

## DATA SHEET

### RGMAT E W8 5/4 F KK Load Unit



#### Main Features

##### Description

This load unit is intended for use in systems with solid-fuel boilers and fireplaces. The load valve integrated in the load unit ensures keeping the min. inlet temperature to the boiler (fire) above the flue condensing temperature, thus preventing a low-temperature corrosion of the boiler combustion chamber. The load unit thus contributes to a significant limitation of tarring and fouling of the boiler, to an increased efficiency in fuel combustion and to extending the service life of the boiler. The load unit is equipped with a set of three G 6/4" ball valves with union nuts, making repairs/disassembling easier, without the need to drain the system. The Load Unit consists of:

- Wilo PARA 25/8 SC Pump,
- TSV5BMF 6/4M x 5/4F Load Valve w. outer threads and automatic bypass balancing,
- three G 6/4" ball valves with union nut,
- thermometer,
- insulation.

##### Working fluid

Water; water–glycol mixture (max. 1:1) or water–glycerine mixture (max. 2:1).

##### Installation

On return piping, min. distance of the pipe axis from a wall is 100 mm.

#### Codes

#### boiler output

**18654** – for valve opening temperature 55 °C

max. 59 kW

**18657** – for valve opening temperature 65 °C

max. 43 kW

#### 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            | 80 %, non condensing      |
| Insulation material               | EPP RG 60 g/l             |
| Control range of the load valve   | opening temperature +5 °C |
| Load valve Kvs (A ► AB direction) | 7.3 m³/h                  |
| Load valve Kvs (B ► AB direction) | 7.3 m³/h                  |
| Max. pump speed                   | 4800 rpm                  |
| Pump speed control                | frequency converter       |
| Pump motor protection             | integrated                |
| Overall dimensions                | 390 x 210 x 165 mm        |
| Total weight                      | 4.6 kg                    |
| Connections                       | 3 x G 5/4" F              |

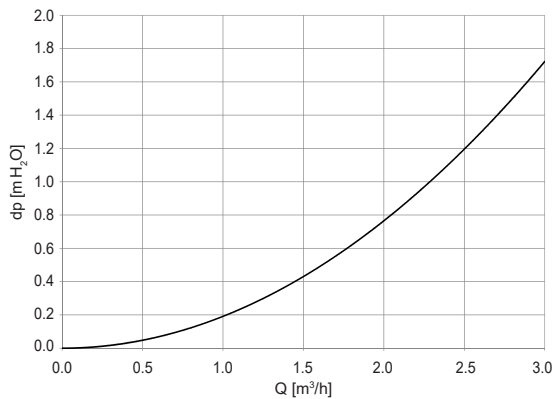
#### Electric Data

|                         |                       |
|-------------------------|-----------------------|
| Power supply            | 230 V, 50 Hz          |
| Power input (min./max.) | 2/75 W                |
| Current (min./max.)     | 0.03/0.66 A           |
| Energy Efficiency Index | ≤ 0.21 by EN 16 297/3 |
| IP rating               | IPX4D                 |

