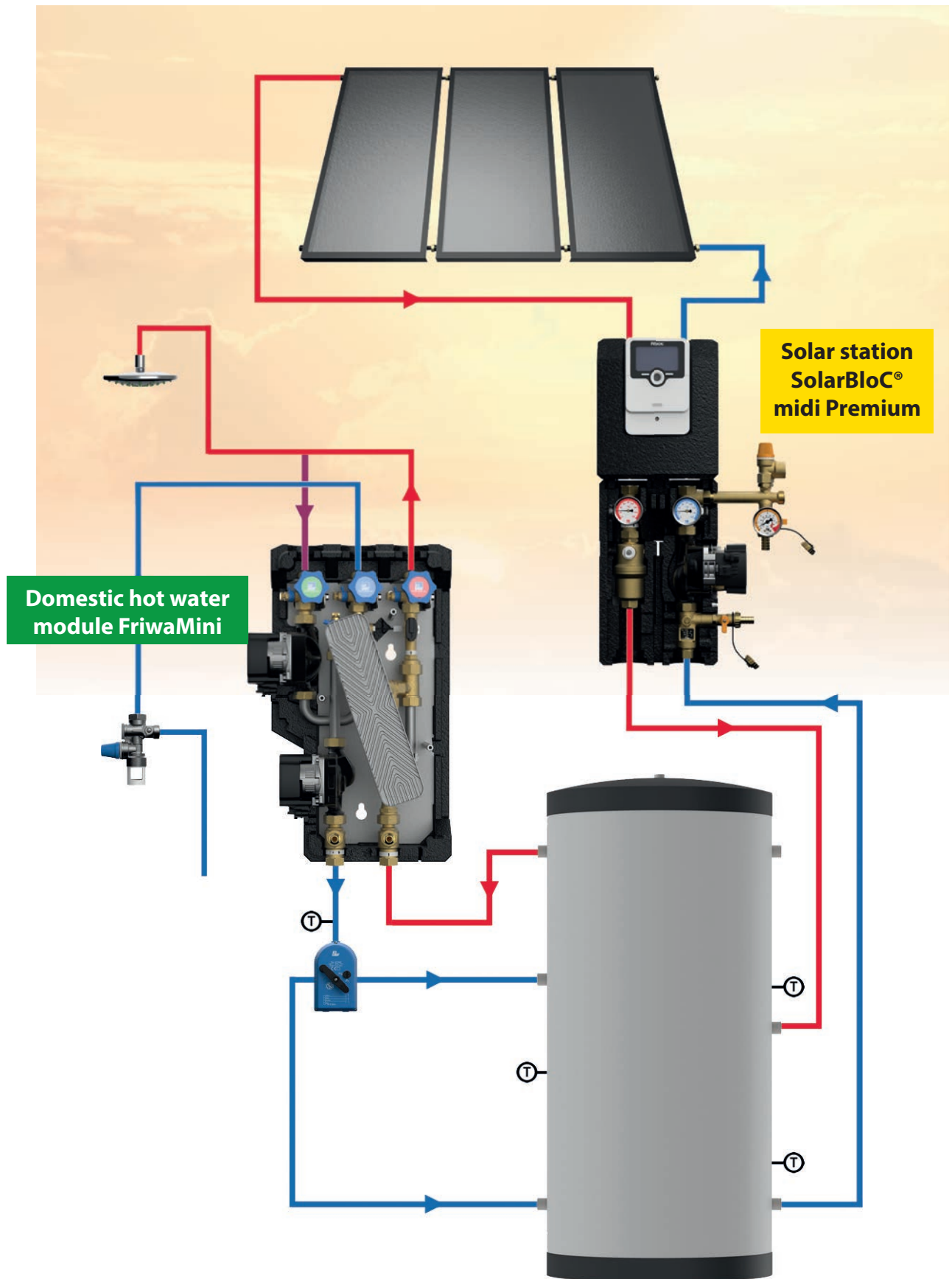
Storage tank and pool, stand-alone operation of the external heat exchanger, valve logic
(2 x E13170 additionally required)

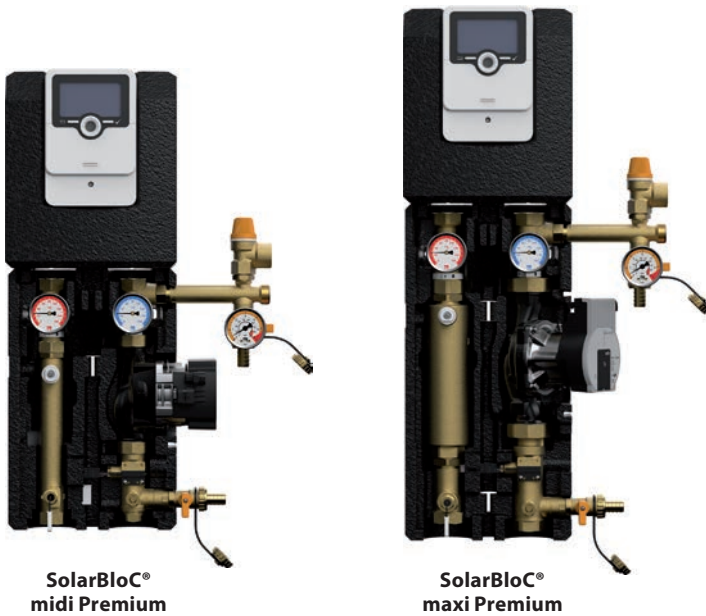
Function overview controller

Display	graphic LCD display
Operation	4 (5) push buttons
Relay outputs	3 x 230 V, semiconductor relay 1 x 230 V, switching relay 1 x SELV (max. 24 V), potential-free relay 2 x PWM signal for 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

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





Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- midi: up to 60 m² of collector surface
- maxi: up to 125 m² of collector surface

*For information on **design data**, see page 2.

