



MULTI LAYERED ENERGY FLOW 10

# D.I.Y. Strip Solar

INSTALLATION MANUAL



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## CONGRATULATIONS ON THE PURCHASE OF YOUR NEW SUNLOVER HEATING SYSTEM!

By investing in a Sunlover pool heating system you will extend your swimming season. Night time swimming will become a real possibility.

Installing a Sunlover pool heating system simply, and cost effectively, utilises the sun's FREE energy to extend your swimming season.

This manual is designed to enable the handyman to install a professional sunlover pool heating system quickly and easily.

With the correct sized kit and a few hand tools these instructions will provide the necessary information for an easy and economical installation.

To ensure you have many years use of your Sunlover Pool Heating System, we recommend that you have it serviced regularly, to check for any maintenance requirements that may spring up over the Winter season and have them rectified well before the swimming season begins.

In order to avoid potential delays of up to 10 business days during the rush of Service and Maintenance bookings we receive during the swimming season, we recommend registering for our Annual Maintenance program, scheduled yearly between May and August.

If you would like to register for our Annual Maintenance Program please log your details at [sunloverheating.com.au/annual-pool-heating-maintenance-program](http://sunloverheating.com.au/annual-pool-heating-maintenance-program).

Additional product information is available for download from [sunloverheating.com.au/solar-pool-heating-system](http://sunloverheating.com.au/solar-pool-heating-system) and we have a number of troubleshooting questions answered for you over on our [Troubleshooting FAQs](#) page

Should you have any queries regarding the operation of your Sunlover Solar Pool Heating System, please do not hesitate to contact your local Sunlover Heating Office during business hours for assistance.

Thank you for your business and we know you will be very happy with your decision to purchase your Sunlover Heating product.

## Solar Kit Sizing

The kit size depends on the amount of solar absorber required.

The surface area of the pool (length x width) is used as the basis for calculating your swimming pool's heating, and a solar collector is installed according to this total area. Typically 80 – 100% is used as the area required for the absorber.

### Additional Items

Along with the Sunlover Kit you will require a method of circulating the pool water through the solar system.

These items are purchase separately as specific requirements may need to be considered

For example:

A pool 10m long by 4m wide has a surface area of 40m<sup>2</sup>  
Therefore 32 - 40m<sup>2</sup> is required.



# DIY SOLAR KIT CHECK LIST



## Solar Absorber – Supply Only

Size m <sup>2</sup>	20	24	28	32	36	40	44	48	52	56	60
10 Tube Energy Flow Solar	20	24	28	32	36	40	44	48	52	56	60
10 into 1 Manifolds <i>(include Rubber Grommets)</i>	20	24	28	32	36	40	44	48	52	56	60
Joining Barbs	50	50	100	100	100	100	200	200	200	200	200
Tubes of Adhesive	6	8	9	10	11	12	14	15	16	17	18
VacRel Valve	1	1	1	1	1	1	1	1	1	1	1
Check Valve	1	1	1	1	1	1	1	1	1	1	1
End Caps Black	1	1	1	1	1	1	1	1	1	1	1
40mm 90° Elbows Black	12	12	12	12	12	12	12	12	12	12	12
40mm 45° Elbows Black	6	6	6	6	6	6	6	6	6	6	6
Silicone Spray	1	1	1	1	1	1	1	1	1	1	1
500ml Solvent Cement	1	1	1	1	1	1	1	1	1	1	1
500ml PVC Priming Fluid	1	1	1	1	1	1	1	1	1	1	1
Equaliser Kit	1	1	1	1	1	1	1	1	1	1	1
Saddles Black	12	12	12	12	12	12	12	12	12	12	12
Locking Sleeves	300	340	480	520	560	600	840	880	920	960	1000
Drill Bit	*	*	*	*	*	*	*	*	*	*	*
Sleeving Tool	*	*	*	*	*	*	*	*	*	*	*

