



ECO COMPACT SOLAR SYSTEM

Assembly and start-up manual

Please contact Pleion S.r.l. for any information not contained in this manual

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SAFETY WARNINGS

	Regulation-compliant, non-personal fall protection or safety netting or other catch equipment, in accordance with DIN 18338 Roof Covering and Roof Sealing Work and DIN 18451 Scaffolding Work with Safety Net, must be installed before starting work.		Safety harnesses must be secured above the user if possible. Only secure safety harnesses to building elements or connection points with sufficient load-bearing capacity.
	If no personal fall protection or fall arrest system or equipment has been installed for technical reasons, safety harnesses must be worn.		Do not use damaged ladders e.g. splintered stringers and rungs on wooden ladders, bent or kinked metal ladders. Do not patch up splintered or broken stringers, steps and rungs of wooden ladders.
	Only use safety harness equipment (harnesses or belts, ropes and straps, fall arresters, rope shorteners) that have been approved by authorized testing authorities.		Make sure that lean-to ladders are propped securely. Apply the correct leaning angle (68 ° - 75 °). Secure lean-to ladders against slipping, falling over and sinking into the ground e.g. by using wider feet, adjusting the ladder feet to the ground surface, securing/hook fixtures.
	If no personal fall protection or fall arrest system is used there is a risk of falling from a great height which can lead to serious or fatal injury if no safety harness or equipment is used.		Only lean ladders against secure supporting surfaces. Cordon off ladders in traffic areas.
	When using lean-to ladders, there is a risk of dangerous falls if the ladder sinks, slips or falls over.		Contact with live overhead electrical cables and wiring can lead to fatal injury.
	Work in the vicinity of live, electrical cables and wiring, where contact is possible, can only be carried out if safety distances and precautions are observed.		Wear protective goggles when drilling or handling collectors.
			Wear safety shoes when carrying out installation work.
	The manufacturer declines any responsibility for failure to observe safety. Regulations and/or information contained in this manual which may cause serious accidents/damage.		Wear cut-proof safety gloves when carrying out installation work or handling collectors due to sharp edges.
			Wear a safety helmet when carrying out installation work.

COMPOSITION

Solar system **ECO COMPACT** is composed of the following articles:

- n.1 ECO COMPACT tank (available in sizes 200 liters, 300 liters, 500 liters).
- n.1, 2 or 3 solar collectors (X-RAY10, UNIKO, KSFG-25 or CSI model).

The number of collectors depends on the size of the tank, according to the following scheme:

- n.1 collector for 200 liters;
 - n.2 collectors for 300 liters;
 - n.3 collectors for 500 liters.
- n.1 expansion vessel (18 liters for 200 liters, 24 liters for 300 liters, 35 liters for 500 liters).
 - n.1 sensor pocket.
 - n.1 thermostat valve 35 ° / 60 ° C.
 - n.1 fittings for the plumbing connection to solar collectors (depends on the type and the number of collectors).
 - Solar and antifreeze liquid (depends on the type and the number of collectors).

GENERAL INFORMATION

Installation must be carried out only by qualified personnel according to safety norms and regulations and as instructed in this document. Only original components specific for this solar system must be used.

Before installation and start-up, please consult local norms, laws and by-laws.

Suitable restraining belts must be used during collector and tank transport. Do not lift the collector and the tank by the screw thread connections. Avoid hitting the collector and fragile glass tubes which might smash.

ECO COMPACT TANK

Description

Tank with double glazing in accordance with DIN 4753, available in sizes 200-300-500 liters, two fixed exchangers, predisposition for electrical resistance on a sleeve at the center part of tank, rigid polyurethane foam insulation and finish with PVC outer white.

Complete with two-way compact solar station with pump high efficiency, safety unit 6 bar with manometer, solar control unit, 3 PT1000 temperature sensors, all these fully assembled and wired in a frontal cover made of ABS red.

