

8008 – CIRCULATION UNIT FOR SOLAR THERMAL SYSTEMS, FLOW AND RETURN.



FUNCTION:

Circulation units for solar thermal systems are used in the primary circuit of solar heating systems to control the temperature of the hot water storage. The unit contains functional and safety devices for an optimized circuit control. It is a compact and integral solution and properly isolated that allows recovering the thermal energy from the sun.

TECHNICAL SPECIFICATIONS:

Medium: water – glycol solution (max. glycol 50%)

Max. working temperature (except parts with lower specifications): 180°C

Max. working pressure: 10 bar

Temp. range of safety valve: -30 — 160°C

Setting pressure of safety valve: 6 bar

Min. opening pressure for check valve: Δp : 2 kPa

Flow meter adjustment range: 1 — 13 l/min

Max. temperature of flow meter: 120°C

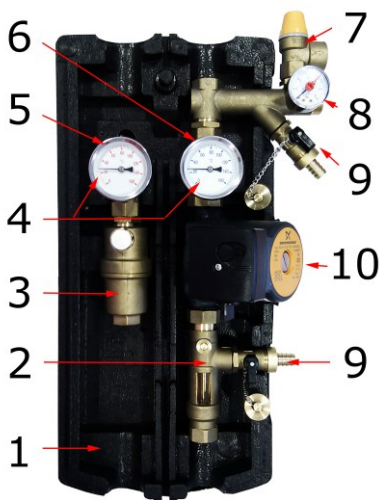
Pressure range of pressure gauge: 0 - 6 bar

Temperature range of flow and return temperature gauges: 0 — 160°C

In-Out connections size: 3/4" F

Connection size of fill/drain valve: 3/4" M with hose connection

Hose for connecting expansion vessel: 3/4" M



CONSTRUCTION DETAILS:

Check valves are built into the ball valves of the temperature gauge connectors. To allow the fluid flowing in both directions, it is necessary to open the handle of the ball valve (45°). The movement of the ball will open the check valve. In normal system operation, the ball valves must be fully open.

The flow meter has a built-in adjustable flow limiter.

The circulation unit with flow and return connection is equipped with a manual air vent device located on the flow line. The air of the circulation unit is collected at the top of the air vent.

PRODUCT RANGE:

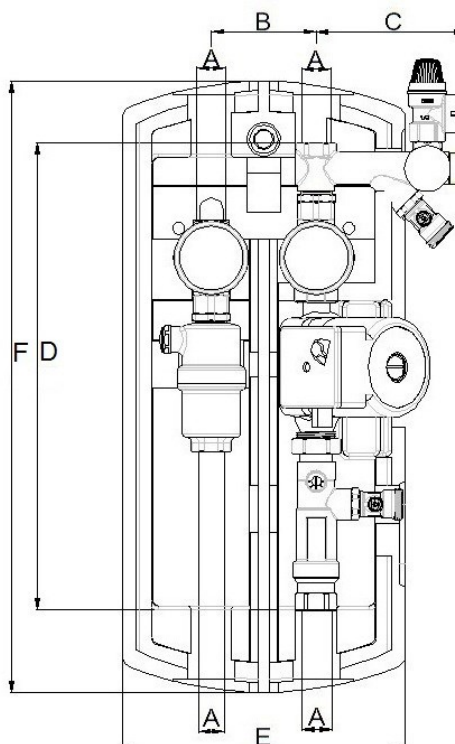
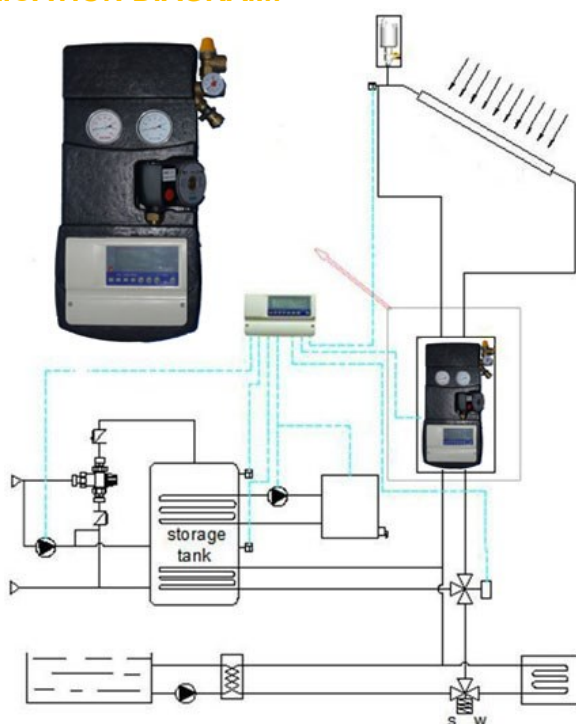
Circulation unit without controller

