

**ANNUAL PERFORMANCE**

**OF**

**OG-300 CERTIFIED SYSTEMS**

**IN**

**ASHEVILLE,  
NORTH CAROLINA**



**March 2008**

Solar Rating & Certification Corporation  
c/o FSEC, 1679 Clearlake Road  
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# SOLAR RATING AND CERTIFICATION CORPORATION

## Estimated Annual Performance of OG-300 Certified Solar Water Heating Systems in Asheville, NC

### Introduction

The Solar Rating and Certification Corporation (SRCC) is a non-profit organization whose primary purpose is the development and implementation of certification programs and national rating standards for solar energy equipment. The SRCC was incorporated in October of 1980 as an independent third-party certification entity. It is governed by a twelve-member board of Directors with representation from the public, private and generalist Sectors. It is unique in that it is the only national certification program established solely for solar energy products. It is also the only national certification organization whose programs are the direct result of combined efforts of state organizations involved in the administration of standards and an industry association.

The combined programs of the Solar Rating and Certification Corporation provide one-time certification, national recognition, product credibility, and standardized comparisons of solar energy products. The SRCC programs serve three primary constituencies: the solar energy industry, solar consumers, and state and federal regulatory bodies. All three constituencies benefit from the SRCC programs by obtaining a national state-of-the-art rating system, a mechanism to develop consumer confidence, and a rational and defensible criterion for tax credit qualification and other solar incentive programs.

The OG-300 certification program for solar water heating systems was established in 1992. It integrates results of collector tests and system tests with evaluations against minimum standards of system durability, reliability, safety and operation; as well as factors affecting total system design, installation, maintenance and service. A copy of the certification requirements<sup>1</sup> is available from SRCC.

### Performance Estimation Procedures

SRCC uses a computer model<sup>2</sup> to estimate the thermal performance of solar water heating systems under specified conditions. A separate computer model for each system is developed from test data on some of the system components, manufacturer's literature on the others, and theoretical calculations. The SRCC rating calculated using the computer model is called the Solar Energy Factor. It is published in a Directory and in a summary booklet<sup>3</sup>. These ratings are based on conditions similar to the ones defined by the U.S. Department of Energy for testing

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<sup>1</sup> "Operating Guidelines and Minimum Standards for Certifying Solar Water Heating Systems", April 1997.

<sup>2</sup> "TRNSYS A Transient Simulation Program", Solar Energy Laboratory, University of Wisconsin - Madison, July 1994.

<sup>3</sup> "Directory of SRCC Certified Solar Water Heating System Ratings" and the Summary are available from the SRCC web site at [www.solar-rating.org](http://www.solar-rating.org).

conventional water heaters. These conditions describe hot water usage for a single day. Keep in mind that these ratings are only estimates based on an assumed set of operating conditions and that your actual performance will vary depending your hot water usage pattern and actual weather conditions.

The estimated annual performance indicators given in the attached tables are different from the SRCC ratings and are not directly comparable. The annual performance listed in this booklet was developed to provide an estimate of how solar water heaters could perform over a whole year in a specific location. The SRCC rating estimates the performance of the systems under “rating” conditions. Once again, keep in mind that these ratings are only estimates.

### Operating Conditions

The estimated annual performance listed in the attached tables is based on the following conditions:

Condition	Value
Hot water load	64.3 gallons (243 liters) per day drawn throughout the day with the maximum loads occurring at 8 am and 8 pm <sup>4</sup> .
Water mains temperature	Varied monthly using Asheville, NC values <sup>5</sup> .
Collector orientation	Facing south at a tilt of 26.6°.
Distance from collector to tank	25 feet (7.6 meters) pipe length (each way), 16 feet (4.9 meters) vertical rise.
Backup heater set point	125°F (51.7°C) <sup>6</sup>
Weather conditions	TMY2 data for Asheville, NC <sup>7</sup>
Air temperature around indoor tanks	$T_{air} + [(72 - T_{air})/3]$ , this estimates the temperature in a garage.

For reference, a conventional 50 gallon electric water heater with an energy factor of 0.9 would consume 4,400 kilowatt hours (kWh) per year under these conditions and a 50 gallon gas water heater with an energy factor of 0.6 would consume 215 therms (including delivered energy and losses).

<sup>4</sup> This profile adapted from the 1995 ASHRAE Applications Handbook, Chapter 45, and “A Domestic Hot Water Use Database”, Becker and Stogsdill, ASHRAE Journal, September 1990.

<sup>5</sup> “F-Chart”, Klein and Beckman, F-Chart Software, 1993.

<sup>6</sup> This set point was chosen as a compromise between the Department of Energy recommendation of 125°F (51.7°C), the plumbing code 120°F (48.9°C) maximum allowable in showers and tubs, and the 135°F (57.2°C) used in the Department of Energy test for conventional water heaters.

<sup>7</sup> “TMY2s, Typical Meteorological Years”, National Renewable Energy Laboratory, June 1995.

## Table Entries

The tables give the estimated annual performance for all OG-300 certified solar water heating systems. There are separate tables for systems using electric and gas backup water heaters. The systems are listed by company name, system name and model number. The remaining columns are as follows:

**System Number:** SRCC's reference number. This number is used to cross-reference a specific system in the Directory.

**FTL:** This is the Freeze Tolerance Limit. The Freeze Tolerance Limit is the temperature below which the solar water heating system might suffer damage due to freezing. This means that if the outdoor air temperature drops near the freeze tolerance limit it is necessary to follow the instructions in the owner's manual for protecting the system.

**Energy Savings:** This is the estimated annual performance of the system. This value is the quantity of energy that did not have to be provided by electricity or gas because of the contribution of the solar water heating system. Note that the electricity required to operate any pumps and controllers used in a particular system has been accounted for.