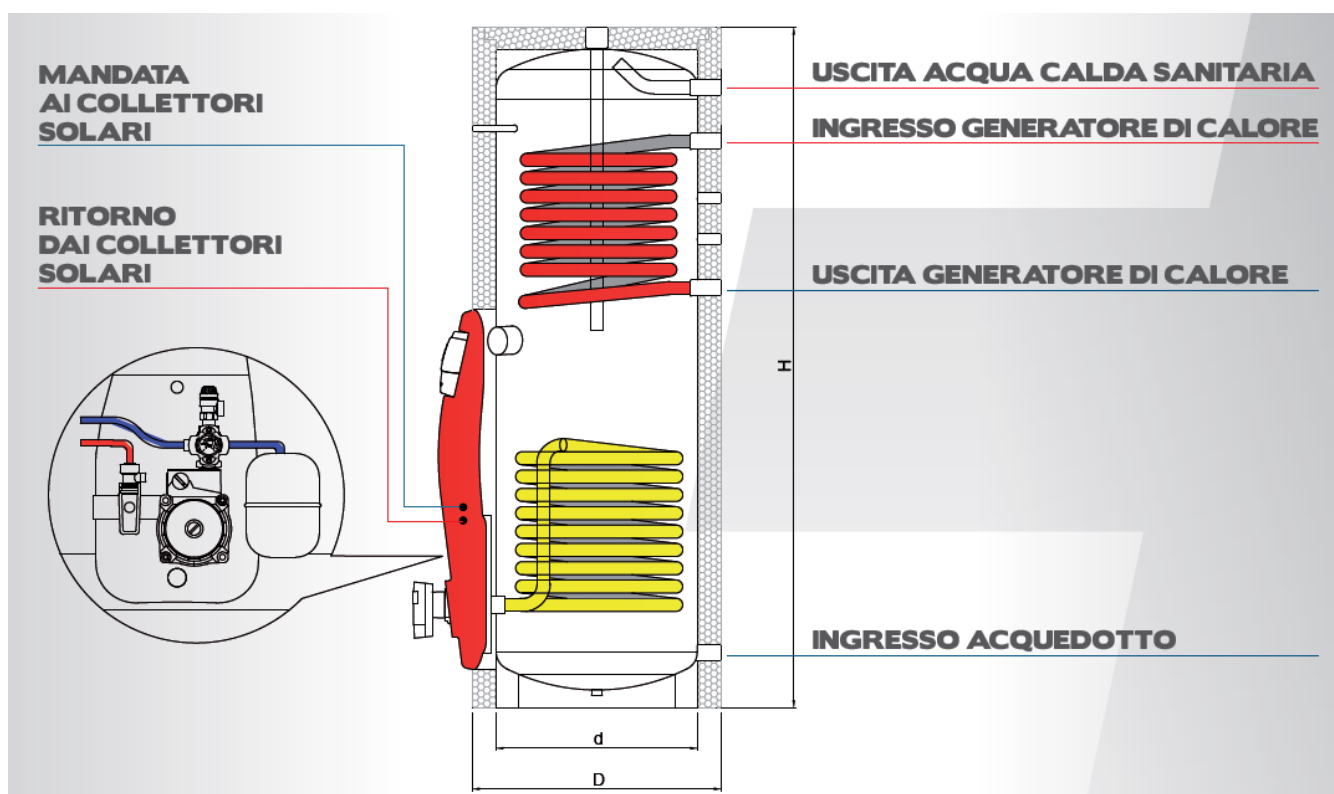


Technical Data

DATI TECNICI	U.M.	ECO COMPACT 200	ECO COMPACT 300	ECO COMPACT 500
Contenuto d'acqua	l	228	290	509
Altezza totale (H)	mm	1350	1670	1740
Diametro con isolamento (D)	mm	610	610	760
Diametro senza isolamento (d)	mm	500	500	650
Spessore isolamento	mm	55	55	55
Superficie scambiatore superiore	m ²	0,8	1,0	1,4
Superficie scambiatore inferiore	m ²	1,0	1,5	2,1
Peso	kg	94	124	190
Potenza scambiatore superiore*	kW	16,8	21,0	29,3
NL	DIN 4708	1,6	2,2	4,0

