

Sun-Tec Solar Energy

Solar Pool Heater Components

Our Header

While most solar pool manufacturers weld the header to the absorber, which can lead to many problems, all SHC collectors are manufactured utilizing an over-molded header.

That means that the header is molded, or formed directly over the absorber surface, creating a single body unit, with no gaps, leaks, missed welds, cold seals, clogs, plugged absorber holes, dimpled tubes, or other possible manufacturing defects.

An over molded header is a “Direct Feed” header, meaning that your pool water faces no restrictions and flows freely from the header to the absorber. With an “Indirect Feed” header, water passes from the main header through very small holes into a secondary sub-header before being fed into the absorber. Direct Feed headers are far more efficient because the water is permitted to flow freely, with no restrictions that create higher backpressure on your pools pump and filtration system.

Our Absorbers

SHC solar pool heating absorbers utilize a “tube-on-fin” design, which captures the most heat, and allows for natural lateral expansion and contraction. SHC’s absorber surface also features flexible vertical expansion joints every six inches across the width of the four foot wide collector. SHC produces the only collectors in the world with this unique feature which allows the absorber to flex freely along the width of the collector to even out temperature variances and allow the panel to lay flat without buckling and creating high stress zones.

Our Mounting Hardware

When it comes to the mounting hardware, we thought of everything. We created a mount that is as unobtrusive, yet as secure as possible. Our mounts cause no irritation to the roof. They are built to last without deterioration from the elements. They provide sealed protection of the roof penetration points. In short, they are perfect.

We created the **Universal Anchor Mount** as the first step in achieving this goal. The universal mount features a special 2-piece design. The bottom anchors into the roof trusses and cradles the collector header, holding it slightly off the roof surface and allowing for lateral expansion and contraction of the collector as it heats and cools throughout the day. The second top piece locks securely into the base piece.

Should you ever need to remove your collector, your authorized SHC dealer just removes the top of the universal mount to gain access to the collector.

An added mounting system is the **Strap Anchor** – a series of 3 to 4 steel reinforced straps that run the length of the solar array with an anchor between each collector.

SHC’s anchors also utilize two-piece construction for added protection. Again, the bottom piece is secured into the roof, the strap lays across it and fits into a special lock-tight groove, then the cap screws onto the base securing the strap and protecting the anchor from the elements.

Our Controller

We use an automatic controller on our solar pool heating systems rather than a manual controller. What is the difference? The controller works very similarly to the thermostat you have for your home's climate control. Would you rather set the thermostat for your favorite temperature and forget it, or have to get up and down to turn the thermostat off and on every time the room felt too hot or cold? With an automatic controller, you set the pool temperature one time, and forget it.

IntelliFlo Variable Speed Pumps



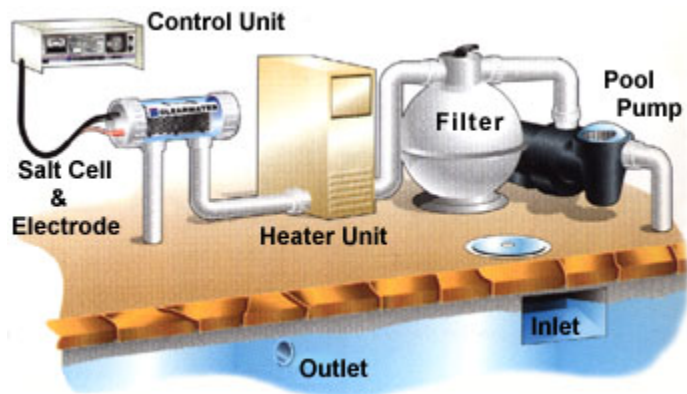
When Pentair® first introduced IntelliFlo variable speed technology, it set off a marketplace revolution with its energy efficiency, near-silent operation and long service life. Now comes the latest member of the IntelliFlo family, the new IntelliFlo variable speed pump. It further refines the field-proven advancements that have led IntelliFlo pumps to outsell all other variable speed brands combined. Check out these advantages and you'll quickly see why:

Features

- ENERGY STAR® Certified: meets strict energy efficiency criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.
- Energy savings up to 90% versus traditional pumps*
- 8 programmable speed settings and built-in timer to ensure the pump runs at optimum speed and duration
- Ultra-efficient permanent magnet motor design reduces noise and vibration for greater efficiency and longer pump life
- Dramatically quieter operation – as low as 45 decibels – about 4 times quieter than most traditional-style pumps.**
- Totally enclosed fan-cooled (TEFC) design and low average operating speed makes IntelliFlo the quietest pump on earth
- Fully compatible with IntelliTouch®, EasyTouch®, SunTouch® Pool Control Systems and other brands of digital pool/spa controls for managing pump, heating, lighting, spa jets and water features.
- Built in diagnostics protect the pump for longer service life

*Savings based on variable speed pump compared to a single-speed pump running 12 hours per day at an average of \$0.16 per kWh in a 20,000 gallon pool. Actual savings may vary based on local utility rates, pool size, pump run time, pump horsepower, pump rpm, plumbing size and length, pump model, service factor and other hydraulic factors.

** Compared to noise level of typical 1.5 hp single-speed pump.



The benefits of salt systems in pools are the convenience and the constant delivery of pure chlorine-based sanitizer. The reduction of irritating chloramines versus traditional chlorinating methods and the “softening” effect of electrolysis reducing dissolved alkali minerals in the water are also perceived as benefits. For some people that have sensitivities to chlorine, these systems may be less offensive. Salt water pools are cheaper to maintain throughout the year, since salt is significantly cheaper than the commercial chlorines.

How it Works

Salt chlorine generators utilize a chemical process called *electrolysis* to form hypochlorous acid (a sanitizer) from salt and water. The key characteristic that distinguishes salt chlorine from its sanitizing counterparts is its ability to recycle itself. After the hypochlorous acid sanitizes the swimming pool water, it reverts back to salt, and then the process repeats.

Advantages of Salt Chlorine Sanitization

- Because the chlorine generated is so concentrated at the point of production (inside the salt cell), swimming pool water is superchlorinated when it passes through the energized cell. This superchlorination helps combat the buildup of chloramines.
- Swimmers experience less skin and eye irritation in salt chlorine swimming pools than in traditionally-chlorinated swimming pools.
- Salt chlorine produces nearly neutral pH levels, so few additional chemicals are required to balance the pH levels in salt chlorine swimming pools.