Code	8008-1/G	8008-1/W	8008-1/GP	8008-1/O
Circulation pump	Grundfos Solar 15-60	Wilo ST 15/6 ECO	Greenpro	Without pump

Circulation unit with controller

Code	8008-2/G	8008-2/W	8008-2/GP	8008-2/O
Circulation pump	Grundfos Solar 15-60	Wilo ST 15/6 ECO	Greenpro	Without pump

APPLICATION DIAGRAM:

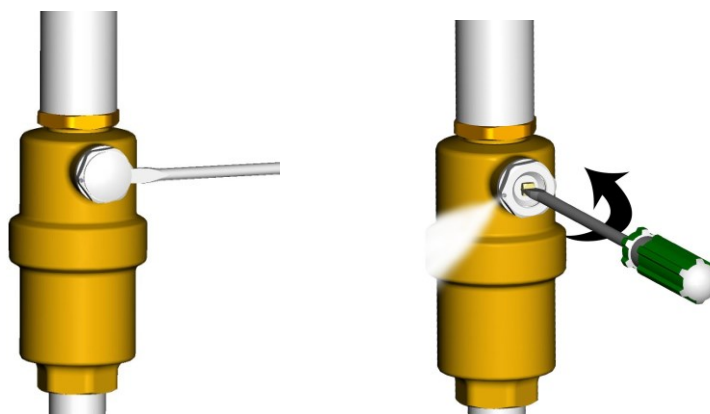


Code	A	B	C	D	E	F	Weight (kg)
8008	3/4"	90°	129°	400°	240°	518°	6.500

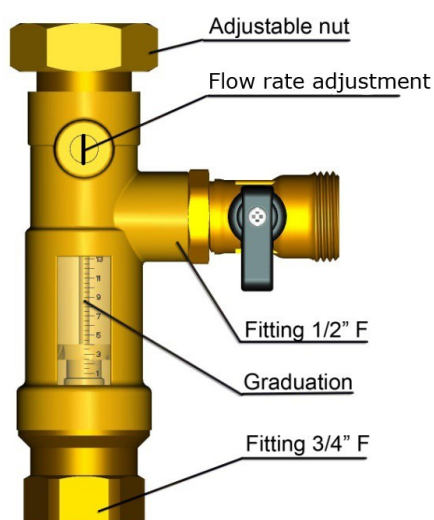
(*mm)

AIR SEPARATOR:

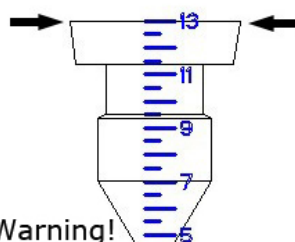
The solar circulation unit, version with flow and return connection, is equipped with an air vent (air separator) on the flow line. The gases, separated from the thermal carrier fluid, are collected at the top of the air vent (air separator). The collected gases must be evacuated from time to time (every day after putting into operation and later, depending on the quantity of air, about once a week or once a month) using the manual air vent with a screwdriver. To maintain optimal efficiency of the solar heating system, later, it is necessary to vent the system every six months by using the manual air vent.



FLOW METER:



Read the flow rate
at the top of the float



Warning!
Use a screwdriver with
appropriate shape to
adjust the flow.



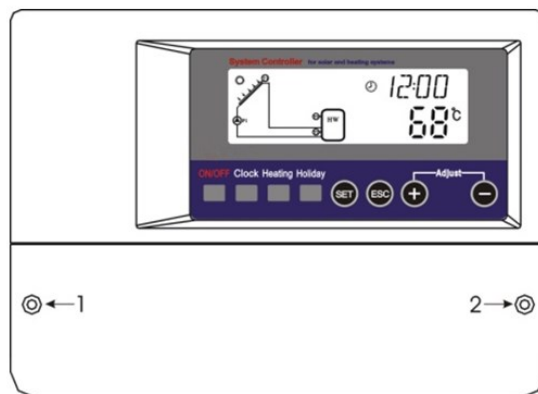
Open



Closed

CONNECTION TO THE PUMP AND CONTROLLER:

1. Loosen the screws ① ②, move cover upwards and take the cover away.



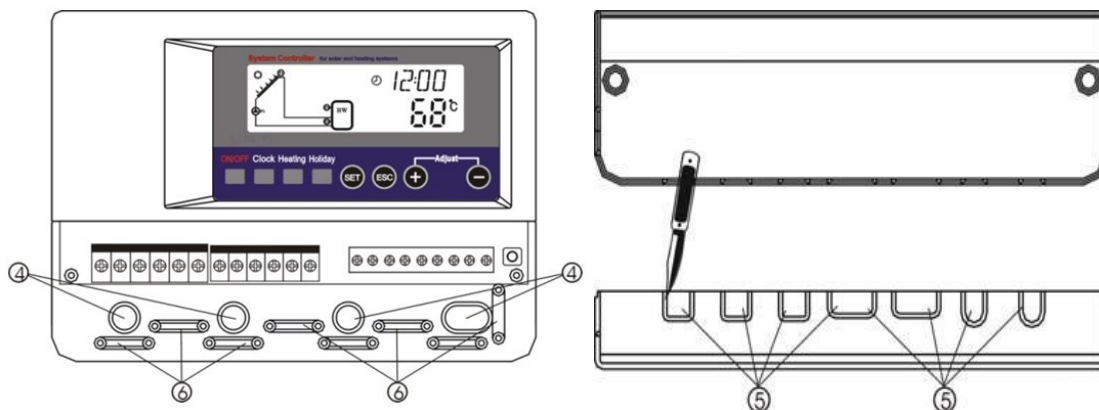
2. Depending on the type of installation, the cables may enter the device through the rear hole of the case ④ or the lower side hole of the case ⑤

Cables come from the rear ④:

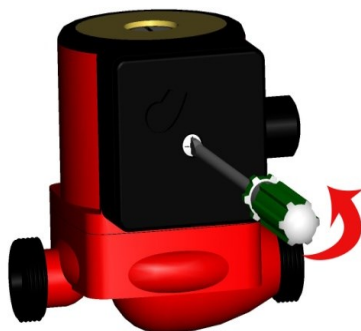
· Remove the plastic flaps from the rear side of the case using an appropriate tool.

Cables come from the below ⑤:

· Cut the left and right plastic flaps using an appropriate tool (e.g. knife) and break them out of the case.



- Open the back cover of the pump. After opening the cover, do not touch the speed selector handle on the back cover.



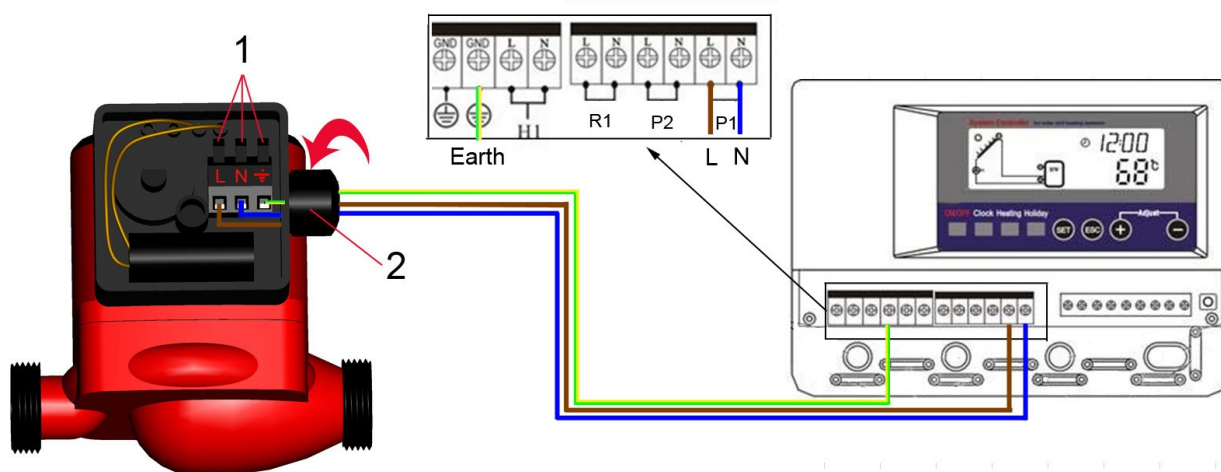
- Loose the screw on the right side of the pump slightly. **Warning: Don't screw it out.** Penetrate the cable through the hole of nut 2 (see fig.1).

Then push down the three connection switches (described as 1 in the fig.1) separately until you see the small hole.

Put the corresponding cables (cables are distinguished by color) into these holes. After the connection, release the connection switches.

Then tighten nut 2. Close the back cover of the pump.

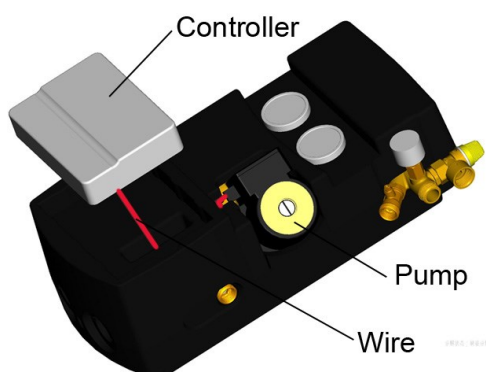
About the connection with the controller, the connecting lines should be connected with P1 and GND. The connection of cables of the controller should be the same as the connection of pump: that is L-L and N-N.



(Fig.1)

5. The way of wiring

The wire can be connected through inside of the EPP insulation box to the controller. If using this way, the wire must be suitable to be used for a long time at more than 120°C



Instead, the wire can be connected through outside of the EPP insulation box to the controller.