\*\$100 Holding Deposit for the hire of either the Drill Bit or Sleeving Tool (or both) – refundable on return of item(s)

**KITS DO NOT INCLUDE PVC PIPE – TO BE ORDERED SEPARATELY**

## Independent

Additional Parts Required  
when installing a NEW System

### Solar Boost Pump

M Series Pool & Spa Pump  
(Instructions with pump)

### Digital Solar Controller

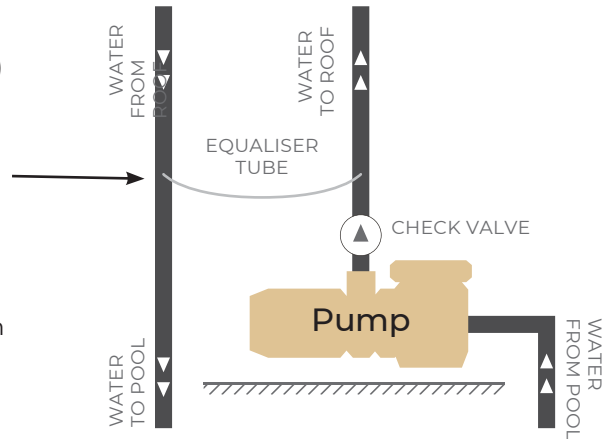
SLHC1 - Heat Command Auto Controller  
(Instructions with controller)

## Equaliser Kit

The Equaliser tube (bleeder pipe) is used to allow the roof system to drain while the solar is not operating. This is installed on the pipe work up to the roof (below the eave) connecting supply and return pipes.

To install the equaliser tube:

- Drill one 9mm hole onto each of the 40mm pipes
- Insert a grommet (supplied) into each hole
- Using one tube of the solar absorber, push a joining barb into either end and push both ends into the grommets and sleeve.



## Retro Fit

If existing pool plumbing to be used, the pool pump must be running during solar heating hours.

This system is suitable for 2 story installations.

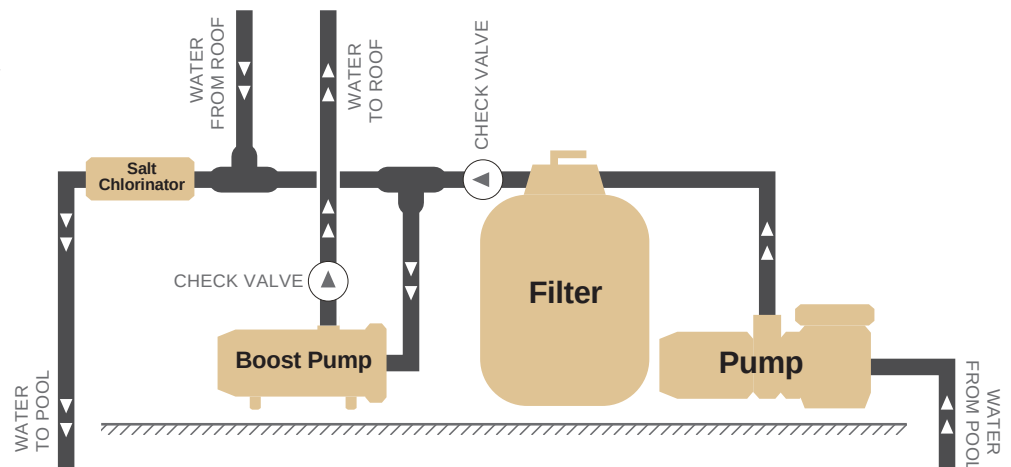
Additional Parts Required  
when installing a NEW System

### Solar Boost Pump

P Series Pool & Spa Pump  
(Instructions with pump)

### Digital Solar Controller

SLHC1 - Heat Command Auto Controller  
(Instructions with controller)



## Before Installing

The absorber is designed to fit on almost any type of roof, but there are cases where it is inadvisable;

- Where there is a lack of suitable roof area facing the right direction.
  - A north facing roof is always preferred but north-west or flat facing is acceptable.
- Where the roof is shaded by trees or buildings
- Where the roof is in bad condition and not suitable for foot traffic
- Where the roof pitch makes it difficult to work on. Generally speaking any roof exceeding 30° is unsafe.