**Comments:** This column lists additional information regarding specific systems.

**Solar Rating and Certification Corporation**  
**Estimated Annual Performance of OG-300 Certified Solar Water Heating Systems**  
**Asheville, North Carolina**  
**with Electric Backup**

<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (kWhr)</b>	<b>Comments</b>
<b>ACR Solar International</b>					
Skyline System 3	100133C50	1999003G	30	1900	
Skyline System 3	200131C50	1999003A	30	1500	
Skyline System 3	200132C50	1999003B	30	2200	
Skyline System 3	200132C502TE	2002002A	30	2100	
Skyline System 3	200132C50T20E	2002004A	20	1900	
Skyline System 3	200132C80	1999003F	30	2300	
Skyline System 3	200133C50	1999003D	30	2700	
Skyline System 3	200133C80	1999003C	30	2800	
Skyline System 5	200152C80EX	2000007A	-54	2000	
Skyline System 5	200152C80EX2TE	2002003A	-54	1800	
Skyline System 5	200153C80EX	2000007B	-54	2500	
Skyline System 5	200153C80EX2TE	2002003B	-54	2300	
Skyline System 5	200154C80EX	2000007C	-54	2800	
<b>Alternate Energy Technologies</b>					
EagleSun	DB-120-64	2006006E	-20	2600	
EagleSun	DB-120-80	2006006F	-20	2800	
EagleSun	DB-120-96	2006006G	-20	3000	
EagleSun	DB-80-40	2006006A	-20	2000	
EagleSun	DB-80-52	2006006B	-20	2300	
EagleSun	DB-80-64	2006006C	-20	2600	
EagleSun	DB-80-80	2006006D	-20	2800	
EagleSun DX	DX-120-64	2006007E	-20	3100	
EagleSun DX	DX-120-80	2006007F	-20	3400	
EagleSun DX	DX-120-96	2006007G	-20	3500	
EagleSun DX	DX-80-40	2006007A	-20	2500	

**\* A conventional 50 gallon electric water heater would consume 4400 kWh under these rating conditions.**

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<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (kWhr)</b>	<b>Comments</b>
EagleSun DX	DX-80-52	2006007B	-20	2800	
EagleSun DX	DX-80-64	2006007C	-20	3100	
EagleSun DX	DX-80-80	2006007D	-20	3300	
<b>Bobcat &amp; Sun, Inc.</b>					
Sun-Pak	SP32CHE	1994005E	-60	1500	
Sun-Pak	SP32CHE-1	1994004E	-60	1800	
Sun-Pak	SP32PHE	1994005A	-60	1400	
Sun-Pak	SP32PHE-1	1994004A	-60	1700	
Sun-Pak	SP40CHE	1994005G	-60	1800	
Sun-Pak	SP40CHE-1	1994004G	-60	2100	
Sun-Pak	SP40PHE	1994005C	-60	1700	
Sun-Pak	SP40PHE-1	1994004C	-60	1900	
Sun-Pak	SP64CHE	1994005F	-60	2600	
Sun-Pak	SP64CHE-1	1994004F	-60	2800	
Sun-Pak	SP64PHE	1994005B	-60	2400	
Sun-Pak	SP64PHE-1	1994004B	-60	2600	
Sun-Pak	SP80CHE	1994005H	-60	2900	
Sun-Pak	SP80CHE-1	1994004H	-60	3000	
Sun-Pak	SP80PHE	1994005D	-60	2700	
Sun-Pak	SP80PHE-1	1994004D	-60	2900	
<b>BTF, Ltd.</b>					
Solar Patriot <sup>TM</sup>	SP20-1-65G-PV-E	2006018A	-50	1300	
Solar Patriot <sup>TM</sup>	SP20-2-80G-PV-E	2006018B	-50	2000	
<b>Butler Sun Solutions</b>					
Solar Butler	BSS-PV1-40Ea	2005005A	-54	1700	
Solar Butler	BSS-PV1-40Eb	2005005B	-54	1000	
Solar Butler	BSS-PV1-40Ec	2005005I	-54	1400	
Solar Butler	BSS-PV1-40Ed	2005005J	-54	1500	
Solar Butler	BSS-PV1-50Ea	2005005C	-54	1500	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
Solar Butler	BSS-PV1-50Ec	2005005H	-54	1400	
Solar Butler	BSS-PV1-80E2a	2005008A	-54	1600	
Solar Butler	BSS-PV1-80E2b	2005008B	-54	1900	
Solar Butler	BSS-PV1-80Ea	2005005E	-54	1900	
Solar Butler	BSS-PV1-80Ec	2005005G	-54	1600	
Solar Butler	BSS-S1-40Ea	2003001A	-54	1200	
Solar Butler	BSS-S1-40Eb	2003001B	-54	1000	
Solar Butler	BSS-S1-40Ec	2003001I	-54	1400	
Solar Butler	BSS-S1-50Ea	2003001C	-54	1400	
Solar Butler	BSS-S1-50Ec	2003001H	-54	1400	
Solar Butler	BSS-S1-80E2a	2005007A	-54	1600	
Solar Butler	BSS-S1-80E2b	2005007B	-54	1900	
Solar Butler	BSS-S1-80Ea	2003001E	-54	2000	
Solar Butler	BSS-S1-80Ec	2003001G	-54	1600	

**Energy Laboratories, Inc.**

Roof Integrated Thermosiphon Sy	RITH 72 E	2004006A	22	2100	
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**Enerworks, Inc.**

Solar Water Heating Appliance	EWRA1-E40	2005012A	-50	1900	
Solar Water Heating Appliance	EWRA1-E80	2005012B	-50	1900	
Solar Water Heating Appliance	EWRA2-E100	2005012D	-50	2600	
Solar Water Heating Appliance	EWRA2-E80	2005012C	-50	2700	
Solar Water Heating Appliance	EWRA3-E100	2005012E	-50	2600	
Solar Water Heating Appliance	EWRA3-E120	2005012F	-50	2600	
Solar Water Heating Appliance	EWRA4-E120	2005012G	-50	2700	
Solar Water Heating Appliance	EWRA4-E144	2005012H	-50	2600	

**Fafco, Inc.**

Polymer Drainback	VDB-48U-50E	2007002A	-20	1300	
Polymer Drainback	VDB-48U-50E-50S	2007003A	-20	1600	
Polymer Drainback	VDB-48U-50E-80S	2007003B	-20	1600	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
Polymer Drainback	VDB-48U-80E	2007002B	-20	2000	
Polymer Drainback	VDB-48UX2-50E	2007002C	-20	1500	
Polymer Drainback	VDB-48UX2-50E-50S	2007003C	-20	1800	
Polymer Drainback	VDB-48UX2-50E-80S	2007003D	-20	2000	
Polymer Drainback	VDB-48UX2-80E	2007002D	-20	2000	

