



Exclusive ACR Solar International Corp. Skyline "ISLANDER" Solar Water Heater

By Al C. Rich, November 20, 2010

Website: www.SolarRoofs.com

The "Islander" Solar Water Heater features a 100% "Run By The Sun" design utilizing high quality "Skyline" 10-01 collectors that are made in the USA. They are very light



weight, architecturally attractive, high performance, SRCC OG-100 Rated, easy to install and are tested to withstand winds over 150 MPH.

The overall system is exceptionally easy to install because there are no ugly, heavy tanks on the roof above the collector(s). The Skyline design results in low roof loading and a much safer installation. The Collectors connect to an existing or added 20 to 120 gallon tank depending on the size of the collector array as specified in the sizing guide.

All needed solar side parts are included to do a simple installation to an existing or added standard 20 to 120 gallon water heater. The Silver kit includes all specialty parts and, unless the Gold upgrade installation kit is ordered, the installer supplies all solar line and tank connection lines and fitting.

Patented Skyline 10-01 Collector and Options:



Skyline 10-01" 10 Sq/Ft Collector, 20" wide X 6' long, 3' thick, 19 Lb. High Performance Black Crystal all copper Thermafin absorber. Unbreakable Twinwall Polycarbonate glazing with High UV protection. SRCC OG-100 rated.

- Single collector includes 4 -1 ½" Mounting Ell brackets, 8 color coded screws to attach mounting ells and 4 washers.
- Two or more collectors include compression union body for each additional stacked collector.
- Trim Colors, Standard: Dove (medium) Gray (CO109), or free option - Musket Brown, (CO101) plus 25 optional colors.
- Islander Default color is Dove Gray, Default configuration is Stacked (one above the other)



These parts are easily available at the hardware store. Islander 10 and 20 square foot (S/f) systems can use low cost CPVC pipes to connect the Skyline 10-01 collectors to the storage tank with provided 5' copper adaptors. The 5' length of copper serves as a heat buffer to protect the CPVC from high collector temperatures in cases where the system starts up after a stagnation condition.

It is highly recommended that 3 or 4 collectors (30 and 40 s/f) should use copper lines to prevent melting the CPVC under stagnation conditions. 50 and 60 s/f systems are available and are recommended only to be used with 120 gallon tanks. Other system sizes, configurations and parts are available to fill your needs.



- Optional Tilt Kits – aluminum rail, legs and feet tilt collectors approximately 18 degrees, or as specified, from existing roof angle.
- Other options are available.



Skyline System Sizing Guide:

* For areas where the average supply water is 75 F or greater. For areas with an average water supply

temperature to the solar storage tank of under 75 F we recommend adding 10 s/f to family size.

System:	* Family size	Recomm. Tank Size	Thermal Watts / kWh Day
10 s/f Silver system 100111CS	1 - 3	20 - 40 Gallon	500 W / 3 kWhs
20 s/f Silver system 100111CS	3 - 5	30 - 50 Gallon	1,000 W / 6 kWhs
30 s/f Silver system 100111CS	5 - 6	50 - 80 Gallon	1,500 W / 9 kWhs
40 s/f Silver system 100111CS	6 +	80 - 120 Gallon	2,000 W / 12 kWhs

