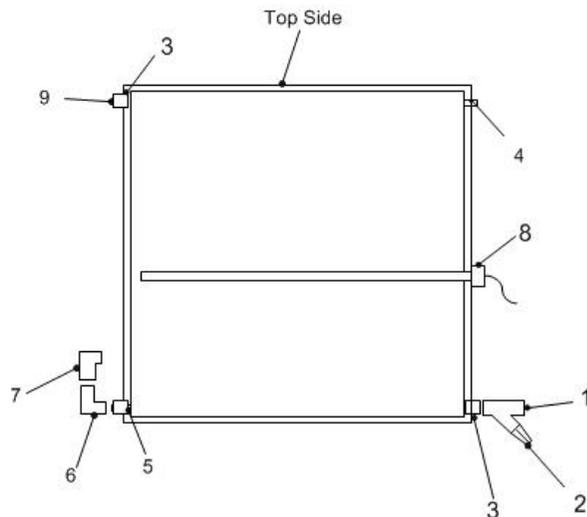


Installation Instruction and Use & Care Guide



Solav – Solar Water Heater, 85L Assembly With Heating Rod



<u>Part</u>	<u>Qty.</u>
1. Cold Water Inlet, ¾"F.	-
2. Pressure Reducing Valve ¾"M x ¾"F.	1
3. Bushing ¾"M x ¾"F.	2
4. Threaded Plug ¾"M.	1
5. Reducing Nipple, ¾"M x ½"M.	1
6. Street Elbow, ½"F x ½"M.	1
7. Pressure Relief Valve ½"F.	1
8. Heating Rod 230V AC	1
9. Hot Water Outlet ¾"F	-

The SOLAV is the first Integrated Polymer Based Solar Water Heater, made of Polypropylene. This type of plastic is FDA approved for direct contact with food and potable water. Among its advantages are no accumulation of Lime-Scale, Corrosion Resistance, Flexibility (Freeze and Hail Resistant), 100% Recyclable and more. Proper installation and care will provide you with many years of solar heated water.

PLEASE READ THIS ENTIRE MANUAL BEFORE BEGINNING INSTALLATION OR ATTEMPTING TO OPERATE THIS SYSTEM. For record keeping and documentation, please write the serial number and installation date of your SOLAV water heater in the maintenance section of this manual. This manual should be stored safely for future reference and maintenance.

Installation – Step by Step

STEP 1

Preparation



Prepare your Home Installing a new water heater is the perfect time to examine your home’s plumbing system and make sure the system is up to current code standards. Verify that the structure can support the full weight of the SOLAV (approximately 120kg per unit). Ensure there is enough access space to the system for installation and maintenance.

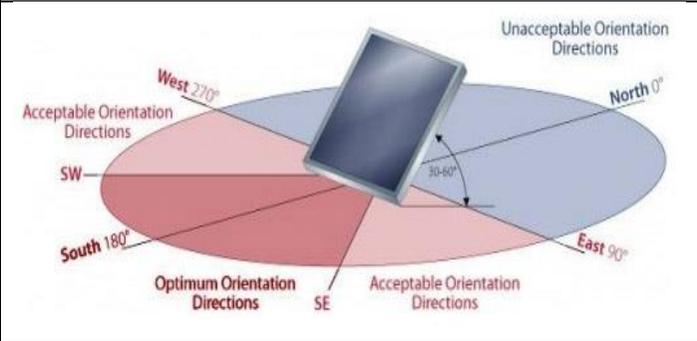


Sunlight Exposure

Orientation: The performance of solar water heating systems in the Northern Hemisphere is optimal when the collector is mounted facing True South. Performance, however, suffers very little when the collector is oriented no more than 15° East or West of True South.

Tilt: Optimal annual efficiency is achieved by tilting the SOLAV solar collector at an angle that equals your latitude plus an additional 10°, but no less than 22.5° from the horizon. This tilt

angle favors the lower winter sun when collector performance is at its lowest and minimizes overheating during the hottest summer months.



