Regulus

# Pump **Stations**


## Pump Stations
## Load Units

Energy-saving solutions

**www.regulus.eu**

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## CSE OTS G Single-Line Pump Station, Insulated

Insulated single-line pump station with high-efficiency circulation pump, ball valves and thermometer.

### Technical Data

| | |
|---|---|
| CONNECTIONS | 1" F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| DIMENSIONS | 325x140x150 mm |

### Components

- Grundfos UPM3 FLEX AS 25-70 high-efficiency circulation pump
- Pump connection cable with connector
- Neat insulation for reduced heat loss
- 2 ball valves
- Non-return valve (codes 15042, 17922)
- Magnet Filterball (code: 17922)
- Thermometer

### Models

| | CSE OTS G | CSE OTS ZV G | CSE OTS MFB+ZV G |
|---|---|---|---|
| Pump speed control | manual or PWM | manual or PWM | manual or PWM |
| Max. head | 7 m | 7 m | 7 m |
| **Code** | **15325** | **15042** | **17922** |

## CSE OTS W Single-Line Pump Station, Insulated

Insulated single-line pump station with high-efficiency circulation pump, ball valves and thermometer.

### Technical Data

| | |
|---|---|
| CONNECTIONS | 1“ F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| DIMENSIONS | 325 x 140 x 150 mm |

### Components

- Wilo high-efficiency circulation pump
- Pump connection cable with connector
- Neat insulation for reduced heat loss
- 2 ball valves
- Non-return valve (codes 15042, 17922)
- Magnet Filterball (code: 17922)
- Thermometer

### Models

| | CSE OTS W | CSE OTS ZV W | CSE OTS MFB+ZV W | CSE OTS ZV W-PWM |
|---|---|---|---|---|
| Pump | YP RS25/6 | PARA 25/8 SC | PARA 25/8 SC | PARA 25/8 iPWM1 |
| Pump speed control | manual | manual | manual | PWM + flow rate info |
| Max. head | 6.2 m | 6.2 m | 8.4 m | 8.4 m |
| **Code** | **15782** | **15892** | **17818** | **18127** |

# RegulusTOP PUMP STATIONS FOR HEATING SYSTEMS

## CSE MIX G Pump Station with electric mixing actuator

Pump station intended to control temperature of a mixed circuit or of a return line to solid-fuel boiler through an external controller. A version designed for the right-hand pipe, possible to convert to a left-hand pipe version.

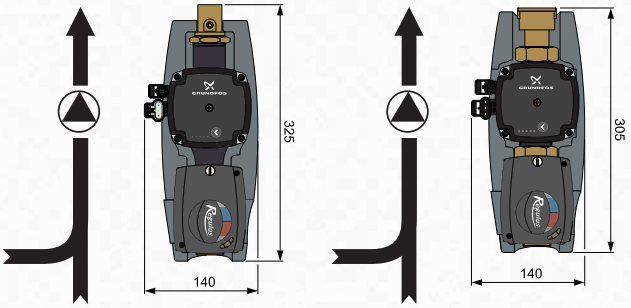
## Technical Data

| | |
|---|---|
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| MIXING VALVE ACTUATOR | 3-point control, 120 s, 5 Nm |
| POWER SUPPLY | 230 V, 50 Hz |

## Components

- Grundfos circulation pump with power cable w. connector
- Mixing valve
- Mixing valve actuator w. cable
- Neat insulation for reduced heat loss

## Dimensions




## Models

| | CSE MIX G 1M | CSE MIX G 5/4M | CSE MIX G 1F | CSE MIX G 5/4F |
|---|---|---|---|---|
| Connections | 1“ (2x M, 1x F)* | 5/4“ (2x M, 1x F) * | 1“ (3x F) | 5/4“ (3x F) |
| Pump Grundfos UPM3 | FLEX AS 25-70 | FLEX AS 25-75 | FLEX AS 25-70 | FLEX AS 25-75 |
| Pump speed control | manual or PWM | manual or PWM | manual or PWM | manual or PWM |
| Max. head | 7 m | 7.5 m | 7 m | 7.5 m |
| $K_{vs}$ of the mixing valve | 6.3 $m^3/h$ | 12 $m^3/h$ | 10 $m^3/h$ | 16 $m^3/h$ |
| **Code** | **15208** | **16847** | **16401** | **16402** |

** the inner thread is located at the outlet end of the pump*

## Accessories

| | Name | Application | Code |
|---|---|---|---|
|  | CSE/HV Kit | 2 threaded fittings, 1 T-piece, 1 ball valve for an easy connection to Regulus heating circuit manifolds | **16922** |
|  | T-piece, 1“ M/Fu/M, 90 mm | to connect a return line to a mixing valve | **16660** |
|  | T-piece, 1“ M/Fu/M, 125 mm | for an easy connection to Regulus heating circuit manifolds | **16659** |
|  | 1“ Fu/F Fittings | union nut x F thread | **15694** |

# RegulusTOP PUMP STATIONS FOR HEATING SYSTEMS

## CSE MIX W Pump Station with electric mixing actuator

Pump station intended to control temperature of a mixed circuit or of a return line to solid-fuel boiler through an external controller. A version designed for the right-hand pipe, possible to convert to a left-hand pipe version.

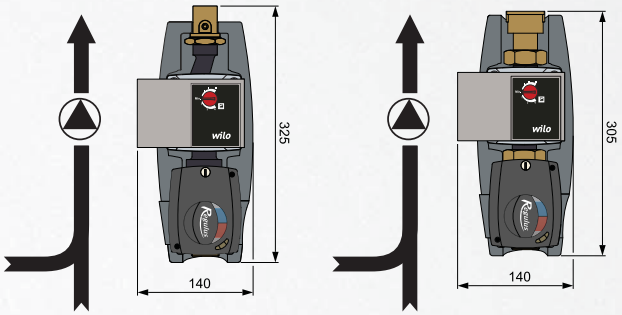
## Technical Data

| | |
|---|---|
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| MIXING VALVE ACTUATOR | 3-point control, 120 s, 5 Nm |
| POWER SUPPLY | 230 V, 50 Hz |

## Components

- Wilo circulation pump with power cable w. connector
- Mixing valve
- Mixing valve actuator w. cable
- Neat insulation for reduced heat loss

## Dimensions




## Models

| | CSE MIX W -SC 1M | CSE MIX W 5/4M | CSE MIX W 1F | CSE MIX W-PWM 1F | CSE MIX W 5/4F | CSE MIX W-PWM 5/4F |
|---|---|---|---|---|---|---|
| Connections | 1" (2x M, 1x F)* | 5/4" (2x M, 1x F) * | 1" (3x F) | 1" (3x F) | 5/4" (3x F) | 1" (3x F) |
| Wilo Pump | PARA 25/8 SC | YP RS25/7.5 | YP RS25/6 | PARA 25/8 iPWM1 | YP RS25/7.5 | PARA 25/8 iPWM1 |
| Pump speed control | manual | manual | manual | PWM + flow rate info | manual | PWM + flow rate info |
| Max. head | 8.4 m | 7.6 m | 6.2 m | 8.4 m | 7.6 m | 8.4 m |
| $K_{vs}$ of the mixing valve | 6.3 $m^3/h$ | 12 $m^3/h$ | 10 $m^3/h$ | 10 $m^3/h$ | 16 $m^3/h$ | 16 $m^3/h$ |
| **Code** | **17980** | **16848** | **16219** | **18128** | **16215** | **18130** |