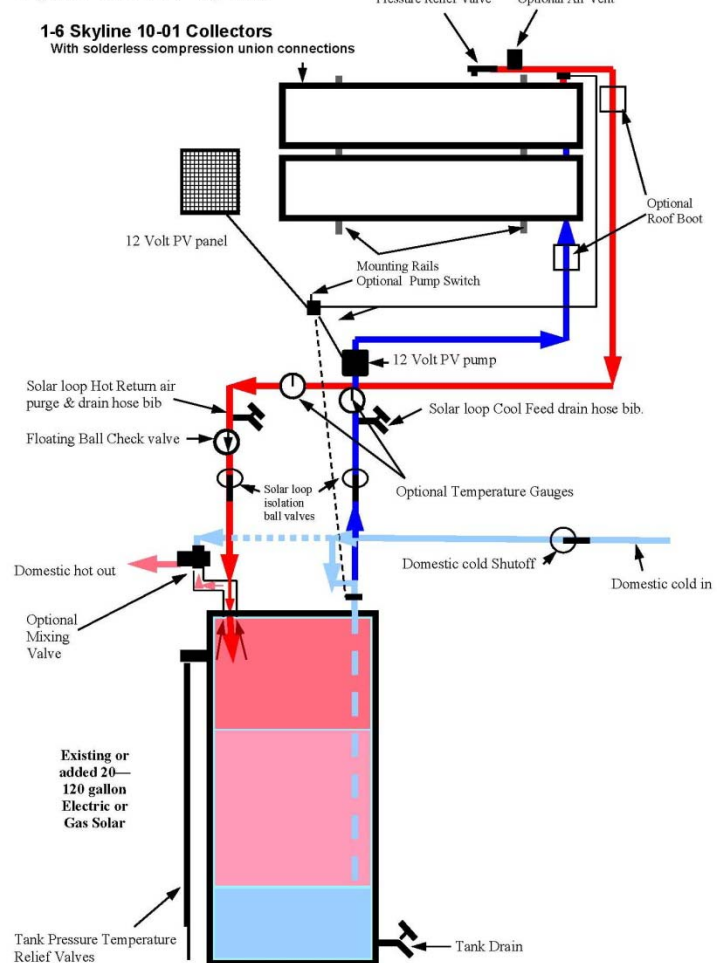
Components Included in the System:

- 10-01 Skyline collector(s) with 4 Ell Brackets, trimmed in Dove (medium) Gray, White, or Colonial Red. Optional colors available.
- 10-01 collector 6" mounting blocks + PV rail, with stainless fender washers and 4" lags, tube polyurethane caulk.
- 10 Watt, 12 Volt PV panel, mounts to PV / mounting rail with included hardware.
- 12 Volt 1/2" M (Male Pipe Thread) x 1/2" M PV Pump with 25" of wire and 4 wire nuts.
- 2, 5' long 1/2" od soft copper tubes with 1/2" Male adaptor soldered on end to connect copper or CPVC line from tank to.
- 1, 1/2" F (Female Pipe Thread) Pressure Relief valve to protect solar loop.
- 1, 1/2" compression Tee to connect Pressure relief valve adaptor and 5' copper adaptor to collector Hot return line.
- 1, 1/2" compression union to connect 5' copper adaptor to collector feed line.
- 2, 1/2" F Hose Bibs to drain solar loop. Return side Hose Bib is used to purge solar loop of air and charge solar loop with water. The feed side Hose Bib allows water to be drained from the collector and feed line.
- 2, 1/2" F X F Ball Valves to isolate the solar loop before the hose bibs from the tank.
- 1, 1/2" F X F Floating Ball Check Valve installed on the solar hot return line prevent tank heat loss at night.

NOTE: Hardware items such as connecting lines, Tees, etc. needed to connect hose bibs, ball valves, etc. and to the tank are not included unless the "Gold" install kit is included.

"Gold" Install Kit Option: Includes all fitting, solar loop Quick Connect Kit to tank drain, 50" of 1/2' od copper tube, 2 thermometers, switch, Tempering valve, air vent and fittings. This kit meets SRCC OG-300 "Skyline3" Ratings. Specify tank

Skyline "Islander" System



being connected to. Solar tanks with 4 top connections are supplied with the Gold "Top Connect" kit.

Optional Parts Available: Tempering valve, recommended for 30 and 40 s/f | PV 10 TopsFlow Pump | 50' 1/2" OD soft copper roll | 2" Temperature Gauge, 1/2" NPT | High Temp. Solid Pipe Insulation, 1/2" Wall for 1/2" 5/8" OD Tube 6' long | 10 Watt PV Panel