

RGMAT E G60 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 lowtemperature 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:

- Grunfos UPM3 FLEX AS Pump
- pipe fittings w. shut-off ball valve
- TSV3B Load Valve with automatic bypass balancing
- thermometer
- insulation

Working fluid

water, water-glycol mix (max. 1:1) or water-glycerine mix (max. 2:1)

Installation

on return pipe, min. pipe centre distance from wall = 100 mm

Code
boiler output

19083 for 45 °C valve opening temperature	max. 46 kW
19090 for 50 °C valve opening temperature	max. 42 kW
19086 for 55 °C valve opening temperature	max. 36 kW
19092 for 60 °C valve opening temperature	max. 32 kW
19089 for 65 °C valve opening temperature	max. 26 kW
19091 for 70 °C valve opening temperature	max. 22 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	5766 rpm
Pump motor protection	not needed
Overall dimensions	325 x 140 x 220 mm
Total weight	3,25 kg
Connection	3 x G 1" F

Electric data

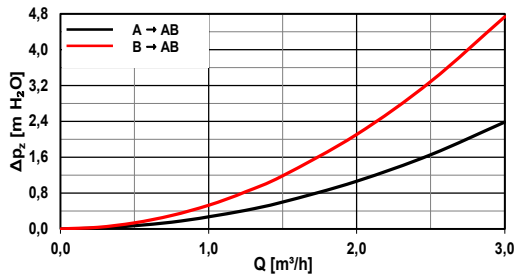
Power supply	230 V, 50 Hz
Power input (min./max.)	2/42 W
Current (min./max)	0,04/0,40 A
IP rating	IP44
Energy efficiency index	≤ 0.20 per EN 16 297/3

Materials

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

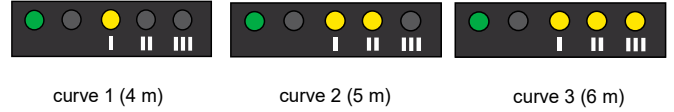
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Valve pressure drop diagram



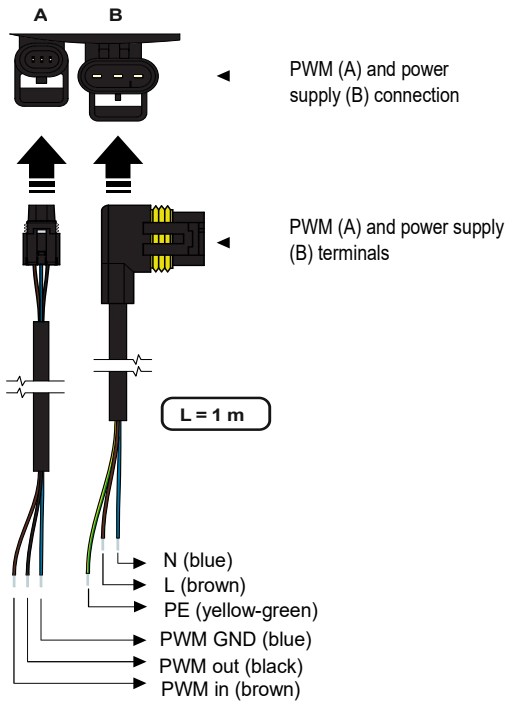
The pressure drop value of the valve moves between the two curves depending on the mixing ratio during mixing

Selected profile display during pump operation



with PWM signal the pump speed changes with the signal value up to the maximum of the selected curve; with no PWM signal the pump runs according to the selected curve

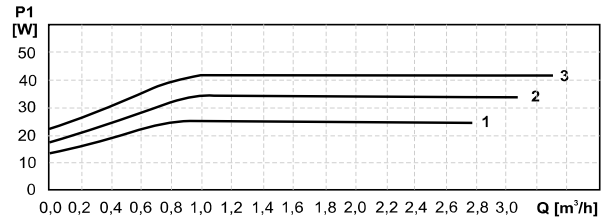
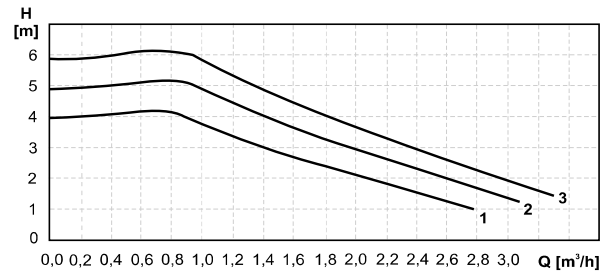
Pump wiring



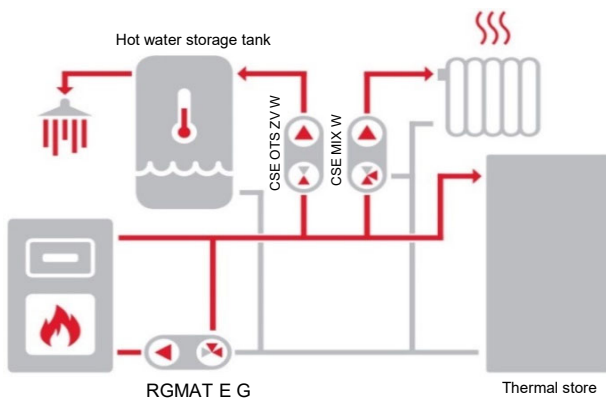
Power supply cables and PWM cables are included in supply.

Pump performance curves

Curve	Max. H (upper graph)	Max. P ₁ (lower graph)
1	4 m	25 W
2	5 m	34 W
3	6 m	42 W

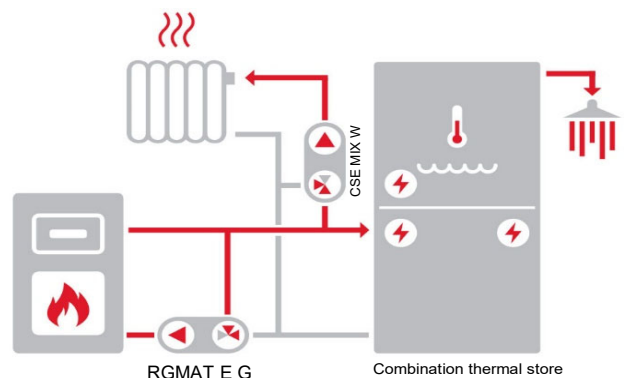


Example of possible connection I



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).