

Application:

The Oventrop programme for solar energy allows for 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” station is used.

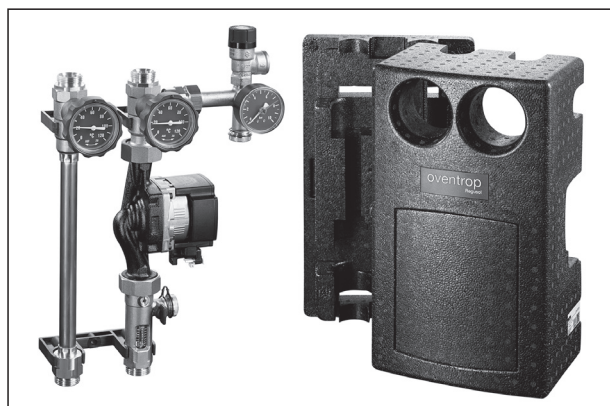
To guarantee an effective deaeration of the heat transfer medium, the supply of the stations “Regusol LH-180” and “Regusol ELH-180-RC” is additionally equipped with a deaerator.

The station “Regusol ELH-180-RC” with electronic controller allows for a microprocessor based control of solar thermal plants and covers a wide range of applications.

Should the supply and return be installed apart, the pump circuit “Regusol PH-180” can 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 stations and the pump circuit are equipped with a safety group with connection facility for an expansion tank. The “Regusol” components are suitable for commercial heat transfer liquids basing on glycol.

Advantages:

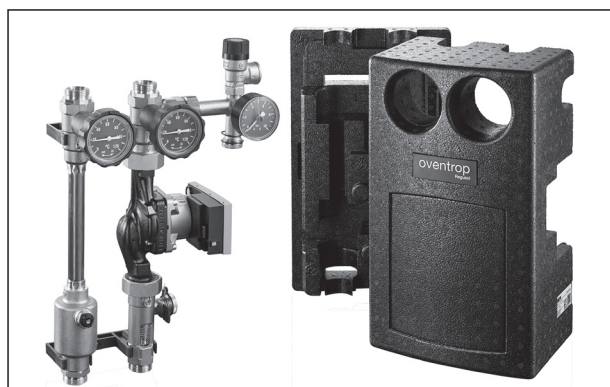
- high functional reliability
- all components from one supplier
- complete product assemblies (systems) available
- high quality materials
- time-saving installation
- max. short-term starting temperature 160 °C
- max. continuous operating temperature 120 °C
- with insulation
- efficient microprocessor based control with easy menu navigation via graphic display for a comprehensible visualisation of the system conditions (“Regusol ELH-180-RC”)
- with high-efficiency pump



“Regusol SH-180” DN 25



“Regusol PH-180” DN 25



“Regusol LH-180” DN 25



“Regusol ELH-180-RC” DN 25 with electronic controller
“Regtronic RC”

Tender specification:

“Regusol SH-180” DN 25 - Station with safety group, without controller

For the connection to the solar circuit by use of “Regusol” compression fittings DN 25 (to be ordered separately). Complete, pre-assembled and leak tested unit with safety group with connection facility for an expansion tank.

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

Technical data:

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

with high-efficiency pump

Grundfos UPM 3 Solar 25-75 PWM C 180
(technical details see below)

Item no.: 1368064

Flow measuring device:
2-15 l/min.

Further models:

“Regusol LH-180” DN 25 - Station with safety group and deaerator, without controller

As “Regusol SH-180”, additionally with deaerator for the deaeration of the heat transfer medium in the supply riser.

