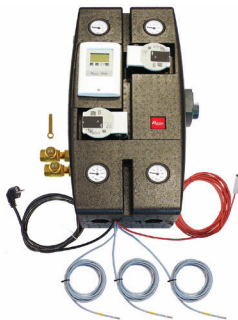

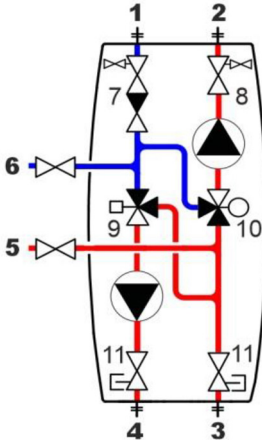


DATA SHEET

BIO MIX W-PWM 1F TRS6K Load Unit

<p>BIO MIX W-PWM 1F TRS6K</p> 	<p>Main Features</p> <p>Application</p> <p>BIO MIX W-PWM 1F TRS6K Load Unit includes a complete hydraulic and electrical connections for the installation of a heating system with a solid fuel boiler. The load unit has a complete electrical installation and is fitted with a power cord with a plug. All you need to do is connect the boiler, the heating system, thermal store or stores (depending on the selected hydraulic variant), then place the sensors and plug the load unit into a wall socket. Then select the corresponding hydraulic variant in the controller using the setup wizard and set other required parameters. The basic connection diagram can be upgraded with optional accessories.</p>								
<p>Enclosed</p> 	<p>The Load Unit involves</p> <ul style="list-style-type: none"> • TRS6K BIOMIX Controller with hydraulic variant selection for smart control of the entire system. • Two Wilo Para 25/8 iPWM1 circulation pumps with continuous performance control via PWM signal for boiler circuit and heating system. • TSV3BM load valve with automatic bypass balancing protecting a boiler against low-temperature corrosion by keeping the min. return water above the flue condensation temperature. • Motorised three-way mixing valve including actuator to maintain the required temperature in the heating circuit. • Two ball valves and two drain valves for shutting off and draining the heating system. • Check valve integrated in the ball valve body located at the return line from the heating system. • Two ball valves to connect a boiler. • Lever for ball valves, located inside insulation. • 3 m power cord. • Three Pt1000 temperature sensors with 4 m cable. • Pt1000 heating circuit temperature sensor (comes installed in the sheath in the Load Unit). • 10 m cable for outdoor temperature sensor (sensor itself enclosed). • Four thermometers. • Two drain mini-valves to drain water from the Load Unit. • Outlets to connect optional accessories (e.g. a pressure switch). 								