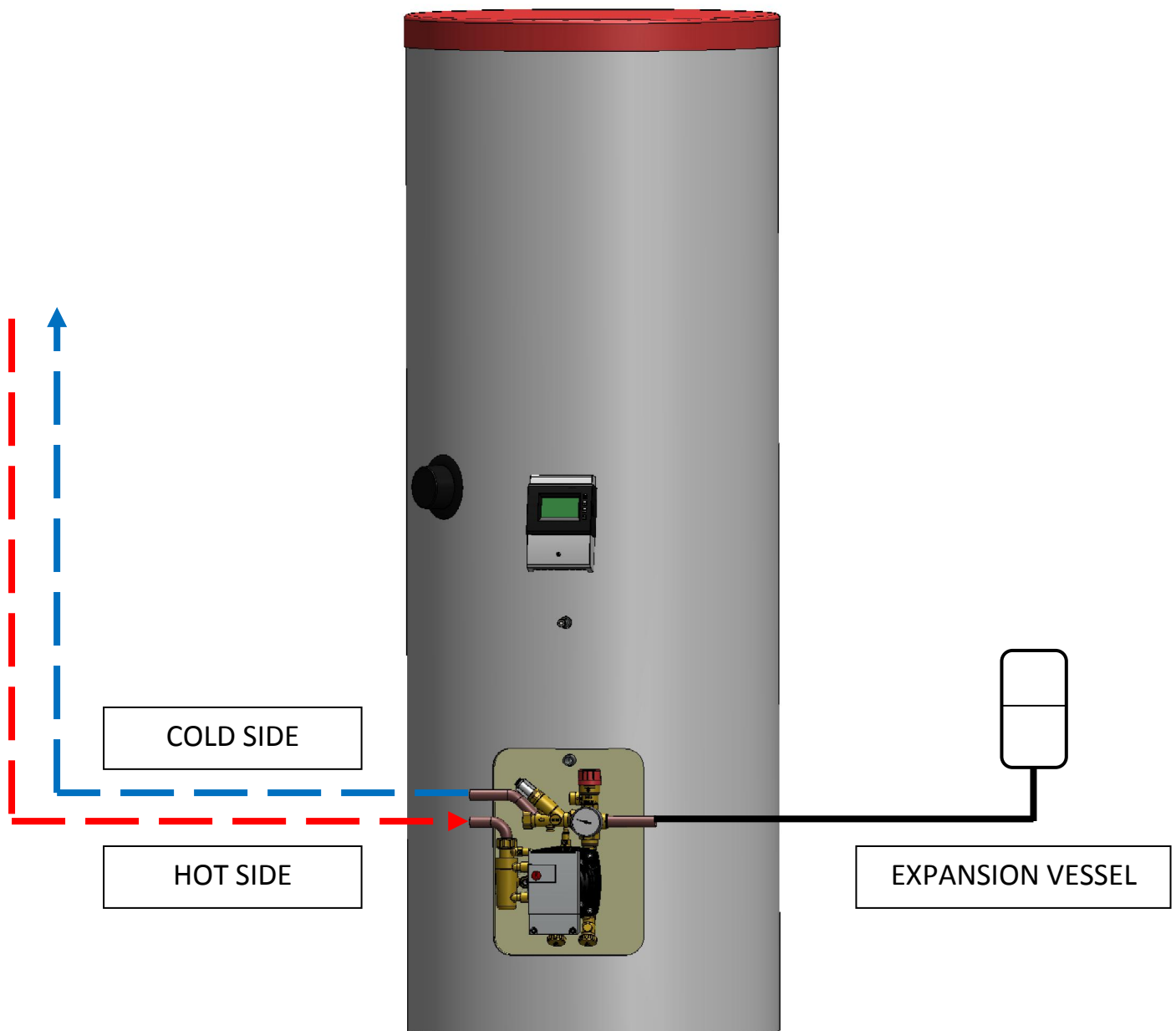
* Produzione continua acqua calda sanitaria con temperatura di ingresso 10° C, di uscita 45° C e con temperatura di mandata caldaia 70° C
Pressione accumulo: 6,0 bar · Pressione scambiatori: 10,0 bar · Max temperatura di esercizio: 95°C