**Heat Transfer Products**

SuperStor Conntender Solar	SSC-119SE	2007011C	-60	2900	
SuperStor Contender Solar	SSC-50SE	2007011A	-60	1900	
SuperStor Contender Solar	SSC-80SE	2007011B	-60	2200	
SuperStor Ultra Solar	SSU-119SE	2007019C	-60	2800	
SuperStor Ultra Solar	SSU119SE-DW	2007020B	-60	2800	
SuperStor Ultra Solar	SSU-60SE	2007019A	-60	1800	
SuperStor Ultra Solar	SSU-80SE	2007019B	-60	2200	
SuperStor Ultra Solar	SSU80SE-DW	2007020A	-60	2200	

**Heliodyne, Inc.**

Helio-Flo	HF 1408 G 80 AC S E	2001023A	27	2500	
Helio-Flo	HF 1410 G 120 AC S E	2001023C	27	2900	
Helio-Flo	HF 1410 G 80 AC D E	2001024A	27	2600	
Helio-Flo	HF 1410 G 80 AC S E	2001023B	27	2900	
Helio-Flo	HF 23366 G 80 AC D E	2001024B	27	3000	
Helio-Flo	HF 23366 G 80 AC S E	2001023D	27	3300	
Helio-Flo	HF 2408 G 120 AC D E	2001024D	27	3200	
Helio-Flo	HF 2408 G 120 AC S E	2001023F	27	3300	
Helio-Flo	HF 2408 G 80 AC D E	2001024C	27	3200	
Helio-Flo	HF 2408 G 80 AC S E	2001023E	27	2900	
Helio-Flo	HF 2410 G 120 AC D E	2001024E	27	3400	
Helio-Flo	HF 2410 G 120 AC S E	2001023G	27	3500	
Helio-Flo	HF 3408 G 120 AC D E	2001024F	27	3300	
Helio-Flo	HF 3408 G 120 AC S E	2001023H	27	3200	
Helio-Flo	HF 3410 G 120 AC D E	2001024G	27	3500	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
Helio-Flo	HF 3410 G 160 AC S E	2001023I	27	3200	
Heliopak	16 DWCL HP 1 3366 G 50 ACS	1992010J	-60	2000	
Heliopak	16 DWCL HP 1 3366 G 80 ACD	1992013G	-60	1600	
Heliopak	16 DWCL HP 1 3366 G 80 ACS	1992010K	-60	2000	
Heliopak	16 DWCL HP 1 408 G 65 ACD	1992013F	-60	1900	
Heliopak	16 DWCL HP 1 408 G 65 ACS	1992010A	-60	2300	
Heliopak	16 DWCL HP 1 408 G 65 PVD	1996004C	-60	2000	
Heliopak	16 DWCL HP 1 408 G 65 PVS	1996003C	-60	2200	
Heliopak	16 DWCL HP 1 408 G 80 ACD	1992013I	-60	1900	
Heliopak	16 DWCL HP 1 408 G 80 ACS	1992010N	-60	2300	
Heliopak	16 DWCL HP 1 410 G 65 ACD	1992013A	-60	2300	
Heliopak	16 DWCL HP 1 410 G 80 ACD	1992013J	-60	2300	
Heliopak	16 DWCL HP 1 410 G 80 ACS	1992010B	-60	2600	
Heliopak	16 DWCL HP 1 410 G 80 PVD	1996004A	-60	2400	
Heliopak	16 DWCL HP 1 410 G 80 PVS	1996003A	-60	2500	
Heliopak	16 DWCL HP 2 3366 G 120 ACS	1992010M	-60	3100	
Heliopak	16 DWCL HP 2 3366 G 80 ACD	1992013H	-60	2800	
Heliopak	16 DWCL HP 2 3366 G 80 ACS	1992010L	-60	3000	
Heliopak	16 DWCL HP 2 408 G 120 ACD	1992013C	-60	3000	
Heliopak	16 DWCL HP 2 408 G 120 ACS	1992010C	-60	3300	
Heliopak	16 DWCL HP 2 408 G 80 ACD	1992013B	-60	3000	
Heliopak	16 DWCL HP 2 410 G 120 ACD	1992013D	-60	3300	
Heliopak	16 DWCL HP 2 410 G 120 ACS	1992010O	-60	3500	
Heliopak	DWCL HE HP 1 3366 G 80 ACS	1992010I	-60	1900	
Heliopak	DWCL HE HP 1 408 G 80 ACS	1992010D	-60	2100	
Heliopak	DWCL HE HP 1 410 G 80 ACS	1992010E	-60	2400	
Helio-Pak Helix SS PV	HP HX SS 1 3366 G PV 50 EE S	2005003A	-60	1900	
Helio-Pak Helix SS PV	HP HX SS 1 3366 G PV 65 EE S	2005003B	-60	1900	
Helio-Pak Helix SS PV	HP HX SS 1 408 G PV 50 EE S	2005003C	-60	2200	
Helio-Pak Helix SS PV	HP HX SS 1 408 G PV 65 EE S	2005003D	-60	2200	
Helio-Pak Helix SS PV	HP HX SS 1 408 G PV 80 EE S	2005003E	-60	2200	

**\* A conventional 50 gallon electric water heater would consume 4400 kWh under these rating conditions.**

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
Helio-Pak Helix SS PV	HP HX SS 1 410 G PV 65 EE S	2005003F	-60	2600	
Helio-Pak Helix SS PV	HP HX SS 1 410 G PV 80 EE S	2005003G	-60	2600	
Helio-Pak Helix SS PV	HP HX SS 2 3366 G PV 80 EE S	2005003H	-60	3000	
Helio-Pak Helix SS PV	HP HX SS 2 408 G PV 120 SE S	2005003I	-60	3200	
Helio-Pak Helix SS PV	HP HX SS 2 410 G PV 120 SE S	2005003J	-60	3400	
Helio-Pak Helix SS PV	HP HX SS 3 3366 G PV 120 SE S	2005003K	-60	3400	
Helio-Pak Helix SS PV	HP HX SS 3 408 G PV 120 SE S	2005003L	-60	3600	
HP HELIX AC	HP 1 408 GAC WAC 50 S	1999004A	-60	2200	
HP HELIX AC	HP 1 410 GAC WAC 80 S	1999004B	-60	2400	

