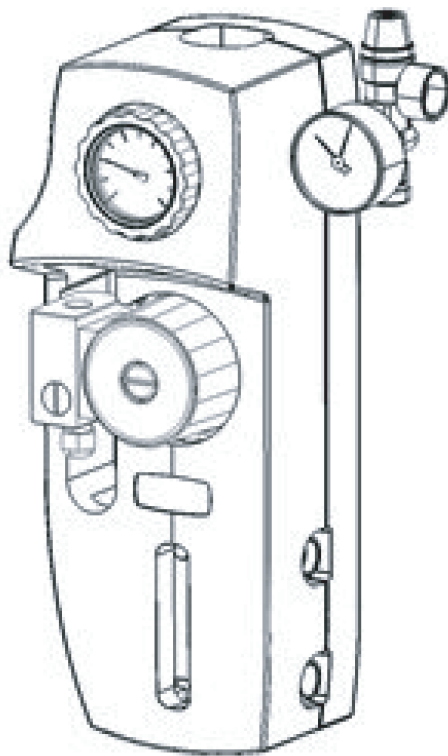


MODVLS

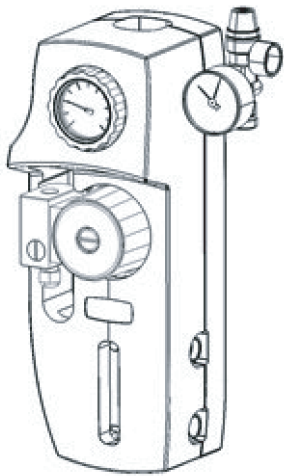
Single-line Solar Pump Station

S1 Solar 1



Regulus[®]

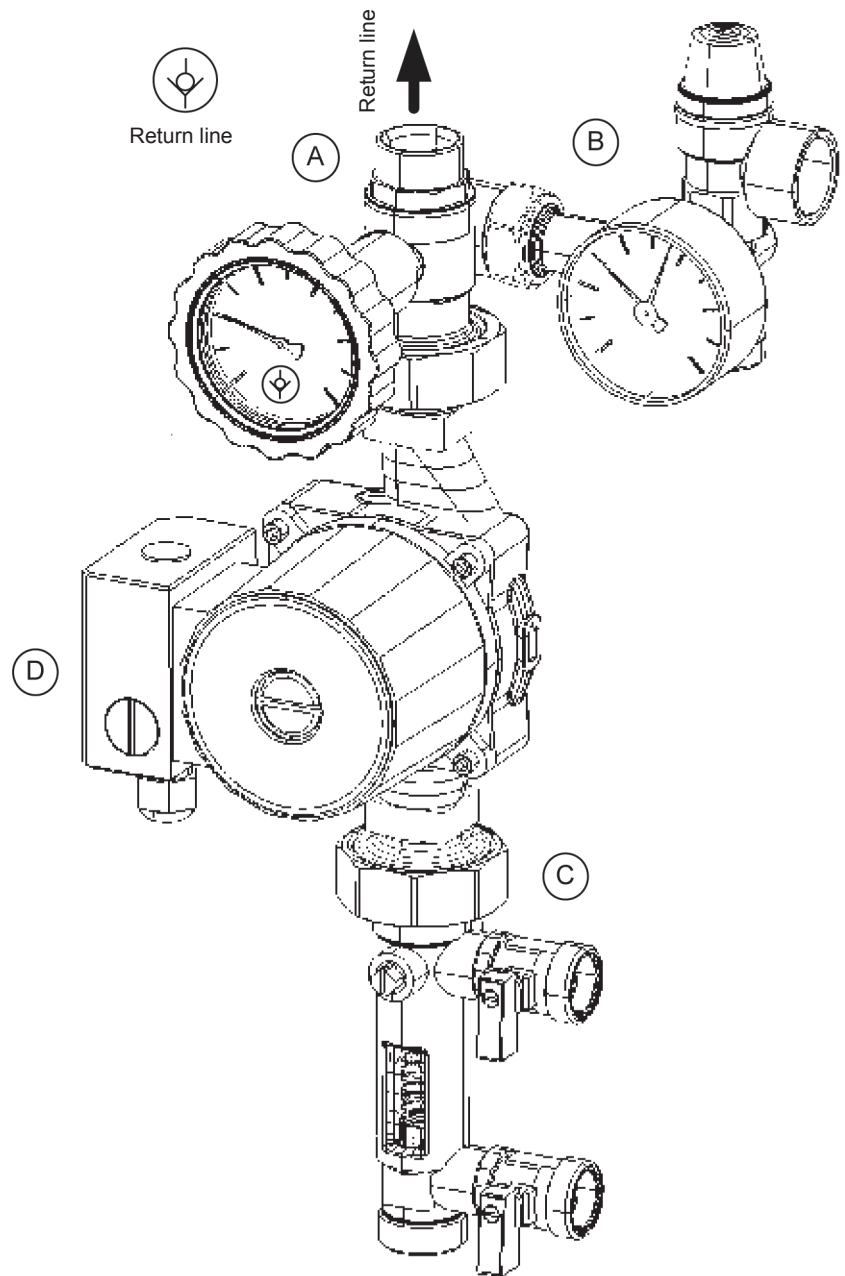
MODVLVS Single-line Solar Pump Station "S1 Solar 1"



