



SUPREME
HEATING
POOL HEATING SINCE 1990

Heatseeker Premium

Strip Solar Pool Heating



INSTALLATION & WARRANTY MANUAL

TABLE OF CONTENTS

GENERAL INFORMATION	3-4
Before We Start	
Components / Checklist	
Introduction	
Collector Sizing	
CHOOSING A ROOF	5
Roof Orientation	
Shade	
Aesthetics	
Solar Positioning	
Roof Size	
SYSTEM DESIGN	6
Strips & Manifold	
Standard Configuration	
Butterfly Arrangement	
HEATSEEKER PREMIUM PROFIL	7
Roof Calculation	
Ideal Lengths	
INSTALLING SOLAR COLLECTOR	8-12
Laying Solar Strips	
Joining Strips	
Pressure Sleeves	
Drainage Loops	
Vacuum Valves	
Independent Systems	
Retro Systems	
Manual System	
System Key	
MANUFACTURER'S WARRANTY	13-14

GENERAL INFORMATION

BEFORE WE START

The following are your instructions to install your Heatseeker system. Please read through thoroughly before you make a start. Please refer to OH & S Regulations (of the relevant state) and Work Safe code of practises. Make sure your shoes grip the roof sufficiently.

COMPONENTS / CHECKLIST

Component	Type	Qty	Checked
Collector Rolls	Heatseeker Premium		
Manifold	Heatseeker Premium 10 into 1 manifolds		
Grommets	10mm		
Cable ties	Black 300mm		
Pipe - Black	Manifold pipe Class 12		
Roof Glue			
Pressure Sleeves			
Joining Barbs			
Vacuum Valve & Tee			
Swing Check Valve	Applicable with pump only		
Joiner / Coupling	40mm Black		
End Caps	40mm Black		
Tee	40mm Black		
Solvent Cement	Type B non-pressure clear 500mm		
Priming Fluid	Clear 500mm		
3 Way Valve	40mm White		
Tee	40mm White		
Compact Ball Valve	Black		
Elbows - 45°	Black		
Elbows - 90°	Black		
Manifold Clips	40mm PC		
Saddles - Galvanised	40mm pressure		
Saddles	40mm Black		
Drainage Loop			
Auto & Sensor Coup.	Serial No.:		
Pump	Serial No.:		
Repair Kit			
Pipe - White	Class 9		
Pipe - Black	Class 9		
Pressure Gauge	Fitted to 40mm joiner		

No special tools required: Generally, screwdriver / hammer / scissors / silicon applicator gun / cordless drill / hacksaw.

GENERAL INFORMATION

INTRODUCTION

The purpose of this manual is to provide training and instructions for installation crews, retail and trade customers to install solar systems.

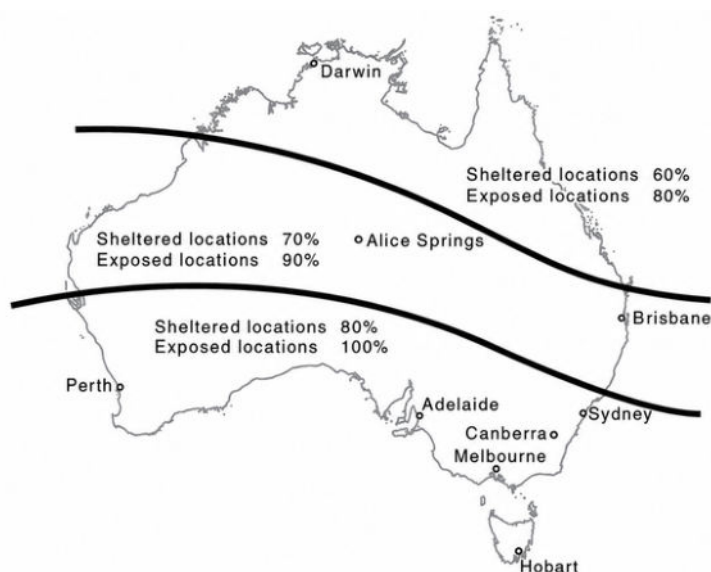
Solar heating installed on a pool will give you a swimming season of 6 - 9 months depending on where you are situated in Australia. This is approximately double an unheated swimming season.