** the inner thread is located at the outlet end of the pump*

## Accessories

| | Name | Application | Code |
|---|---|---|---|
|  | CSE/HV Kit | 2 threaded fittings, 1 T-piece, 1 ball valve for an easy connection to Regulus heating circuit manifolds | **16922** |
|  | T-piece, 1" M/Fu/M, 90 mm | to connect a return line to a mixing valve | **16660** |
|  | T-piece, 1" M/Fu/M, 125 mm | for an easy connection to Regulus heating circuit manifolds | **16659** |
|  | 1" Fu/F Fittings | union nut x F thread | **15694** |

## CSE MIX FIX G Pump Station with electronic-controlled mixing

Pump station intended to control the temperature of return water to boiler or output temperature of heating circuits mixed to a constant temperature that can be adjusted directly on the mixing valve actuator, 0-99°C. A version designed for the right-hand pipe, possible to convert to a left-hand pipe version.

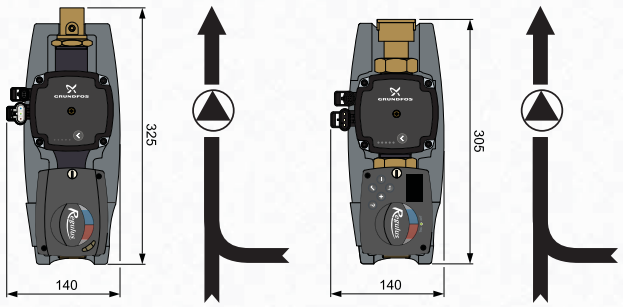
### Technical Data

| | |
|---|---|
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| MIXING VALVE ACTUATOR | control to constant temperature, 120 s, 6 Nm |
| POWER SUPPLY | 230 V, 50 Hz |

### Components

- Grundfos circulation pump with power cable w. connector
- Mixing valve
- Mixing valve actuator, electronic-controlled
- 2 Pt 1000 sensors
- Neat insulation for reduced heat loss

### Dimensions




### Models

| | CSE MIX FIX G 1M | CSE MIX FIX G 5/4M | CSE MIX FIX G 1F | CSE MIX FIX G 5/4F |
|---|---|---|---|---|
| Connections | 1" (2x M, 1x F)* | 5/4" (2x M, 1x F)* | 1" (3x F) | 5/4" (3x F) |
| Pump Grundfos UPM3 | FLEX AS 25-70 | FLEX AS 25-75 | FLEX AS 25-70 | FLEX AS 25-75 |
| Pump speed control | manual or PWM | manual or PWM | manual or PWM | manual or PWM |
| Max. head | 7 m | 7.5 m | 7 m | 7.5 m |
| $K_{vs}$ of the mixing valve | 6.3 $m^3/h$ | 12 $m^3/h$ | 10 $m^3/h$ | 16 $m^3/h$ |
| **Code** | **15333** | **16844** | **16403** | **16404** |

** the inner thread is located at the outlet end of the pump*

### Accessories

| | Name | Application | Code |
|---|---|---|---|
|  | CSE/HV Kit | 2 threaded fittings, 1 T-piece, 1 ball valve for an easy connection to Regulus heating circuit manifolds | **16922** |
|  | T-piece, 1" M/Fu/M, 90 mm | to connect a return line to a mixing valve | **16660** |
|  | T-piece, 1" M/Fu/M, 125 mm | for an easy connection to Regulus heating circuit manifolds | **16659** |
|  | 1" Fu/F Fittings | union nut x F thread | **15694** |

## CSE MIX FIX W Pump Station with electronic-controlled mixing

Pump station intended to control the temperature of return water to boiler or output temperature of heating circuits mixed to a constant temperature that can be adjusted directly on the mixing valve actuator, 0-99°C. A version designed for the right-hand pipe, possible to convert to a left-hand pipe version.

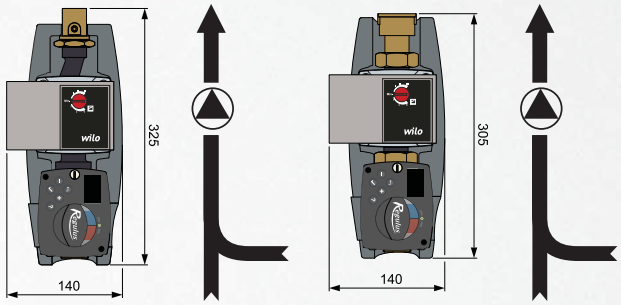
## Technical Data

| | |
|---|---|
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| MIXING VALVE ACTUATOR | control to constant temperature, 120 s, 6 Nm |
| POWER SUPPLY | 230 V, 50 Hz |

## Components

- Wilo circulation pump with power cable w. connector
- Mixing valve
- Mixing valve actuator, electronic-controlled
- 2 Pt 1000 sensors
- Neat insulation for reduced heat loss

## Dimensions




## Models

| | CSE MIX FIX W 1M | CSE MIX FIX W 5/4M | CSE MIX FIX W 1F | CSE MIX FIX W 5/4F |
|---|---|---|---|---|
| Connections | 1“ (2x M, 1x F)* | 5/4“ (2x M, 1x F)* | 1“ (3x F) | 5/4“ (3x F) |
| Pump Wilo Yonos Para | RS25/6 | RS25/7,5 | RS25/6 | RS25/7,5 |
| Pump speed control | manual | manual | manual | manual |
| Max. head | 6.2 m | 7.6 m | 6.2 m | 7.6 m |
| $K_{vs}$ of the mixing valve | 6.3 m³/h | 12 m³/h | 10 m³/h | 16 m³/h |
| **Code** | **16083** | **16846** | **16220** | **16216** |

** the inner thread is located at the outlet end of the pump*

## Accessories

| | Name | Application | Code |
|---|---|---|---|
|  | CSE/HV Kit | 2 threaded fittings, 1 T-piece, 1 ball valve for an easy connection to Regulus heating circuit manifolds | **16922** |
|  | T-piece, 1“ M/Fu/M, 90 mm | to connect a return line to a mixing valve | **16660** |
|  | T-piece, 1“ M/Fu/M, 125 mm | for an easy connection to Regulus heating circuit manifolds | **16659** |
|  | 1“ Fu/F Fittings | union nut x F thread | **15694** |

# RegulusTOP PUMP STATIONS FOR HEATING SYSTEMS

## CSE2 F Pump Stations

Twin-line pump station with a high-efficiency circulation pump and other well-arranged basic components set in a compact thermoinsulating case. It permits shutting off heating circuits, temperature control, placing controller temperature sensors and easy servicing. A filter with magnet is included which makes it suitable also for older systems with steel pipes. A version designed for the right-hand outlet, conversion not possible.

**TYPICAL APPLICATION:**
For unmixed heating circuits with/without thermostatic heads. Installation possible on a wall, thermal store or manifold.