EPP insulation box

Dimensions 150x425x150.

Box with a special bracket to fasten the unit and with a groove for the cable. Cover with the opening for the cable press. (The cable press must be positioned downwards, see the picture.) Side opening for the security unit. A special window allows to read and regulate the flow without removing the cover.



(A) Ball valve on the return line (thermometer with a blue ring and scale 0-120°C) with "Solar" check valve.

Solar Check Valve

It is included in the ball valve in the return line. It ensures the seal and low head losses. To exclude the check valve, for instance in case of emptying, rotate the handle by 45° clockwise.

(B) Safety Unit

The security unit, approved according to CE and TÜV, protects the installation from overpressures. It is equipped with a 6bar safety valve. It is also provided with a manometer and with a connection to the expansion vessel with a 3/4" thread.

(C) Flowmeter

The flowmeter allows to regulate the flow rate depending on the capacity of the installation, by a 3-way valve. The flow rate is measured and shown by a special sliding cursor.

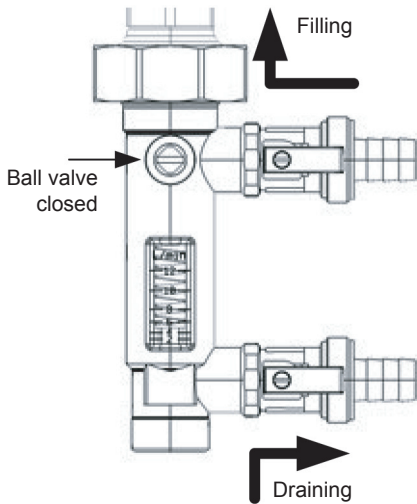
Further it enables the following actions to be taken:
system filling - draining - flushing.

Two flowmeters are available with a different range of measurement: 2-12 l/min and 8-28 l/min.

(D) Circulation pump

Three-speed circulation pump with manual regulation. Thanks to the seal of the ball valves before and after the circulating pump, it can be removed without emptying the installation.

Directions for the use of the flowmeter to fill the installation:

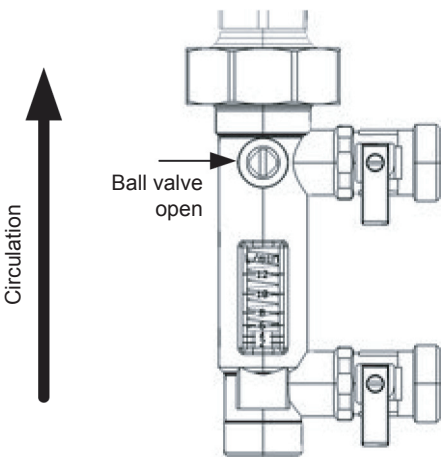


(1) - Filling the installation:

- Attach the filling hose to the filling valve and open it completely.
- Attach the return hose to the drain valve and open it completely.
- Turn the groove on the flowmeter's adjustment screw into a horizontal position. The integrated ball valve will close.
- Pour sufficient solar liquid into the filling station tank (not included in the delivery) and fill the solar system.
- Flush the solar system using the filling station for at least 15 min. In order to remove air from the system completely, open shortly the regulation screw on the flowmeter (groove vertically).