Plumbing details



Plumbing instructions

(to be implemented on site)

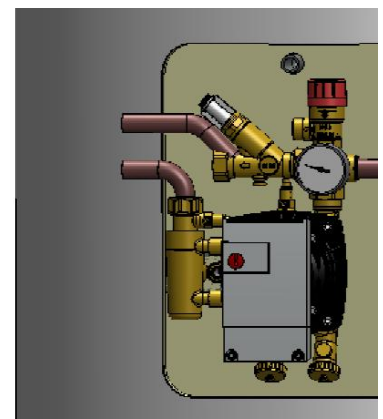


The connections to the solar control unit are made of copper outer diameter 18 mm.

Use copper or stainless steel corrugated, do not use plastic pipes and / or zinc.

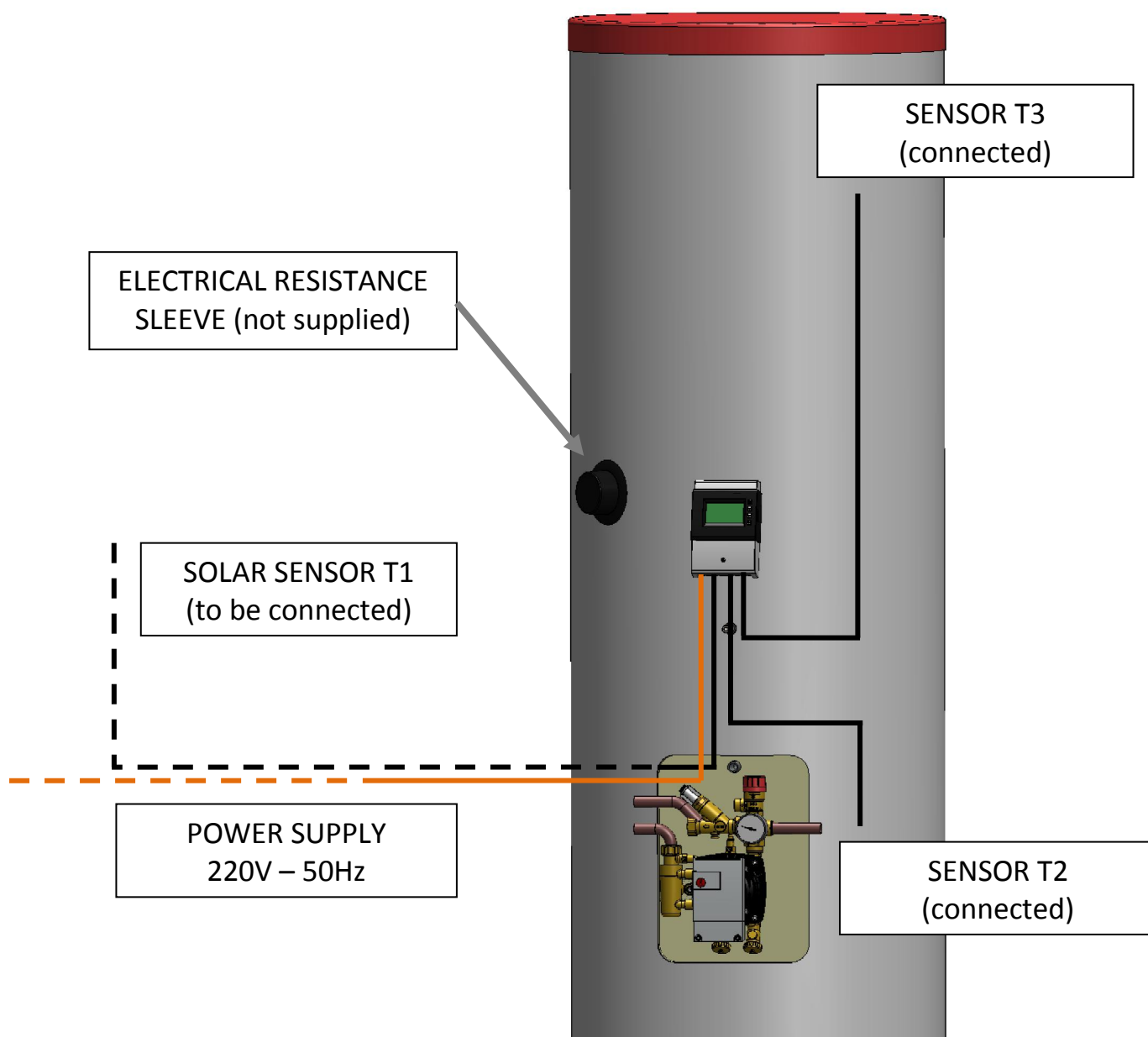
Use brass fittings to tighten with metal, weld copper with nickel silver, staple or tighten fittings with high temperature seals, loctite, teflon high temperature. Do not use hemp and paste commonly used hydraulic.