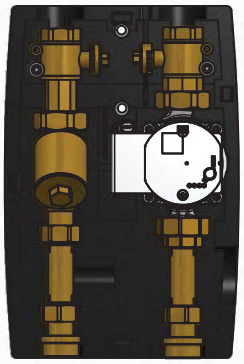
## Technical Data

| | |
|---|---|
| CONNECTION POINTS | 1" F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| PIPE DISTANCE | 125 mm |
| DIMENSIONS | 360 x 133 x 245 mm |

## Components

**FLOW:**
- 1" connection fitting with union nut.
- High efficiency circulation pump.
- DN 20 ball valve with union nut and a sensor sheath.
- Thermometer 0-120°C.

**RETURN:**
- 1" connection fitting with union nut.
- Non-return valve.
- Filter with a large strainer surface area and magnet.
- Ball valve w. sheath for sensor.
- Thermometer 0-120°C.



## Models

| Pump | Grundfos UPM3 25-75 | Wilo PARA 25/8 SC | Wilo Para 25/8 iPWM1 |
|---|---|---|---|
| Pump speed control | manual or PWM | manual | PWM + flow rate info |
| Max. head | 7.5 m | 8.4 m | 8.5 m |
| **Code** | **17487** | **17936** | **17485** |

**Possible variants upon order:**
- connections: 3/4", 5/4". Cu22, Cu28
- no strainer

## CSE2 MIX F Pump Stations with Mixing

Twin-line pump station with a high-efficiency circulation pump, mixing valve, control, possibly also without actuator, and with other well-arranged basic components set in a compact thermoinsulating case. It permits shutting off a heating circuit, temperature control, placing controller temperature sensors and easy servicing. A filter with magnet is included for which makes it suitable also for older systems with steel pipes. A version designed for the right-hand outlet, conversion not possible.

**TYPICAL APPLICATION:**
For mixed heating circuits. Installation possible on a wall, thermal store or manifold.

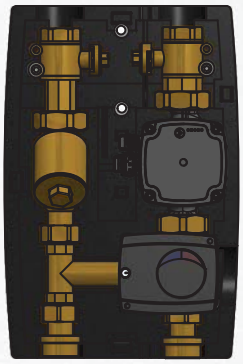
## Technical Data

| | |
|---|---|
| CONNECTION POINTS | 1" F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| PIPE DISTANCE | 125 mm |
| DIMENSIONS | 360 x 133 x 245 mm |
| **AVC05 ACTUATOR** | |
| SHIFT TIME | 120 s |
| TORQUE | 5 Nm |
| SUPPLY VOLTAGE | 230 V 50 Hz |

## Components

**FLOW:**
- 1" connection fitting with union nut.
- Mixing valve with / without electric actuator
- High efficiency circulation pump.
- DN 20 ball valve with union nut and a sensor sheath.
- Thermometer 0-120°C.

**RETURN:**
- 1" connection fitting with union nut.
- Non-return valve.
- Filter with a large strainer surface area and magnet.
- Ball valve with check valve (can be opened by service staff) and sensor sheath.
- Thermometer 0-120°C.



## Models

| Pump | Grundfos UPM3 25-75 | Wilo PARA 25/8 SC | Wilo Para 25/8 iPWM1 |
|---|---|---|---|
| Pump speed control | manual or PWM | manual | PWM + flow rate info |
| Max. head | 7.5 m | 8.4 m | 8.5 m |
| $K_{vs}$ of the mixing valve | 6.3 $m^3/h$ | 6.3 $m^3/h$ | 6.3 $m^3/h$ |
| **Code** | **17484** | **17937** | **17482** |
| **Code for pump stations without actuator** | **18082** | **17917** | **-** |

**Possible variants upon order:**
- connections: 3/4", 5/4". Cu22, Cu28
- without filter
- actuator with shift time of 60s, 240s or 0/10V controlled
- actuator with integrated control to constant temperature
- actuator with integrated weather compensation controller, enabling to connect a room unit

## Contents

## RGMAT E G
## RegulusRGMAT Load Unit

Load unit for solid-fuel boilers and fireplaces that prevents **low-temperature corrosion and boiler fouling by keeping a boiler (fireplace) inlet temperature** through a thermostatic valve.

RGMAT E G load unit comes in a left-hand version (outlet to boiler is on its left side), and can be easily modified to a right-hand version (outlet to boiler on its right side) during installation. Its installation position can be either horizontal or vertical.

It consists of a Grundfos UPM3 FLEX AS 25-70 high efficiency circulation pump incl. connection cables, a ball shut-off valve for the pump, thermometer, insulation and TSV3BF valve with a thermostatic element of 45 to 70 °C opening temperature.

## Technical Data

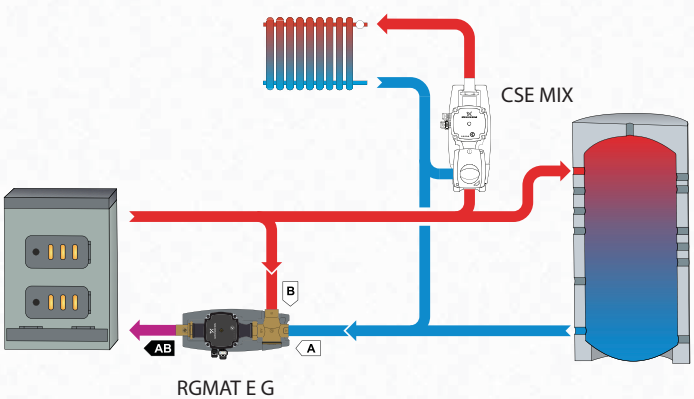
| | |
|---|---|
| CONNECTIONS | 3 x G1" F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| POWER SUPPLY | 230 V, 50 Hz |
| TOTAL WEIGHT | 3.25 kg |
| $K_{vs}$ from A to AB | 6.2 m³/h |
| $K_{vs}$ from B to AB | 4.4 m³/h |
| MAX. HEAD | 7 m |
| PUMP OPERATING POINT | 1.8 m³/h flow rate<br>4.9 m head |

**Prevention of low-temperature corrosion of boilers.**
**Installation possible with A inlet from either right or left side.**
**Minimum heat loss thanks to thermal insulation.**

## Versions

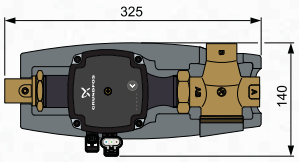
| RGMAT E G | 45 G | 50 G | 55 G | 60 G | 65 G | 70 G |
|---|---|---|---|---|---|---|
| Valve opening temp. | 45 °C | 50 °C | 55 °C | 60 °C | 65 °C | 70 °C |
| Recommended max. boiler output | 48 kW | 44 kW | 37 kW | 33 kW | 27 kW | 23 kW |
| **Code** | **14925** | **15910** | **14926** | **15911** | **14927** | **15912** |

## Connection in a system




RGMAT E G

## Dimensions




Available also as a variant with a thermostatic valve with manual bypass balancing.


## RGMAT E W
## RegulusRGMAT Load Unit

Load unit for solid-fuel boilers and fireplaces that prevents **low-temperature corrosion and boiler fouling by keeping a boiler (fireplace) inlet temperature** through a thermostatic valve.

RGMAT E W load unit comes in a left-hand version (outlet to boiler is on its left side), and can be easily modified to a right-hand version (outlet to boiler on its right side) during installation. Its installation position can be either horizontal or vertical.