**Integrated Solar, LLC**

CopperSun	CS330-E	1997001B	20	1300	
CopperSun	CS330SV-E	2002007A	20	1200	
CopperSun	CS340-E	1997001C	20	1300	
CopperSun	CS340SV-E	2002007B	20	1200	
CopperSun	CS440-E	1997001A	20	1500	
CopperSun	CS450-E	1997001D	20	1500	
Radco Drainback Heat Exchanger	R-DBHX-12-120-D-80P	1992007I	-60	2600	
Radco Drainback Heat Exchanger	R-DBHX-8-120S-80P	1994007C	-60	2800	
Radco Drainback Heat Exchanger	R-DBHX-8-65-D-40P	1992007A	-60	1700	
Radco Drainback Heat Exchanger	R-DBHX-8-65S-40P	1994007A	-60	2000	
Radco Drainback Heat Exchanger	R-DBHX-8-80-D-64P	1992007C	-60	2400	
Radco Drainback Heat Exchanger	R-DBHX-8-80S-40C	1994007E	-60	2400	
Radco Drainback Heat Exchanger	R-DBHX-8-80S-40P	1994007D	-60	2000	
Radco Drainback Heat Exchanger	R-DBHX-8-80S-64P	1994007B	-60	2600	

**Mr. Sun Solar**

Sol-Reliant	SR 40/80 E PVDB	2004008B	-50	2500	
Sol-Reliant	SR 56/120 SE PVDB	2007015A	-50	3100	
Sol-Reliant	SR 56/80 E PVDB	2004008A	-50	3000	
Sol-Reliant	SR112/120 E PVDB	2007025C	-50	3600	
Sol-Reliant	SR112/80 E PVDB	2007025B	-50	3500	

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<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (kWhr)</b>	<b>Comments</b>
Sol-Reliant	SR80/80 E PVDB	2007025A	-50	3300	
<b>Rheem Water Heaters</b>					
Rheem Solaraide	RS47-21BP	2005013A	19	1100	
Rheem Solaraide	RS80-42BP	2005013B	19	1600	
<b>Schuco USA L.P.</b>					
Premium Package	Premium II-80E	2006012A	-40	2700	
Premium Package	Premium III-120E	2006012B	-40	3100	
Slimline Package	Slimline II-80E	2006014A	-40	2600	
Slimline Package	Slimline III-120E	2006014B	-40	3000	
<b>Solahart Industries</b>					
SOLAHART	181BCXII	2001011B	19	1100	
SOLAHART	181J & 181J Free Heat	2001010A	19	1100	
SOLAHART	181KF & 181KF Free Heat	2001011A	19	1200	
SOLAHART	181L	2001009A	41	1100	
SOLAHART	182BCXII	2001011D	19	1900	
SOLAHART	182J & 182J Free Heat	2001010B	19	1700	
SOLAHART	182KF & 182KF Free Heat	2001011C	19	2000	
SOLAHART	302BCXII	2001011F	19	1800	
SOLAHART	302J & 302J Free Heat	2001010C	19	1600	
SOLAHART	302JXII	2001010D	19	1600	
SOLAHART	302KF & 302KF Free Heat	2001011E	19	1800	
SOLAHART	302L	2001009B	41	1600	
SOLAHART	303BCXII	2001011H	19	2300	
SOLAHART	303J & 303J Free Heat	2001010E	19	2000	
SOLAHART	303JXII	2001010F	19	2000	
SOLAHART	303KF & 303KF Free Heat	2001011G	19	2300	
SOLAHART	303L	2001009C	41	2000	
SOLAHART	443BCXII	2001011J	19	2200	
SOLAHART	443J & 443J Free Heat	2001010G	19	1800	

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<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (kWhr)</b>	<b>Comments</b>
SOLAHART	443JXII	2001010H	19	1800	
SOLAHART	443KF & 443KF Free Heat	2001011I	19	2200	
SOLAHART	443L	2001009D	41	1900	
SOLAHART	444BCXII	2001011L	19	2500	
SOLAHART	444J & 444J Free Heat	2001010I	19	2100	
SOLAHART	444JXII	2001010J	19	2100	
SOLAHART	444KF & 444KF Free Heat	2001011K	19	2600	
SOLAHART	444L	2001009E	41	2100	
SOLAHART	ASE 181BCXII	2001014B	19	1600	
SOLAHART	ASE 181J & ASE 181J Free Heat	2001013A	19	1500	
SOLAHART	ASE 181KF & ASE 181KF Free He	2001014A	19	1600	
SOLAHART	ASE 181L	2001012A	41	1300	
SOLAHART	ASE 182BCXII	2001014D	19	2200	
SOLAHART	ASE 182J & ASE 182J Free Heat	2001013B	19	2000	
SOLAHART	ASE 182KF & ASE 182KF Free He	2001014C	19	2200	
SOLAHART	ASE 302BCXII	2001014F	19	2300	
SOLAHART	ASE 302J & ASE 302J Free Heat	2001013C	19	2000	
SOLAHART	ASE 302JXII	2001013D	19	2000	
SOLAHART	ASE 302KF & ASE 302KF Free He	2001014E	19	2300	
SOLAHART	ASE 302L	2001012B	41	1900	
SOLAHART	ASE 303BCXII	2001014H	19	2700	
SOLAHART	ASE 303J & ASE 303J Free Heat	2001013E	19	2300	
SOLAHART	ASE 303JXII	2001013F	19	2300	
SOLAHART	ASE 303KF & ASE 303KF Free He	2001014G	19	2700	
SOLAHART	ASE 303L	2001012C	41	2200	
SOLAHART	ASE 443BCXII	2001014J	19	2700	
SOLAHART	ASE 443J & ASE 443J Free Heat	2001013G	19	2300	
SOLAHART	ASE 443JXII	2001013H	19	2300	
SOLAHART	ASE 443KF & ASE 443KF Free He	2001014I	19	2700	
SOLAHART	ASE 443L	2001012D	41	2200	
SOLAHART	ASE 444BCXII	2001014L	19	2900	