In both connections has been inserted a compass, in order to increase the mechanical strength of the copper pipes in output from the solar station.



Electrical connections

(to be implemented on site)



The pump is wired directly to the power supply of control unit.

The power cord of the control unit, wired on factory, comes out from the frontal cover in correspondence of the plumbing connections to the solar collectors and ends with a stretch of about 10/20 cm. The connection to the electric cabinet must be made by the installer.

The connection of the sensor T1 to the control unit has already been done at the factory. The prolongation of the sensor T1 (temperature sensor of the solar field) comes out from the frontal cover in correspondence of the plumbing connections to solar collectors and ends with a power terminal.

The electrical connection must be made with shielded cable.

Use cables with 0.75 mm² for lengths up to 50 meters and cables with 1.5 mm² for lengths up to 100 meters.

The temperature sensors T2 (bottom side of the tank) and T3 (top side of the tank) are already placed in the pocket (under the thermoformed) and wired to the solar control unit.

The electrical resistance (not supplied) must be installed on the sleeve on the front of the tank, so as to facilitate its insertion and its maintenance.

The sensor pocket for the boiler always remains (free) on the back of the tank, the other is the pocket for recirculation.

If in doubt contact the technical department of Pleion.

START UP

Solar collectors

Please see the assembly and start-up manual for the solar collectors model (X-RAY10, UNIKO, KSFG-25 and CSI).

ECO COMPACT Tank

The start up, made by the Service Center of competence, involves the following steps:

- fill with water;
- open the sleeves until the water comes out with a continuous stream;
- adjust the safety valve;
- Heat the tank only when it is completely full.

Attention. The electrical resistance heater can be operated only when the tank is completely filled with water.

After the first heating, tighten and check the tightness of all plumbing connections on tank.

Solar control unit and pump

The solar control unit has already been programmed at the factory for the proper functioning of electronic circulator and of the ECO COMPACT system.

It is recommended at installers and end-user to don't change the programming of solar control unit, in order to prevent not correct operation of the system.

For any changes to the settings of the unit please contact the technical department of Pleion or the Service Center of competence.

