



The Oventrop Quality Management System is certified to DIN-EN-ISO 9001

## Valves and controls for solar installations “Regusol-180”

Technical information

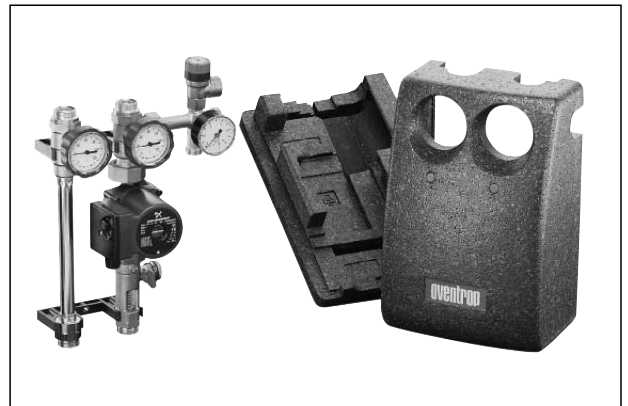
### Application:

The Oventrop programme for solar installations allows the connection of the collector to the storage cylinder within a solar circuit. Oventrop offers both, single components and pre-assembled units with suitable insulations. In installations in which the supply leading from the collector to the storage cylinder (heated collector liquid) and the return leading in opposite direction (cooled collector liquid) are installed in parallel, the “Regusol-180” transmission unit is used. To guarantee an effective deaeration of the heat transfer medium, the supply of the transmission unit “Regusol L-180” is additionally equipped with a deaerator.

Should the pipes be installed apart, the pump circuit “Regusol-180” may be used. The filling and flushing device, being a part of the “Regusol” programme, serves to supply the solar circuit with collector liquid and to drain the system for maintenance work. To avoid any excess pressure within the solar circuit, the transmission unit and the pump circuit are equipped with a safety group to which an expansion tank may be connected. The “Regusol” components are suitable for commercial solar liquids base on glycols.

### Advantages:

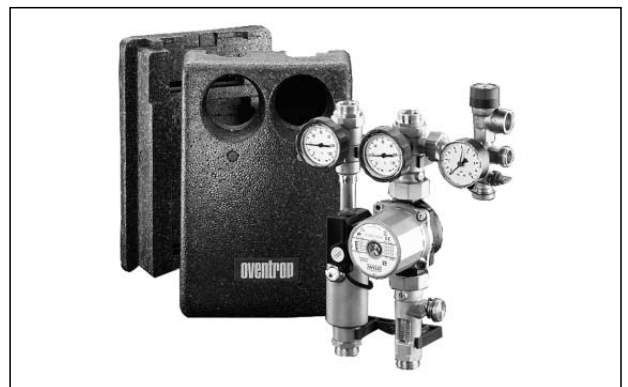
- high functional efficiency
- all components from one supplier
- complete systems available
- material of high quality
- time-saving installation
- short-term max. starting temperature 160°C
- continuous max. working temperature 120°C
- with insulation



Transmission unit “Regusol-180”



Pump circuit “Regusol-180”



Transmission unit “Regusol L-180”



Filling and flushing device “Regusol”

**Tender specification/technical data:****Transmission unit "Regusol-180" with safety group**

for the connection to the solar circuit DN 25 by use of "Regusol" compression fittings (to be ordered separately). Complete, pre-assembled and leak tested unit facilitating the connection of a diaphragm expansion tank to the safety group:

- isolation of supply and return possible
- with adjustable flow measuring device with isolation facility for the regulation of the solar circuit
- with wall mounting device and insulation
- check valves in the supply and return

Distance between supply and return: 100 mm  
 Max. continuous working temperature: 120°C  
 Max. short-term starting temperature: 160°C  
 Max. working excess pressure (safety valve): 6 bar  
 Opening pressure of check valve: 20 mbar

**Pump types:**

Grundfos UPS 25-60

Power consumption phase 1: 45 W  
 phase 2: 65 W  
 phase 3: 90 W

Max. pump head: 6 m  
 Max. pump capacity: 4.5 m<sup>3</sup>

Wilo Star St 25/6

Power consumption phase 1: 34-44 W  
 phase 2: 46-63 W  
 phase 3: 68-82 W

Max. pump head: 6 m  
 Max. pump capacity: 3.5 m<sup>3</sup>

Wilo Star St 25/7

Power consumption phase 1: 44-63 W  
 phase 2: 62-84 W  
 phase 3: 92-110 W

Max. pump head: 7 m  
 Max. pump capacity: 4 m<sup>3</sup>

Control ranges of flow measuring device:  
 1-6 l/min.  
 2-15 l/min.  
 7-30 l/min. (only with Wilo pump St 25/7)

**Other models:**

Transmission unit "Regusol L-180"  
 with deaerator and safety group

Same construction as "Regusol-180" with additional deaerator for the deaeration of the heat transfer medium in the supply riser.