It consists of a Wilo Yonos Para RS25/6 high efficiency circulation pump incl. connection cables, a ball shut-off valve for the pump, thermometer, insulation and TSV3BF valve with a thermostatic element of 45 to 70 °C opening temperature.

## Technical Data

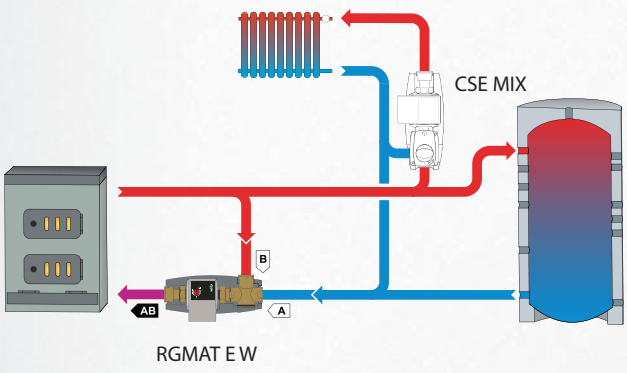
| | |
|---|---|
| CONNECTIONS | 3 x G1" F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| POWER SUPPLY | 230 V, 50 Hz |
| TOTAL WEIGHT | 3.3 kg |
| $K_{vs}$ from A to AB | 6.2 m³/h |
| $K_{vs}$ from B to AB | 4.4 m³/h |
| MAX. HEAD | 6.2 m |
| PUMP OPERATING POINT | 1.7 m³/h flow rate<br>4.6 m head |

**Prevention of low-temperature corrosion of boilers.**
**Installation possible with A inlet from either right or left side.**
**Minimum heat loss thanks to thermal insulation.**

## Versions

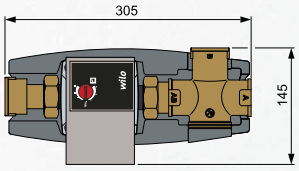
| RGMAT E W | 45 W | 50 W | 55 W | 60 W | 65 W | 70 W |
|---|---|---|---|---|---|---|
| Valve opening temp. | 45 °C | 50 °C | 55 °C | 60 °C | 65 °C | 70 °C |
| Recommended max. boiler output | 45 kW | 42 kW | 36 kW | 32 kW | 26 kW | 22 kW |
| **Code** | **15867** | **15904** | **15868** | **15905** | **15869** | **15906** |

## Connection in a system




RGMAT E W

## Dimensions




Available also as a variant with a thermostatic valve with manual bypass balancing – codes 16036 - 65 °C, 16031 - 72 °C.

Available also as a variant with a PWM controlled pump – codes 18133 - 55°C, 18131 - 65 °C.

## RGMAT E G 5/4
## RegulusRGMAT Load Unit

Load unit for solid-fuel boilers and fireplaces that prevents **low-temperature corrosion and boiler fouling by keeping a boiler (fireplace) inlet temperature** through a load valve.

RGMAT E G 5/4 load unit comes in a left-hand version (outlet to boiler is on its left side), and can be easily modified to a right-hand version (outlet to boiler on its right side) during installation. Its installation position can be either horizontal or vertical.

It consists of a Grundfos UPM3 FLEX AS 25-75 high efficiency circulation pump incl. connection cable, thermometer, insulation and TSV5B valve with a thermostatic element of 55 / 65 °C opening temperature.

### Technical Data

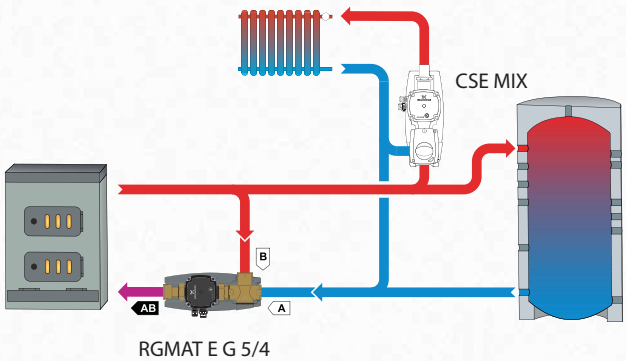
| | |
|---|---|
| CONNECTIONS | 3 x G5/4" F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| POWER SUPPLY | 230 V, 50 Hz |
| TOTAL WEIGHT | 3.7 kg |
| $K_{vs}$ from A to AB | 7.0 m³/h |
| $K_{vs}$ from B to AB | 4.9 m³/h |
| MAX. HEAD | 7.5 m |
| PUMP OPERATING POINT | 2.5 m³/h flow rate<br>4.2 m head |

**Prevention of low-temperature corrosion of boilers.**
**Installation possible with A inlet from either right or left side.**
**Minimum heat loss thanks to thermal insulation.**

### Versions

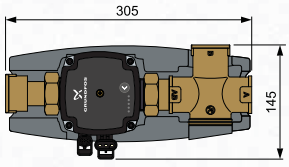
| RGMAT E G 5/4 | 55 G 5/4 | 65 G 5/4 |
|---|---|---|
| Valve opening temp. | 55 °C | 65 °C |
| Recommended max. boiler output | 53 kW | 38 kW |
| **Code** | **16395** | **16397** |

### Connection in a system




RGMAT E G 5/4

### Dimensions




Available also as a variant with a thermostatic valve with manual bypass balancing.


# RGMAT E W 5/4
# RegulusRGMAT Load Unit

Load unit for solid-fuel boilers and fireplaces that prevents **low-temperature corrosion and boiler fouling by keeping a boiler (fireplace) inlet temperature** through a load valve.

RGMAT E W 5/4 load unit comes in a left-hand version (outlet to boiler is on its left side), and can be easily modified to a right-hand version (outlet to boiler on its right side) during installation. Its installation position can be either horizontal or vertical.

It consists of a Wilo Yonos Para RS25/7,5 high efficiency circulation pump incl. connection cable, thermometer, insulation and TSV5B valve with a thermostatic element of 55 / 65 °C opening temperature.

## Technical Data

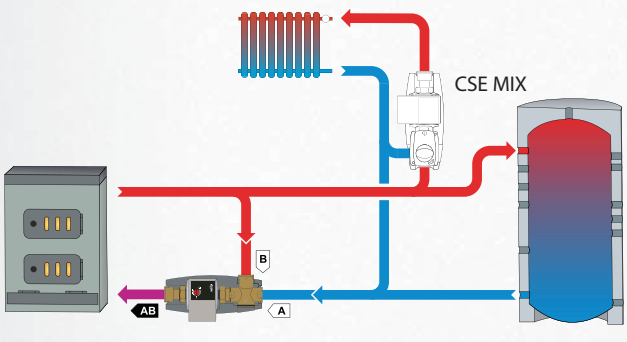
| | |
|---|---|
| CONNECTIONS | 3 x G5/4" F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| POWER SUPPLY | 230 V, 50 Hz |
| TOTAL WEIGHT | 3.7 kg |
| $K_{vs}$ from A to AB | 7.0 m³/h |
| $K_{vs}$ from B to AB | 4.9 m³/h |
| MAX. HEAD | 7.6 m |
| PUMP OPERATING POINT | 2.7 m³/h flow rate<br>4.9 m head |

**Prevention of low-temperature corrosion of boilers.**
**Installation possible with A inlet from either right or left side.**
**Minimum heat loss thanks to thermal insulation.**

## Versions

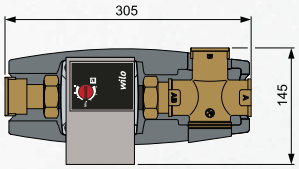
| RGMAT E W 5/4 | 55 W 5/4 | 65 W 5/4 |
|---|---|---|
| Valve opening temp. | 55 °C | 65 °C |
| Recommended max. boiler output | 57 kW | 41 kW |
| **Code** | **15790** | **15791** |

## Connection in a system




RGMAT E W 5/4

## Dimensions




Available also as a variant with a thermostatic valve with manual bypass balancing – codes 16036 - 65 °C, 16031 - 72 °C.