Operating data

Max. pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m ² of collector surface	midi: up to 60 m ² maxi: up to 125 m ²
High-flow = 0.5 l/min per m ² of collector surface	midi: up to 40 m ² maxi: up to 80 m ²

Technical data

Equipment

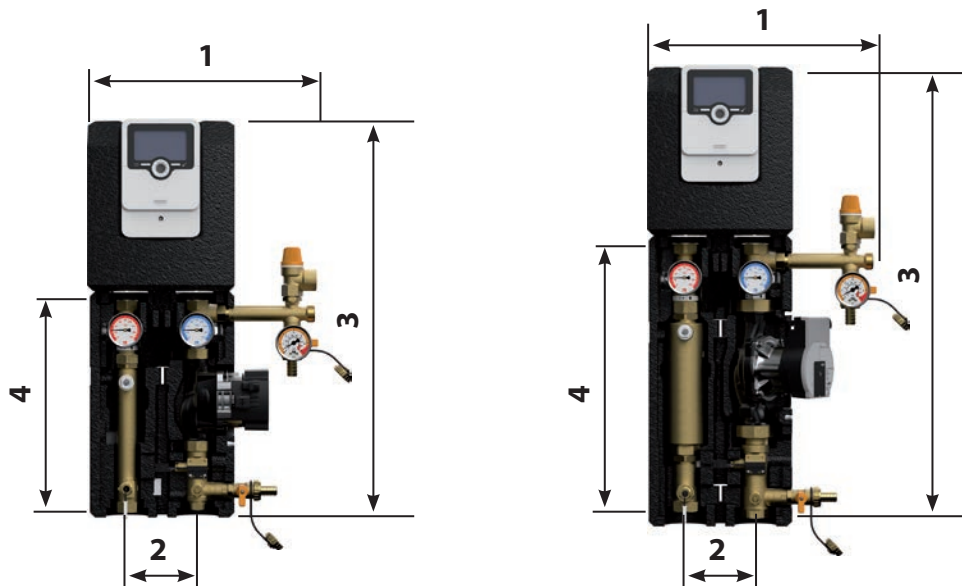
Airstop	yes
Check valve	2 x 200 mm wc
FlowRotor	midi: 0.5 - 15 l/min maxi: 1 - 35 l/min
Safety valve	6 bar
Sensors	2 x Pt1000 (integrated) 3 x Pt1000 (enclosed)
Controller	Premium: SC3.5 Basic: SC2.3
Pressure gauge	0 - 6 bar, resistant to high temperatures

Dimensions

Nominal diameter	midi: DN 20 (¾") maxi: DN 25 (1")
Connections	midi: ¾" internal thread maxi: 1" internal thread
(1) Width	midi: 322 mm maxi: 324 mm
(2) Centre distance	midi / maxi: 100 mm
(3) Height	midi: 560 mm maxi: 652 mm
(4) Installation length	midi: 302 mm maxi: 394 mm
Depth	midi: 150 mm maxi: 158 mm

Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Check valves	Brass





SolarBloC® midi Premium **Item no.**



Wilo Para ST 15/7	773313WP7
Wilo Para ST 15/13	773313WP13
Grundfos UPM3 Solar 15-75	773313GP7
Grundfos UPM3 Solar 15-145	773313GP14

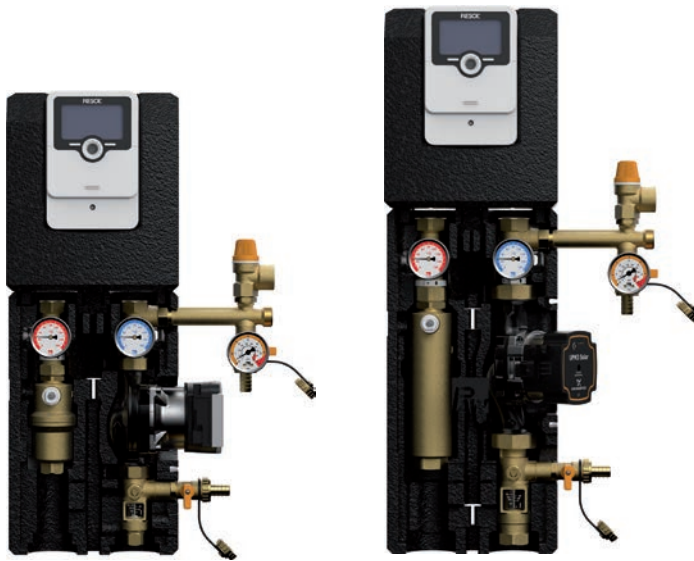
SolarBloC® maxi Premium **Item no.**



Wilo Para MAXO 25-180	783313WM11
Wilo Para ST 25/8	783313WP8
Grundfos Solar PML 25-145	783313GH14
Grundfos UPM3 Solar 25-75	783313GP7
Grundfos UPM3 Solar 25-145	783313GP14