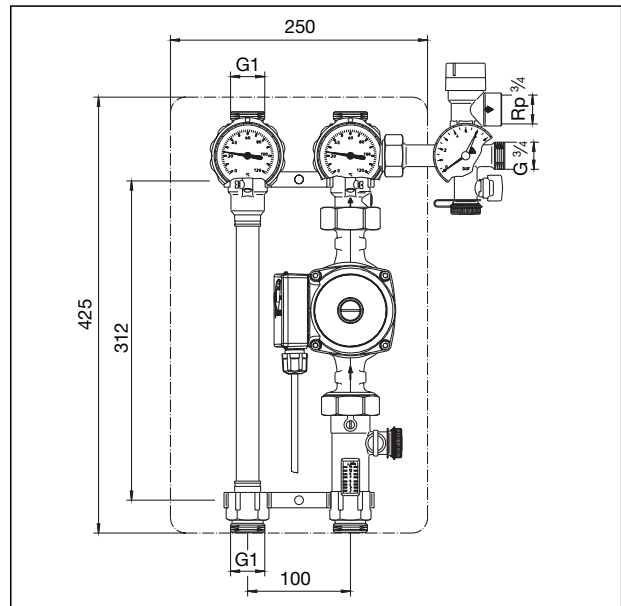
**Pump types:**

Wilo Star St 25/6

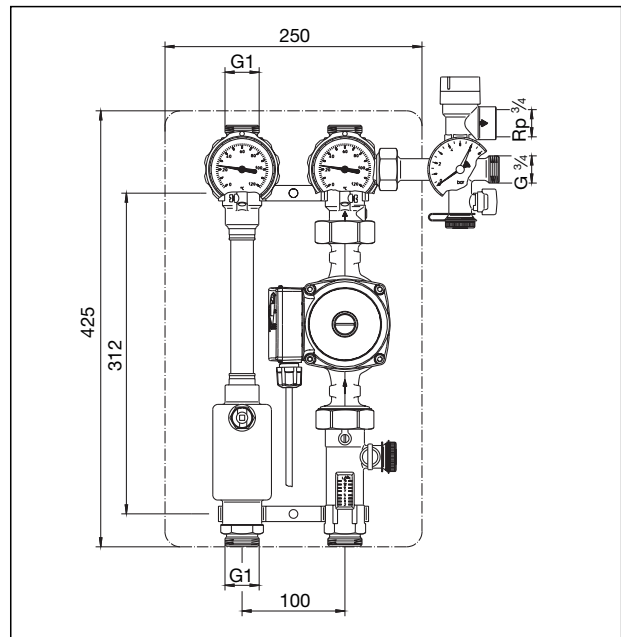
Grundfos UPS 25-60

Wilo Star St 25/7

Control ranges of flow measuring device:  
 1-6 l/min.  
 2-15 l/min.  
 7-30 l/min. (only with Wilo pump St 25/7)

**Dimensions:**

Transmission unit "Regusol-180"



Transmission unit "Regusol L-180"

### Pump circuit "Regusol-180" with safety group

for the connection to the solar circuit DN 25 by use of the "Regusol" compression fittings (to be ordered separately). Complete, pre-assembled and leak tested unit facilitating the connection of a diaphragm expansion tank to the safety group.

- with isolation facility
- with adjustable flow measuring device with isolation facility for the regulation of the solar circuit
- with wall mounting device and insulation
- check valve integrated in the ball valve

Max. continuous working temperature: 120°C  
Max. short-term starting temperature: 160°C  
Max. working excess temperature: 6 bar  
Opening pressure of the check valve: 20 mbar

Pump types:

Grundfos UPS 25-60

Wilo Star St 25/6

Control ranges of flow measuring device:

1-6 l/min.

2-15 /min.