Available also as a variant with a PWM controlled pump – codes 18133 - 55°C, 18131 - 65 °C.

## RegulusBIO 55 MIX W-PWM 1F TRS6K
## Load Unit for heating systems with solid fuel (biomass) boiler, thermal store and integrated control of the entire system

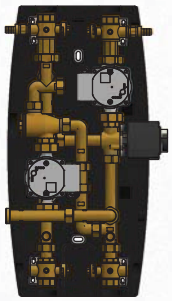
The RegulusBIO 55 MIX W-PWM 1F TRS6K Load Unit is designed for heating systems with a solid fuel boiler with a thermal store, with the possibility of DHW heating. Water to the heating system is mixed in a 3-way mixing valve with actuator, the temperature of return water to the boiler is kept by a load valve at a minimum temperature of 55 ° C. Excess boiler output is stored in the thermal store and automatically used after the boiler extinguishes. An integrated controller controls the operation of the entire system. The load unit is completely electrically connected and equipped with a power cord with a plug. The system can be controlled by a room unit with a touch screen (shall be ordered separately).

## Technical Data

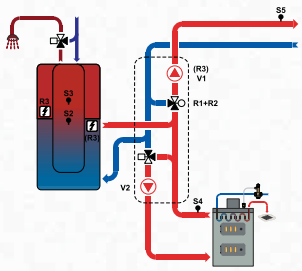
| | |
|---|---|
| CONNECTIONS | 1“ F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| NOMINAL INLET TEMPERATURE TO BOILER | 55 °C |
| POWER SUPPLY | 230 V, 50 Hz |
| PIPE DISTANCE | 125 mm |
| DIMENSIONS | 640 x 250 x 350 mm |
| PUMP | Wilo Para 25/8 iPWM1 |
| PUMP CONTROL | PWM + flowrate info |
| MAX. HEAD | 8.4 m |
| MAX. BOILER OUTPUT | 40 kW |
| **CODE** | **17499** |

## Components

- Heating system pump
- Boiler pump
- TSV3B load valve
- 3-way mixing valve for heating system
- Mixing valve actuator
- TRS6 K Controller
- Mains power cord and complete electric connection for the entire load unit
- 2 ball valves and 2 drain valves, to shut off and drain a heating system
- 2 ball valves to shut off a boiler
- 4 thermometers



## Connection in a system




## Accessories

Room temperature sensor
*Code: 16167*

MAGNET FILTERBALL 1” ball valve w. filter & magnet
*Code: 17405*

Digital room unit w. touchscreen
*Code: 17150*

**Possible variants on order:**

- connections: 3/4“, 5/4“, Cu22, Cu28.
- return water temperature: 45, 50, 60, 65, 70 °C
- safety valve 1,5-6 bar

# RegulusBIO 55 MIX-BP G 1F
# Load Unit for heating systems with solid fuel (biomass) boiler and thermal store

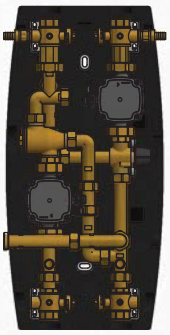
The RegulusBIO 55 MIX-BP G 1F Load Unit is designed for heating systems with a solid fuel boiler with a thermal store, with the possibility of DHW heating. Water to the heating system is mixed in a 3-way mixing valve, the temperature of return water to the boiler is kept by a load valve at a minimum temperature of 55 ° C.
Excess boiler output is stored in the thermal store. Heating output is controlled by an external controller by controlling the motorised mixing valve.
The actuator and controller are not included.

## Technical Data

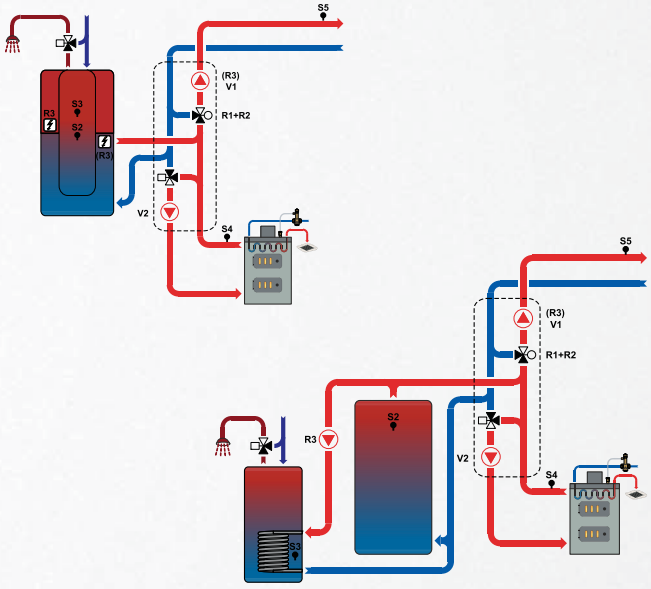
| | |
|---|---|
| CONNECTIONS | 1“ F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| NOMINAL INLET TEMPERATURE TO BOILER | 55 °C |
| POWER SUPPLY | 230 V, 50 Hz |
| PIPE DISTANCE | 125 mm |
| DIMENSIONS | 640 x 250 x 350 mm |
| PUMP | Grundfos UPM3 25-75 |
| PUMP CONTROL | manual or PWM |
| MAX. HEAD | 7.5 m |
| MAX. BOILER OUTPUT | 38 kW |
| **CODE** | **17553** |

## Components

- Heating system pump inc. power cable
- Boiler pump incl. power cable
- TSV3B load valve
- 3-way mixing valve for heating system
- 2 ball valves and 2 drain valves, to shut off and drain a heating system
- 2 ball valves to shut off a boiler
- 4 thermometers



## Connection in a system




**Possible variants on order:**

- connections: 3/4“, 5/4“, Cu22, Cu28.
- return water temperature: 45, 50, 60, 65, 70 °C
- safety valve 1,5-6 bar
- motorised mixing valve actuator, optionally adjustable to either a constant temperature or with weather-compensated control

## RegulusBIO 55 G 1F
## Load Unit for heating systems with solid fuel (biomass) boiler

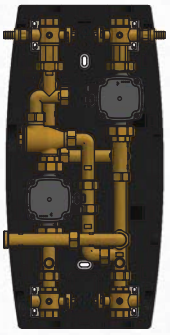
RegulusBIO 55 G 1F load unit is designed for use with solid fuel boilers with no thermal store, with a possibility of DHW heating. Water entering the heating system is mixed to the temperature corresponding to the boiler output. Return water temperature to boiler is kept at the min. temperature of 55°C by the load valve. Heating output is controlled by the boiler controller – e.g. by switching a pellet fired boiler.

