EnerWorks

Residential Solar Water-Heating + Seasonal Pool-Heating

Application: Adding Seasonal Home Pool or Hot-Tub Heating

- **Improve your solar water-heating appliance's year-round performance** by using excess solar energy in summer to heat your pool or household-plumbed hot tub
- **Extend your pool season** with more solar heat available in late spring and early fall
- Adding pool-heating as a secondary seasonal application can supply you with **more solar energy in winter** for household hot water
- Systems modified for pool-heating divert solar heat for domestic hot water either **completely or partially** depending on homeowner's preference
- **Ask your dealer** for information on how they can modify the EnerWorks appliance for pool heating and make your solar water-heating appliance more efficient

North America typically has warm summers and cold winters. Due to the tilt of the Earth's axis, North America also has more hours of sunlight in summer than in winter. This provides an opportunity to use excess solar energy in the summer to heat a seasonal swimming pool or an externally-plumbed and heated hot-tub.

To supply solar pool-heating in the summer, the solar water-heating appliance can be up-sized to produce more hot water throughout the year.

Depending on the consistency of the domestic water load, the system can be configured manually (biased toward household hot water for consistent domestic use) or automatically (detecting how much solar energy is available for pool-heating). By not wasting any of the available solar radiation, year-round performance of the solar water-heating appliance is improved, providing a better return on your investment.

Contact your dealer for more information on how your EnerWorks solar water-heating appliance can be modified for this innovative and cost-effective solution.

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Details:

Solar collectors are usually located near the pool's mechanical area. Collectors can be mounted on a roof, pool gazebo, fence, or ground rack.

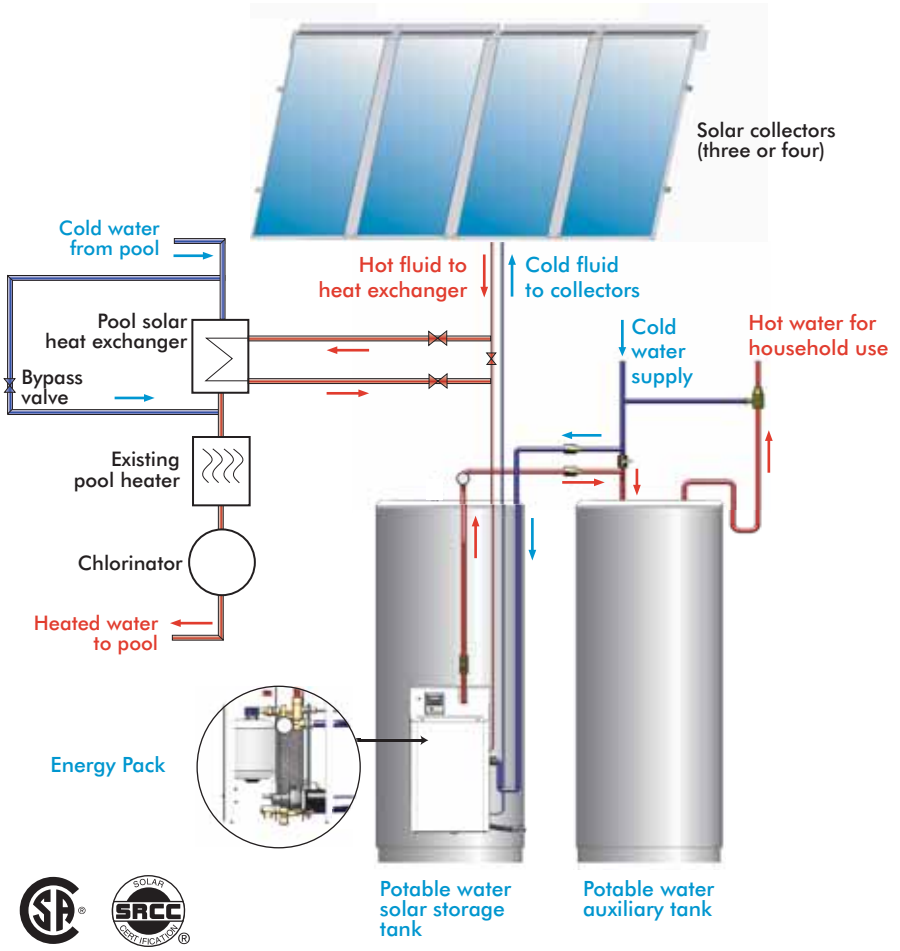
A **secondary, chlorine-resistant heat exchanger** transfers solar energy from the heat-transfer fluid to the pool water. This **displaces the energy required** by the existing pool-heater.

Heat-transfer fluid from the collectors is **diverted completely or partially** from the domestic hot water appliance to pool-heating, depending on the **homeowner's priority.**

Large volumes of pool water require a bypass. **Rather than heating the entire volume** of pool water, a **portion of the pool water is heated to a greater degree** and mixed with the bypass, resulting in a **warmer pool at lower costs**.

When ambient temperatures are low, glazed collectors are **very effective at capturing solar energy** and **limiting heat loss** by the convection of air or by wind blowing over the collector. Unglazed plastic absorbers, designed specifically for pool heating, are **effective only during the hottest months** of the summer and their **effectiveness is greatly reduced by wind.**

Using solar energy for potable hot water and seasonal pool-heating is a **highly economical solution** for both of these water-heating needs.



Printed on recycled paper.

Printed in Canada

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Dec. 2007 Rev. 2.0