### Function:

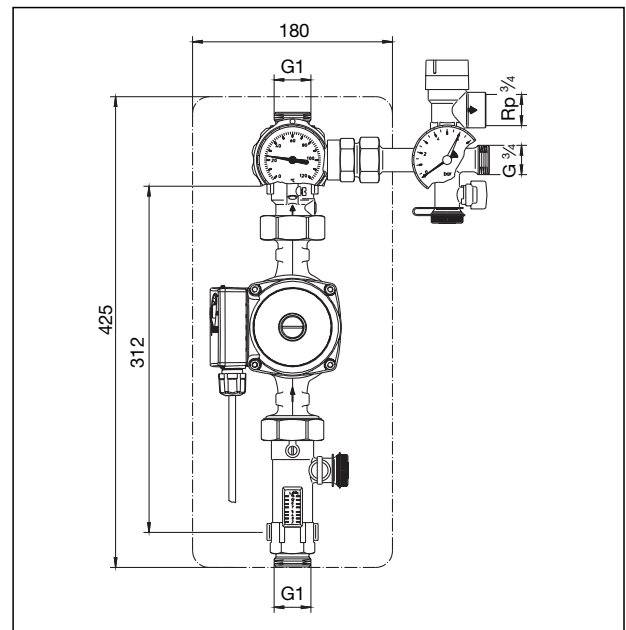
The return of the transmission units "Regusol-180", "Regusol L-180" and of the pump circuit "Regusol-180" is equipped with a ball valve with integrated check valve serving to avoid gravity circulation when the pump is switched off. The safety group is connected to the lateral connection piece of the ball valve and is equipped with a safety valve, a drain ball valve and a connection for a diaphragm expansion tank. The drainage pipe to a collecting basin is connected to the safety valve. The circulation pumps are especially suitable for use in solar circuits and are located in the return between the ball valve and the flow measuring device at which the fine setting of the flow rate can be carried out. In general, the required flow rate depends of the number of collectors or on the installation equipment. The flow measuring device can be shut off completely. The circulation pipe can easily be removed after isolation of the flow measuring device and the pump ball valve.

The difference between the pump circuit "Regusol-180" and the transmission unit "Regusol-180" is the integrated supply pipe with an additional isolating ball valve with check valve. Both ball valves are equipped with thermometers.

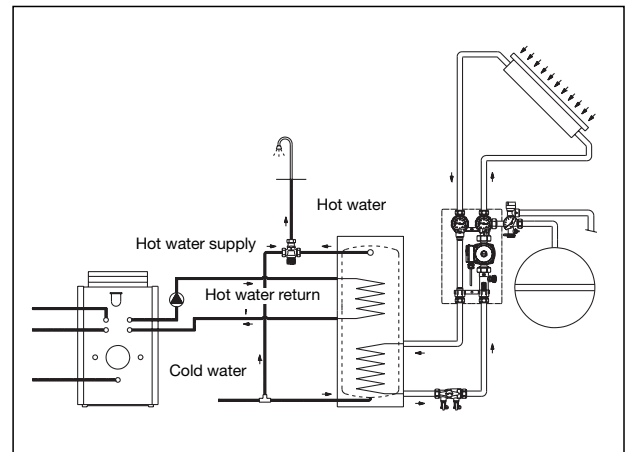
The wall mounting device which is supplied with each unit allows a fast installation. As the insulation made of expanded polypropylene consists of different elements, the unit may be easily insulated even where space is limited. A safe connection of the "Regusol" components to the pipework is carried out with compression fittings.

The installation and operating instructions are to be observed!

### Dimensions:



Pump circuit "Regusol-180"

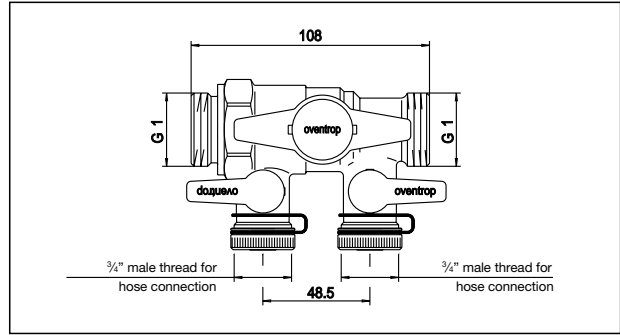


Solar station

**Further components for solar installations:**

**Filling and flushing device “Regusol”**

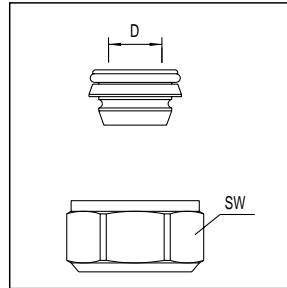
for installation at the lowest point of the solar circuit with isolating ball valves, connection by use of compression fittings.



