

**STATE PREMIER® SOLAR WATER HEATING**

# **THE BEST WAY UNDER THE SUN TO GET HOT WATER.**

**A COMPLETE, READY-TO-INSTALL PACKAGE THAT USES THE SUN FOR UP TO 70% OF THE ENERGY REQUIRED FOR WATER HEATING.**



**SOLID.STATE.**

# PREMIER® Solar Water Heating Systems

PREMIER® is more than just a solar water heater - it's the ultimate solar thermal solution. High efficiency ratings, long life and reduced carbon emissions are just a few things that make it an irresistible choice for environmentally conscious homeowners. Utility costs for water heating being reduced up to 70% make PREMIER® a wise choice for everyone.

The time has never been better to invest in renewable energy.  
Demonstrate your own green initiative with PREMIER® Solar.

## THE PREMIER® ADVANTAGE:

- 16 solar water heating systems - one, two or three collector configurations - collectors can be added for larger systems.
- All solar water heating systems are SRCC certified OG-300.
- ENERGY STAR® qualified systems - refer to chart on back cover
- Proudly partnered with Chromagen™ to provide top-of-the-line solar thermal collectors.
- All solar thermal collectors are SRCC certified OG-100.
- Standard and Deluxe solar system packages are available.
- All system packages include integrated solar pump stations.
- 65, 80 & 120-gallon direct and indirect solar booster tanks with 4500 watt back-up heating elements.
- Single wall and double wall heat exchanger systems.
- Solar Energy Factor (SEF) ratings up to 10.1.
- Provides up to 70% of the energy needed for water heating directly from the sun.
- Can produce the same amount of energy as photo-voltaic solar collectors at 1/8th of the cost.
- Eligible for Federal Tax Credit - 30% of the total installed cost (no cap). May also be eligible for local and utility company rebates. Visit [www.statewaterheaters.com](http://www.statewaterheaters.com) for more information.
- Solar thermal collectors and solar pump stations can be purchased individually or in bulk.
- Full line of solar accessories including Solar Pathfinder™ site analysis unit and Pathfinder Assistant Software, contractor installation kits, collector tilt kits and roof mounting kits for composite, flat, tile, split seam and corrugated metal roof installations.
- 4-Year extended solar tank and 3-year extended pump station warranty available.