## Technical Data

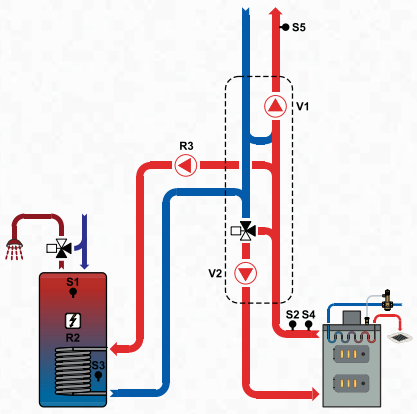
| | |
|---|---|
| CONNECTIONS | 1" F |
| FLUID WORKING TEMPERATURE | 5 - 95 °C |
| NOMINAL INLET TEMPERATURE TO BOILER | 55 °C |
| POWER SUPPLY | 230 V, 50 Hz |
| PIPE DISTANCE | 125 mm |
| DIMENSIONS | 640 x 250 x 350 mm |
| PUMP | Grundfos UPM3 25-75 |
| PUMP CONTROL | manual or PWM |
| MAX. HEAD | 7.5 m |
| MAX. BOILER OUTPUT | 38 kW |
| **CODE** | **17502** |

## Components

- Heating system pump inc. power cable
- Boiler pump incl. power cable
- TSV3B load valve
- 2 ball valves and 2 drain valves, to shut off and drain a heating system
- 2 ball valves to shut off a boiler
- 4 thermometers



## Connection in a system



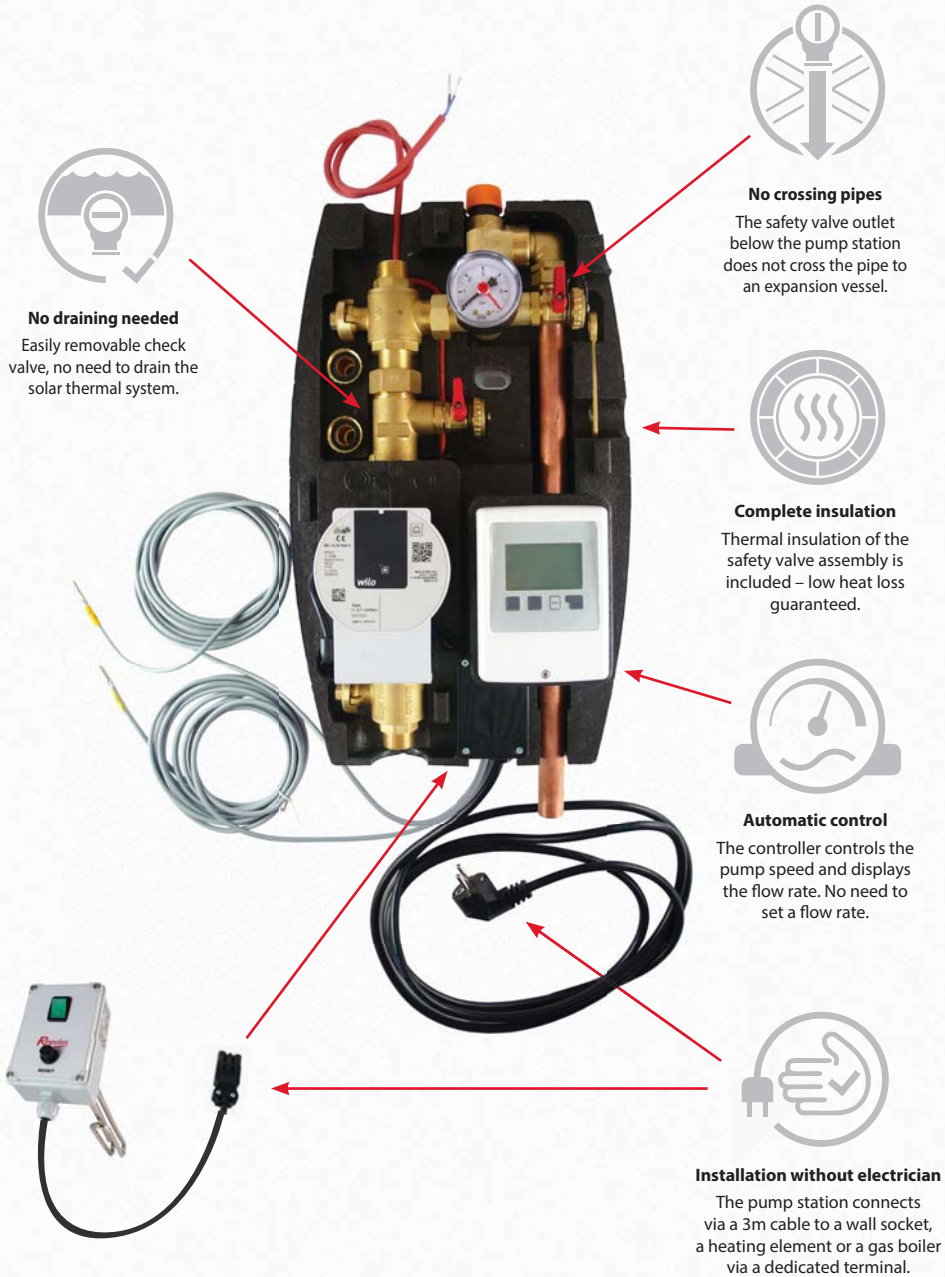

**Possible variants on order:**

- connections: 3/4", 5/4", Cu22, Cu28.
- return water temperature: 45, 50, 60, 65, 70 °C
- safety valve 1,5-6 bar

## RegulusSOL SOLAR PUMP STATIONS

This Solar Pump Station is designed to be installed in the return line of a solar thermal system. It ensures solar fluid circulation, flow measurement and control, solar thermal system protection and monitoring. It is intended for installation on a wall or on a tank. It contains all components necessary for an efficient and safe operation of a solar thermal system, thermal insulation, and is internally wired.

## ADVANTAGES



**No draining needed**

Easily removable check valve, no need to drain the solar thermal system.

**No crossing pipes**

The safety valve outlet below the pump station does not cross the pipe to an expansion vessel.

**Complete insulation**

Thermal insulation of the safety valve assembly is included – low heat loss guaranteed.

**Automatic control**

The controller controls the pump speed and displays the flow rate. No need to set a flow rate.

**Installation without electrician**

The pump station connects via a 3m cable to a wall socket, a heating element or a gas boiler via a dedicated terminal.

## Contents

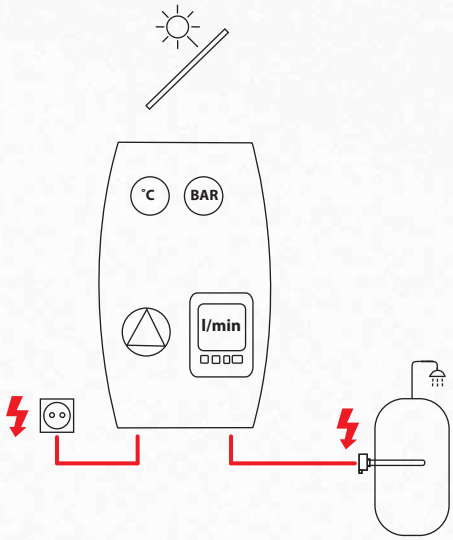
# SOLAR PUMP STATIONS WITH CONTROLLER

## with a socket for an el. heating element

## CSE SOL W SRS1 T-E Pump Station

Pump Station with an integrated solar controller. The pump speed is controlled continuously and the flow rate through the solar thermal system is shown on the display. The pump station includes also a dedicated 230V power socket intended to connect an el. heating element of up to 3kW output. The power socket is switched by the controller depending on the tank temperature and time program.