## Overview

The Solar Heating system consists of solar absorber (10 Tube Energy Flow) and the patented manifolds (10 to 1).

The finished collector consists of hot and cold manifold system with a third pipe acting as a balancing pipe to insure best efficiency. The solar absorber should be installed horizontally across tiles, clip lock or colorbond roofs.

The preferred maximum length run of absorber is 13m. Each pack of absorber consists of 27 lineal meters (4m<sup>2</sup>).

With the manifolds located vertically (up a sloping roof), the cold feed to the collector must enter at the bottom and the hot return drawn from the top.

## There are 2 parts to the installation

### Part 1

#### Laying the Absorber

Once the manifold system has been constructed it can be placed on the roof and the absorber can be measured out.

### Part 2

#### Manifold installation

Once the measurements have been taken all pipe work should be done off the roof. No drilling or cutting should be done on the roof for safety reasons.



## SAFETY



Full attention should be paid to safe working practices at all times. Solar heating systems are usually installed on an elevated structure and unless you have the appropriate safety equipment for working at heights, you should employ someone with experience and equipment to complete the installation for you.

**Falls from heights can result in serious injury or death.**

# PART 1

## LAYING THE ABSORBER

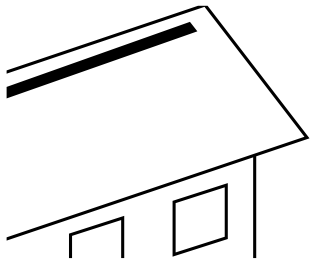
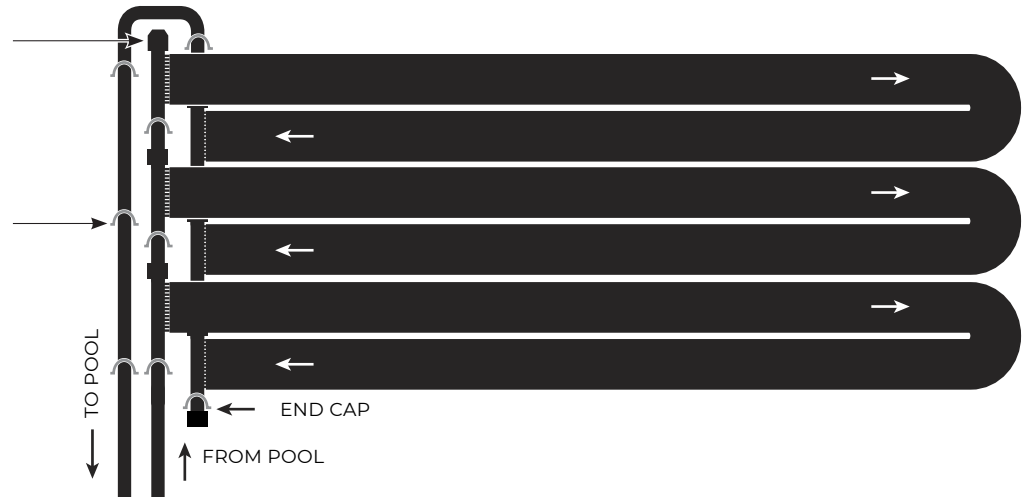
### Roof System Diagram

#### VacRel

the VacRel goes on the highest possible point of the supply pipe. the valve allows air into the system while the solar is not operating.

