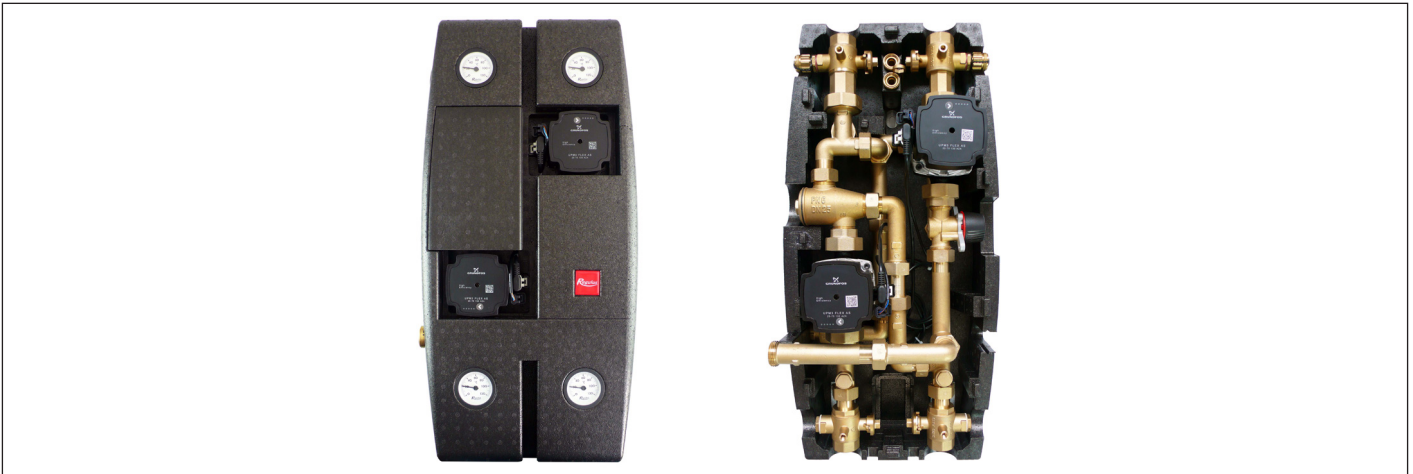


## DATA SHEET

### BIO MIX-BP G 1F Load Unit



Main Features	
Application	<p>BIO MIX-BP G 1F insulated load unit is used to connect a heating system with a hydronic fireplace or a solid-fuel boiler and a thermal store. Water for the heating system is mixed in a 3-way mixing valve to OTC temperature, the temperature of return water to the boiler is kept above the flue condensation temperature through a load valve as a boiler protection against low-temperature corrosion. Excess boiler output is stored in a thermal store, from where it can be used in the heating system if necessary.</p>
Description	<p><b>The Load Unit includes:</b></p> <ul style="list-style-type: none"> <li>● two Grundfos UPM3 Flex AS 25-75 circulation pumps (with the possibility of control by a PWM signal or by selecting a pump performance curve),</li> <li>● TSV3BM load valve with automatic bypass balancing, protecting a boiler against low-temperature corrosion by keeping the min. temperature of return water to a boiler above the flue condensation temperature,</li> <li>● three-way mixing valve to maintain the required temperature in the heating circuit,</li> <li>● two ball valves with drain valve for shutting off and draining the heating system,</li> <li>● check valve integrated in the ball valve body located at the outlet from the heating system,</li> <li>● two ball valves and to shut off the boiler circuit,</li> <li>● two ball valves permitting to shut off the thermal store circuit (included in supply),</li> <li>● two drain valves to drain the load unit,</li> <li>● control key for ball valves,</li> <li>● four thermometers,</li> <li>● outlets to connect a thermal store or a combination one, and alternative outlets to connect optional accessories.</li> </ul>
Working fluid	Water, antifreeze heat-transfer fluid for heating systems.
Installation	Vertically on a wall using the installation kit.
Connections	<p>2 x G 1" F to a heating system            2 x G 1" F to a boiler circuit            2 x G 1" F to a thermal store            2 x G 1/2" F alternative outlets to connect optional accessories (if you do not wish to use them, they can be plugged with the enclosed plugs)</p>
Max. boiler output at flowrate of 1,7 m <sup>3</sup> /h	40 kW by $\Delta t$ 20 °C / 20 kW by $\Delta t$ 10 °C
Max. heating system output at flowrate of 1,7 m <sup>3</sup> /h	40 kW by $\Delta t$ 20 °C / 20 kW by $\Delta t$ 10 °C
Codes	<p><b>17553</b> – opening temperature 55 °C  <b>21257</b> – opening temperature 65 °C</p>