**\* A conventional 50 gallon electric water heater would consume 4400 kWh under these rating conditions.**

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
SOLAHART	ASE 444J & ASE 444J Free Heat	2001013I	19	2500	
SOLAHART	ASE 444JXII	2001013J	19	2500	
SOLAHART	ASE 444KF & ASE 444KF Free He	2001014K	19	2900	
SOLAHART	ASE 444L	2001012E	41	2400	
Streamline Electric	270SL-2Bt	2004012A	41	2300	
Streamline Electric	270SL-2L	2004012B	41	1500	
Streamline Electric	270SL-3Bt	2004012C	41	2700	
Streamline Electric	270SL-3L	2004012D	41	1900	
Streamline Electric	340SL-2Bt	2004012E	41	2300	
Streamline Electric	340SL-2L	2004012F	41	1500	
Streamline Electric	340SL-3Bt	2004012G	41	2700	
Streamline Electric	340SL-3L	2004012H	41	1900	
Streamline Electric	430SL-2Bt	2004012I	41	2200	
Streamline Electric	430SL-2L	2004012J	41	1400	
Streamline Electric	430SL-3Bt	2004012K	41	2700	
Streamline Electric	430SL-3L	2004012L	41	1800	

**Solarhot**

Solvelox DB	S-SV-DB100	2007008A	-10	3100	
Solvelox DB	S-SV-DB100P32	2007008C	-10	1900	
Solvelox DB	S-SV-DB100P64	2007008B	-10	3000	
Solvelox Glycol	S-SV-G100	2007018A	-30	3100	
Solvelox Glycol	S-SV-G100ET	2007018B	-30	3700	
Solvelox Glycol	S-SV-GC100P64	2007018D	-30	3000	
Solvelox Glycol	S-SV-GET30	2007018C	-30	2900	
Solvelox Glycol	S-SV-GET30-120	2007018F	-30	2800	
Solvelox Glycol	S-SV-GET60-120	2007018E	-30	3800	

**Solene**

Solene/Chromagen DC Closed Lo	SLCR32DC-80HE	2006003A	-10	2000	
Solene/Chromagen DC Closed Lo	SLCR32DC-80HE-XE	2006031A	-10	1800	
Solene/Chromagen DC Closed Lo	SLCR40DC-80HE	2006003B	-10	2300	

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<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (kWhr)</b>	<b>Comments</b>
Solene/Chromagen DC Closed Lo	SLCR40DC-80HE-XE	2006031B	-10	2100	
Solene/Chromagen DC Closed Lo	SLCR60DC-80HE	2006003E	-10	2900	
Solene/Chromagen DC Closed Lo	SLCR64DC-80HE	2006003C	-10	3000	
Solene/Chromagen DC Closed Lo	SLCR64DC-80HE-XE	2006031C	-10	2700	
Solene/Chromagen DC Closed Lo	SLCR80DC-80HE	2006003D	-10	3200	
Solene/Chromagen DC Closed Lo	SLCR80DC-80HE-XE	2006031D	-10	3000	
Solene/Chromagen DC Open Loo	SLCR32DC-66	2005011A	20	2200	
Solene/Chromagen DC Open Loo	SLCR40DC-80	2005011B	20	2600	
Solene/Chromagen DC Open Loo	SLCR60DC-80	2005011C	20	3200	
Solene/Chromagen DC Open Loo	SLCR64DC-120	2005011D	20	3500	
Solene/Chromagen DC Open Loo	SLCR80DC-120	2005011E	20	3700	
Solene/Chromagen Drain Back	SLCR32DC-80DB	2006001A	-10	1900	
Solene/Chromagen Drain Back	SLCR32DC-80DB-XE	2006030A	-10	1700	
Solene/Chromagen Drain Back	SLCR40DC-80DB	2006001B	-10	2200	
Solene/Chromagen Drain Back	SLCR40DC-80DB-XE	2006030B	-10	2000	
Solene/Chromagen Drain Back	SLCR60DC-80DB	2006001E	-10	2800	
Solene/Chromagen Drain Back	SLCR64DC-80DB	2006001C	-10	2900	
Solene/Chromagen Drain Back	SLCR64DC-80DB-XE	2006030C	-10	2700	
Solene/Chromagen Drain Back	SLCR80DC-80DB	2006001D	-10	3200	
Solene/Chromagen Drain Back	SLCR80DC-80DB-XE	2006030D	-10	2900	
Solene/Chromagen PV Open Loo	SLCR32PV-66	2006002A	20	2600	
Solene/Chromagen PV Open Loo	SLCR40PV-80	2006002B	20	3100	
Solene/Chromagen PV Open Loo	SLCR60PV-80	2006002C	20	3600	
Solene/Chromagen PV Open Loo	SLCR64PV-120	2006002D	20	3800	
Solene/Chromagen PV Open Loo	SLCR80PV-120	2006002E	20	4000	
Solene/Corona DC Closed Loop	SLCO32DC-80HE	2006023A	-10	1900	
Solene/Corona DC Closed Loop	SLCO32DC-80HE-XE	2006029A	-10	1700	
Solene/Corona DC Closed Loop	SLCO40DC-80HE	2006023B	-10	2200	
Solene/Corona DC Closed Loop	SLCO40DC-80HE-XE	2006029B	-10	2000	
Solene/Corona DC Closed Loop	SLCO60DC-80HE	2006023C	-10	2600	
Solene/Corona DC Closed Loop	SLCO64DC-80HE	2006023D	-10	2900	