with high-efficiency pump

Wilo Yonos PARA ST 25/7 PWM 2

Max. power consumption: 45 W

Max. pump head: 7 m

Max. delivery capacity: 3.3 m³/h

Item no.: 1360851

with 10 bar safety valve

Item no.: 1360854

Grundfos UPM 3 Solar 25-75 PWM C 180

Max. power consumption: 45 W

Max. pump head: 7.5 m

Max. delivery capacity: 4 m³/h

Item no.: 1360853

Wilo Yonos PARA ST 25/7.5 PWM 2

Max. power consumption: 76 W

Max. pump head: 7.5 m

Max. delivery capacity: 4 m³/h

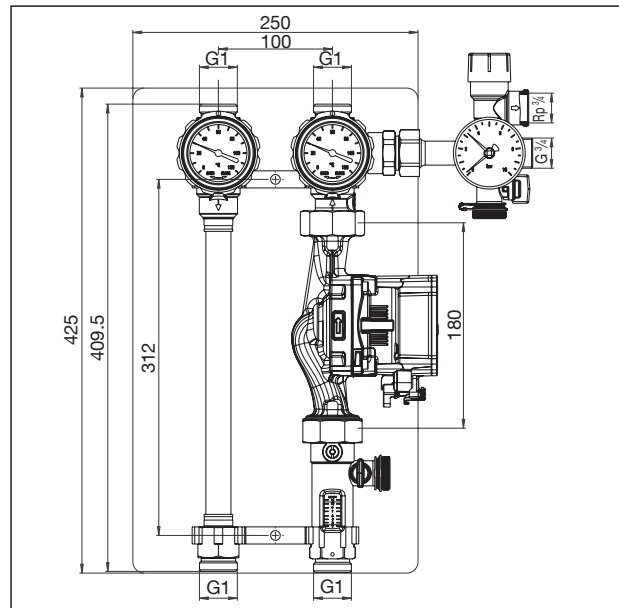
Item no.: 1360852

Flow measuring device:

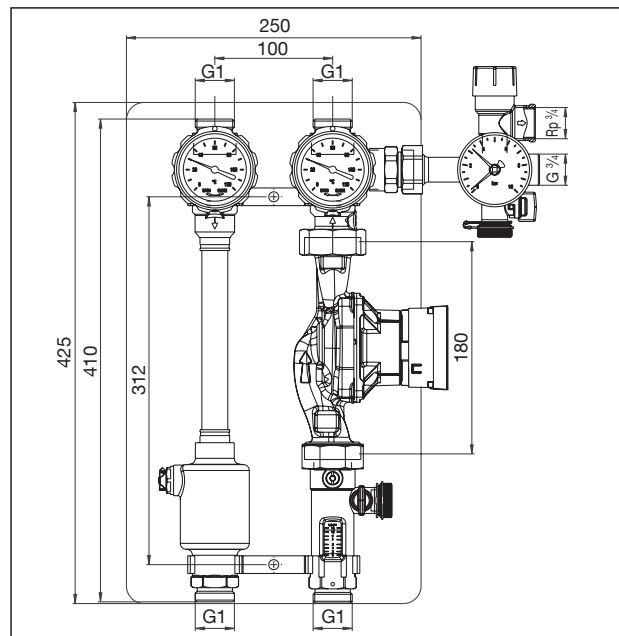
2-15 l/min.

7-30 l/min. (only with Wilo pump Yonos PARA ST 25/7.5)

Only use electronic controllers providing pump specific control signals.



Dimensions “Regusol SH-180” DN 25



Dimensions “Regusol LH-180” DN 25

“Regusol ELH-180-RC” DN 25 - Station with safety group, deaerator and electronic controller “Regtronic RC”

As “Regusol LH-180”, additionally with electronic controller “Regtronic RC”.

with high-efficiency pump
Wilo-Yonos PARA ST 25/7 PWM 2
(technical details see page 2)

Item no.: 1360862

with 10 bar safety valve

Item no.: 1360864

Flow measuring device:
2-15 l/min.

“Regusol PH-180” DN 25 - Pump circuit with safety group

For the connection to the solar circuit by use of “Regusol” compression fittings DN 25 (to be ordered separately). Complete, pre-assembled and leak tested unit with safety group with connection facility for an expansion tank.

