



User Manual

Solar Pool Heating

Please keep this document in a safe place for future referral

Install Address:

Install Date:

Installer:

System Type: Heliocol

Controller Type: Aquasmart

Pump / motorised valve Type: Poolstore pump

Contents

Introduction	3
Living with solar pool heating	3
Seasonal adjustments	3
Solar performance / Covering your pool.....	4
Is my system working properly?	4
What should I not do?	4
Maintenance.....	5
Appendix / products manuals:	5

Introduction

The solar pool heating system includes solar panels, solar controller, pipework and a solar pump or diversion valve.

The solar controller is the brains of the system and continually monitors pool and roof temperatures to maintain optimum performance. When the roof becomes 5°C hotter than the pool temperature the solar pump starts or the motorised valve diverts the flow. This pumps water through the solar panels then returns hot water to your pool, via the filter. When this temperature differential drops to 2°C, either the collector has cooled down (end of the day or clouds) or the pool temperature increased, the pump / valve turns off. When the roof becomes hotter, the whole process starts again.

Living with solar pool heating

Congratulations, you have now extended the comfortable swimming season of you pool.

Once set up; the solar controller will take care of the system for you. Most controllers have a maximum pool temperature setting, refer to controller owners manual.

Set this temperature to your desired maximum temperature, the pump or valve will shut down when the pool reached this temperature. This prevents the pool from becoming too warm in the middle of summer.

Seasonal adjustments

Summer – Make sure your pool pump is set to run daytime hours, when solar gain is available the pump / valve will divert water to the panels.

Every season is different but on average the air temperature is starting to increase by mid October, this is a good time to activate your pool solar. The first heating of the season is the slowest because there is heat loss into the cooler ground surrounding the pool.

Winter – When you winterise your pool and reduce the pump running time you may want to isolate your solar system for the winter. You can either unplug the dedicated solar pump from the controller (the controller will stay on but can't operate pump) or turn off the controller at the wall socket.

Solar performance / Covering your pool

A standard system can be expected to achieve an 8 to 10 degree rise of your pool temperature during summer. This should give a comfortable swimming season of 5 to 6 months, between mid October to mid April, with an average pool temperature between 24 to 28 deg.

The use of a pool cover should be considered when the maximum extended season is required. The extended season indicated can be approximately halved when a pool cover is not utilised.

Fact - *Up to 70% of your heat loss is caused by evaporation, the best way to prevent evaporation is with the use of a pool cover.*

While a cover is not normally needed during the summer months, a cover is recommended during periods of high winds or low overnight temperatures to retain heat in your pool.

The above are intended as a guide only – during sustained periods of low solar heat gain or poor conditions the performance of the system will be affected.

To achieve good pool temperatures the system will achieve the best results if it is exposed to at least three consecutive days of good weather with the pool cover in place.

Is my system working properly?

Freenergy install clear lid non return valves, this is a simple way to confirm your solar is flowing. You can see the flap lift inside the valve when the solar flow is running

What should I not do?

Never isolate any valves without first isolating the solar pump or motorised valve.

If your pool solar has a solar boost pump that feeds from the main pool pump, never shut off the pool pump without also shutting off the solar booster pump (otherwise this will cause the pump to run dry and damage the seals and impellor).

Maintenance

Your system should be largely maintenance free but like all hydraulic system with pumps, controllers and pressurised water, it will benefit from ongoing maintenance.

Freenergy will contact you each spring to arrange pre season maintenance inspection.

This will ensure your system is set up for optimum heat generation and check your system for any leaks or wear and tear.

If you have any concerns that something is faulty or not operating correctly, please contact Freenergy as soon as possible. Small maintenance problems left unchecked can lead to larger system faults.

If you have any performance or maintenance issues, please contact
Freenergy Solar Solution
021 375013

Appendix / products manuals:

System Schematic

Photos

Controller manual

Pump or motorised valve specifications