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<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (kWhr)</b>	<b>Comments</b>
Solene/Corona DC Closed Loop	SLCO64DC-80HE-XE	2006029C	-10	2700	
Solene/Corona DC Closed Loop	SLCO80DC-80HE	2006023E	-10	3100	
Solene/Corona DC Closed Loop	SLCO80DC-80HE-XE	2006029D	-10	2900	
Solene/Corona DC Open Loop	SLCO32DC-66	2006021A	20	2100	
Solene/Corona DC Open Loop	SLCO40DC-80	2006021B	20	2500	
Solene/Corona DC Open Loop	SLCO60DC-80	2006021C	20	2800	
Solene/Corona DC Open Loop	SLCO64DC-120	2006021D	20	3400	
Solene/Corona DC Open Loop	SLCO80DC-120	2006021E	20	3700	
Solene/Corona Drainback	SLCO32DC-80DB	2006022A	-10	1900	
Solene/Corona Drainback	SLCO32DC-80DB-XE	2006028A	-10	1600	
Solene/Corona Drainback	SLCO40DC-80DB	2006022B	-10	2100	
Solene/Corona Drainback	SLCO40DC-80DB-XE	2006028B	-10	1900	
Solene/Corona Drainback	SLCO60DC-80DB	2006022C	-10	2500	
Solene/Corona Drainback	SLCO64DC-80DB	2006022D	-10	2800	
Solene/Corona Drainback	SLCO64DC-80DB-XE	2006028C	-10	2600	
Solene/Corona Drainback	SLCO80DC-80DB	2006022E	-10	3100	
Solene/Corona Drainback	SLCO80DC-80DB-XE	2006028D	-10	2800	
Solene/Corona PV Open Loop	SLCO32PV-66	2006020A	20	2600	
Solene/Corona PV Open Loop	SLCO40PV-80	2006020B	20	2900	
Solene/Corona PV Open Loop	SLCO60PV-80	2006020C	20	3300	
Solene/Corona PV Open Loop	SLCO64PV-120	2006020D	20	3700	
Solene/Corona PV Open Loop	SLCO80PV-120	2006020E	20	3900	
<b>Stitt Energy Systems, Inc.</b>					
Sup.plen.ergy Solar Water Heater	SESI-120-80	2006008B	-40	2600	
Sup.plen.ergy Solar Water Heater	SESI-80-40	2006008A	-40	1900	
<b>SunEarth, Inc.</b>					
Cascade	ECRD-40-80	2001026B	-50	2400	
Cascade	ECRD-40-80-2	2001027B	-50	2000	
Cascade	ECRD-42-80	2001026D	-50	2300	
Cascade	ECRD-42-80-2	2001027D	-50	2000	

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<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (kWhr)</b>	<b>Comments</b>
Cascade	ECRD-48-80	2001026F	-50	2600	
Cascade	ECRD-48-80-2	2001027F	-50	2300	
Cascade	ECRD-64-80	2001026H	-50	3000	
Cascade	ECRD-64-80-2	2001027H	-50	2700	
Cascade	EPRD-40-80	2001026A	-50	2200	
Cascade	EPRD-40-80-2	2001027A	-50	1900	
Cascade	EPRD-42-80	2001026C	-50	2300	
Cascade	EPRD-42-80-2	2001027C	-50	2000	
Cascade	EPRD-48-80	2001026E	-50	2500	
Cascade	EPRD-48-80-2	2001027E	-50	2200	
Cascade	EPRD-64-80	2001026G	-50	2900	
Cascade	EPRD-64-80-2	2001027G	-50	2600	
CopperHeart	CP-20	1992011I	20	1100	
CopperHeart	CP-30	1992011E	20	1500	
CopperHeart	CP-40	1992011F	20	1700	
CopperHeart	CP-60P	1992011G	20	1900	
CopperHeart	CP-80P	1992011J	20	2200	
SOLARAY	TE32C-80-1	1993001B	-60	2300	
SOLARAY	TE32C-80-2	1996001B	-60	2100	
SOLARAY	TE32P-80-1	1993001A	-60	2200	
SOLARAY	TE32P-80-2	1996001A	-60	2100	
SOLARAY	TE40C-120-1	1993001M	-60	2600	
SOLARAY	TE40C-120-2	1996001K	-60	2400	
SOLARAY	TE40C-120-2-PV	2000003I	-60	2300	
SOLARAY	TE40C-120-PV	2000004I	-60	2400	
SOLARAY	TE40C-80-1	1993001D	-60	2600	
SOLARAY	TE40C-80-2	1996001D	-60	2500	
SOLARAY	TE40C-80-2-PV	2000003A	-60	2400	
SOLARAY	TE40C-80-PV	2000004A	-60	2500	
SOLARAY	TE40P-80-1	1993001C	-60	2500	
SOLARAY	TE40P-80-2	1996001C	-60	2400	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
SOLARAY	TE40P-80-2-PV	2000003D	-60	2300	
SOLARAY	TE40P-80-PV	2000004D	-60	2400	
SOLARAY	TE48C-120-1	1993001O	-60	2800	
SOLARAY	TE48C-120-2	1996001M	-60	2700	
SOLARAY	TE48C-120-2-PV	2000003K	-60	2500	
SOLARAY	TE48C-120-PV	2000004K	-60	2700	
SOLARAY	TE48C-80-1	1993001L	-60	2900	
SOLARAY	TE48C-80-2	1996001J	-60	2700	
SOLARAY	TE48C-80-2-PV	2000003H	-60	2600	
SOLARAY	TE48C-80-PV	2000004H	-60	2700	
SOLARAY	TE48P-120-1	1993001N	-60	2700	
SOLARAY	TE48P-120-2	1996001L	-60	2600	
SOLARAY	TE48P-120-2-PV	2000003J	-60	2500	
SOLARAY	TE48P-120-PV	2000004J	-60	2600	
SOLARAY	TE48P-80-1	1993001K	-60	2800	
SOLARAY	TE48P-80-2	1996001I	-60	2600	
SOLARAY	TE48P-80-2-PV	2000003G	-60	2500	
SOLARAY	TE48P-80-PV	2000004G	-60	2700	
SOLARAY	TE64C-120-1	1993001Q	-60	3200	
SOLARAY	TE64C-120-2	1996001O	-60	3100	
SOLARAY	TE64C-120-2-PV	2000003M	-60	3000	
SOLARAY	TE64C-120-PV	2000004M	-60	3100	
SOLARAY	TE64C-80-1	1993001H	-60	3200	
SOLARAY	TE64C-80-2	1996001F	-60	3100	
SOLARAY	TE64C-80-2-PV	2000003B	-60	3000	
SOLARAY	TE64C-80-PV	2000004B	-60	3100	
SOLARAY	TE64P-120-1	1993001P	-60	3100	
SOLARAY	TE64P-120-2	1996001N	-60	3000	
SOLARAY	TE64P-120-2-PV	2000003L	-60	2900	
SOLARAY	TE64P-120-PV	2000004L	-60	3000	
SOLARAY	TE64P-80-1	1993001G	-60	3200	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
SOLARAY	TE64P-80-2	1996001E	-60	3000	
SOLARAY	TE64P-80-2-PV	2000003E	-60	2900	
SOLARAY	TE64P-80-PV	2000004E	-60	3000	
SOLARAY	TE80C-120-1	1993001S	-60	3500	
SOLARAY	TE80C-120-2	1996001Q	-60	3300	
SOLARAY	TE80C-120-2-PV	2000003O	-60	3200	
SOLARAY	TE80C-120-PV	2000004O	-60	3400	
SOLARAY	TE80P-120-1	1993001R	-60	3400	
SOLARAY	TE80P-120-2	1996001P	-60	3300	
SOLARAY	TE80P-120-2-PV	2000003N	-60	3100	
SOLARAY	TE80P-120-PV	2000004N	-60	3300	
SunSaver	NF40P-80S	1995010M	41	2600	
SunSaver	NF40P-80T	1995009M	41	2600	
SunSiphon	EPGX116-63-2	2001004I	15	2600	
SunSiphon	EPGX116-64-2	2001004J	15	2600	
SunSiphon	EPGX116-80-2	2001004L	15	2900	
SunSiphon	EPGX48-21-2	2001004A	15	1400	
SunSiphon	EPGX48-24-2	2001004B	15	1500	
SunSiphon	EPGX48-32-2	2001004C	15	1800	
SunSiphon	EPGX80-40-2	2001004D	15	2000	
SunSiphon	EPGX80-42-2	2001004E	15	2100	
SunSiphon	EPGX80-48-2	2001004F	15	2300	
SunSiphon	EPGX80-63-2	2001004G	15	2500	
SunSiphon	EPGX80-64-2	2001004H	15	2600	
SunSource	HX40P-80	1995001E	-28	2500	
SunSource	HX64P-120	1995001K	-28	3300	