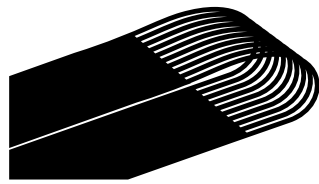
#### Saddles

3 saddles per manifold pipe



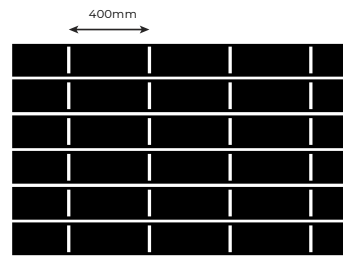
# 1

- Lay the absorber out on the Roof



# 2

- At the far end of a run the absorber is folded over and back on itself
- Peel back the webbing in between the tubes to allow the absorber to sit flat on itself
- Laying the runner tight up to the top run, the roll is taken back to the manifold system. the returning run is then trimmed to length and attached to the corresponding manifold



# 3

- Finally Sunlover adhesive is applied under the absorber with a standard caulking gun at 400mm intervals. Press absorber firmly onto adhesive to ensure good contact.

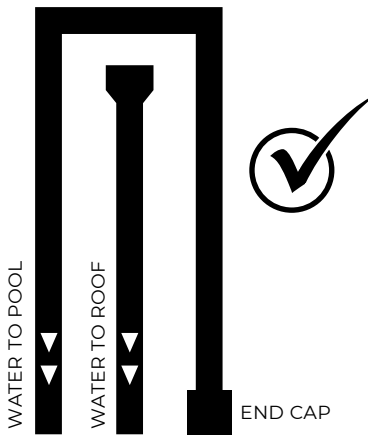
**Do not use any other adhesive than the Sunlover adhesive as untested adhesives might have adverse effects on the absorber**

# 4

- Repeat the process until all rolls of absorber are used.

# PART 2

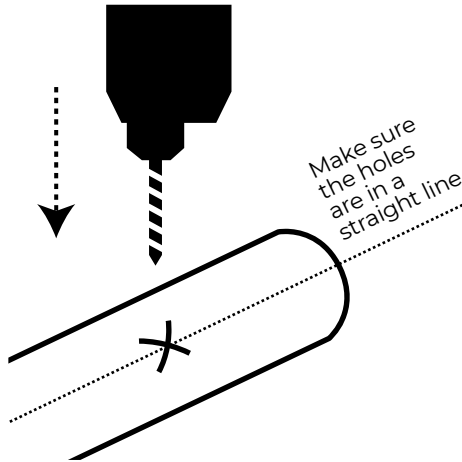
## MANIFOLD INSTALLATION



1

- Complete all PVC pipe work.
- Use 3 saddles on each manifold pipe to hold in place

Ensure pipe does not bend.



2

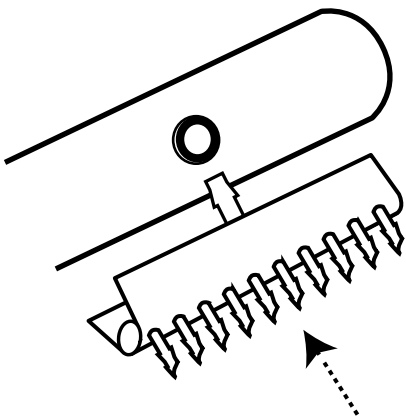
- Pre-mark PVC with text in the center of absorber.
- Drill 14.5mm holes with special drill bit, available to loan from Sunlover Heating
- For Tin Roof holes should be 295mm apart. Tiled roofs will vary, work out distances once absorber has been laid

Do not run absorber over roof screws (if avoidable) as the sharp heads can pierce the absorber

3

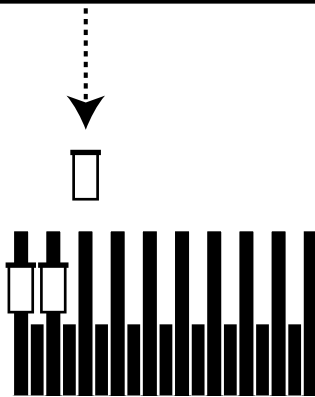
- Plug with grommet
- Spray with silicone spray or soapy water

Do not use petroleum or oil based lubricants as it will damage the absorber and E.P.D.M. grommet.