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

Technical data:

Max. continuous operating temperature: 120°C

Max. short-term starting temperature: 160°C

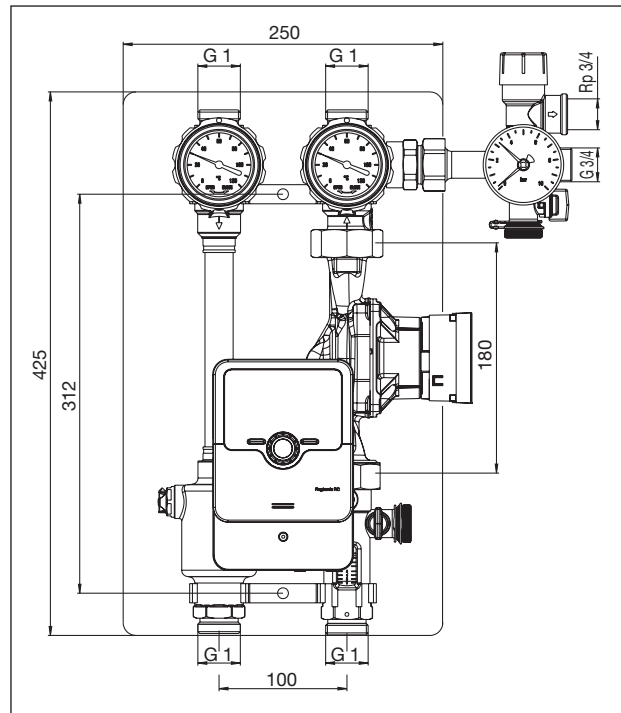
Max. excess operating pressure (safety valve): 6 bar

Opening pressure check valve: 20 mbar

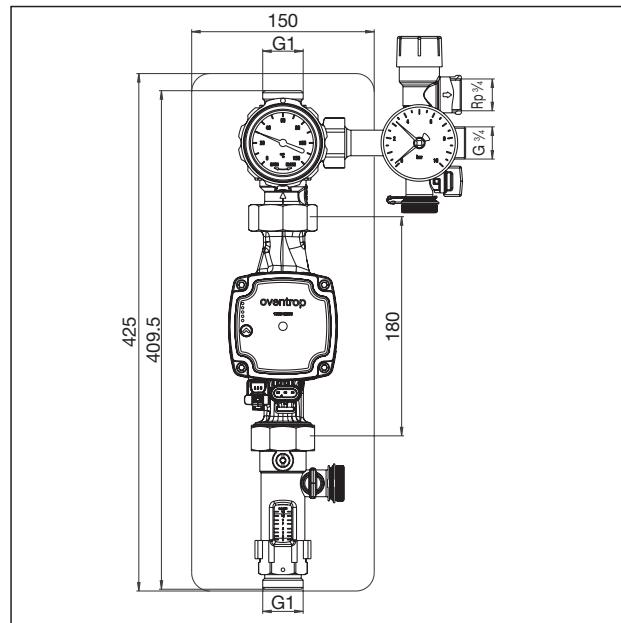
with high-efficiency pump
Grundfos UPM 3 Solar 25-75 PWM C 180
(technical details see page 2)

Item no.: 1368163

Flow measuring device:
2-15 l/min.



Dimensions “Regusol ELH-180-RC” DN 25 with electronic controller “Regtronic RC”



Dimensions “Regusol PH-180” DN 25

Function:

The return pipe of the stations “Regusol SH-180”, “Regusol LH-180”, “Regusol ELH- 180-RC” and of the pump circuit “Regusol PH-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 nipple of the return ball valve and is equipped with a safety valve, a drain ball valve and a connection facility for an expansion tank. The discharge pipe towards a collecting basin is connected to the safety valve. The high-efficiency 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 volume flow is carried out. In general, the required flow rate depends on the number of collectors respectively the plat equipment. The flow measuring device can be shut off completely. The high-efficiency pump can be easily removed after isolation of the flow measuring device and the pump ball valve.

Contrary to the pump circuit “Regusol PH-180”, the stations “Regusol-180” feature an integrated supply pipe with additional isolating ball valve with check valve. Both ball valves are equipped with thermometers.

The electronic controller “Regtronic RC” of the station “Regusol ELH-130-RC” is preloaded with different hydronic basic systems and, amongst others, allows for pump speed control and yield measurement.

The “Regusol” product assemblies are supplied with high-efficiency pumps.

Station “Regusol ELH-180-RC” with electronic controller adapted to the respective pump type.

Stations “Regusol SH-180” and “Regusol LH-180” without electronic controller for the individual selection of a controller providing pump specific control signals.