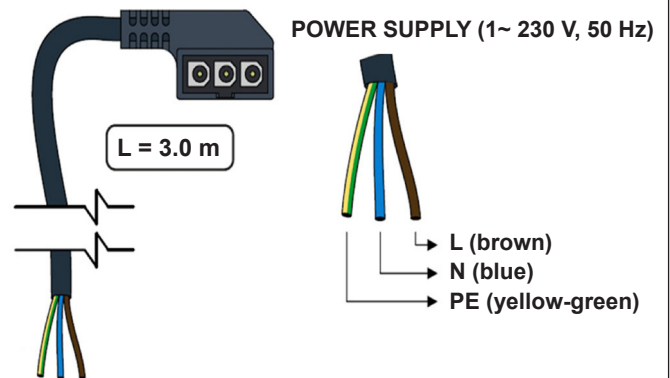
# DATA SHEET

## RGMAT E W8 5/4 F KK Load Unit

### Valve Pressure Drop Diagram

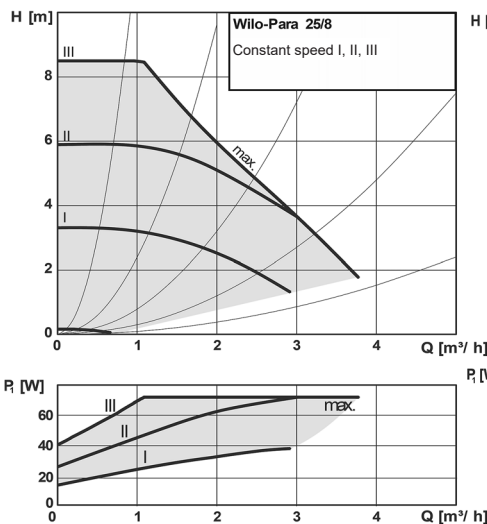


### Pump Wiring

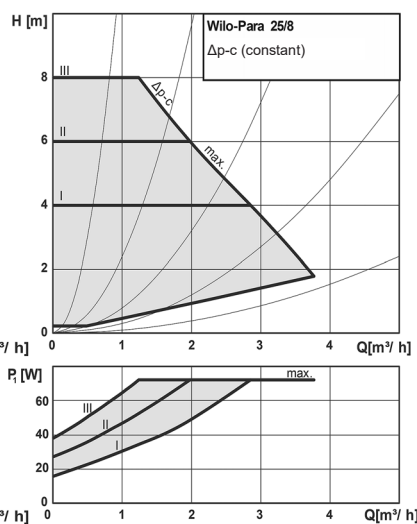


### Pump performance curves

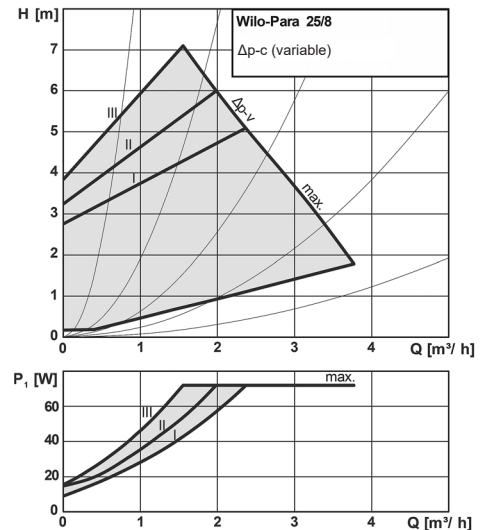
#### Characteristics of n=constant



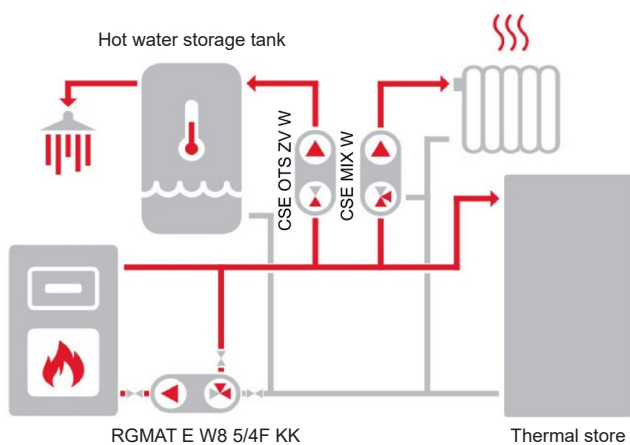
#### Characteristics of Δp-c (constant)



#### Characteristics of Δp-v (variable)

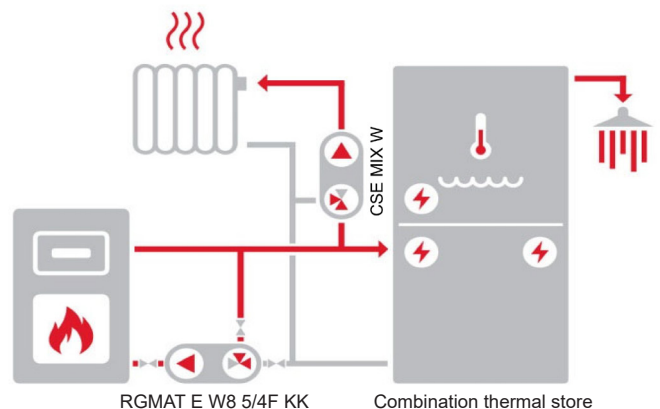


### Example of possible connection I



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).