



eco solar

pool heating

- ▶ **The logical choice to heat your swimming pool or spa**
- ▶ **Free heating from the Sun**
- ▶ **Zero greenhouse gas emissions**
- ▶ **Extends your swimming season**
- ▶ **Long operating life**



Environment friendly pool heating

FREE FROM THE SUN

solar pool heating

Eco Solar Pool Heating systems are designed and manufactured in Australia under ISO 9001 conditions, and are installed to AS3634-1988 standards for swimming pools. We have been in the industry since 1993 and take pride in our quality products and installations.

We offer professional fully installed pool solar heating systems, as well as DIY kits for the handyman and people in remote areas. All DIY kits come with detailed instructions and phone support to assist with correct installation.



What is swimming pool solar heating?

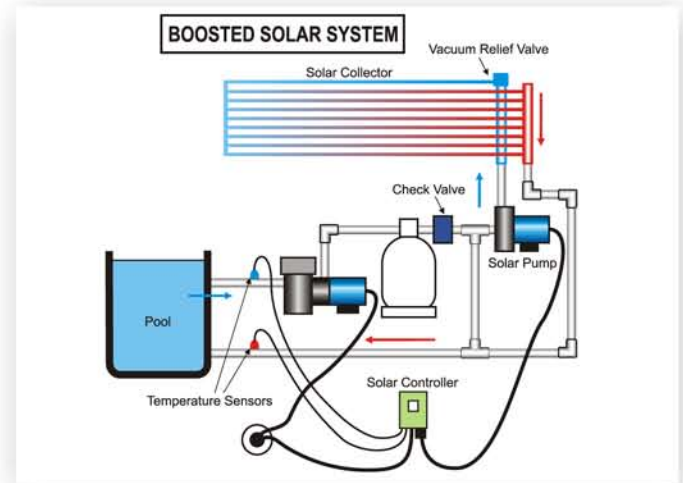
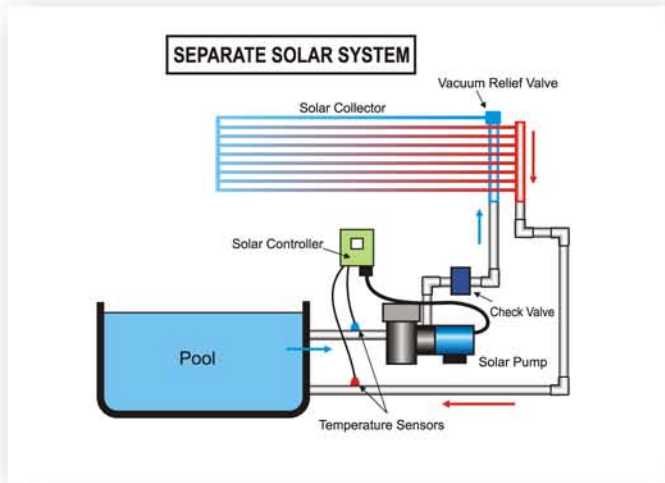
Swimming pool solar heating is an economical and environmentally responsible means of heating your pool or spa water with energy received free from the Sun.

Quite simply water is pumped from the pool through a collector array, (which is normally mounted on a roof) where the water absorbs heat from the sun as it travels through the collector, returning to the pool a

few degrees warmer.

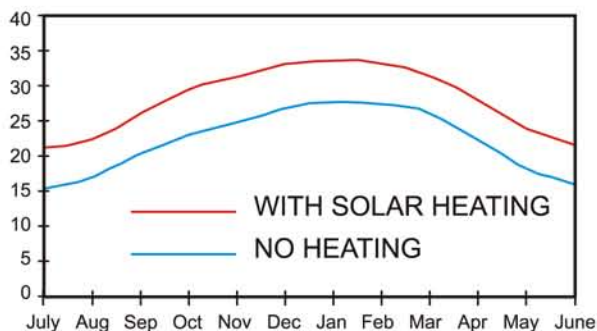
This continuous circulation of water through the solar collector throughout the day raises the overall pool temperature.

It doesn't matter if you have an old or new pool, Eco Solar Pool Heating can be retro fitted to just about any pool.



Effectiveness of solar heating

Pool solar heating is an efficient means of heating a pool or spa for the majority of the year. An appropriately sized and installed system will, on average, raise the water temperature of a pool by at least six degrees celcius, compared to a similar unheated pool. The end result is an extended swimming season, and your investment in a swimming pool that can be enjoyed for most of the year.