Accessories **Item no.**

	<p>Temperature sensor Pt1000 Q00146</p> <p>Measuring range: -50 °C ... +180 °C Connection: 1.5 m of silicone cable Dimensions: d = 6 mm</p>
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**SolarBloC®
midi Basic**

**SolarBloC®
maxi Basic**

Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- midi: up to 60 m² of collector surface
- maxi: up to 125 m² of collector surface

*For information on **design data**, see page 2.

Operating data

Max. pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m ² of collector surface	midi: up to 60 m ² maxi: up to 125 m ²
High-flow = 0.5 l/min per m ² of collector surface	midi: up to 40 m ² maxi: up to 80 m ²

Technical data

Equipment

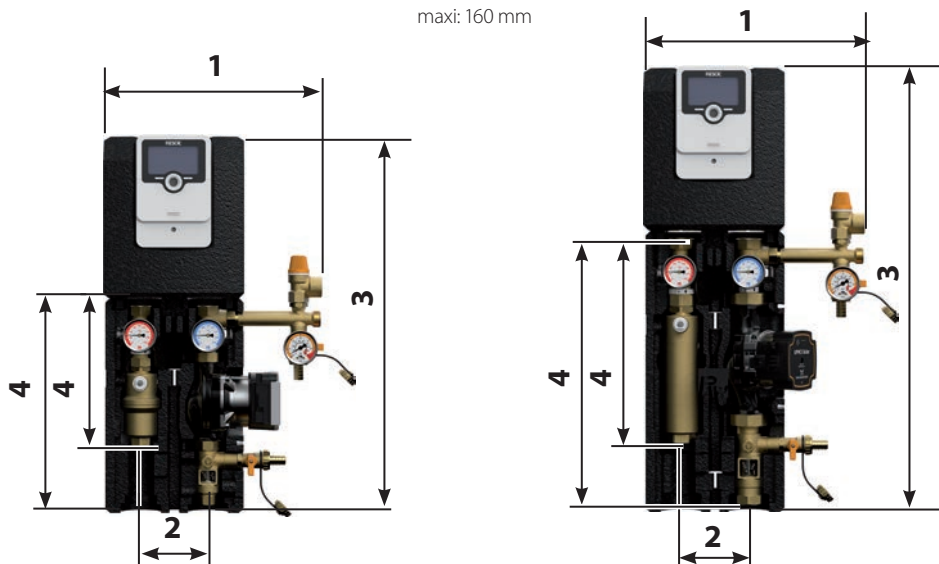
Airstop	yes
Check valve	2 x 200 mm wc
Flow meter	midi: 3 - 22 l/min maxi: 5 - 40 l/min
Safety valve	6 bar
Sensors	2 x Pt1000 (enclosed, only for solar stations with controller)
Controller	Premium: SC3.5 Basic: SC2.3
Pressure gauge	0 - 6 bar, resistant to high temperatures

Dimensions

Nominal diameter	midi: DN 20 (¾") maxi: DN 25 (1")
Connections	midi: ¾" internal thread maxi: 1" internal thread
(1) Width	midi: 322 mm maxi: 324 mm
(2) Centre distance	midi / maxi: 100 mm
(3) Height with/without controller	midi: 560/383 mm maxi: 653/474 mm
(4) Installation length	midi: FL: 210 mm midi: RET: 296 mm maxi: FL: 304 mm maxi: RET: 394 mm
Depth	midi with controller: 156 mm midi without controller: 150 mm maxi: 160 mm

Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Check valves	Brass





SolarBloC® midi Basic	Item no.
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Solar stations with controller SC3.5:	
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Wilo Para ST 15/7	775212WP7
Wilo Para ST 15/13	775212WP13
Grundfos UPM3 Solar 15-75	775212GP7
Grundfos UPM3 Solar 15-145	775212GP14

Controller to be obtained by the customer:	
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Wilo Para ST 15/7	7655210WP7
Wilo Para ST 15/13	7655210WP13
Grundfos UPM3 Solar 15-75	7655210GP7
Grundfos UPM3 Solar 15-145	7655210GP14

SolarBloC® maxi Basic	Item no.
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Solar stations with controller SC2.3:	
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Wilo Para MAXO 25-180	782212WM11
Wilo Para ST 25/8	782212WP8
Grundfos Solar PML 25-145	782212GH14
Grundfos UPM3 Solar 25-75	782212GP7
Grundfos UPM3 Solar 25-145	782212GP14

