Data sheet

RGMAT E W-PWM Pump Station

Main Features	
Description	This Load Unit is intended for systems with solid-fuel boilers and fireplaces. The Load Valve integrated in the Load Unit keeps the min. incoming temperature to a boiler/fireplace above the flue gas condensation temperatures, which prevents low-temperature corrosion of the boiler combustion chamber. This way the Load Unit contributes to a significant reduction in tarring and boiler fouling, to an increase in the efficiency of fuel combustion and to extension of the boiler service life. The Load Unit consists of: • Wilo PARA 25/8 iPWM1 pump • pipe fittings w. shut-off ball valve • TSV3B Load Valve with automatic bypass balancing • thermometer • insulation
Working fluid	water; water/glycol mixture (max. 1:1) or water-glycerine mixture (max. 2:1)
Flow rate measurement	the current flow rate is sent by the pump electronically to the external controller; the controller must be equipped with an iPWM read input and a flow rate calculation function.
Installation	on return piping, min. dist. of the pipe axis from a wall 100 mm

Codes	boiler output
18131 for valve opening temperature 65 °C	max. 31 kW
18133 for valve opening temperature 55 °C	max. 44 kW

Technical data	
Fluid working temperature	5 – 95 °C
Max. working pressure	6 bar
Min. working pressure	0,5 bar
Ambient working temperature	5-40 °C
Max. relative humidity	80%, non condensing
Control Range of the Load Valve	opening temperature + 5 °C
Load Valve Kvs (direction A ►AB)	6,2 m³/h
Load Valve Kvs (direction B ►AB)	4,4 m³/h
Max. pump speed	4300 rpm
Pump speed control	frequency converter
Pump motor protection	integrated
Overall dimensions	305 x 170 x 135 mm
Total weight	3,3 kg
Connections	3 x G 1" F

Electric Data	
Power supply	230 V, 50 Hz
Power input (min./max.)	2/75 W
Current (min./max)	0,03/0,66 A
IP rating	IPX4D
Energy Efficiency Index	≤ 0,21 by EN 16 297/3

Materials	
Insulation	EPP RG 60 g/l
Load Valve and fittings	brass
Thermostatic element and plug seal	EPDM
Load Valve cone seal	NBR

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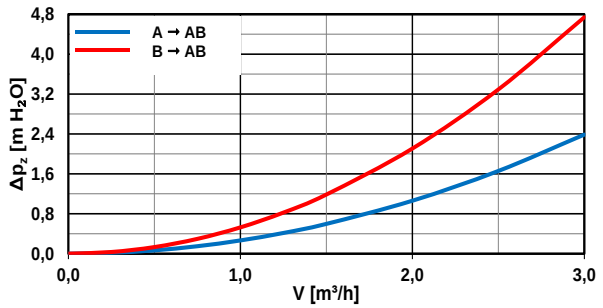
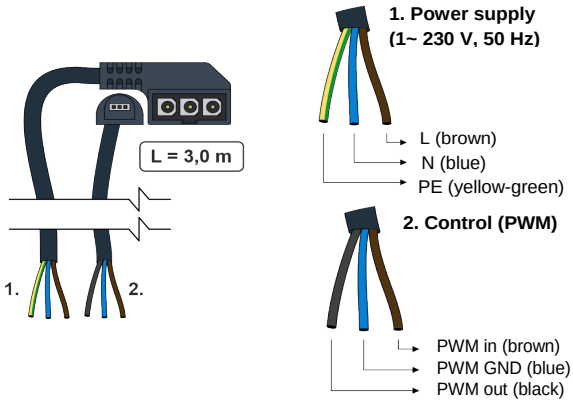
Valve pressure drop diagram

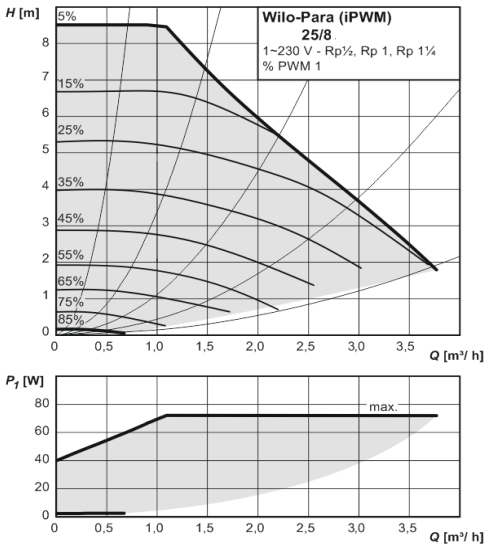


The pressure drop value of the valve moves between the two curves depending on the mixing ratio during mixing

Pump wiring

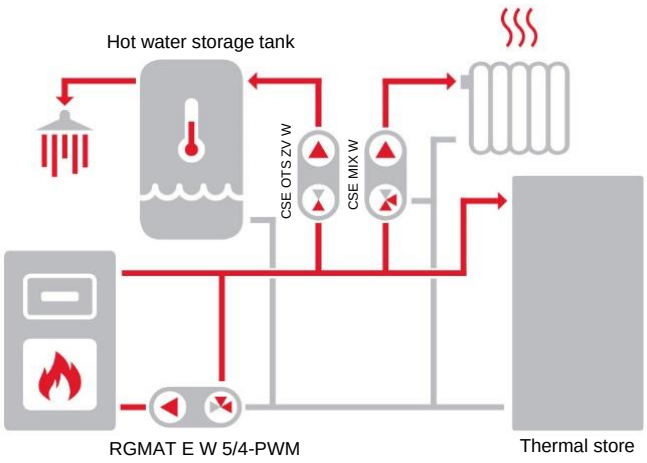


Pump performance curves



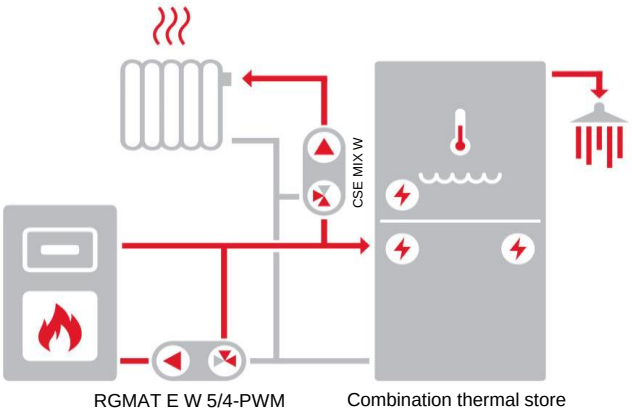
% = PWM signal

Example of possible connection I



The diagram shows a typical connection of a solid fuel boiler, thermal store and heating circuit (with the recommended CSE MIX W pump station – not included in supply). If the boiler is used also for hot water heating, it is recommended to install a CSE OTS ZV W pump station (not included in supply).

Example of possible connection II



The diagram shows a typical connection of a solid fuel boiler, combination thermal store and heating circuit (with the recommended CSE MIX W pump station – not included in supply).