Shading: The collector should be un-shaded by any permanent obstructions between 09:00 and 17:00 on any day of the year.



Water Pipes and Accessories:

Install the SOLAV as close to the hot water taps as possible, using a minimal length of piping in order to reduce heat loss from the pipes. All pipes must be insulated. Solav Energy recommends using PP, PEX or PEX-Al-PEX pipes with a diameter of 20mm (preferably) or 16mm. Use approved compression fittings only. Never use fittings that require Soldering or Brazing as they may harm the SOLAV.

Outdoors: The SOLAV is designed for outdoor use and is UV & weather resistant. Do not

install the SOLAV indoors or in a shaded area as the system relies on Solar Radiation to heat the water in the system.

Sunlight: To maximize efficiency, install the SOLAV in a sunny location without permanent shading between 09:00-17:00. Trim trees that cast a shadow and regularly clean the clear collector surface using water only.

Room/Space for Servicing: Before installing the SOLAV, verify there is enough room around the system for easy maintenance access.

Install the SOLAV only on a structure that can bear the full load of the system (approximately 120 kg per unit). If no structure is available but a connection to a main water supply is present, install the SOLAV on the ground according to the sections above.

Damage to structure caused by leaks: Ensure a proper draining from the SOLAV to avoid structural damage, which may pose a risk to property and lives.

STEP 2

Installing the SOLAV

2.1 Place the SOLAV's base in a manner that the glazing is faced due true South.

Anchor the base to the structure or the floor safely (120 kg Gross per unit).

Ensure an obstacle free route for moving the SOLAV to its place. Using 2 people, carefully place the SOLAV on the base, glazing faced up and "THIS SIDE UP" arrows pointing upwards (Barcode should be on the top of the SOLAV).



Warning: Cover the SOLAV's Glazing until installation is complete to avoid accumulation of hot air in the SOLAV body that may cause a risk of injury.

2.2 Connecting the Threads



Threads: Important note: The plastic threads in the SOLAV unit are easily damaged when threading metal parts. Therefore, plastic fittings have been provided for connecting the SOLAV to

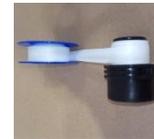
the existing mains. Only these items are approved for use. Installation of non-approved threaded fittings could risk the unit's threads and will result in loss of warranty.

Make sure you have all the provided accessories:

1X PP 3/4" Threaded Plug		2X PP 3/4" Threaded Bushing	
1X PP 1/2" Street Elbow		1X PP Reducing Nipple 3/4" X 1/2"	
1X 1/2" Pressure Relief Valve		1X 3/4" Pressure Reducing Valve	

Additional accessories: PTFE sealing tape, Valves (optional), and suitable connectors (3/4"F) to the pipes used. Solav Energy recommends using PP, PEX, or PEX-AL-PEX pipes.

Wrap all threads with PTFE tape:



Connect 3/4"Mx3/4"F PP Threaded Bushing to the bottom thread marked "INLET"



Connect 3/4"Mx3/4"F PP Threaded Bushing to the top left thread marked "OUTLET" .



Connect 3/4"M Pressure Reducing Valve to the "INLET" Bushing.



Assemble and connect the Pressure Relief Valve, ensure that the Valve's exhaust is horizontal.



Connect Plug to Top Right Thread (Unmarked).



As the SOLAV's body is comprised of plastic, exposure to excessive heat (>95°C) can damage the SOLAV.

2.3 Connecting the Heating Rod

Warning! All and any electric work including installation and servicing must be executed by a licensed electrician in accordance to local codes and regulations.

Warning! Do not operate the rod unless it is submerged in water!

The SOLAV can be fitted with a heating rod as a heating backup.

Heating Rod Specifications:

P=1000 W
v=230 V
f=50 Hz
IP67

Ensure that the SOLAV is drained of water.

Ensure suitable voltage and frequency.

Drill a $\varnothing 13\text{mm}$ hole concentric with the threads in the middle thread.

Remove drilling debris.