## Living Green, Saving Green

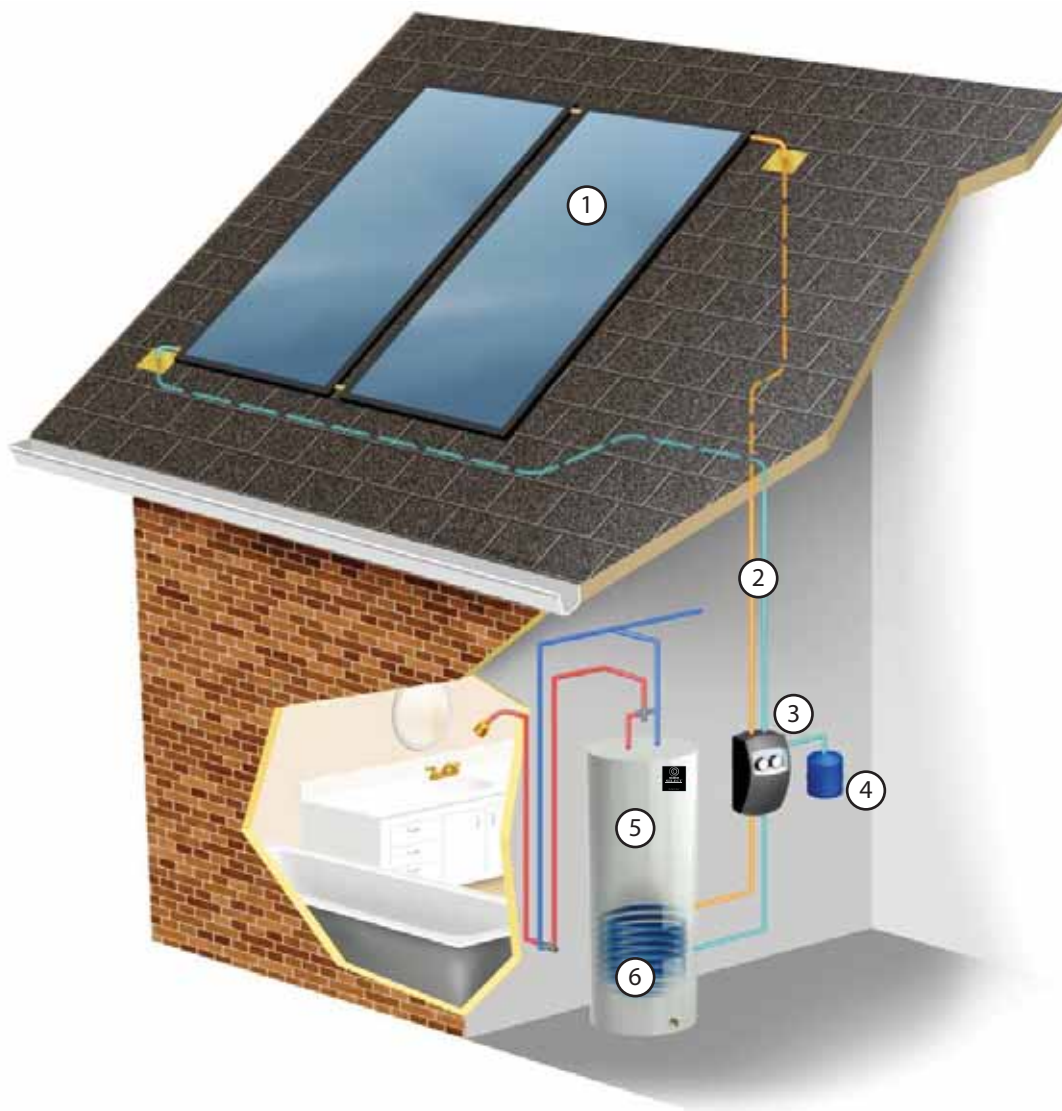
If you've been looking for a way to live a "greener" lifestyle, installing a PREMIER® solar water heating system in your home is a great way to start. Consider the facts: water heating accounts for 14% to 25% of the total energy consumed in a home. They are second only to air conditioning and heating systems in household energy consumption. With Solar Energy Factor (SEF) ratings up to 10.1, a PREMIER® solar water heating

system can provide up to 70% of the energy needed for heating water directly from the sun. PREMIER® systems are OG-300 certified by the Solar Rating and Certification Corporation (SRCC), which means they are eligible for many state, local and utility rebate programs in addition to Federal tax credits. PREMIER® has a great impact on the environment and your wallet!

## How Do PREMIER® Systems Work?

PREMIER® Solar Water Heater Systems utilize energy from the sun to provide hot water. System components include: ① solar thermal collectors mounted on a south facing roof, ② solar loop piping, ③ an integrated solar pump station, ④ a solar loop expansion tank, ⑤ a solar booster tank and ⑥ a heat exchanger. The sun heats a transfer fluid flowing through the solar collectors. The