Controller to be obtained by the customer:	
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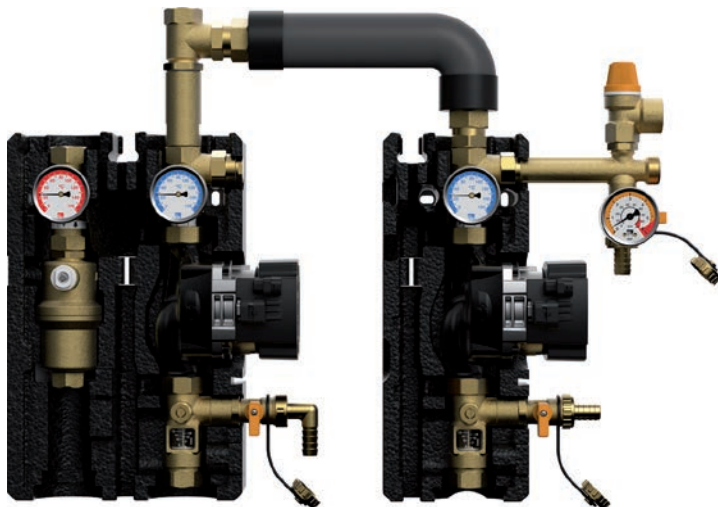
Wilo Para MAXO 25-180	782210WM11
Wilo Para ST 25/8	607052WP8
Grundfos Solar PML 25-145	607052GH14
Grundfos UPM3 Solar 25-75	607052GP8
Grundfos UPM3 Solar 25-145	607052GP14

Accessories	Item no.
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Temperature sensor Pt1000	Q00146
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Measuring range: -50 °C ... +180 °C
 Connection: 1.5 m of silicone cable
 Dimensions: d = 6 mm



Application range

- SolarBloC® 3-line stations for installations with 2 tanks (2S) and with 2 roofs (2D)

Application range

- up to 60 m² of collector surface

*For information on **design data**, see page 2.

Operating data

Max. pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m ² of collector surface	up to 60 m ²
High-flow = 0.5 l/min per m ² of collector surface	up to 40 m ²

Technical data

Equipment

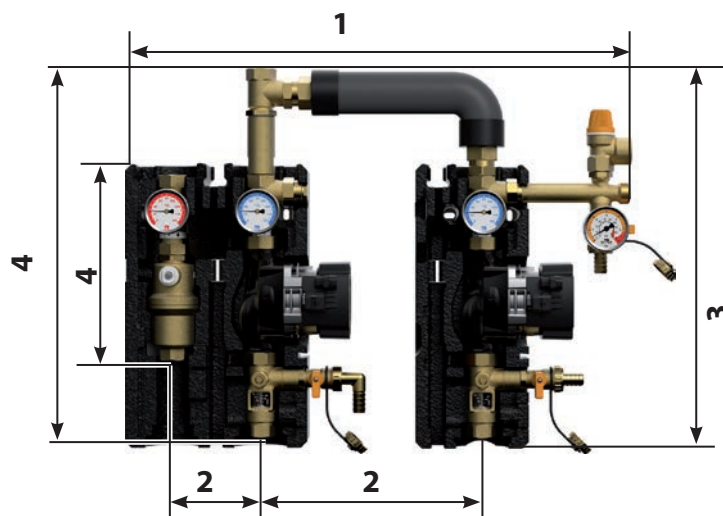
Airstop	yes
Check valve	3 x 200 mm wc
Flow meter	3 - 22 l/min
Safety valve	6 bar
Pressure gauge	0 - 6 bar, resistant to high temperatures

Dimensions

Nominal diameter	DN 20 (¾")
Connections	¾" int. thread
(1) Width	572 mm
(2) Centre distance	100 mm / 250 mm
(3) Height	429 mm
(4) Installation length	418 mm
Depth	150 mm

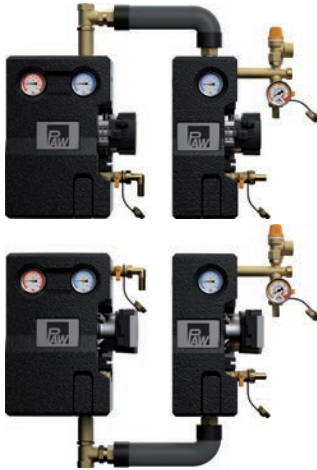
Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Check valves	Brass