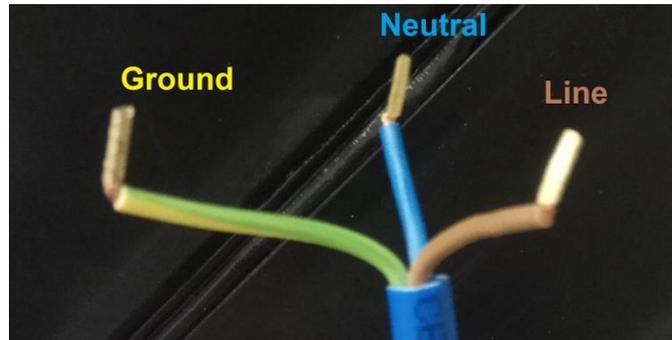
Wrap PTFE tape on the male thread of the rod (blue).

Insert rod into drilled hole and tighten the thread using a 27 mm spanner.



Ground the Rod in accordance with local codes and regulations.

Connect to electric switch, DO NOT TURN THE SWITCH ON.



Fill the SOLAV with water according to section 2.4. Check the rod only after the system has been filled with water.

2.4 Connecting the Water Supply

Pipes and Insulation: All pipes must meet local codes and standards for hot water pipes. The diameter should be 20mm (preferably) or 16mm. All pipes must be insulated according to local codes and standards.

Connect Piping to the Cold Water Inlet and fill the SOLAV with water.



Once full, close the inlet tap.



Connect Piping to the Hot Water Outlet.



Open the hot water taps in the house, then open the hot water tap and allow remaining air bubbles to exit the system until a steady flow of water is achieved.

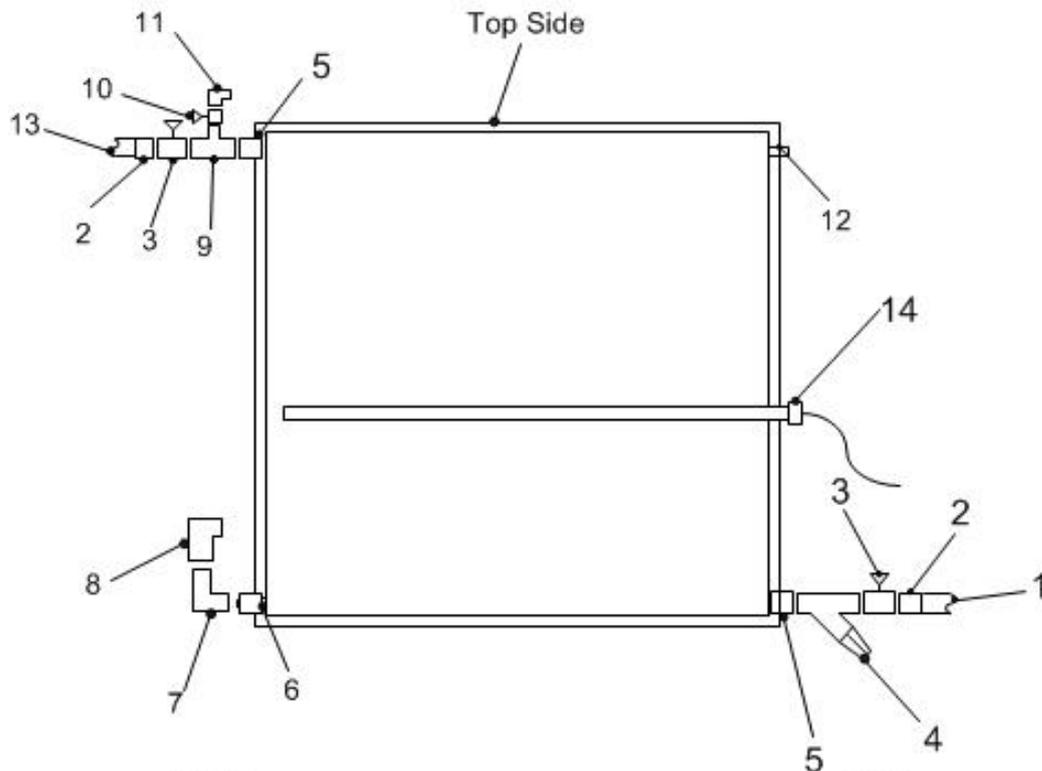
Close taps in the house, then check for leaks and repair if needed.