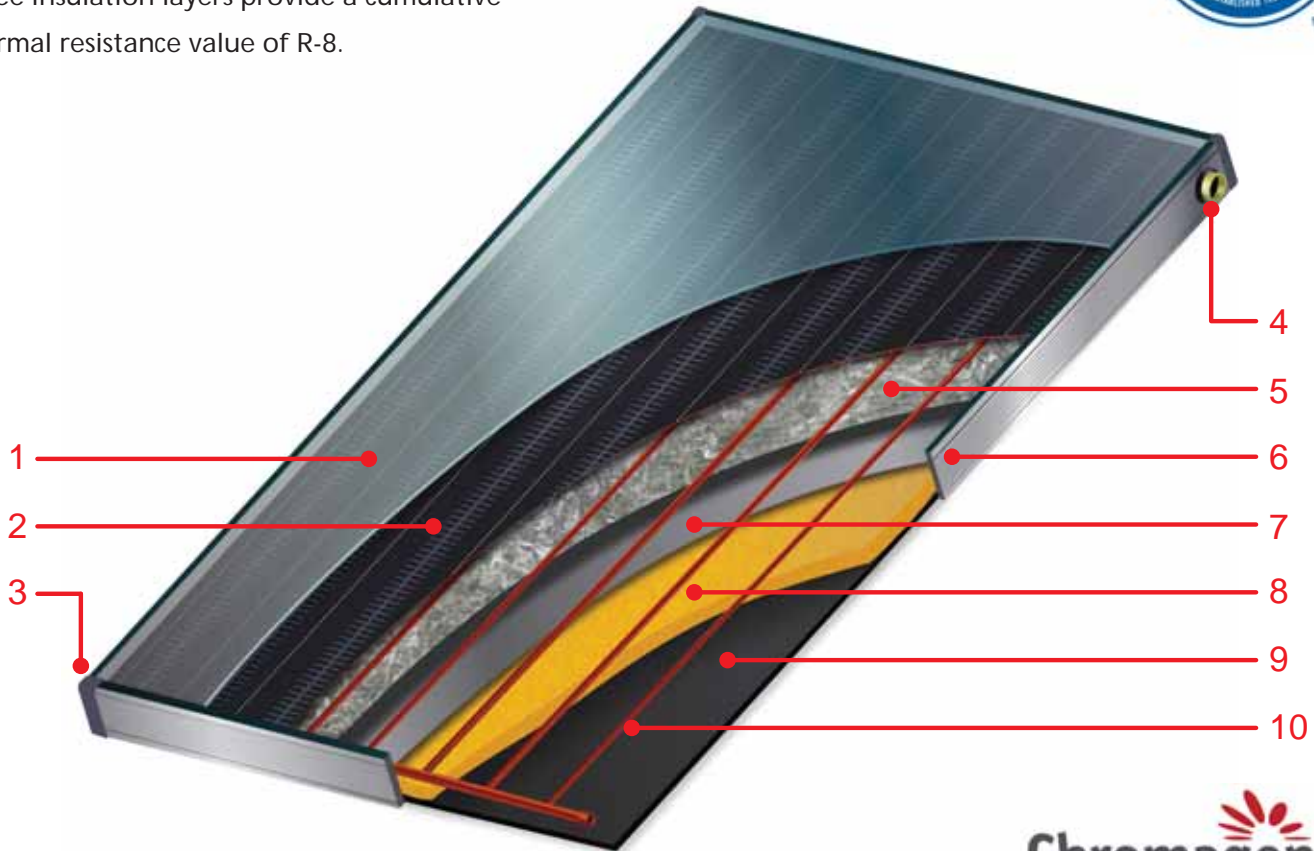
heat transfer fluid is a mixture of distilled water and non-toxic propylene glycol to prevent freezing in the winter. The integrated pump station circulates the heat transfer fluid through the solar loop piping to a heat exchanger where the heat energy is transferred to the water inside a solar booster tank.



## All Solar Collectors Are Not Created Equal

Backed by over 40 years of expertise Chromagen™ has fine-tuned the design and manufacture of solar collectors to an art. Collectors are assembled using the highest quality materials and advanced techniques, which result in highly efficient, durable products you can depend on for years to come.

- Optimal heat absorption and efficiency.
- Riser tubes are laser welded to the absorber plate which ensures optimum heat transfer and permanent bond.
- Three insulation layers provide a cumulative thermal resistance value of R-8.



1. Low-iron patterned and tempered glazing provides superior strength, anti-glare surface and 91% solar transmittance.
2. Aluminum absorber plate with spectrally selective black coating provides more than 90% solar absorption and less than 40% IR emission for high performance even in cooler climates.
3. Rugged nylon glass fiber moldings on all four corners protect collectors and adjacent property from damage during transport and installation.
4. 1-1/8 inch outside diameter (O.D.) copper sweat inlet/outlet connections.
5. Glass wool insulation layer
6. Black anodized extruded aluminum casing - interlocking construction assembly - requires no fasteners that loosen over time and allow moisture infiltration.
7. Integrated aluminum foil insulation barrier.
8. Injected rigid Polyurethane foam insulation layer.
9. Durable black Polypropylene backsheet - resists punctures during transport and installation, resists corrosion for the life of the collectors.
10. Type M copper risers 5/8" and manifolds 1-1/8" are brazed together in a parallel tube configuration - ensuring optimal flow and a low pressure drop. Collectors may be installed in portrait or landscape orientation.