SolarBloC® midi 3-line station 2S / 2D	Item no.
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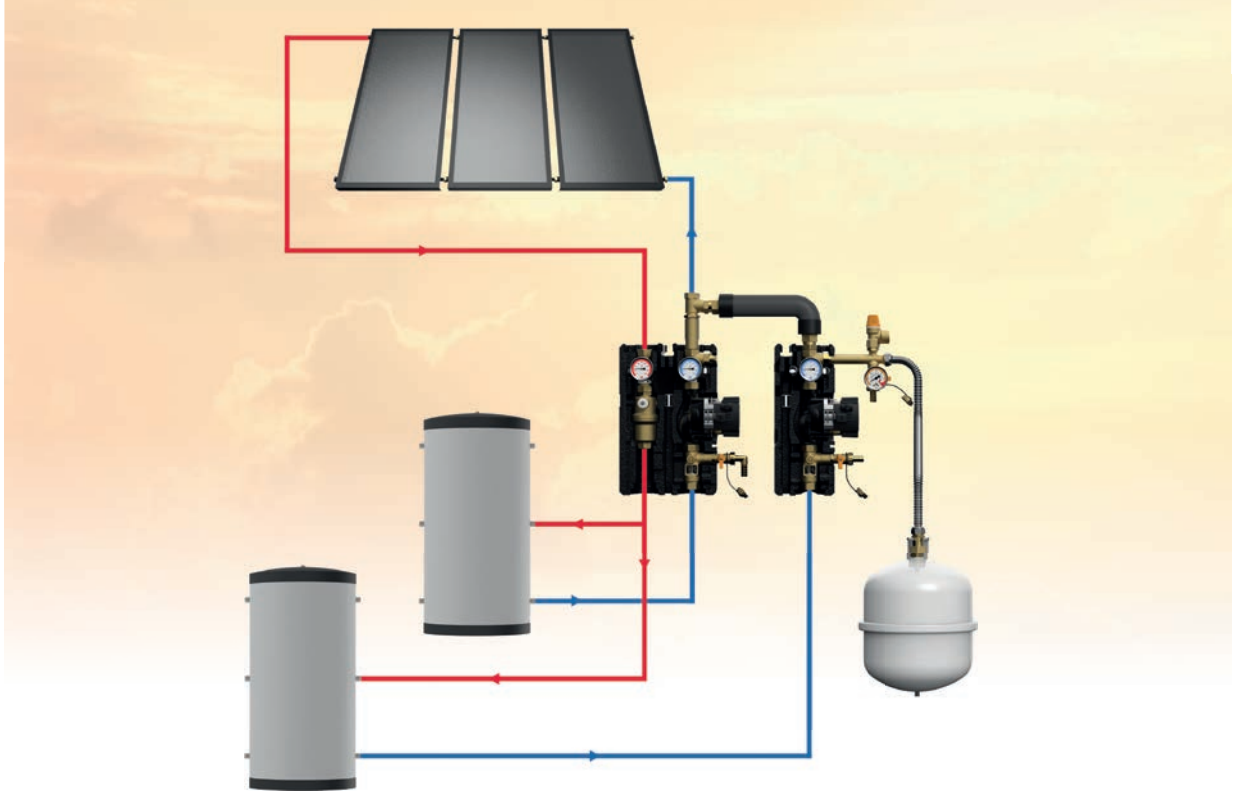


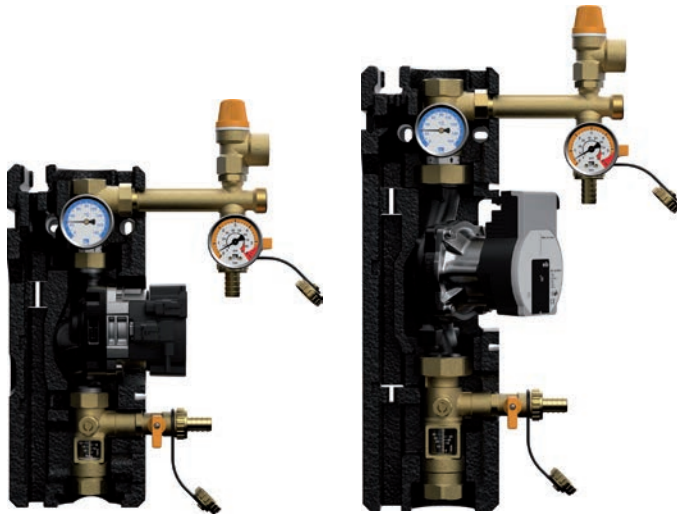
2x Wilo Para ST 15/7	775810WP7
2x Wilo Para ST 15/13	775810WP13
2x Grundfos UPM3 Solar 15-75	775810GP7
2x Grundfos UPM3 Solar 15-145	775810GP14

Accessories	Item no.
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Supplementary set for heat quantity reduction	131914
consisting of: - Controller SC3.5 with 2x mains connection and 2x pump cable, 5x temperature sensor Pt1000 - Controller insulation for simple installation onto the solar station - Flowmeter for installation at the solar station - T-piece with sensor immersion sleeve for installation at the solar station	





SolarBloC® midi
Basic return station

SolarBloC® maxi
Basic return station

Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- midi: up to 60 m² of collector surface
- maxi: up to 125 m² of collector surface

*For information on **design data**, see page 2.

Operating data

Max. pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m ² of collector surface	midi: up to 60 m ² maxi: up to 125 m ²
High-flow = 0.5 l/min per m ² of collector surface	midi: up to 40 m ² maxi: up to 80 m ²