## DATA SHEET

### BIO MIX-BP G 1F Load Unit

#### Data for BIO MIX-BP G 1F Load Unit

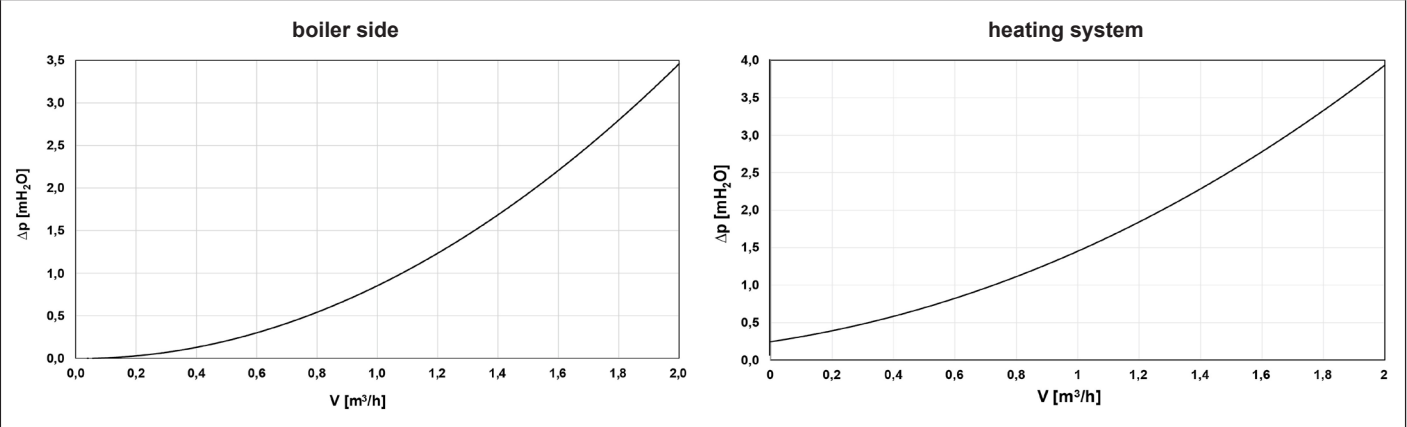
Fluid working temperature	5–95 °C
Max. working pressure	6 bar
Min. working pressure	0.5 bar
Ambient temperature	5–40 °C
Max. relative humidity	80 %, non condensing
Power supply	230 V, 50 Hz from external controller
Max. load unit power input	120 W
IP rating	IP 20
Insulation material	EPP RG 60 g/l
Overall dimensions (L x W x D)	640 x 250 x 350 mm
Total weight	16.5 kg

#### Accessories\*

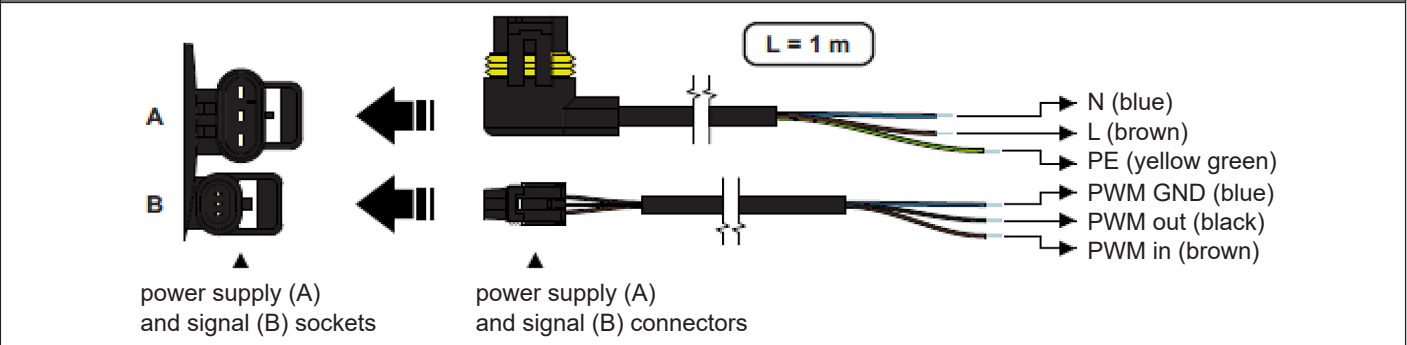
		Code
Magnet Filterball 1"	MAGNET FILTERBALL 1" Ball valve with filter and magnet	17405

\* Not included in supply, shall be ordered separately!