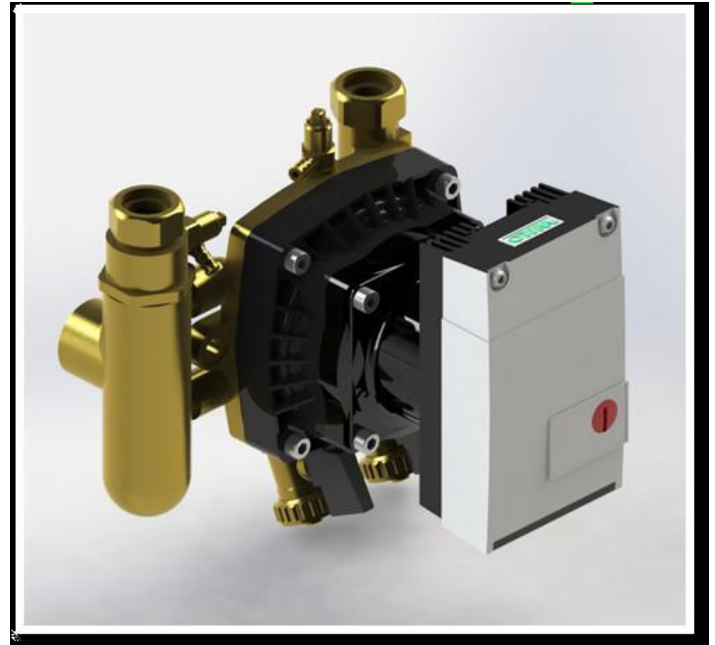
Anyway ECO COMPACT system is delivered with the start-up manual of the solar control and of the pump in Italian and English language.

Loading Solar circuit

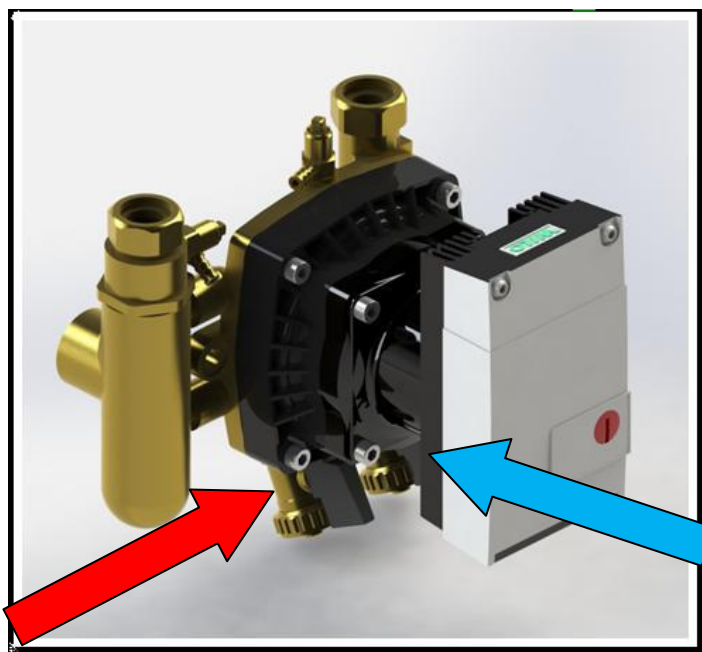
To make the loading of the circuit will be necessary to have a solar charging station for solar installations.



REAR VIEW SOLAR STATION



FRONT VIEW SOLAR STATION



TAP LEFT:
ATTACK OF
DISCHARGE OF
SOLAR STATION

TAP RIGHT:
ATTACK
AGAINST THE
SOLAR STATION

WARRANTY CONDITIONS

Legal warranty

All products supplied by Pleion have a legal warranty on defects in material or manufacturing that lasts for 24 months from the date of delivery.

Commercial warranty

Alongside the legal warranty, Pleion offers a commercial warranty on defects in material or manufacturing of the products supplied, with effect from the date of delivery for a period of:

- 60 months for solar collectors.
- 60 months for tanks.
- 24 months for accessories and electrical or electronic components.

Warranty conditions and validity on “Certificato di Garanzia Convenzionale” supplied by Pleion s.r.l. with product.



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