The wall mounting device which is supplied with each “Regusol-180”, allow for a fast installation of the product assembly. As the insulation made of expanded polypropylene consists of several components, the “Regusol-180” can be easily insulated even where space is limited. As safe connection of the of the “Regusol-180” product assemblies to the pipework is carried out with the help of compression fittings.

The installation and operating instructions must be observed!

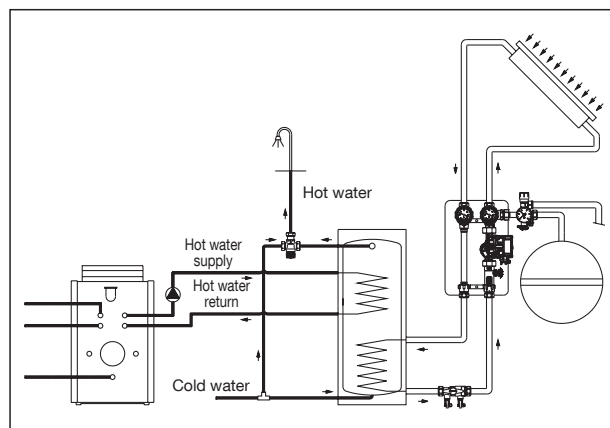
Important information on the combination of controllers and speed controlled high-efficiency pumps:

In addition to the power supply cable (230 V), speed controlled high-efficiency pumps call for a separate cable for the transmission of the control signal. The most common control signals are 0-10 and pulse-width modulated (PWM) signals. The type of signal is specified in the operating instructions of the pump.

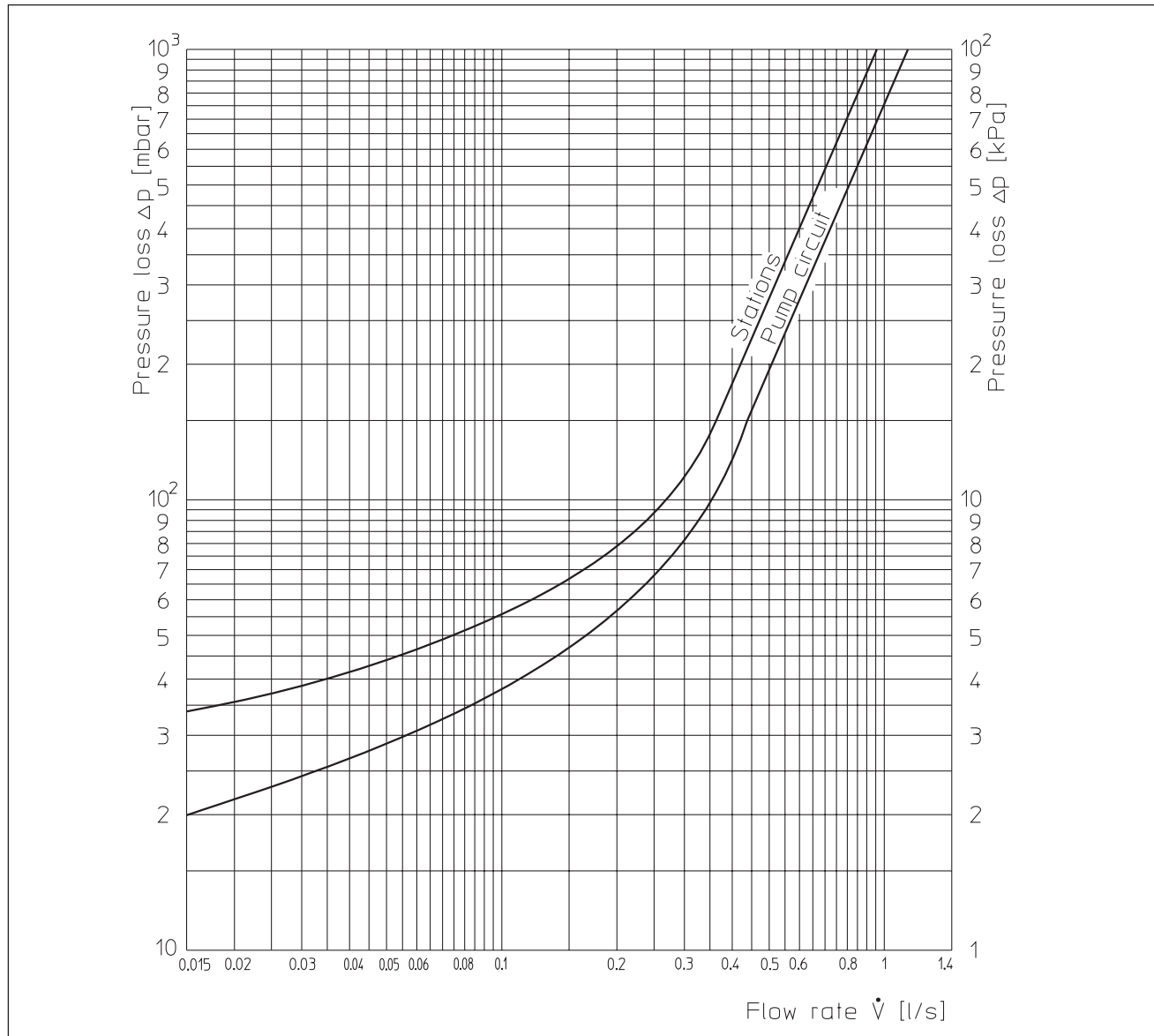
To guarantee a perfect operation, the controller has to provide the corresponding signal. This must also be observed when replacing the pump or the controller.

