Solar Kit 3 - Solar Boiler connection kit with motorized servo control

Installation instructions



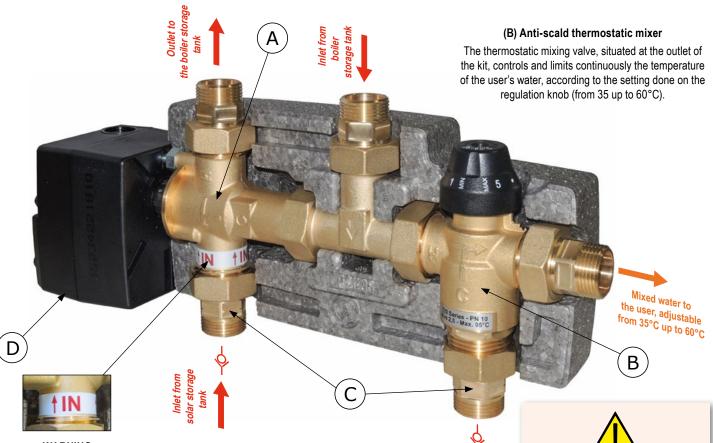
SAFETY: Please read carefully the mounting and the setting working instructions before starting the unit, in order to avoid accidents and failures caused by an incorrect use of the product. Please keep this manual for future consultations.



List and features of main components

(A) Motorized diverting valve with adjustable temperature

The function is to divert the hot water, coming from the storage tank, to the boiler tank when the temperature is lower than the temperature set on the servomotor. On the contrary, if the temperature is higher, the hot water is sent directly to the thermostatic mixer. Thanks to this device the working time of the boiler is reduced to the minimum, so avoiding intermittent startings.



WARNING Flow direction

The direction of the incoming flow is indicated by the adhesive "IN" with an arrow next to it. The arrows on the brass body of the mixer for this application are not to be taken into consideration.

(C) Pipe union with check valve and filter

The check valve built into the pipe fitting, specially made for solar use, prevents unwelcome circulations and refluxes in case of pressure imbalances. Filters protect the inside works of the diverting valve and of the thermostatic mixing valve against impurities, assuring a long and precise working.

Do not exchange positions with other fittings.

Note: the fittings provided with filter and chech valve are marked by a notch on the hexagonal key profile.





DANGER: SCALD

Setting temperatures of the thermostatic mixing valve higher than 55°C may cause scalds in a very short time, particulary to the childrens. Therefore we recommend to install a security anti-scald device in the crucial outlets.



(D) Servomotor

Servomotor with deviation temperature control, adjustable from 20°C to 80°C. The servomotor operates the diverting valve on the basis of the temperature detected by the storage tank's probe. Factory pre-configurated, it does not require any configuration by the user other than the

selection of the diverting temperature.



Operating configuration of DIP switches.

WARNING!

WARNING! Do not change the settings.



(E) Temperature probe

PT1000 probe connected to the servomotor, to be installed on solar storage tank

Diverting temperature adjustment knob

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Technical features

Maximum static pressure: Maximum inlet temperature:

constant 100 °C; short time: 120 °C for 20 s $35 \div 60$ °C $/ \pm 1$ °C $20 \div 80$ °C

Setting range of diverting temperature:

Connections: 3/4" Male (swivel union)
Centre distance: 163 mm. Boiler: 95 mm.

Temperature setting range / Precision:

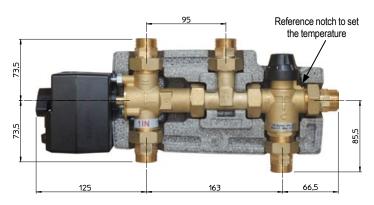
"T" central connection with adjustable angular position of connections; in some positions it'll be necessary to remove the insulation box.

Available models

✓ Medium use up to 66 l/min (3 bar):

Kvs 2,3

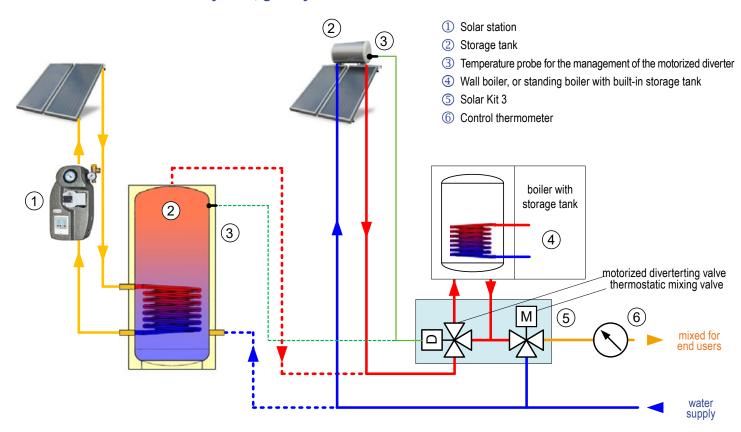
3 bar



EPP insulation box Measurements: 255 x 125 x 100 mm.

Once the installation finished place the protection cover (we suggest a minimum distance of 100 mm from the pipes axis to the wall to make easy the insertion) and check again the fittingness of the connections together with the indications written on the cover.

Scheme of a thermal solar system, gravity or forced circulation





Temperature setting

The temperature setting is done by rotating the knob to put the requested temperature value on the reference notch.

Temperatures at the reference notches:

MIN	1	2	3	4	5	MAX
~32°C	40°C	47°C	51°C	54°C	57°C	~60°C

The above indicated values are related to the following operational conditions: $T_H = 65 \text{ °C}$ $T_C = 15 \text{ °C}$ P = 1 bar



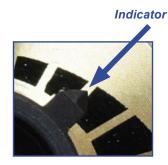
ANTI-SCALD SAFETY

The anti-scald function automatically cuts the hot water flow in case of failure of the cold water circuit. This security is operating at a temperature difference of 10 K between the hot water inlet temperature and the mixed outlet temperature.

Check this operation when the installation is running by closing the cold water isolating valve: the outlet flow of the mixed water must come down to zero very quickly.

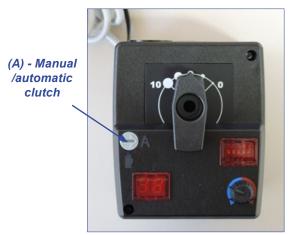
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Servomotor replacement/recovery scheme





1. - Position the mixing rod at 45° (half stroke) with the servomotor's adapter inserted. The indicator will thus be at 45°.



2. - Set the servomotor in manual operation with the appropriate clutch (Ref. A) and re-orient the knob half stroke (vertical). Then re-set the servomotor to automatic operation.





screw.

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