The pool is heated by circulating pool water through the solar collectors where it absorbs the sun's energy. Solar systems normally incorporate a separate pump and digital automatic controller to maximise heat gain and can be fitted to existing pools.



The sizing of the solar collector varies as well but are normally sized on a 1:1 ratio with the pool surface area. ie. 100%.

SUGGESTED MINIMUM COLLECTOR AREAS FOR UNCOVERED, UNSHADED OUTDOOR POOLS HEATED FOR THE SWIMMING SEASON (EXPRESSED AS PERCENTAGE OF POOL SURFACE AREA)



NOTE 1 Values given are for optimally positioned collectors.

NOTE 2 Sheltered locations refer to sheltering of the pool from the wind.

CHOOSING A ROOF

When choosing the appropriate roof to position the solar collectors, the following important things need to be considered so you can make a decision.

ROOF ORIENTATION

The ideal roof varies slightly from state to state but as a rule of thumb a North, West or flat roof is a good choice.

SHADE

Try to avoid positioning the solar collectors on a roof that is going to be shaded heavily throughout the day. The best solar gains are made three hours either side of solar noon. ie. 9am - 3pm or 10am - 4pm during day light savings for a north facing roof. Shading outside these hours will have minimal effect on the overall performance.

If they are going to be shaded at some time during the day, then a larger collector can be fitted to compensate.

AESTHETICS

Positioning solar systems will require discussions with the owner to obtain authorisation. With optional colours available, the look of the collectors has improved dramatically. Solars on the front of houses are always an issue and require careful consideration and planning.

POSITION SOLAR CLOSE TO FILTER/SOLAR PUMP

Shorter pipe runs require less pumping power and reduces installation costs. Long runs up to 50 metres have minimal effects on solar performance.

SIZE OF ROOF

Will solar fit? This has to be established from the ground or a ladder with OH & S Regulations preventing access to the roof without a harness or rail system. A quick measurement in most cases can be taken at ground level.

Following are some examples:

Basic Formula

$m^2 = \text{length} \times \text{width}$ - Or for solar strips

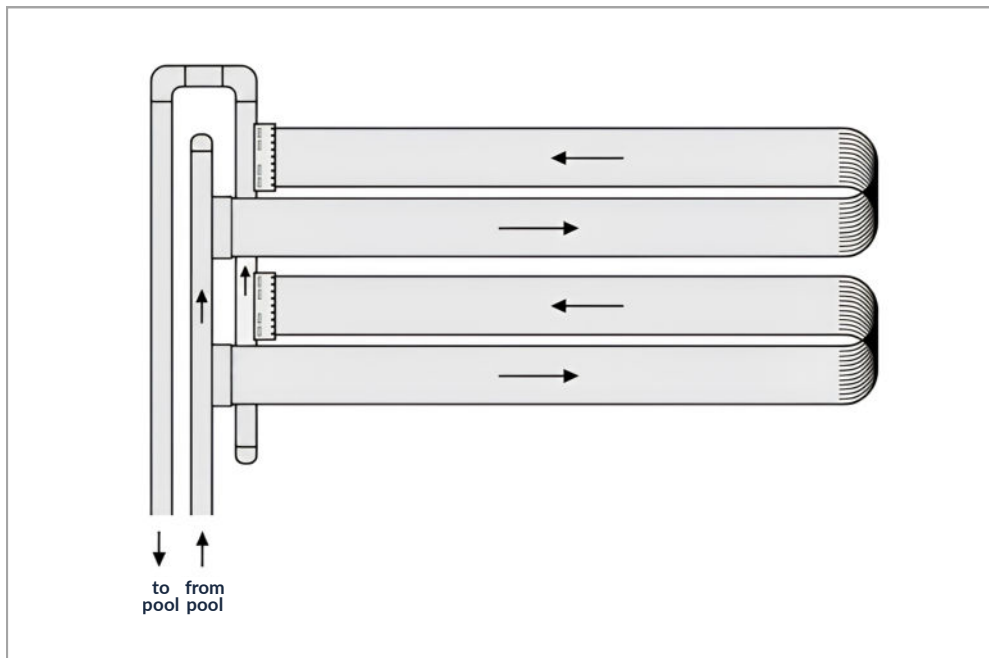
$m^2 = \text{length} \times \text{width (of strip)} \times n^\circ \text{ (of strips)}$