## Integrated Solar Pump Stations

Double Wall Pump Station



Standard Pump Station



### All-in-one integrated, insulated assembly features:

- Clean professional looking installation.
- Saves time and money.
- Programmable electronic solar system control with advanced diagnostics and LCD display.
- Precise flow control - multiple speeds pumps, flow control valves and variable speed controls.
- Flow meter, temperature and pressure gauges.
- Solar loop pressure relief valve.
- Isolation valves, fill and drain valves, check valves and an air stripper.
- Standard pump stations are used with indirect solar booster tanks that have factory installed internal single wall coil-type heat exchangers.
- Double wall pump stations are equipped with plate-type stainless steel heat exchangers (double wall) and two circulation pumps; one for potable water and one for the heat transfer fluid in the solar loop. They are used with direct solar booster tanks.

## Solar System Packages and Solar Booster Tanks

Standard and Deluxe solar system packages are available, see the comparison table below. Use our Solar Sizing Guide to determine the number of solar collectors and solar booster tank needed. Order a system package that meets the sizing needs making sure double wall heat exchanger systems are ordered when required by local building codes. Order the required solar booster tank separately to complete the system.

Visit [www.statewaterheaters.com](http://www.statewaterheaters.com) for more information including; Specification Sheets, Solar Sizing Guide with site analysis instructions, Online Rebate Locator, Installation Videos and Instruction Manuals.

### INTEGRATED PREMIER® SYSTEMS INCLUDE:

Deluxe vs Standard - Included System Components		
System Component Description	Standard	Deluxe
Solar Collector(s)	X	X
Integrated Solar Pump Station With Advanced Programmable Digital LCD Controller	X	X
Solar Loop Expansion Tank (Includes Bracket/Stainless Steel Flex Pipe)	X	X
Solar Loop Pressure Relief Valve	X	X
Thermostatic Mixing Valve	X	X
Propylene Glycol (DOWFROST™) 5-Gallons	X	X
Solar Loop Air Vent	X	X
Temperature Sensors (2) - Tank & Collector Outlet	X	X
Collector Spanner Mounting Hardware Kit (Stainless Steel/Aluminum)	X	X
Roof Flashing for solar loop piping supply line (1 - copper)		X
Roof Flashing for solar loop piping return line and sensor wire (1 - copper)		X
Roof Flashing Kit (Shingle Roof Mounting Kit) - 4 Per/Collector (iodized aluminum)		X
Temperature Sensor Control Wire 75' Roll		X
Collector Copper Sweat Fittings Kit		X
Flexible Pipe Insulation (UV Resistant/300°F) 6' x 1/2" tube (1)		X
Flexible Pipe Insulation (UV Resistant/300°F) 6' x 1" tube (1)		X
Tape, Stretch & Seal		X
Roof & Flashing Sealant		X

# STATE PREMIER® SOLAR WATER HEATER

## Deluxe Solar System Packages - Solar Tanks Not Included

Model Number	Number of Collectors	Solar Collector Model - Size (ft)	Heat Exchanger Type	Solar Booster Tank Ordered Separately (80 or 120-gallon)	Solar Energy Factor / ENERGY STAR® Qualified		Approx Shipping Weight (lbs)
					80 Gallon Tank	120 Gallon Tank	
SSX01-ACI-501	1	CR-140-AP - (4' x 10')	Single Wall Internal Coil	SB6-80-SOTX or SB6-120-SOTX	2.2/Yes	1.9/Yes	564
SSX02-ACI-202	2	CR-110-AP - (3-1/2' x 7')	Single Wall Internal Coil	SB6-80-SOTX or SB6-120-SOTX	3.0/Yes	2.3/Yes	542
SSX02-ACI-402	2	CR-130-AP - (4' x 8')	Single Wall Internal Coil	SB6-80-SOTX or SB6-120-SOTX	5.3/Yes	3.3/Yes	586
SSX03-ACI-203	3	CR-110-AP - (3-1/2' x 7')	Single Wall Internal Coil	SB6-80-SOTX or SB6-120-SOTX	10.1/Yes	4.9/Yes	635
SSX01-ACE-501	1	CR-140-AP - (4' x 10')	Double Wall External Plate	SBV-82-10TS or SBV-120-10TS	1.8/Yes	1.7/No	590
SSX02-ACE-202	2	CR-110-AP - (3-1/2' x 7')	Double Wall External Plate	SBV-82-10TS or SBV-120-10TS	2.2/Yes	2.1/Yes	560
SSX02-ACE-402	2	CR-130-AP - (4' x 8')	Double Wall External Plate	SBV-82-10TS or SBV-120-10TS	3.0/Yes	2.8/Yes	614
SSX03-ACE-203	3	CR-110-AP - (3-1/2' x 7')	Double Wall External Plate	SBV-82-10TS or SBV-120-10TS	4.3/Yes	3.5/Yes	661