**Compression fittings “Regusol”**

made of brass for the connection of the “Regusol” components to the solar circuit; suitable for copper and precision steel pipes.

Attention: When installing copper pipes with a wall thickness of  $\leq 1$  mm, it is necessary to use reinforcing sleeves for the additional stabilisation of the pipe. Should the wall thickness exceed 1 mm, please contact the pipe manufacturer.



Size	D	SW*
12 mm	12	37
15 mm	15	37
16 mm	16	37
18 mm	18	37
22 mm	22	37

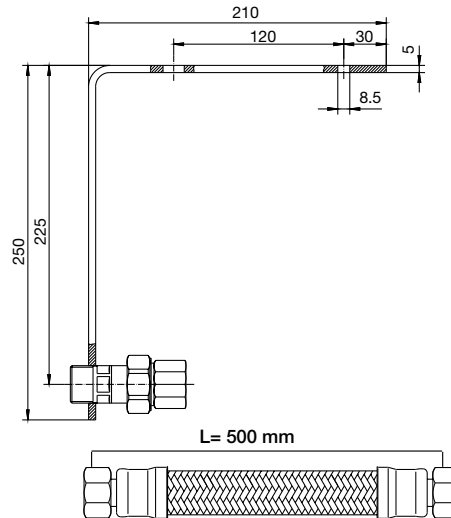
\*SW = spanner size

**Connection set “Regusol” for diaphragm expansion tanks**

for the connection of a diaphragm expansion tank to the solar station “Regusol”.

Consisting of:

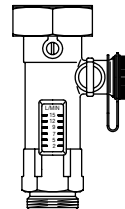
- hose 500 mm
- angled wall bracket 210 x 250
- quick-coupling
- fixing material



**Flow measuring and regulating device, with isolation**

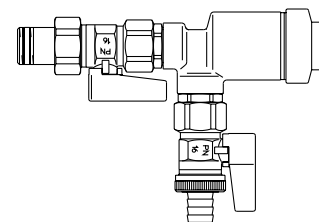
for “Regusol-180”

- 1-6 l/min.
- 2-15 l/min.
- 7-30 l/min.