<p>Inner hydraulic connection</p>  <p>1 – return from heating system 2 – flow to heating system 3 – flow from boiler 4 – return to boiler 5 – outlet to thermal store with ball valve (enclosed) 6 – return from thermal store w. ball valve (enclosed) 7 – ball valve w. integrated check and drain valves* 8 – ball valve w. drain valve* 9 – load valve 10 – mixing valve w. actuator 11 – ball valve w. outlet to connect optional accessories*</p> <p><small>* Remains connected with heating system / boiler when the ball valve is closed.</small></p>	<p>Description</p> <p>Accessories enclosed</p> <ul style="list-style-type: none"> • Mounting kit for easy mounting on a wall bracket. • Two DN 20 ball valves to connect a hot water storage tank. • Pt1000 outdoor temperature sensor to be installed on a North facing wall. <table border="1"> <tr> <td>Working fluid</td><td>Water, antifreeze heat-transfer fluid for heating systems.</td></tr> <tr> <td>Installation</td><td>Vertically on a wall using the installation kit.</td></tr> <tr> <td>Connections</td><td> 2 x G 1" F for heating system 2 x G 1" F for boiler 2 x G 1" F for thermal store 2 x G 1/2" F outlets to connect optional accessories (plugged in production) </td></tr> <tr> <td>Code</td><td> 17499 – opening temperature 55 °C 21255 – opening temperature 65 °C </td></tr> </table>	Working fluid	Water, antifreeze heat-transfer fluid for heating systems.	Installation	Vertically on a wall using the installation kit.	Connections	2 x G 1" F for heating system 2 x G 1" F for boiler 2 x G 1" F for thermal store 2 x G 1/2" F outlets to connect optional accessories (plugged in production)	Code	17499 – opening temperature 55 °C 21255 – opening temperature 65 °C
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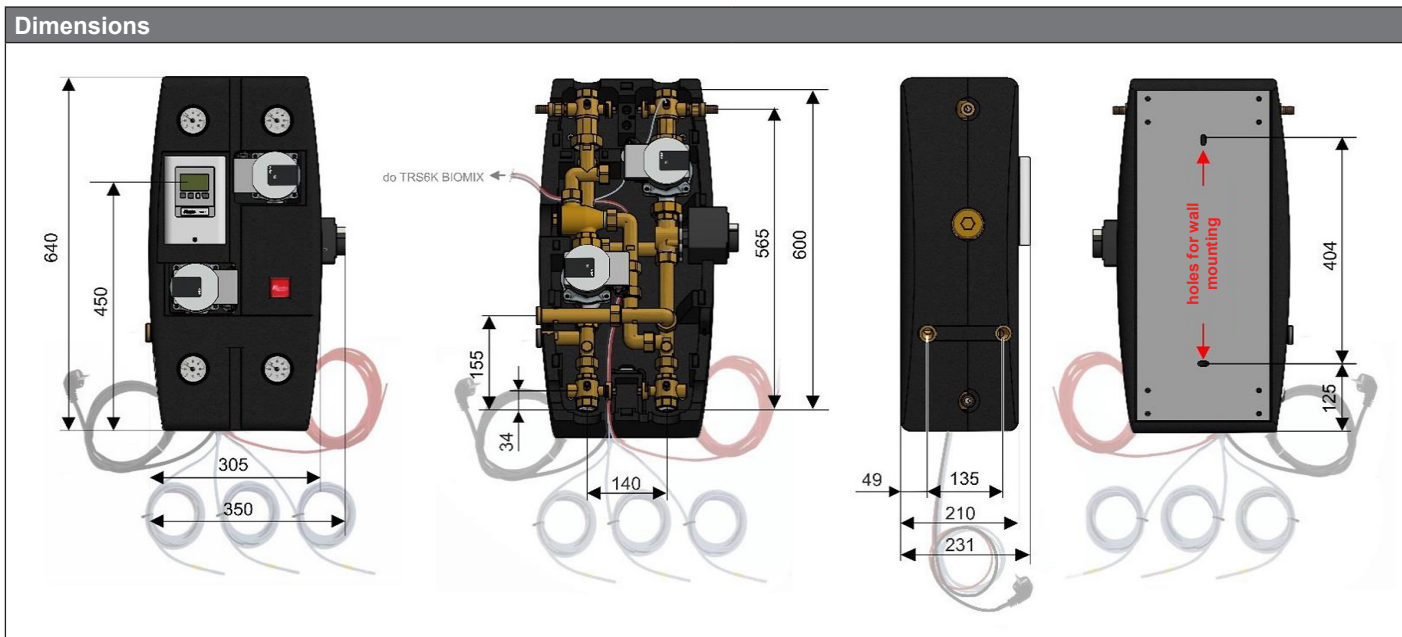
DATA SHEET