If the control signals are not coordinated, an operation of the pump is not possible and health risks as well as damage to the components may arise.

Repairs and modifications to the installation must only be carried out by qualified personnel with due consideration of the valid rules and regulations.

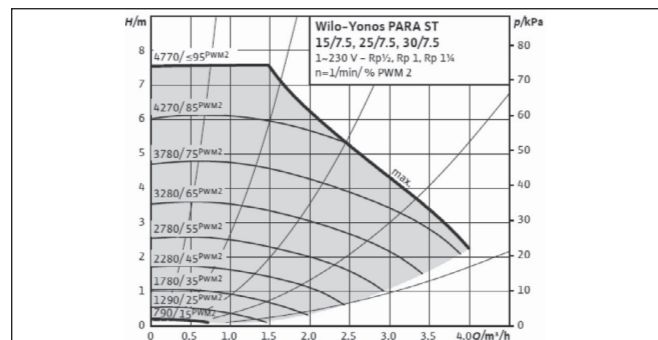
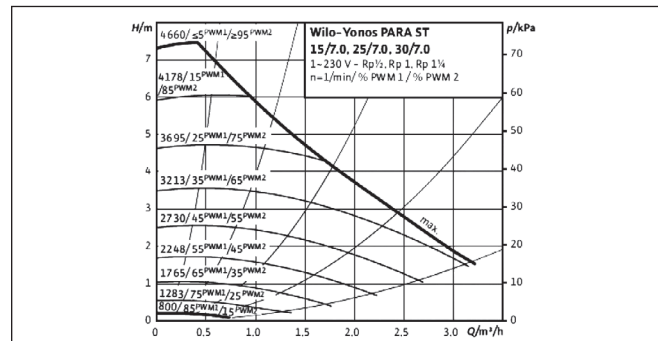
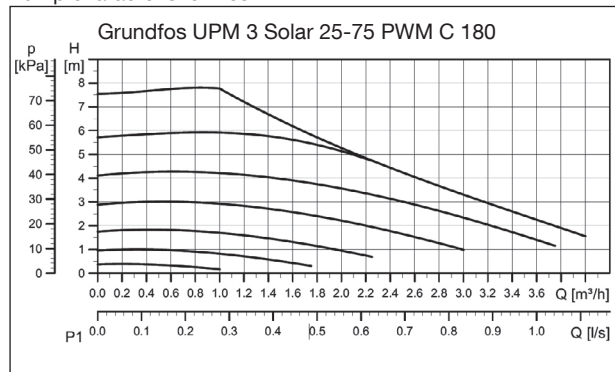


System illustration



Flow chart “Regusol-180” DN 25

Pump characteristic lines



Subject to technical modifications without notice.

Product range 9
ti 108-EN/10/MW
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