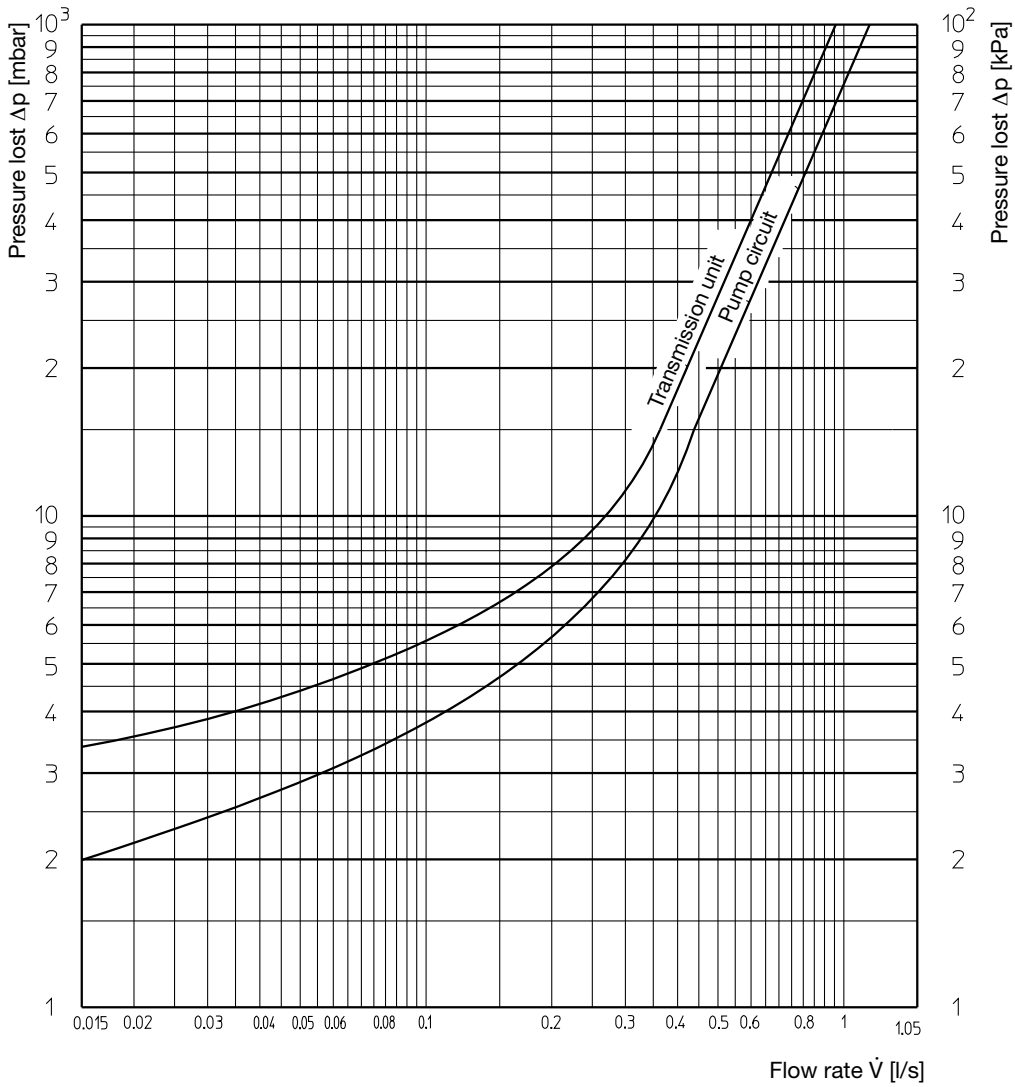


**Filling pump “Regusol”**

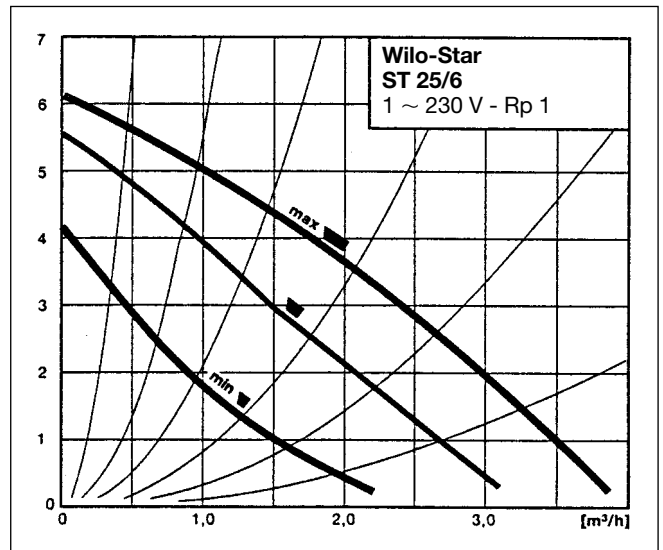
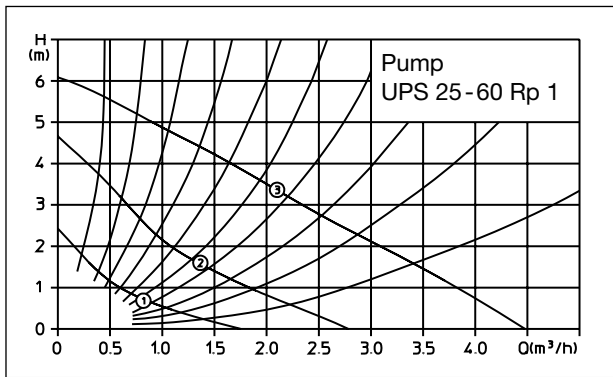
The filling pump “Regusol” serves to fill a solar installation with a heat transfer medium stored in an external tank. It is suitable for both, stationary and mobile use.



**Flow chart:**



**Pump curves:**



Subject to technical modification without notice.

Product range 6  
ti 108-1/10/MW  
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OVENTROP UK LTD.  
Unit I – The Loddon Centre  
Wade Road  
Basingstoke, Hampshire RG24 8FL  
Great Britain  
Telephone (01256) 330441  
Telefax (Sales) (01256) 330525  
Telefax (General) (01256) 470970  
E-Mail sales@oventrop.co.uk

F. W. OVENTROP GmbH & Co. KG  
Paul-Oventrop-Straße 1  
D-59939 Olsberg  
Germany  
Telephone (02962) 82-0  
Telefax (02962) 82-450  
E-Mail mail@oventrop.de  
Internet www.oventrop.de