BIO MIX W-PWM 1F TRS6K Load Unit

Technical Data	
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	max. 80%, non condensing
Max. temperature of sheath sensors	95 °C
Min. return water temperature to boiler from load valve	55 °C – code 17499 65 °C – code 21255
Mixing valve actuator run time	120 s
Max. boiler output at flow of 1.7 m ³ /h	40 kW at Δt 20 °C / 20 kW at Δt 10 °C
Max. heating system output at flow of 1.7 m ³ /h	40 kW at Δt 20 °C / 20 kW at Δt 10 °C
Insulation material	EPP RG 60 g/l
Overall dimensions (H x W x D)	640 x 350 x 231 mm
Total empty weight	18.4 kg

Electric Data	
Load Unit power supply	230 V, 50 Hz (power cord)
Load Unit max. power input	155 W (basic connection, no accessories)
IP rating of BIO MIX W-PWM 1F TRS6K Load Unit	IP 20
Inner fuse of TRS6K BIOMIX controller	T2A / 250 V, slow blow
Backup of TRS6K BIOMIX controller clock operation in case of power failure	24 hours
Max. length of Pt1000 sensor cables	10 m
Max. length of CAN cable to CALEON unit (standard cable)	3 m
Max. length of CAN cable to CALEON unit (shielded twisted cable)	50 m

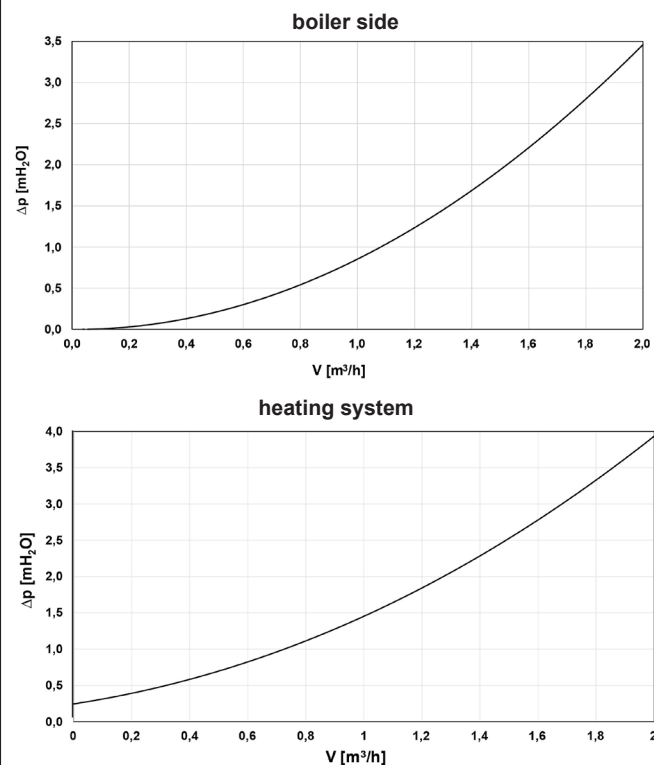
Kvs values	
Mixing valve	6.3 m ³ /h
Ball valves	20.2 m ³ /h