STRIPS AND MANIFOLD

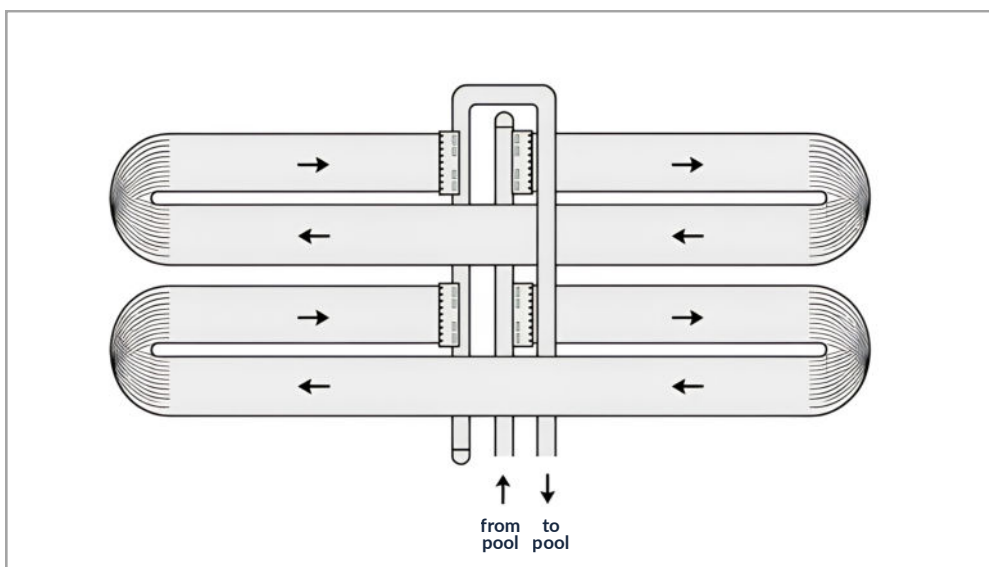
Once you can safely access the roof an accurate design must be worked out for strips and manifold placement.

STANDARD CONFIGURATION

Parallel connection of strip collectors (pipework arranged for reverse return)



BUTTERFLY TYPE ARRANGEMENT



HEATSEEKER PREMIUM PROFILE

Material	P.V.C Nitrile
Colour	Black
Use	On all systems
Roof Glue	Refer to Supreme Solar Pty Ltd
Length	1 Roll = 26.66 lineal metres = 4 m ²
Width	0.15m (150mm)

TO CALCULATE ON A ROOF

m² = length x width (0.15m) x n° of strips

OR

m² = l x w x n°

IDEAL LENGTHS

No joins: 4.45m, 6.65 m and 13.30m

1 Join / 2 rolls: 8.85m and 5.30m



INSTALLING SOLAR COLLECTOR

a) LAYING & CONNECTING SOLAR STRIPS

The following procedure is the recommended way to install the solar strips.

Once roof is measured and marked up

1. Fix manifold pipe into position
2. Pre glue roof (10mm wide silicon bead) at every 600mm to 750mm spacing depending on pitch of roof and wind exposure. Silicon Glue length down the roof should be enough to roll 4 strips.
3. Cut strips in line with main manifolds PVC pipe. Apply even tension to the strip as you rollout and bed into the silicon bead as you go.
4. Adjust loop return to exact length and fold the loop return down on itself so it sits lower on the roof.
5. Repeat procedure until collector is all laid.
6. Mark positions for the 10 into 1 manifold and drill holes.
7. Fit grommets using silicon lubricant (food grade only)
8. Separate tubes (using tear strip) with fingers approximately 100mm past end and cut off webbing.
9. Fit pressure sleeves to tubes, if required (refer to 'c) Pressure Sleeves - When to Use')
10. Apply solvent cement (type B non-pressure) evenly around all barbs on the 10 into 1 manifold b4 connect into main PVC pipe. Visually inspect barbs for any missed glue spots or blockages. Push tubes on and connect to pipe. This is recommended for independent systems, and the system operating pressure needs to be set below 50kpa.
11. Where sleeves are used, push these on by hand or use a sleeving tool to assist. Hold tubes behind the sleeve individually with 1 hand while the sleeve is pushed onto the barb.

b) JOINING STRIPS

Where possible, if you can, avoid joining rolls by using strip lengths to suit the length of the roll. The job will then be done without joins minimising the leak potential of the solar collectors. (Refer to 'System Design' for ideal strip lengths.)