## Diagram




## Technical Data

| | |
|---|---|
| MAX. WORKING PRESSURE | 6 bar |
| MAX. WORKING TEMPERATURE | 110 °C |
| FLOW RATE MEASUREMENT RANGE | 2-20 l/min |
| POWER SUPPLY | 230 V, 50 Hz |
| HEATING ELEMENT SOCKET | 230 V, max 3 kW |
| DIMENSIONS | 470 x 265 x 120 mm |

## Components

- PARA ST 25 / 7-50 / iPWM2 circulation pump
- 3m power cable with el. plug
- **SRS1 T Controller with tank sensors connected (the assembly involves 1 solar sensor and 2 tank sensors)**
- **230V power socket intended to connect an el. heating element of up to 3kW output, switched by the controller**
- Check valve
- Safety valve
- Fill and drain valves
- Two ball valves
- Pressure gauge
- Thermometer
- Safety valve drain pipe
- Expansion vessel connection point
- Thermoinsulating case

## Types

| Connections | G 3/4“ M | G 1“ M | Cu 18 mm | Cu 22 mm | Cu 28 mm |
|---|---|---|---|---|---|
| **Code** | **16955** | **17318** | **18118** | **16956** | **17319** |

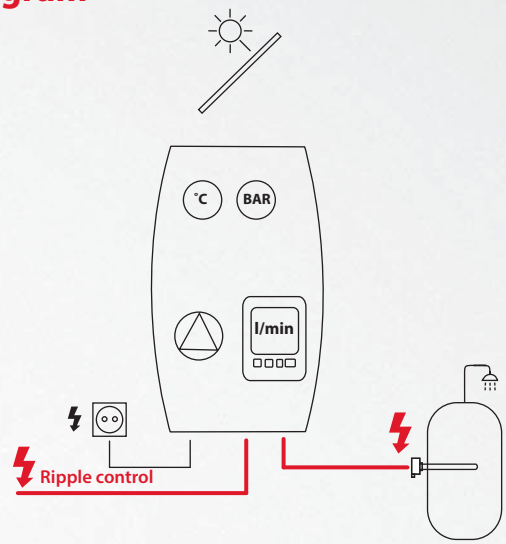
# SOLAR PUMP STATIONS WITH CONTROLLER

## with a socket for a Ripple-controlled el. heating element

## CSE SOL W SRS1 T-E HDO Pump Station

Pump Station with an integrated solar controller. The pump speed is controlled continuously and the flow rate through the solar thermal system is shown on the display. The pump station includes also a dedicated 230V power socket intended to connect an el. heating element of up to 3kW output. The power socket is switched by the controller depending on the tank temperature, time program and low tariff for Ripple control.

## Diagram




## Technical Data

| | |
|---|---|
| MAX. WORKING PRESSURE | 6 bar |
| MAX. WORKING TEMPERATURE | 110 °C |
| FLOW RATE MEASUREMENT RANGE | 2-20 l/min |
| POWER SUPPLY | 230 V, 50 Hz |
| HEATING ELEMENT SOCKET | 230 V, max 3 kW |
| DIMENSIONS | 470 x 265 x 120 mm |

## Components

- PARA ST 25 / 7-50 / iPWM2 circulation pump
- 3m power cable with el. plug for controller and pump
- **Power cable for an el. heating element to connect to Ripple-controlled power supply**
- **SRS1 T Controller with tank sensors connected (the assembly involves 1 solar sensor and 2 tank sensors)**
- **230V power socket intended to connect an el. heating element of up to 3kW output, switched by Ripple control and the controller**
- Check valve
- Safety valve
- Fill and drain valves
- Two ball valves
- Pressure gauge
- Thermometer
- Safety valve drain pipe
- Expansion vessel connection point
- Thermoinsulating case

## Types

| Connections | G 3/4" M | G 1" M | Cu 22 mm | Cu 28 mm |
|---|---|---|---|---|
| **Code** | **17350** | **17349** | **17351** | **17352** |

# RegulusSOL SOLAR PUMP STATIONS WITH CONTROLLER

## with a socket for switching an auxiliary heat source

## CSE SOL W SRS1 T-K Pump Station

Pump Station with an integrated solar controller. The pump speed is controlled continuously and the flow rate through the solar thermal system is shown on the display. The pump station includes also a dedicated socket intended to switch an auxiliary heat source via a potential-free contact. The heat source is switched by the controller depending on the tank temperature and time program. The cable permitting to connect the heat source is included in supply.

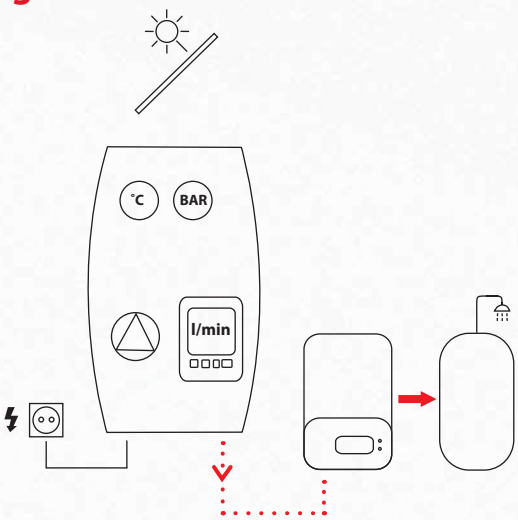
## Technical Data

| | |
|---|---|
| MAX. WORKING PRESSURE | 6 bar |
| MAX. WORKING TEMPERATURE | 110 °C |
| FLOW RATE MEASUREMENT RANGE | 2-20 l/min |
| POWER SUPPLY | 230 V, 50 Hz |
| HEAT SOURCE SWITCHING | potential-free contact |
| MAX. SWITCHED CURRENT | 13 A |
| DIMENSIONS | 470 x 265 x 120 mm |

## Components

- PARA ST 25 / 7-50 / iPWM2 circulation pump
- Power cable for pump and controller
- **SRS1 T Controller with tank sensors connected (the assembly involves 1 solar sensor and 2 tank sensors)**
- **Socket for switching an auxiliary heat source (boiler)**
- **Cable with connector to control heat source**
- Check valve
- Safety valve
- Fill and drain valves
- Two ball valves
- Pressure gauge
- Thermometer
- Safety valve drain pipe
- Expansion vessel connection point
- Thermoinsulating case

## Diagram




## Types

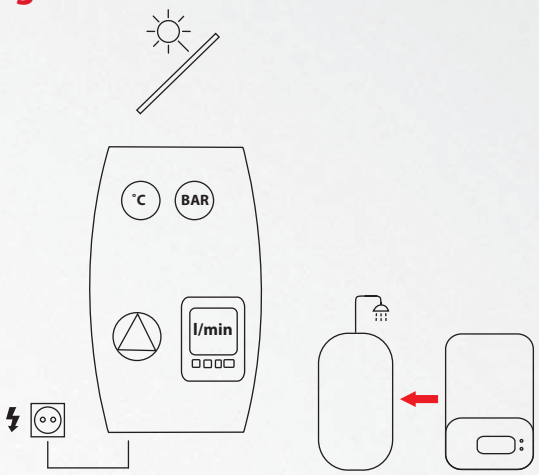
| Connections | G 3/4“ M | G 1“ M | Cu 18 mm | Cu 22 mm | Cu 28 mm |
|---|---|---|---|---|---|
| **Code** | **17899** | **17898** | **18119** | **17900** | **17901** |

# RegulusSOL SOLAR PUMP STATIONS WITH CONTROLLER

## CSE SOL W SRS1 T Pump Station

Pump Station with an integrated solar controller. The pump speed is controlled continuously and the flow rate through the solar thermal system is shown on the display.