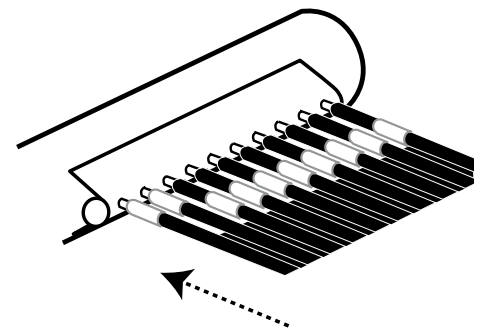
4

- Push manifold barb through grommet until it locks in



5

- Strip absorber webbing back
- Place sleeves on the tube of absorber



6

- Slip tube onto barb on the manifold
- Push sleeve down to lock onto Manifold. Using a Push in Tool (Hired) can assist
- Spray with silicone spray or soapy water

Do not use petroleum or oil based lubricants as it will damage the absorber and E.P.D.M. grommet.

- Lay the collector first - work plumbing back to filter
- Make sure roof is not shaded and is clean
- Collector runs across top of ridges of metal roof
- Collector runs across roof tiles
- Use saddles where needed to secure pipe to roof and walls. 3 saddles minimum per manifold PDC
- Vacuum break valve must be installed to allow water to flow back to pool when switched off
- All off-cuts of collector can be spliced together using splicing barbs and collars
- Install solar controller so pump lead reaches
- Make sure solar controller roof sensor is not shaded and is not installed on absorber
- Wear sand shoes when working on roof and read safety issue statement before beginning work
- Pre drill header pipe for tile or metal roof and glue header last
- At start up, check all fittings and collector for leaks.
- When turning solar on you will see air bubbles returning to the pool - this is normal.
- To ensure you have many years use of your Sunlover Pool Heating System, we recommend that you have it serviced regularly

## ADDITIONAL NOTES

If running a solar system independent of filter system, a lint pot is required to be fitted to solar pump.

The VacRel lets air into the system when it is shut down to avoid pipes collapsing from vacuum pull of water going back to the pool. The VacRel should be installed at the highest point of supply line.

When solar system is plumbed through a filter system, as per diagram of auto system, filter pump must run in conjunction with solar pump and check valves must be installed as per diagram.

### Solar Controllers

A solar controller is supplied with two sensors.

One measures pool water temp (short lead) called the Pool or Pipe sensor. This is installed by drilling a hole in the pipe before solar take off and inserting a grommet, then pushing the sensor into grommet.

The other measures Roof temp (long lead) called the Roof sensor.

This is pushed into a scrap piece of absorber and glued to the roof, Wires are held in place with wire ties.

The controller is plugged into a power point and the pump plugs into the controller.

### Solar Boost Pumps

If independent suction and return lines are installed to the pool either an Oasis M130, M150, M170, M250 or P330 are to be used with a SLHC1 Heat Command Digital Solar Controller.



# VACUUM RELIEF VALVE (VACREL)



If the Vacrel leaks it may have some type of foreign material under the silicone rubber. ie Stick, leaf, spider etc.

To clean this unit:

- Unscrew the Valve body from the main body of the Vacrel. (grip points included on this part)
- Simply clean out the Underside of the umbrella lip (soft rubber) on the valve and remove any foreign material.
- Replace the valve body ensuring that the O-ring is still in place
- Replace Vacrel onto your solar system


Should you continue having an issue with leaks on the valve please contact your local Sunlover Heating Office during business hours for assistance.



## TECHNICAL SUPPORT

For all product and installation enquiries please contact your Sunlover Heating office and we will either assist or direct you to your nearest authorised support agent.