Technical data

Equipment

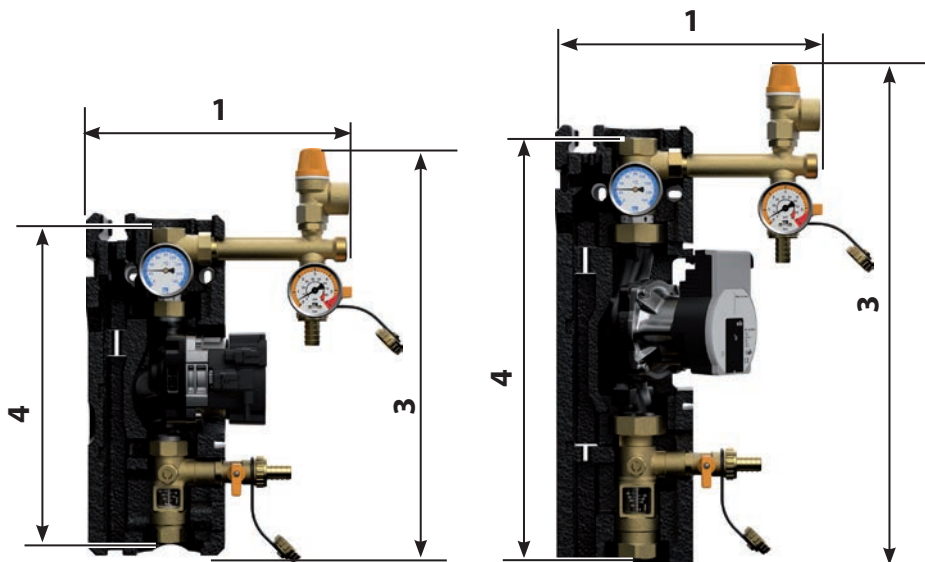
Airstop	no
Check valve	1 x 200 mm wc
Flow meter	midi: 3 - 22 l/min maxi: 5 - 40 l/min
Safety valve	6 bar
Pressure gauge	0 - 6 bar, resistant to high temperatures

Dimensions

Nominal diameter	midi: DN 20 (¾") maxi: DN 25 (1")
Connections	midi: ¾" int. thread maxi: 1" int. thread
(1) Width	midi: 244 mm maxi: 246 mm
(3) Height	midi: 383 mm maxi: 474 mm
(4) Installation length	midi: 296 mm maxi: 394 mm
Depth	midi: 150 mm maxi: 155 mm

Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Check valves	Brass





SolarBloC® midi Basic return station **Item no.**



Wilo Para ST 15/7	7650210WP7
Wilo Para ST 15/13	7650210WP13
Grundfos UPM3 Solar 15-75	7650210GP7
Grundfos UPM3 Solar 15-145	7650210GP14

SolarBloC® maxi Basic return station **Item no.**



Wilo Para MAXO 25-180	780210WM11
Wilo Para ST 25/8	7680210WP8
Grundfos Solar PML 25-145	7680210GH14
Grundfos UPM3 Solar 25-75	7680210GP8
Grundfos UPM3 Solar 25-145	7680210GP14

Accessories **Item no.**

	<p>Accessory kit for storage tank installation of return station DN 20 172706201</p> <p>flange bracket made of brass with fill and drain valve and insulation for direct assembly of the return station to the storage tank</p>
	<p>Solar check valve 1211</p> <p>for the solar flow, 200 mm wc, can be opened, resistant up to 150 °C, ¾" internal thread x ¾" internal thread</p>
	<p>Dial thermometer with red scale 21711SOL</p> <p>Dial thermometer with blue scale 21721SOL</p> <p>measuring range 0 - 160 °C, immersion shaft 25 mm, with self-sealing immersion sleeve, d = 50 mm</p>
	<p>Temperature sensor Pt1000 Q00146</p> <p>Measuring range: -50 °C ... +180 °C Connection: 1.5 m of silicone cable Dimensions: d = 6 mm</p>



Application range

- Efficient circulation of the solar fluid in the solar circuit

Application range

- up to 175 m² of collector surface

*For information on **design data**, see page 2.

Operating data

Max. pressure	6 bar
Max. operating temperature	120 °C
Low-flow = 0.25 l/min per m ² of collector surface	up to 175 m ²
High-flow = 0.5 l/min per m ² of collector surface	up to 115 m ²

Technical data

Equipment

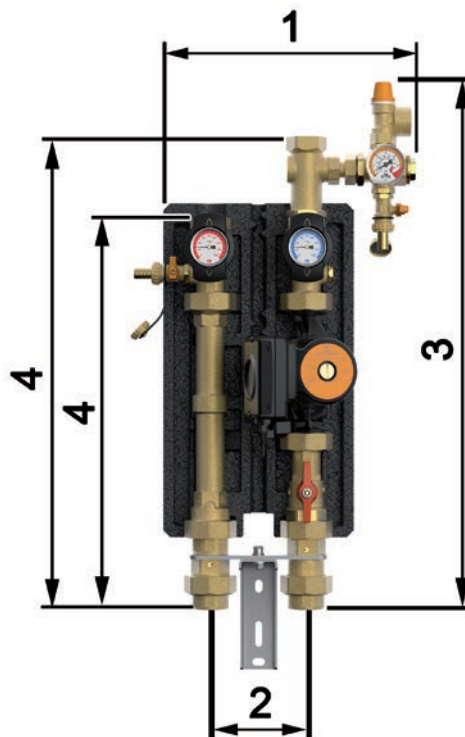
Airstop	no
Check valve	2 x 200 mm wc
Safety valve	6 bar
Pressure gauge	0 - 6 bar, resistant to high temperatures

Dimensions

Nominal diameter	DN 32 (1¼")
Connections	1¼" int. thread
(1) Width	366 mm
(2) Centre distance	125 mm
(3) Height	671 mm
(4) Installation length	498 mm / 603 mm
Depth	240 mm

Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Check valves	Brass





SolarBloC® mega

Item no.