1. Run rolls out to end.
2. Place next roll along side and cut both ends square.
3. Separate strips into individual tubes and cut off webbing approximately 100mm from end.
4. Using a joining barb, apply solvent cement evenly around each barb and insert into the tubes – be careful to not block the waterways.
5. Fit sleeves onto tubes if necessary, prior to fitting barbs.
6. Push sleeves over joining barbs.

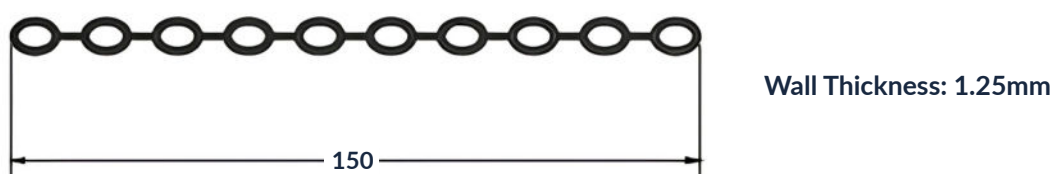
INSTALLING SOLAR COLLECTOR

c) PRESSURE SLEEVES - WHEN TO USE

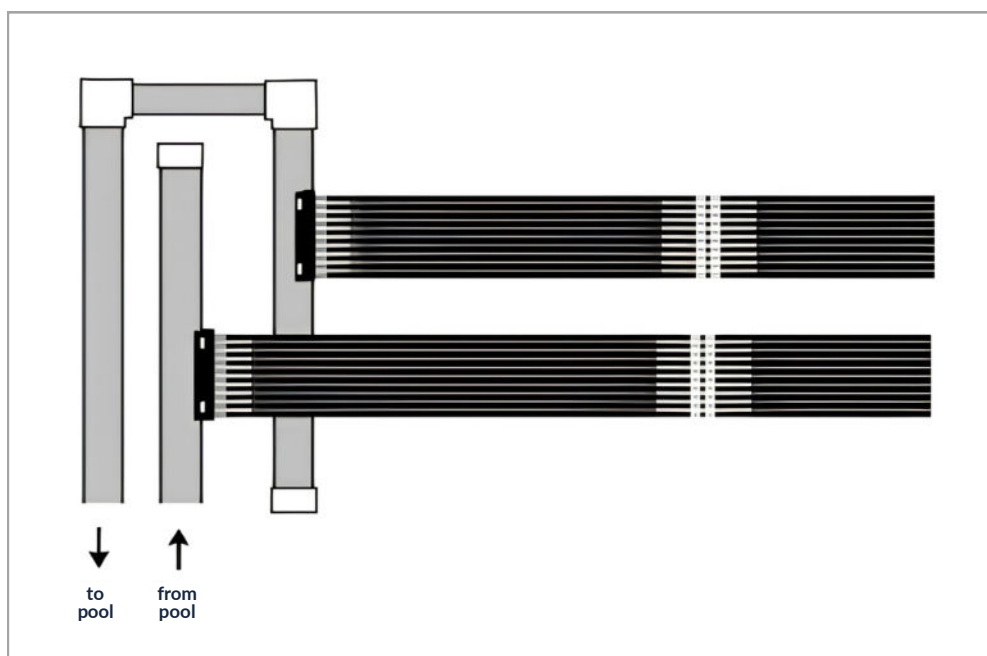
Heatseeker premium profile

Use sleeves only on the manifold connections and collector strip joints where independent lines are not provided (i.e. – using a booster pump on the return line of the existing filtration system.).

Sleeves are not required on the manifold connections of an independent system where system pressure is maintained below 50 kPa.



N.B. If unsure, fit pressure sleeves.

