DATA SHEET
RGMAT E R8 1F 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: • RPA 25-8 Pump, • ball valve with union nut, • TSV3B Load Valve w. outer threads and automatic bypass balancing, • thermometer, • insulation.
Working fluid	Water; water/glycol mixture (max. 1:1). pH range 6.5–8.5. We recommend placing a filter with a mesh size of max. 0.6 mm upstream of the pump – e.g. Magnet FilterBall – see the Catalogue for codes.
Installation	On return piping, min. dist. of the pipe axis from a wall is 100 mm.

Codes	boiler output
21374 – for valve opening temperature 45 °C	max. 54 kW
22038 – for valve opening temperature 50 °C	max. 49 kW
21115 – for valve opening temperature 55 °C	max. 42 kW
22039 – for valve opening temperature 60 °C	max. 37 kW
21122 – for valve opening temperature 65 °C	max. 30 kW
21375 – for valve opening temperature 70 °C	max. 26 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
Pump motor protection	integrated
Overall dimensions	325 x 140 x 155 mm
Total weight	3.1 kg
Connections	3 x G 1" F

Electric Data	
Power supply	230 V, 50 Hz
Max. power input	65 W
Max. current	0.65 A
IP rating	IP44
Power cable length	3 m

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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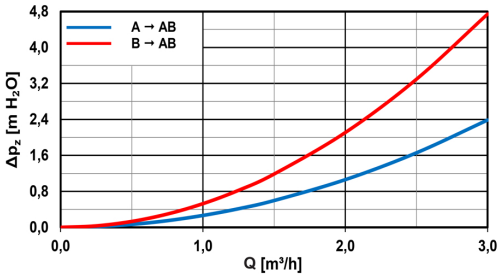
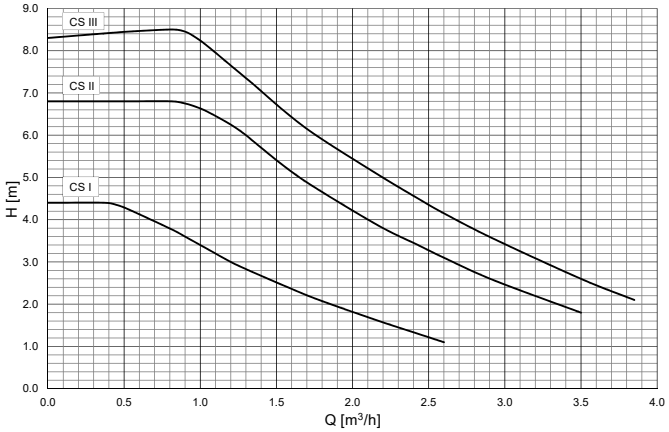
Valve pressure drop diagram



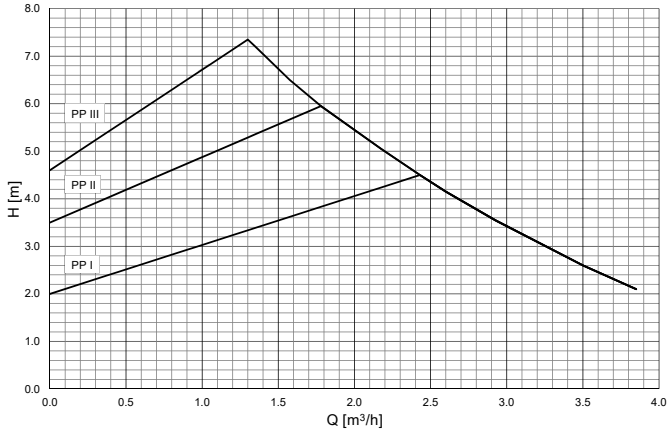
The pressure drop value of the valve moves between the two curves depending on the mixing ratio during mixing.

Pump performance curves

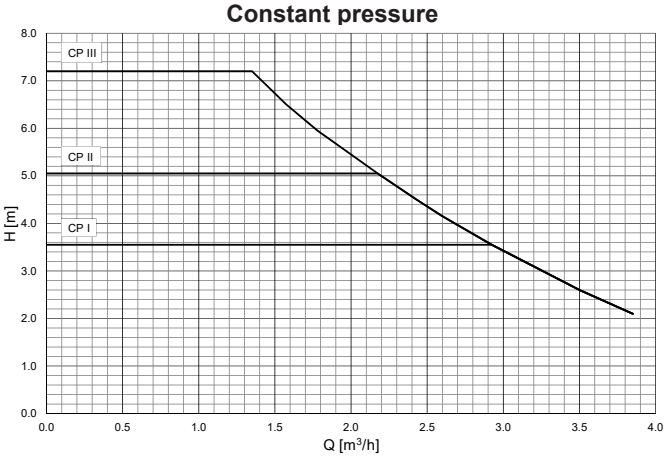
Constant speed



Variable pressure



Constant pressure



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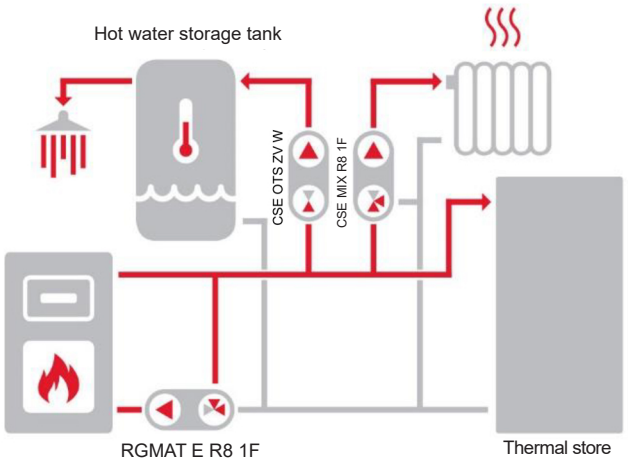
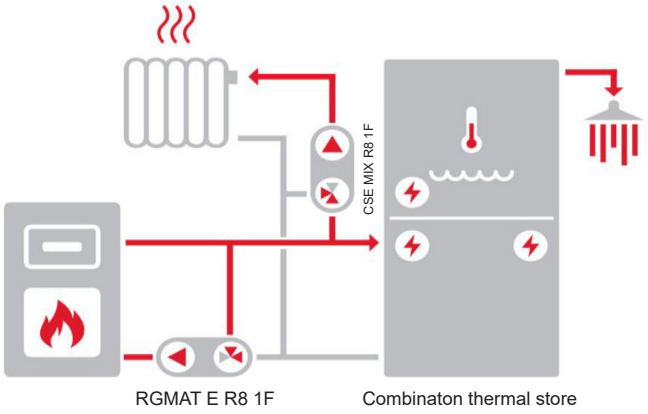
Example of possible connection I



The diagram shows a typical connection of a solid fuel boiler, thermal store and heating circuit (with the recommended CSE MIX R8 1F 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 R8 1F pump station – not included in supply).

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