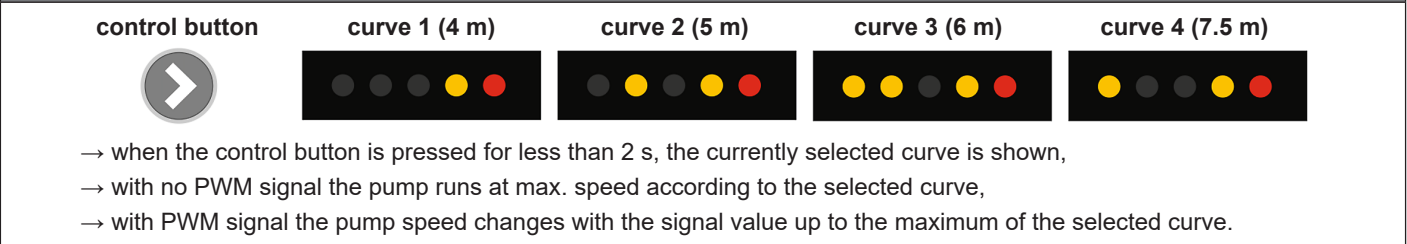
#### Pump Station Pressure Drop Graph



#### Electrical Wiring



#### Selected profile display during pump operation

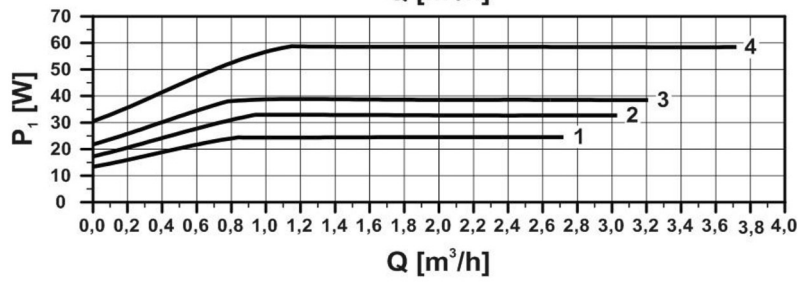
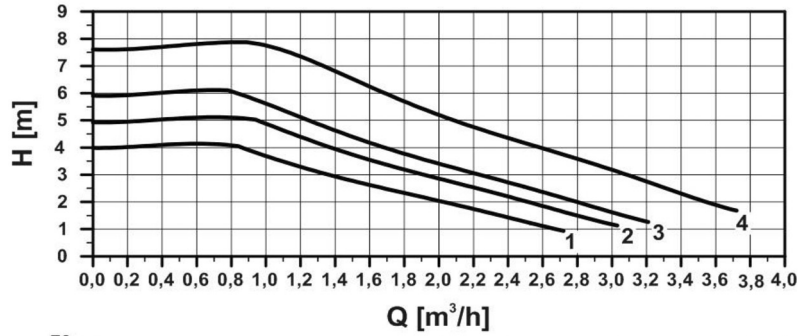


## DATA SHEET

### BIO MIX-BP G 1F Load Unit

#### Pump performance curves

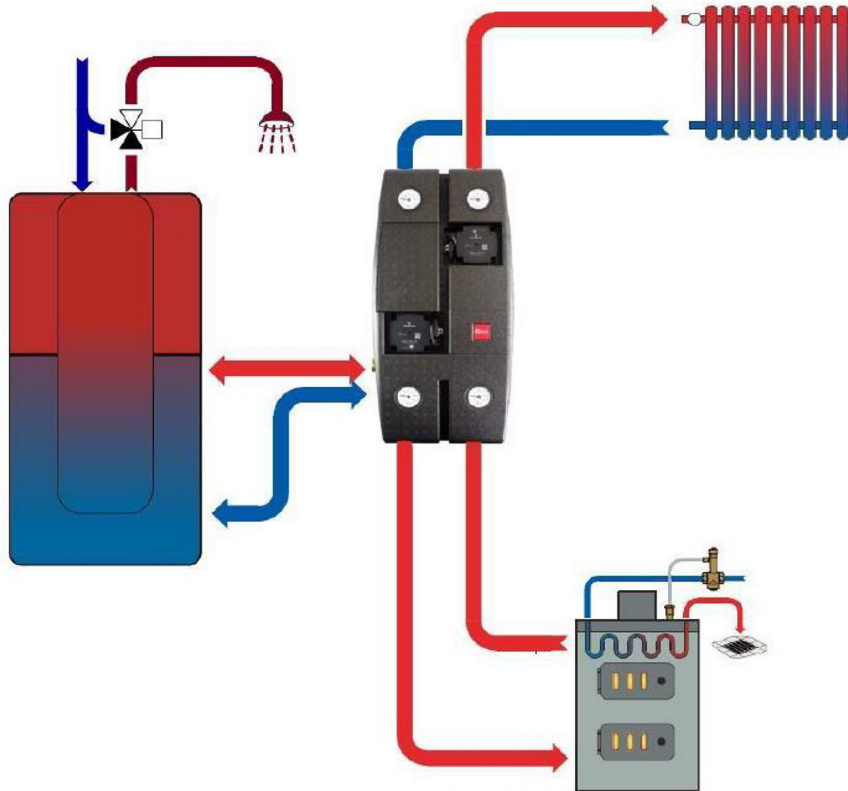
Curve	Max. H (upper graph)	Max. P <sub>1</sub> (lower graph)
1	4.0 m	25 W
2	5.0 m	33 W
3	6.0 m	39 W
4	7.5 m	60 W



**DATA SHEET**  
**BIO MIX-BP G 1F Load Unit**

**Connection Diagram**

Variant 2A



Variant 2B