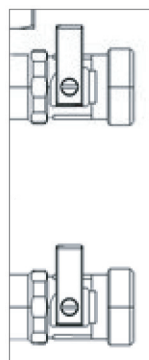
Do not flush the system with water. Since it mostly does not get completely empty, there is a risk of frost damage.

- With the filling pump running, open the drain valve and increase the pressure to approx. 5.5 bar. This value can be read on the manometer.
- Close the filling valve and turn off the filling pump, open the regulation screw on the flowmeter (groove vertically).
- Air bleed the system above collectors until bubble-free solar liquid starts flowing out. Then increase the pressure to approx. 5 bar again and check the system for leaks.
- Adjust the working pressure as given by the collector manufacturer.
- Turn on the circulation pump at its highest speed (see its Instruction Manual) and let circulate for at least 15 min.
- Then air bleed the system and set the pump to the desired speed.



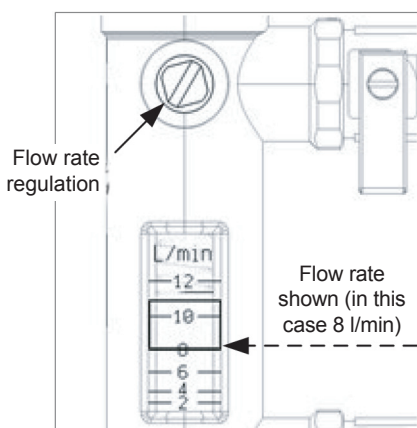
(2) - Commissioning:

- Set a suitable flow rate by the flowmeter according to the data supplied by the collector manufacturer (1-2 l/min. for each flat solar collector).
- Remove the filling station hoses and screw caps on both the filling and drain valves.
- Test the system for leaks once again.



Blocking the filling/drain levers:

Unscrew the fixing screw, take out the lever and place it back turning it by 180°.

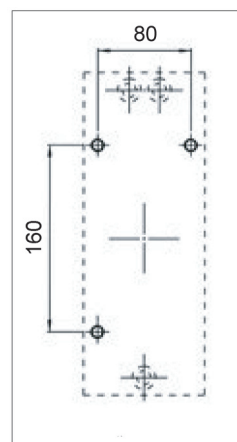
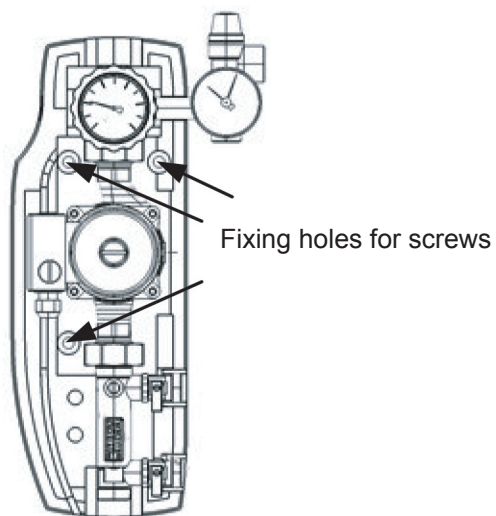


(3) - Regulate the flow rate using the regulation element on the ball valve until the right flow rate is shown.

N.B.

The flow rate is shown taking as reference the lower edge of the sliding cursor. (see pic.)

Instructions for wall mounting:



Drilling template

Using the template, drill 3 holes into the wall where the bracket should be placed.
Use $\varnothing 10$ wall plugs. Place the rear part of the insulation and fasten with screws $\varnothing 5 \times 50$.