Sunlover Heating Pty Ltd

 1800 815 913

 [customerservice@sunloverheating.com.au](mailto:customerservice@sunloverheating.com.au)

We recommend that you register all products to ensure you are covered by your Warranty online at <https://sunloverheating.com.au/service-request/warranty-registration/>

Registering your products simplifies proof of purchase in the event of a warranty claim.



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# WARRANTY REGISTRATION

Registering your Sunlover Heating / Oasis Aquatics products is fast and easy, providing peace of mind that you've got great backup support for the life of your products.

PLUS:

- Extend your warranty by 6 months
- Dedicated customer support
- Exclusive discounts on new products and service

And we promise, NO SPAM!



**IT'S VERY  
IMPORTANT  
THAT WE HEAR  
FROM YOU!**

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# SOLAR ABSORBER WARRANTY



Effective 1st September 2017, SUNLOVER HEATING confirms that it will provide a 10 year Warranty for its Solar Absorber (hereinafter called "the product") plus 5 year pro-rata warranty reducing at 50% of residual value annually until expiration of the full 15 year period.

The Sunlover Heating Pre-Moulded Manifold which is sold to the customer will be provided with a 5 year Warranty

This Warranty is subject to the terms and conditions set out hereunder.

- The Warranty covers the repair or replacement of the product, absorber and pre-moulded manifolds, where in Sunlover Heating's opinion the product has developed a fault in the material or manufacture in which event Sunlover Heating shall at its sole discretion elect to either repair or replace the faulty product or any part thereof.
- The sole obligation of Sunlover Heating under this Warranty is expressly limited to supply or repair of defective collector components at Sunlover Heating's discretion with replacement expressly contingent upon the purchaser paying to Sunlover Heating the difference between the suggested retail price of the materials at the time the Warranty claim is made.
- This Warranty does not cover any cost of labour after the initial period of 12 months from date of installation. Any labour cost incurred in the execution of this Warranty after this period is the sole responsibility of the Consumer.
- This Warranty expressly excludes any claim arising out of, or in connection with, any damage caused to the product or any part thereof once the product has left Sunlover Heating's control.
- Except in the case of a consumer, as defined either by the Trade Practices Act, 1974 as amended or the Manufacturers Warranties Act, 1974 as amended (or anyone deriving title through a consumer), claiming damages in respect to unmerchantable goods, this Warranty shall only apply to the original purchaser of the goods.
- This Warranty expressly excludes damage caused by the installation or use of the product anywhere other than in a swimming pool or spa pool, or any damage caused to any other property of the customer as a result of the use of the product. All installation works are the responsibility of the agent &/or distributor and do not form part of our Warranty.
- This Warranty will become void if chemical balance has not been maintained in accordance with recommended PH and Chlorine levels.
- This Warranty will become void in the event that a Sunlover Heating Digital Controller with Winterising function has not been installed and used.
- No employee, servant, agent or representative of Sunlover Heating has any authority to vary this Warranty or any part thereof and without limiting the generality of the foregoing, no Warranty, representation, promise, agreement, term & condition whether express or implied made by any employee, servant, agent or representative of Sunlover Heating shall be deemed to be included in or form part of this Warranty, or operate in any way collateral to this Warranty.
- In the event that any provision of this Warranty shall be or become illegal, invalid or unenforceable, such provisions will be severed from this Warranty.
- The benefits conferred by this Warranty are in addition to all other rights and remedies in respect of the product (or service), which a purchaser has under the Trade Practices Act and similar State and Territory Laws.
- This Warranty is solely for the benefit of the original Consumer and with respect to the original installation only.
- Twenty four (24) months Warranty on Solar Controllers and Twelve (12) months on sensors if applicable. *Refer Product Manufacturer's Warranty*
- Twenty four (24) months Warranty on Boost Pump if applicable. *Refer Product Manufacturer's Warranty*