**Synergy Solar**

Drainback Stainless HX	107-2T	2004005D	-50	3300	
Drainback Stainless HX	133-2T	2004005F	-50	3500	
Drainback Stainless HX	40-1T	2006019A	-50	2300	
Drainback Stainless HX	53-1T	2006019B	-50	2700	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
Drainback Stainless HX	53-2T	2004005B	-50	2700	
Drainback Stainless HX	60-2T	2004005A	-50	2800	
Drainback Stainless HX	80-2T	2004005C	-50	3100	
Drainback Stainless HX	S53-2T	2004005E	-50	2300	

**Thermal Conversion Technology, Inc. (TCT Solar)**

ProgressivTube®	PT-30-CN	1995002A	10	1500	
ProgressivTube®	PT-35-CN	1995002B	10	1500	
ProgressivTube®	PT-40-CN	1995002C	10	1800	
ProgressivTube®	PT-50-CN	1995002D	10	1800	

**Thermomax Industries Ltd.**

Thermomax Mazdon	Mazdon 30-R120	2001029H	-60	2300	
Thermomax Mazdon	Mazdon 30-R80	2001029A	-60	2400	
Thermomax Mazdon	Mazdon 40-R120	2001029I	-60	2800	
Thermomax Mazdon	Mazdon 40-R80	2001029B	-60	2900	
Thermomax Mazdon	Mazdon 50-R120	2001029J	-60	3200	
Thermomax Mazdon	Mazdon 50-R80	2001029C	-60	3200	
Thermomax Mazdon	Mazdon 60-R120	2001029K	-60	3400	
Thermomax Mazdon	Mazdon 60-R80	2001029D	-60	3400	
Thermomax Mazdon	Mazdon 70-R120	2001029L	-60	3600	
Thermomax Mazdon	Mazdon 70-R80	2001029E	-60	3500	
Thermomax Mazdon	Mazdon 80-R120	2001029M	-60	3700	
Thermomax Mazdon	Mazdon 80-R80	2001029F	-60	3600	
Thermomax Mazdon	Mazdon 90-R120	2001029N	-60	3800	
Thermomax Mazdon	Mazdon 90-R80	2001029G	-60	3700	
Thermomax Solamax	Solamax 20R-R120	2004001I	-50	1500	
Thermomax Solamax	Solamax 20R-R80	2004001A	-50	1700	
Thermomax Solamax	Solamax 20W	2004002A	-50	1500	
Thermomax Solamax	Solamax 30R-R120	2004001J	-50	2100	
Thermomax Solamax	Solamax 30R-R80	2004001B	-50	2200	
Thermomax Solamax	Solamax 30W	2004002B	-50	2000	

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<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (kWhr)</b>	<b>Comments</b>
Thermomax Solamax	Solamax 40R-R120	2004001K	-50	2600	
Thermomax Solamax	Solamax 40R-R80	2004001C	-50	2700	
Thermomax Solamax	Solamax 40W	2004002C	-50	2400	
Thermomax Solamax	Solamax 50R-R120	2004001L	-50	3000	
Thermomax Solamax	Solamax 50R-R80	2004001D	-50	3000	
Thermomax Solamax	Solamax 60R-R120	2004001M	-50	3200	
Thermomax Solamax	Solamax 60R-R80	2004001E	-50	3200	
Thermomax Solamax	Solamax 70R-R120	2004001N	-50	3300	
Thermomax Solamax	Solamax 70R-R80	2004001F	-50	3300	
Thermomax Solamax	Solamax 80R-R120	2004001O	-50	3400	
Thermomax Solamax	Solamax 80R-R80	2004001G	-50	3400	
Thermomax Solamax	Solamax 90R-R120	2004001P	-50	3500	
Thermomax Solamax	Solamax 90R-R80	2004001H	-50	3500	