Solar Controller

Optimum performance of a pool solar heating system requires accurate temperature measurement of the pool water, and the solar collector's ability to heat the pool water throughout the day.

The solar controller measures these temperatures and controls a pump to circulate water through the solar collector.

The solar controller is set to a required temperature by the user, and the controller then operates the pump to heat the pool water to the set temperature.



Installation of the solar collector

Eco Solar Pool Heating collectors can be tailor made to fit just about any roof shape. Because our collector materials are not a rigid panel type it allows more flexibility for the collector to be installed in the most appropriate part of the roof.

The Economical Choice

Solar Heating uses the Sun's energy to heat the pool water, and because the Sun's energy is free the operating costs are extremely low, especially when compared to any other form of pool heating.

Solar heating and the Environment

Pool solar heating is the most environmentally responsible means of heating your pool. It is the longest lasting with fewer parts to wear out, and unlike Electric or Gas Heaters which consume large amounts of energy derived from fossil fuels, solar heating produces Zero carbon emissions.



Solar collector materials

The collector must be efficient at absorbing and transferring heat from the sun to the pool water, be able to cope with extreme levels of UV light, resist damage from temperature extremes, promote good water flow characteristics, and provide reliable service during its lifespan.

There are several popular materials which are widely used, and they all have both strengths and weakness. Eco Solar Pool Heating offers a range of materials so we can tailor make a system to suit your individual needs and budget. Our low profile absorber designs are attractive, thermally efficient, with excellent water flow for effective heating. The absorber profile widths have been designed to fit most standard roof tiles, and with correct installation will not trap water on either a metal or tile roof.

Material Type	PVC Nitrile Poly Vinyl Chloride	EPDM Ethylene Propylene Rubber	Silicone High grade, peroxide cured Silicone Rubber
Cost	Low	Low	High
Life Expectancy	10 years (black)	15 years	20+ years
Long Term Physical Properties	Good	Very Good	Excellent
Vacuum Crush Potential	Yes	Nil	Nil
Heat Transfer Properties	Good	Very Good	Good
Colour Availability	Yes	Black only	Yes
Colour Retention	Good	N/A	Excellent
High Temp. Resistance to Softening	Good	Excellent	Excellent
Low Temp. Resistance to Hardening	Good	Excellent	Excellent
Pool Chemical Resistance	Excellent	Very Good	Excellent

Coloured solar collector

Colour is determined by what parts of the light spectrum an object reflects, and which parts it absorbs. Black objects are black because they absorb nearly all the light, (visible radiation) that falls on it, and that light is then converted into heat. White objects reflect almost all light, so they do not heat up nearly as quickly as black objects, and colours fall somewhere in between.

The most efficient and economical colour for a pool solar heating collector is therefore black, however the decrease in efficiency of a coloured solar collector can be partly compensated for by increasing the area of collector on the roof. Eco Solar Pool Heating offers a range of coloured solar collectors to suit the most popular roof colours.



Header Pipes and Loop returns

One of the most important parts of a pool solar heating system is the Header Pipes and return loops. The header pipes flow water in and out of the collector tubes and their quality will ensure a reliable system. The header pipes, like the collector material, are exposed to extreme UV, and cycles of heat and cold which requires them to be able to expand and flex without cracking and breaking. Eco Solar Pool Heating custom make these header pipes to suit each individual installation. They are made from class-12 uPVC pressure pipe which has excellent flexibility, UV resistance, and a life expectancy of 20 years.

The collector tubes are fixed to the header pipes using the tried and tested system of compression fit rubber grommets, this allows flexing in the system and provides good hail resistance.

Our collector is designed to be split into low profile near flat loop returns which maintain excellent water flow, and there are no additional joints on our loop returns thus reducing potential areas for faults, (water leaks) to develop.



Should I also use a pool cover?

Solar pool heating can be supplemented with a pool cover to gain additional heat and thus extend the swimming season even further. An appropriate pool cover will help insulate the pool, reducing the heat loss from the pool's surface.

A pool cover will also greatly reduce water evaporation from the pool, and assist help keep debris out of the pool. The end result is a warmer, cleaner pool, and one that requires less chemicals to maintain water quality.



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