SunEarth

Applications

Solar Water Heating
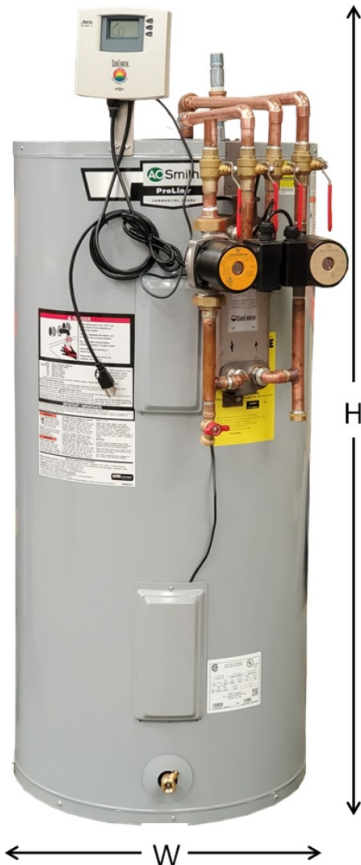
Technical Specifications:

System	
Maximum Collector Area[1]	96 ft^2
Maximum Building Height[2]	30 ft
Potable Plumbing Diameter	$^3/_4$"
Solar Electrical	
Maximum Power Input	195 Watts
Input Voltage	120 V
Backup Heating Element Electrical (Optional)	
Maximum Power Input	4500 Watts[3]
Input Voltage	240 V

[1] Collectors plumbed in parallel.
[2] Based on 20 feet of piping to the collectors.
[3] Dual elements for 50 gallon model (recommended: disable the lower element).

Materials

Tank:	Glass Lined Steel Vessel with 2" Non-CFC Foam Insulation
Heat Exchanger:	316 Stainless Steel Plates
Drainback Tank:	Copper
Plumbing:	Type M Copper Pipe
Potable Pump:	Stainless Steel Wetting Surfaces
Solar Pump:	Stainless Steel Wetting Surface

Models			
Model Number	**Description**	**Dimensions (H x L x W)**	**Approx. Gross Weight**
100004-13-50-1	HWS Cascade 2 50 gallon	61" x 30" x 23"	211 lbs.
100004-13-65-1-6	HWS Cascade 2 65 gallon	70" x 30" x 22"	202 lbs.
100004-13-65-1-12*	HWS Cascade 2-65 gallon	70" x 30" x 22"	202 lbs.
100004-13-80-1-6	HWS Cascade 2 80 gallon	70" x 32" x 24"	241 lbs.
100004-13-80-1-12*	HWS Cascade 2-80 gallon	70" x 32" x 24"	241 lbs.
100004-13-120-1-6	HWS Cascade 2 120 gallon	74" x 38" x 28"	328 lbs.
100004-13-120-1-12*	HWS Cascade 2-120 gallon	74" x 38" x 28"	328 lbs.

* 12 year tank warranty.

Due to SunEarth's policy of continuous product improvement, specifications are subject to change without notice.

General:

The SunEarth CASCADE 2 HWS is a ready to install, pre-engineered hot water station (HWS) designed with seamless installation in mind. Factory assembled using top tier components and tested for hydraulic integrity. The CASCADE 2 HWS contains all the components and safety devices necessary for SunEarth's high performing Drain Back indirect system. Featuring a brazed plate heat exchanger, adjustable three speed pump and manufactured by SunEarth, the CASCADE 2 HWS is the installers obvious choice.

Hot Water Station Features:

1. **Tank:** Glass lined and pressure rated the tank uses R-17 insulation and painted metal jacket. Includes a 4500 Watt heating element as a back-up for confidence in hot water availability. The storage tank is protected by a 150 psi/210°F relief valve and magnesium sacrificial anode.*

2. **Controller:** Operates the pump through differential temperature algorithms, the Liquid Crystal Display (LCD) offers insight into the system operation and condition. The controller reports temperature readings from 2 distinct locations; (T1) collector, (T2) bottom of storage tank. Optional: (T3) top of storage tank.

3. **Drain Back Reservoir:** The CopperStor represents a cost effective advance in drainback reservoir design. Fabricated from spun-end seamless copper tubing with no ferrous metal components, the CopperStor is nearly impervious to corrosion and allows for direct sweated connections without the need for troublesome dielectric unions. High temperature 15% silver brazed joints ensure high strength and are not affected by lower temperature flames used for sweating the connections. A 3/4" brass cap on the top of the units creates a simple and cost effective method for checking the fill level with a dipstick. CopperStor reservoirs are finished with a water-based matte black paint and wrapped in 1/2" Rubatex insulation to minimize heat loss and sound.

4. **Pump:** Wet-rotor type whereas the pump and motor form an integral unit without shaft seals. Solar and Potable pump utilize composite impellers with stainless steel volutes. Multiple speed settings provide the ability to tune the solar system for optimal operation rates.

5. **Heat Exchnager:** Brazed Plate Heat Exchanger manufactured from corrosion resistant 316L Stainless Steel. Channel design promotes turbulent flow for superior heat transfer through a range of flow rates. Built in stainless filters ensure scale is trapped in flush ports and into the precision fluid channels of the heat exchanger**.**

* *HWS Cascade 2-50 gallon model uses a dual heating element tank with Coreguard® anode rod and Blue Diamond® glass coating.*