Wilo Stratos PARA 30 1-11 T2

791010WH12

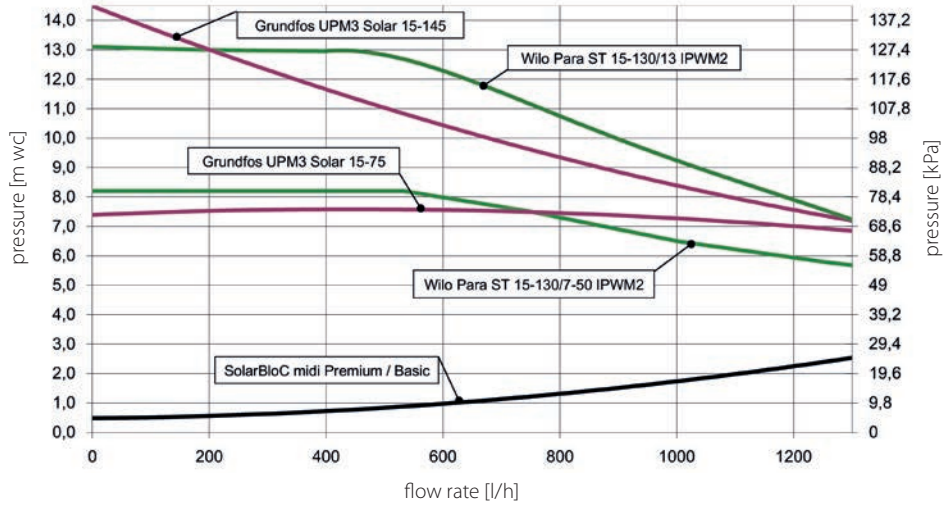
Grundfos Solar PML 32-145

791010GH14

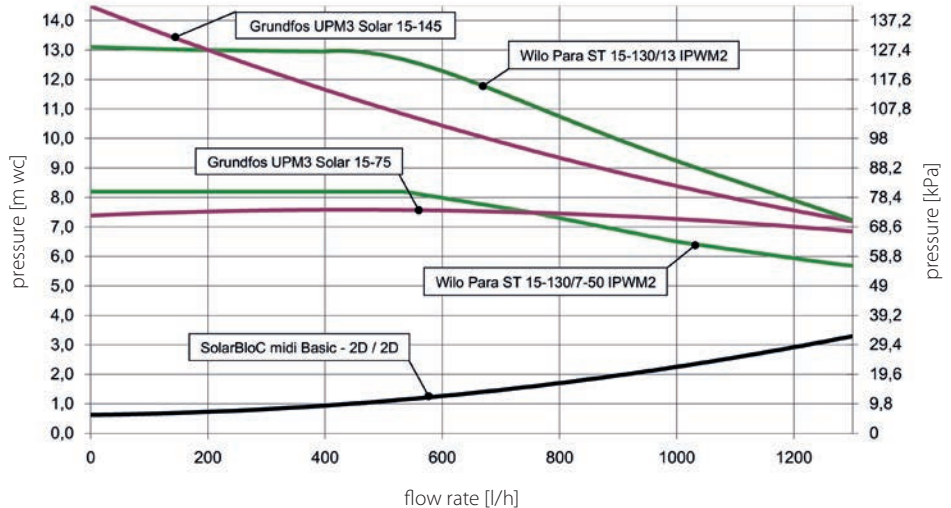




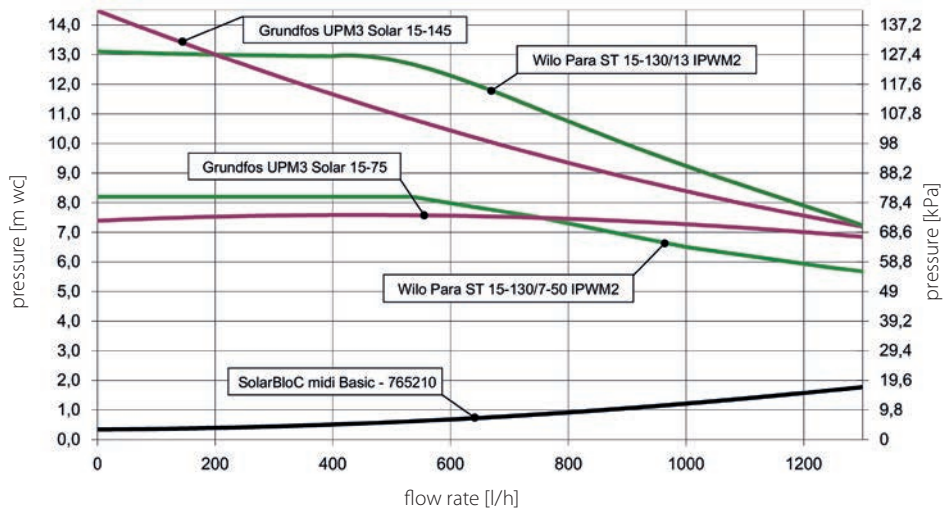
SolarBloC® midi Basic / Premium



SolarBloC® midi 2-tank solution 2S / 2-roof solution 2D