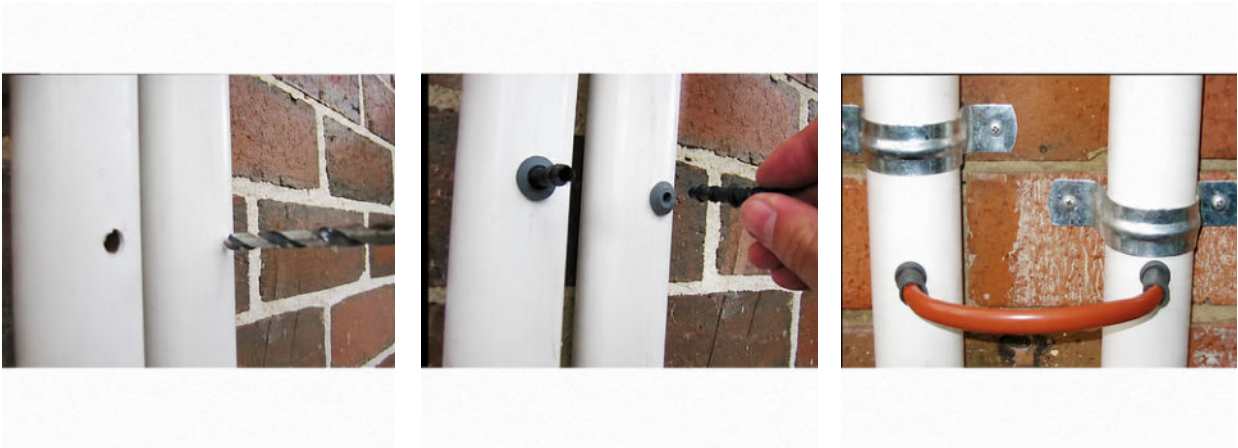


INSTALLING SOLAR COLLECTOR

d) DRAINAGE LOOPS (Balance Tube)

A drainage loop or a balance tube, which it is sometimes referred to, should be fitted approximately 1.5 metres above ground level at the wall.

Its purpose is to drain the water level below the vacuum valve installed at gutter level. This will prevent the vacuum valve from “fluttering” and possibly leaking. Its other purpose is to remove the static head (water pressure) above the in line check valve that has been installed. The check valve prevents the solar pump from losing “prime” but also on high roofs holds a lot of water above it making it difficult for the pump to prime.



1. Drill two 8.5mm holes using a blunted drill bit.
2. Install rubber grommets.
3. Using a solar tube approximately 150mm long, fit barbs and sleeves and with a smear of silicone acting as a lubricant, push drainage loop into grommet holes.

e) VACUUM VALVES

The purpose of the vacuum valve is to introduce air into the system when the solar turns off and remove the gravitational pull of the water in the system. If it is not installed, the solar tubes will collapse, and the PVC pipe could too causing irreparable damage.

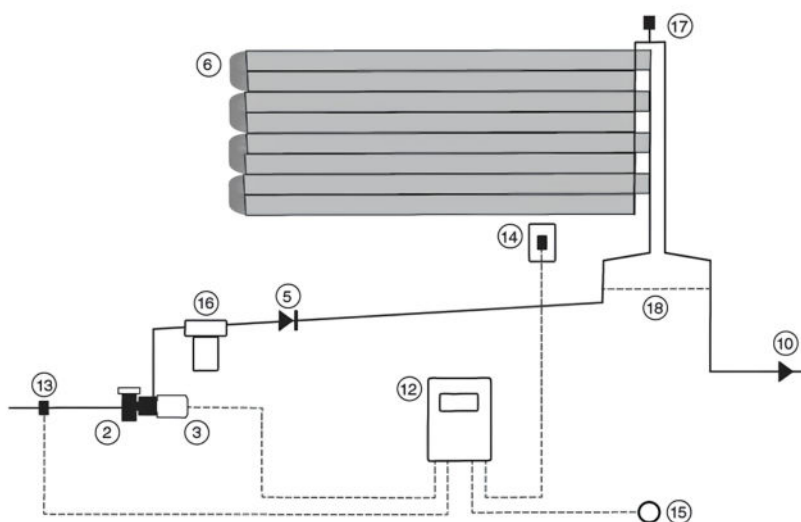
For best results the vacuum valve should be installed on the “up” line at gutter level on the highest roof.

If it leaks, then it will drip on the ground, and the owner should notice it and fix it. If it is installed on the roof it could leak and not be noticed causing excessive loss of pool water and in the case of saltwater pools extensive corrosion.