Remove all covers from the glazed screen

An air relief valve may also be added in order to drain the system from air without disassembly and to prevent bubble formation in the tap's stream of water. Fix the air relief valve vertically in a high point where air can be channeled out of the system.

Verify that all steps have been completed properly. Repair any faults (if needed).

Solav – Solar Water Heater, 85L Complete Recommended Fittings Assembly Diagram



<u>Part</u>	<u>Qty.</u>
1. Cold Water Inlet 20mm.	-
2. Threaded Adapter ¾”M.	2
3. Shut-off Valve ¾”F x ¾”M.	2
4. Pressure Reducing Valve ¾”F x ¾”M.	1
5. Threaded PP Bushing ¾”F x ¾”M.	2
6. PP Reducing Nipple ¾”M x ½”M.	1
7. PP Street Elbow ½”F x ½”M.	1
8. Pressure Relief Valve ½”F	1
9. Tee ¾”M x ½”M x ¾”M	1
10. Shut-off Valve ½”F x ½”M	1
11. Air Release Valve ½”F	1
12. Threaded Plug ¾”M	1
13. Hot Water Outlet	-
14. Heating Rod 230V AC	1

Solav Energy Warranty

This warranty is an integral part of the general terms of use and it determines the conditions of liability for Integral Solar Water Heating System (hereafter referred as "The Product") of Solav-Dolav Solar Energy Cooperative Ltd. (hereafter referred as "The Company")

1. The Company undertakes that under regular terms of installation, use and service, the Product is free of any defects of manufacture.
2. The Company warrants the Product against manufacturing defects and faulty materials for a period of five (5) years, starting from the delivery date of the Product.
3. The Company warrants the kit of components supplied with the system for a period of one (1) year, starting from the delivery date of the Product.
4. Within the warranty period The Company undertakes to repair or replace, at its sole discretion, any part / component of the Product which is found to be having manufacturing defects or is unserviceable.
5. The Company may at its sole discretion replace the whole Product if found necessary by virtue of the nature of fault or defect. In that case, the warranty will continue for the rest of the original period. Such defects, if noticed by the customer, should be reported to the Company's representative immediately upon its discovery.
6. The Company shall be under no obligations under this warranty, if the Company is satisfied that the defects are due to improper storage, usage, negligence, any modifications/ alterations or tampering, over pressure, change of design/pattern of usage, accident, act of god or installation/repairs carried out by any person not duly authorized by the Company or by any reason beyond the control of The Company such as theft, war, earthquake, flood or storm & such other natural calamities like hailstorm, typhoon or cyclones, uprooting of trees or electric poles, wire & radio or T.V. antennas etc. causing accidental damage to the Product.
7. This warranty excludes any damage inflicted by vandalism or by animals such as dogs, monkeys, domestic animals, birds or any other creatures.
8. Under this warranty, no responsibility is accepted for any consequential loss or damage caused by any defect.
9. The repair or replacement, if any, shall be carried out by the Company or by its authorized dealer or representative within the reasonable time required for communication, processing the complaint, procurement of the component, transportation of material and appointment of an authorized person for examination & determination of remedial action to be taken to solve the problem. It is essential that the customer should grant access to the Company's representative for examination of the solar water heating system in full and facilitate the repairs as and whenever convenient to the customer and the Company's representative.
10. The Product is designed to withstand ambient temperatures no less than minus five degrees centigrade (-5°C).
11. This warranty in no case shall extend to payment of any monetary consideration or compensation.
12. This warranty automatically becomes void on expiry of the warranty period.

Company Signature _____

Date _____

Serial Number	Installation Date	Installed by	Signature