## Diagram




## Technical Data

| | |
|---|---|
| MAX. WORKING PRESSURE | 6 bar |
| MAX. WORKING TEMPERATURE | 110 °C |
| FLOW RATE MEASUREMENT RANGE | 2-20 l/min |
| POWER SUPPLY | 230 V, 50 Hz |
| HEAT SOURCE SWITCHING | potential-free contact |
| MAX. SWITCHED CURRENT | 13 A |
| DIMENSIONS | 470 x 265 x 120 mm |

## Components

- PARA ST 25 / 7-50 / iPWM2 circulation pump
- Power cable for both pump and controller
- **SRS1 T Controller with tank sensor connected (the assembly involves 1 solar sensor and 1 tank sensor)**
- Check valve
- Safety valve
- Fill and drain valves
- Two ball valves
- Pressure gauge
- Thermometer
- Safety valve drain pipe
- Expansion vessel connection point
- Thermoinsulating case

## Types

| Connections | G 3/4“ M | G 1“ M | Cu 18 mm | Cu 22 mm | Cu 28 mm |
|---|---|---|---|---|---|
| **Code** | **17726** | **17902** | **18117** | **17903** | **17904** |

# RegulusSOL SOLAR PUMP STATIONS WITHOUT CONTROLLER

## for controllers with PWM control

## CSE SOL W P Pump Station

Pump station for externally controlled solar thermal system. The pump is controlled by PWM signal. The flow rate is shown on a mechanical flowmeter.

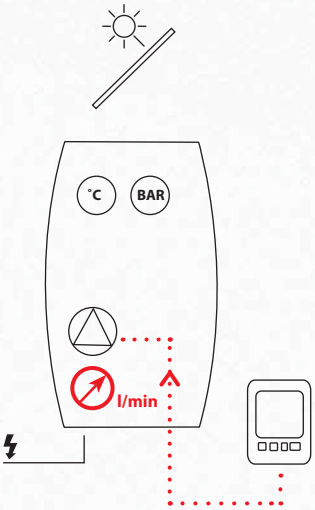
## Technical Data

| | |
|---|---|
| MAX. WORKING PRESSURE | 6 bar |
| MAX. WORKING TEMPERATURE | 110 °C |
| POWER SUPPLY | 230 V, 50 Hz |
| DIMENSIONS | 470 x 265 x 120 mm |

## Components

- PARA ST 25 / 7-50 / iPWM2 circulation pump w. power cable and PWM/iPWM communication cable
- Check valve
- Safety valve
- Fill and drain valves
- Two ball valves
- Pressure gauge
- Thermometer
- **Mechanical flowmeter**
- Safety valve drain pipe
- Expansion vessel connection point
- Thermoinsulating case

## Diagram




## Types

| Connections | G 3/4" M | G 1" M |
|---|---|---|
| Flowrate measurement rate | 2-12 l/min | 8-28 l/min |
| **Code** | **17155** | **17325** |

# G 6/4“ ELECTRIC HEATING ELEMENTS

## w. switch & safety thermostat, for CSE SOL W SRS1 T-E (HDO)

## ETT-N Electric Heating Elements

**Nickel-plated** resistance heating elements with a longer non-heating end, **with thermostatic head** intended for heating of static heating water or antifreeze fluid **in thermal stores with DHW** or for drinking water heating **in hot water storage tanks**. These elements are not intended for stainless steel tanks.

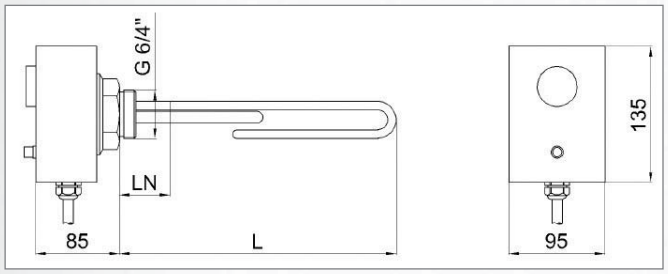
They are designed to be installed in a horizontal position so that the element is completely immersed, the cable gland downwards.

They connect to a dedicated power socket integrated in CSE SOL W SRS1 T-E and CSE SOL W SRS1 T-E HDO solar pump stations. They are fitted with a power switch w. indicator lamp and a safety thermostat.

## Technical Data

| | |
|---|---|
| HEATING ELEMENT | nickel plated copper |
| CONNECTION | G 6/4“ M |
| THREADED HEXAGON G 6/4“ | nickel plated brass |
| HOUSING | PC, flame rating UL94-5V |
| POWER SUPPLY | 230V 50 Hz |
| PROTECTION CLASS BY EN 61140 ed.2 | I |
| **SAFETY THERMOSTAT** | capillary type, fixed setting |
| SWITCH-OFF TEMPER. | 99 +0/-10 °C |
| RESET | manual, after temperature drops below 40 °C |
| **CABLE** | |
| CROSS SECTION AREA | 3× 1.5 mm² |
| LENGTH | 5 m |
| GROMMET | Pg11 |

## Dimensions and models

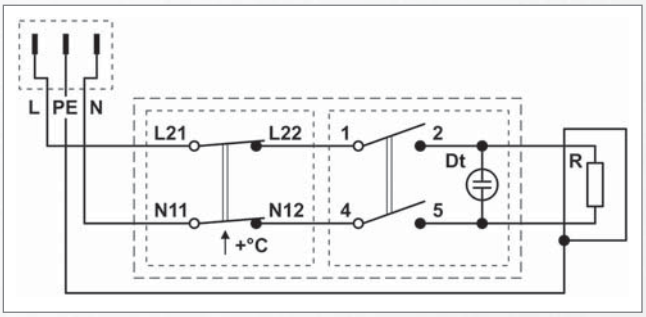



**The elements feature a longer non-heating end (dimension LN) that permits their use for Thermal Stores with DHW.**

| MODEL | | ETT-N 2.0 | ETT-N 3.0 |
|---|---|---|---|
| NOMINAL OUTPUT | kW | 2.0 | 3.0 |
| NOMINAL CURRENT | A | 8.7 | 13.0 |
| ELEMENT LENGTH (L) | mm | 350 | 450 |
| NON-HEATING END LENGTH (LN) | mm | 180 | 180 |
| **CODE** | -- | **16942** | **16943** |

## Wiring

1/N/PE AC 230V



v1.1-01/2020

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