## Standard Solar System Packages - Solar Tanks Not Included

Model Number	Number of Collectors	Solar Collector Model - Size (ft)	Heat Exchanger Type	Solar Booster Tank Ordered Separately (80 or 120-gallon)	Solar Energy Factor / ENERGY STAR® Qualified		Approx Shipping Weight (lbs)
					80 Gallon Tank	120 Gallon Tank	
SSX01-ACI-501LC	1	CR-140-AP - (4' x 10')	Single Wall Internal Coil	SB6-80-SOTX or SB6-120-SOTX	2.2/Yes	1.9/Yes	556
SSX02-ACI-202LC	2	CR-110-AP - (3-1/2' x 7')	Single Wall Internal Coil	SB6-80-SOTX or SB6-120-SOTX	3.0/Yes	2.3/Yes	534
SSX02-ACI-402LC	2	CR-130-AP - (4' x 8')	Single Wall Internal Coil	SB6-80-SOTX or SB6-120-SOTX	5.3/Yes	3.3/Yes	578
SSX03-ACI-203LC	3	CR-110-AP - (3-1/2' x 7')	Single Wall Internal Coil	SB6-80-SOTX or SB6-120-SOTX	10.1/Yes	4.9/Yes	627
SSX01-ACE-501LC	1	CR-140-AP - (4' x 10')	Double Wall External Plate	SBV-82-10TS or SBV-120-10TS	1.8/Yes	1.7/No	582
SSX02-ACE-202LC	2	CR-110-AP - (3-1/2' x 7')	Double Wall External Plate	SBV-82-10TS or SBV-120-10TS	2.2/Yes	2.1/Yes	560
SSX02-ACE-402LC	2	CR-130-AP - (4' x 8')	Double Wall External Plate	SBV-82-10TS or SBV-120-10TS	3.0/Yes	2.8/Yes	606
SSX03-ACE-203LC	3	CR-110-AP - (3-1/2' x 7')	Double Wall External Plate	SBV-82-10TS or SBV-120-10TS	4.3/Yes	3.5/Yes	653

## Indirect Solar Booster Tanks

Model Number	Gallon Capacity	Energy Factor	Heat Exchanger Included	Heating Element (240 VAC Single Phase)	GPH Recovery @ 90° F Rise	Dimensions (inches)	Approx Shipping Weight (lbs)
SB6-80-SOTX	76	N/A	Single Wall Internal Coil	1 upper - 4500W	21	63-1/4" x 24"	257
SB6-120-SOTX	108	N/A	Single Wall Internal Coil	1 upper - 4500W	21	63-1/4" x 28"	365

## Direct Solar Booster Tanks

Model Number	Gallon Capacity	Energy Factor	Heat Exchanger Included	Heating Element (240 VAC Single Phase)	GPH Recovery @ 90° F Rise	Dimensions (inches)	Approx Shipping Weight (lbs)
SBV-65-10TS	65	N/A	No	1 upper - 4500W	21	59-1/4" x 20-1/2"	152
SBV-82-10TS	80	N/A	No	1 upper - 4500W	21	63-1/4" x 24"	204
SBV-120-10TS	119	N/A	No	1 upper - 4500W	21	63-1/4" x 28"	311

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 SRVBR00110 Revised April 2012R

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