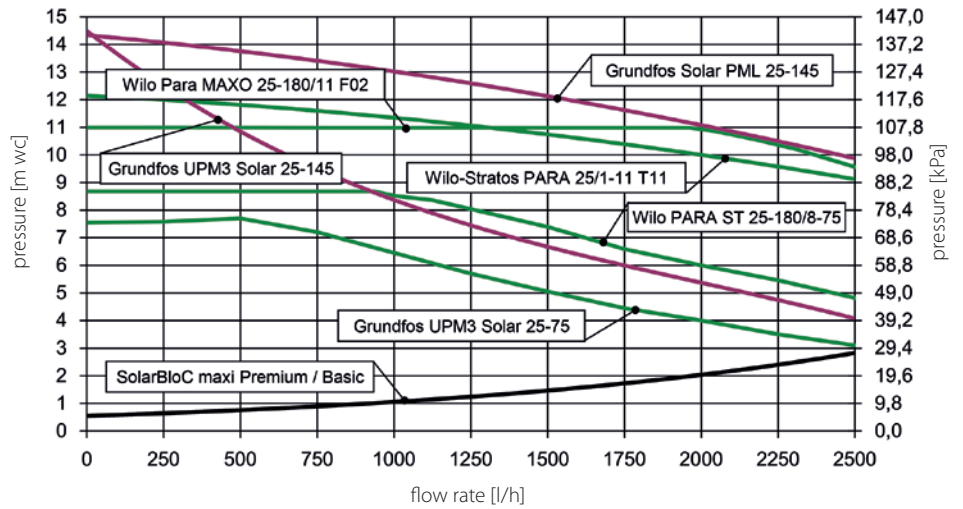


SolarBloC® midi Basic return station

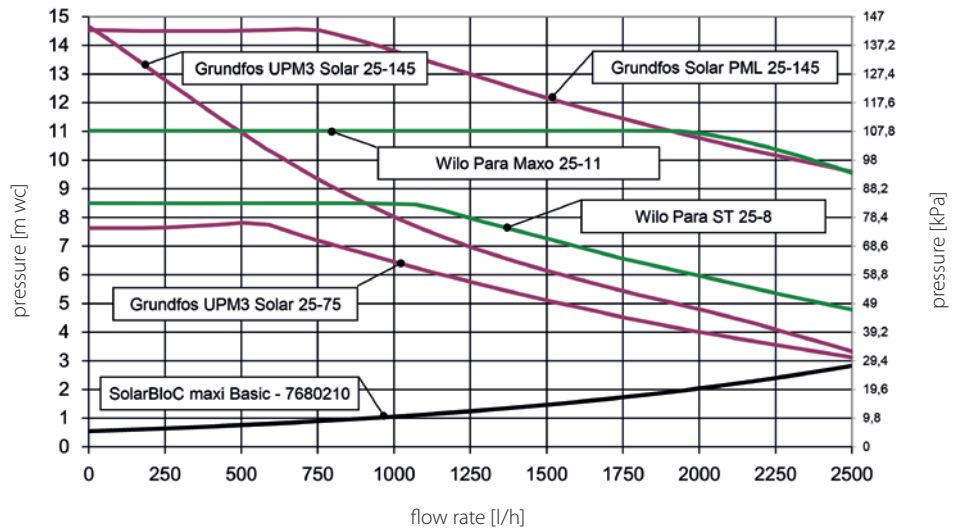




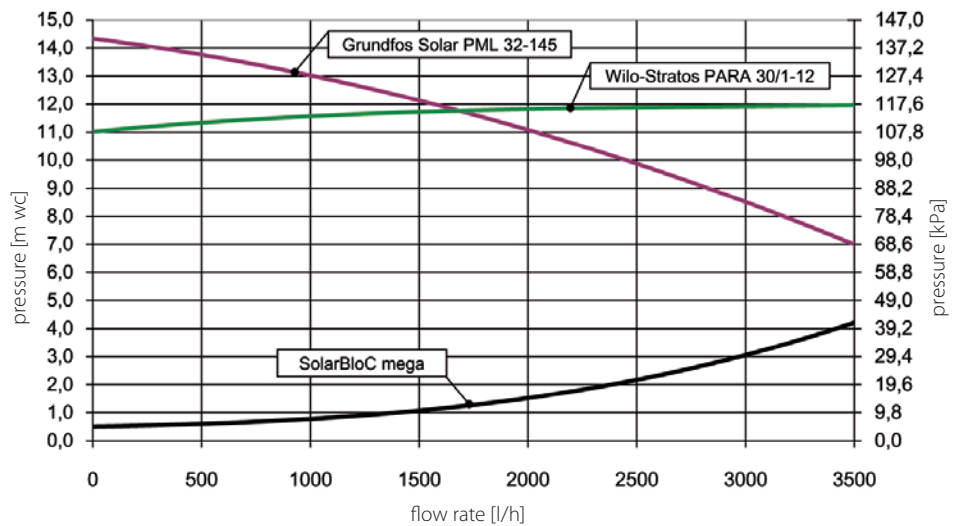
SolarBloC® maxi Basic / Premium



SolarBloC® maxi Basic return station



SolarBloC® mega





Notes





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