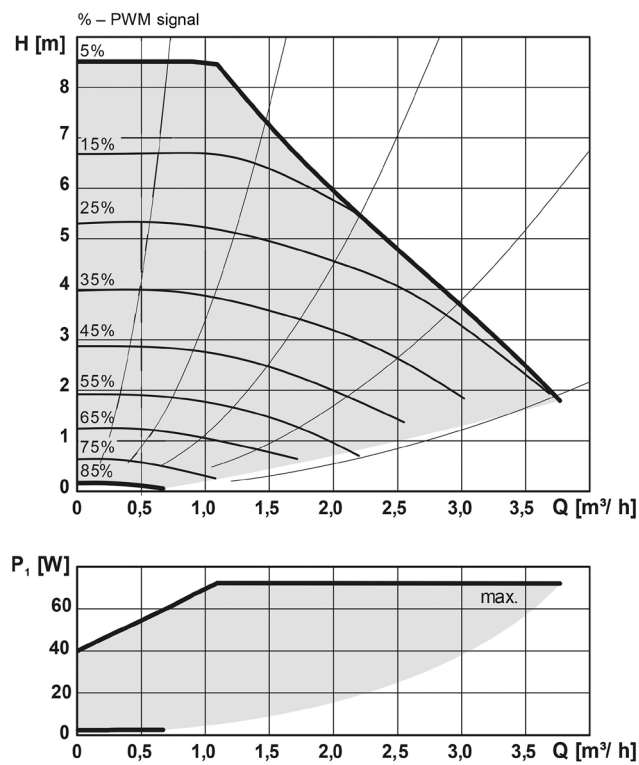
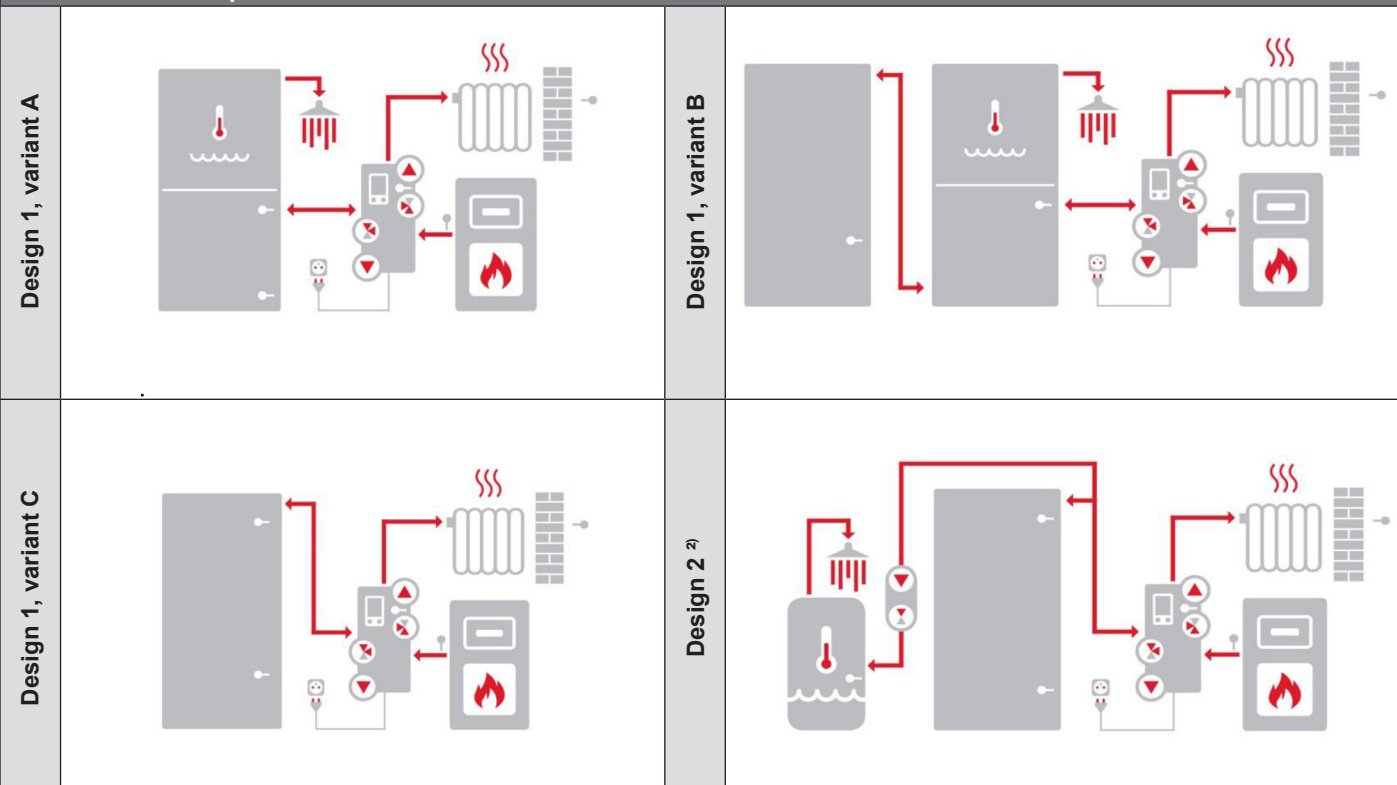
DATA SHEET

BIO MIX W-PWM 1F TRS6K Load Unit

Diagram of Load Unit max. pressure drop



Performance curves for Wilo Para 25/8 iPWM1 pump


Basic connection options¹⁾


1) The basic connection can be upgraded with optional accessories, for details see the Load Unit Instruction Manual. We especially recommend the Caleon room unit (code 17150) or Caleon WiFi for control from a mobile phone app (code 18126).

2) For a system connected according to Design 2, the S1 temperature sensor (code 9108) shall be ordered separately as well as a heat transfer pump station (recommended: CSE OTS ZV W8-SC, code 17979). Electric wiring of a sensor, pump and room unit shall be performed by a qualified person.