On the high roofs (6m or above), gravity can pull the water down too quickly and open the vacuum valve allowing continuous air to return to pool and collapse the tubes. If this occurs, install a two-way valve on the return line near vacuum valve. Throttle back until either the correct pressure is achieved; the vacuum valve has sealed or the tubes are of normal shape.

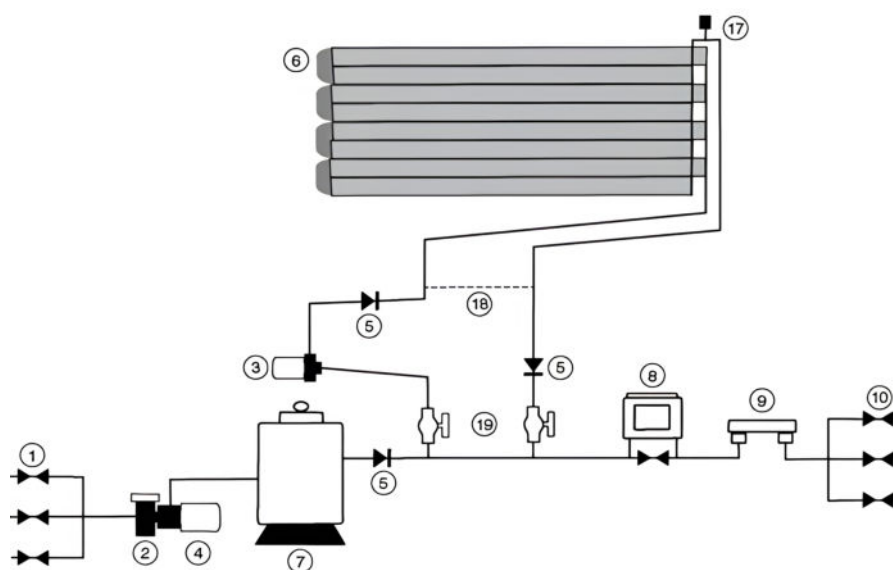
INSTALLING SOLAR COLLECTOR

INDEPENDENT SYSTEMS



NOTE 1 Location of vacuum release can vary depending on manufacturer recommendations.

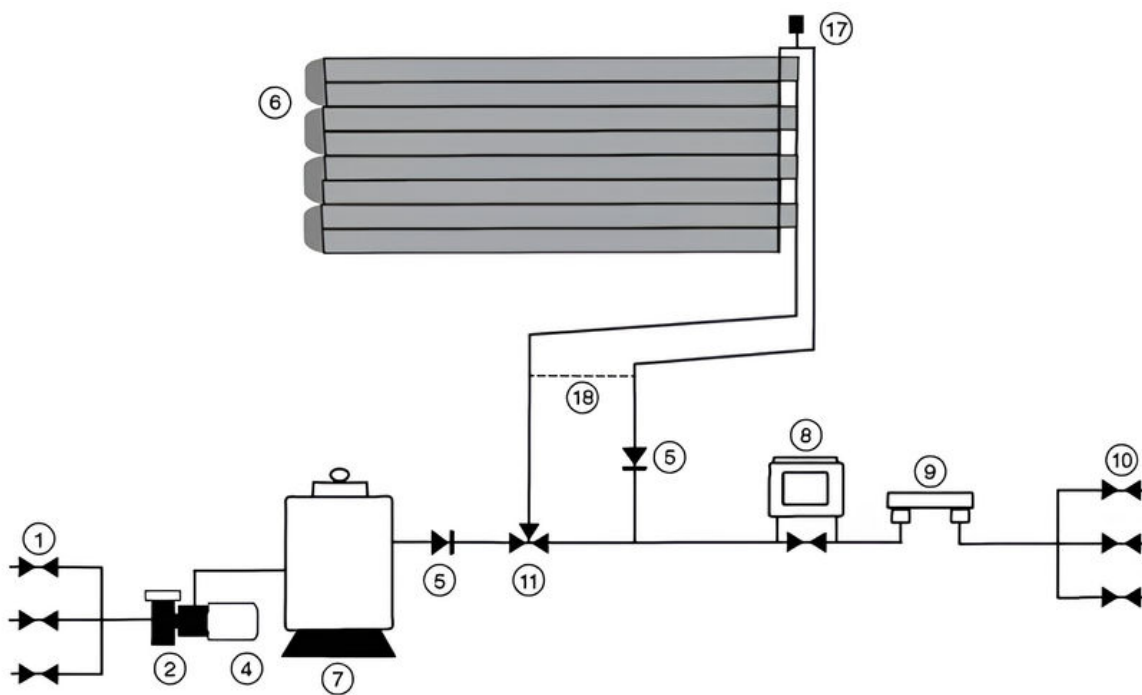
RETRO SYSTEMS



Solar pump interlocked to run with filter pump.

INSTALLING SOLAR COLLECTOR

MANUAL SYSTEM



KEY

1 = Pool suction	8 = Auxiliary heater	15 = 240 V supply
2 = Strainer	9 = Chlorinator	16 = Filter/strainer for solar circuit
3 = Solar pump	10 = Pool returns	17 = Vacuum release
4 = Filter pump	11 = 3-way diverter valve	18 = By-pass
5 = Check valve	12 = Automatic controller	19 = Isolation valves
6 = Solar collector	13 = Pool water sensor	
7 = Filter	14 = Solar sensor	

NOTE 1 Automatic controls have been omitted for clarity.

NOTE 2 Solar circuit arranged for reverse return.

NOTE 3 Location of vacuum release can vary depending on manufacturer recommendations.

MANUFACTURER'S WARRANTY

Heatseeker Premium Solar Pool Heating Warranty

This manufacturer's warranty is provided by Supreme Solar Pty Ltd, trading as Supreme Heating. It is provided in addition to your rights and remedies under the Australian Consumer Law.

Australian Consumer Law

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law.

You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

This warranty is provided in addition to, and does not limit or replace, your rights under the Australian Consumer Law.

Warranty Period

Component	Warranty Period
Heatseeker Premium Solar Collector	20 Years
Manifold	5 Years
Installation Workmanship	12 Months

Warranty Coverage

During the applicable warranty period, Supreme Solar Pty Ltd warrants that the Heatseeker Premium solar pool heating system will be free from defects in materials and workmanship when installed, operated and maintained in accordance with this manual.

Where a valid warranty claim is accepted, Supreme Solar Pty Ltd may, at its discretion:

- repair the product;
- replace the defective component;
- replace the product with an equivalent model; or
- reimburse the reasonable cost of an approved repair.

Labour Warranty

Installation workmanship and in-field labour are covered for a period of 12 months where installation has been completed by Supreme Heating or an authorised installer.

Labour, travel and freight costs incurred after the applicable labour warranty period are the responsibility of the original purchaser unless otherwise required under the Australian Consumer Law.

MANUFACTURER'S WARRANTY

Warranty Exclusions

This warranty does not cover damage or failure resulting from:

- fair wear and tear;
- misuse, abuse, neglect or accidental damage;
- incorrect installation or unauthorised repairs or alterations;
- failure to follow installation, operating or maintenance instructions;
- poor or adverse pool or spa water chemistry;
- damage caused by unsuitable chemicals, solvents or adhesives;
- animal, vermin or insect damage;
- fire, flood, lightning or other events outside normal operating conditions;
- corrosion or consequential damage caused by leaking chlorinated or salt water;
- damage occurring during transport after delivery;
- routine maintenance items; or
- no-fault-found service calls.

Owner Responsibilities

The owner is responsible for ensuring the solar pool heating system is correctly installed, operated and maintained in accordance with Supreme Heating's instructions.

The system should be regularly inspected, particularly before seasonal start-up, and any leaks or damage should be addressed promptly to prevent further damage.

Making a Warranty Claim

If you believe your Heatseeker Premium system has developed a fault covered by this warranty, contact your original supplier or Supreme Heating as soon as the fault becomes apparent.

To assist with processing your claim, you may be asked to provide:

- proof of purchase;
- installation date;
- product and installation details;
- description of the fault; and
- photographs if requested.

Contact

Supreme Heating

A trading name of Supreme Solar Pty Ltd

2/19 Enterprise Drive

Bundoora VIC 3083 Australia

Phone: 1300 787 978

Email: info@supremeheating.com.au

Website: www.supremeheating.com.au