**TrendSetter Industries**

Six Rivers Solar	SRS-100-2-40-PC-E	2001007A	-20	2500	
Six Rivers Solar	SRS-200-3-40-PC-E	2001007B	-20	2900	
Six Rivers Solar	SRS-200-4-40-PC-E	2001007C	-20	3100	
Six Rivers Solar	SRS-300-5-40-PC-E	2001007D	-20	3300	
Six Rivers Solar	SRS-300-6-40-PC-E	2001007E	-20	3400	

**\* A conventional 50 gallon electric water heater would consume 4400 kWh under these rating conditions.**

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**Solar Rating and Certification Corporation**  
**Estimated Annual Performance of OG-300 Certified Solar Water Heating Systems**  
**Asheville, North Carolina**  
**with Gas Backup**

System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
<b>ACR Solar International</b>					
Skyline System 3	200132C502TG	2001018B	30	85	
Skyline System 3	200132C50T20G	2002005A	20	50	
Skyline System 5	200152C80EX2TG	2001019A	-54	75	
Skyline System 5	200153C80EX2TG	2001019B	-54	95	
<b>BTF, Ltd.</b>					
Solar Patriot™	SP20-1-65G-DT-G	2007001A	-50	75	
Solar Patriot™	SP20-2-80G-DT-G	2007001B	-50	125	
<b>Butler Sun Solutions</b>					
Solar Butler	BSS-PV1-40Ga	2005006A	-54	85	
Solar Butler	BSS-PV1-40Gb	2005006B	-54	70	
Solar Butler	BSS-PV1-40Gc	2005006I	-54	95	
Solar Butler	BSS-PV1-40Gd	2005006K	-54	100	
Solar Butler	BSS-PV1-50Ga	2005006C	-54	100	
Solar Butler	BSS-PV1-50Gb	2005006J	-54	110	
Solar Butler	BSS-PV1-50Gc	2005006H	-54	100	
Solar Butler	BSS-PV1-80G2a	2005010A	-54	75	
Solar Butler	BSS-PV1-80G2b	2005010B	-54	85	
Solar Butler	BSS-PV1-80Ga	2005006E	-54	110	
Solar Butler	BSS-PV1-80Gc	2005006G	-54	100	
Solar Butler	BSS-S1-40Ga	2003016A	-54	30	
Solar Butler	BSS-S1-40Gb	2003016B	-54	20	
Solar Butler	BSS-S1-40Gc	2003016I	-54	40	
Solar Butler	BSS-S1-50Ga	2003016C	-54	45	
Solar Butler	BSS-S1-50Gc	2003016H	-54	45	
Solar Butler	BSS-S1-80G2a	2005009A	-54	75	

**\* A conventional 50 gallon gas water heater would consume 215 therms under these rating conditions.**

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
Solar Butler	BSS-S1-80G2b	2005009B	-54	90	
Solar Butler	BSS-S1-80Ga	2003016E	-54	50	
Solar Butler	BSS-S1-80Gc	2003016G	-54	40	

**Enerworks, Inc.**

Solar Water Heating Appliance	EWRA1-G40	2006004A	-50	85	
Solar Water Heating Appliance	EWRA1-G80	2006004B	-50	85	
Solar Water Heating Appliance	EWRA2-G100	2006004D	-50	110	
Solar Water Heating Appliance	EWRA2-G80	2006004C	-50	115	
Solar Water Heating Appliance	EWRA3-G100	2006004E	-50	120	
Solar Water Heating Appliance	EWRA3-G120	2006004F	-50	120	
Solar Water Heating Appliance	EWRA4-G120	2006004G	-50	125	
Solar Water Heating Appliance	EWRA4-G144	2006004H	-50	120	

**Fafco, Inc.**

Polymer Drainback	VDB-48U-50G-50S	2007004A	-20	70	
Polymer Drainback	VDB-48U-50G-80S	2007004B	-20	75	
Polymer Drainback	VDB-48UX2-50G-50S	2007004C	-20	85	
Polymer Drainback	VDB-48UX2-50G-80S	2007004D	-20	90	

**Heat Transfer Products**

Phoenix Solar	PH-119S	2007023B	-60	165	
Phoenix Solar	PH-80S	2007023A	-60	130	
SuperStor Contender Solar	SSC-119SB	2007012C	-60	175	
SuperStor Contender Solar	SSC-50SB	2007012A	-60	135	
SuperStor Contender Solar	SSC-80SB	2007012B	-60	150	
SuperStor Ultra Solar	SSU-119SB	2007021C	-60	170	
SuperStor Ultra Solar	SSU-119SB-DW	2007022B	-60	175	
SuperStor Ultra Solar	SSU-60SB	2007021A	-60	135	
SuperStor Ultra Solar	SSU-80SB	2007021B	-60	150	
SuperStor Ultra Solar	SSU-80SB-DW	2007022A	-60	150	

**Heliodyne, Inc.**

Helio-Flo	HF 13366 G 50 AC D Z	2001025A	27	90	
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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
Helio-Flo	HF 1408 G 50 AC D Z	2001025B	27	100	
Helio-Flo	HF 1410 G 80 AC D Z	2001025C	27	115	
Helio-Flo	HF 23366 G 80 AC D Z	2001025D	27	135	
Helio-Flo	HF 2408 G 120 AC D Z	2001025F	27	145	
Helio-Flo	HF 2408 G 80 AC D Z	2001025E	27	145	
Helio-Flo	HF 2410 G 120 AC D Z	2001025G	27	155	
Helio-Flo	HF 3408 G 120 AC D Z	2001025H	27	155	
Helio-Flo	HF 3410 G 120 AC D Z	2001025I	27	160	
Heliopak	16 DWCL HP 1 3366 G 80 ACD Z	1998001G	-60	80	
Heliopak	16 DWCL HP 1 408 G 65 ACD Z	1998001F	-60	95	
Heliopak	16 DWCL HP 1 408 G 65 PVD Z	1998002C	-60	90	
Heliopak	16 DWCL HP 1 408 G 80 ACD Z	1998001I	-60	95	
Heliopak	16 DWCL HP 1 410 G 65 ACD Z	1998001A	-60	105	
Heliopak	16 DWCL HP 1 410 G 80 ACD Z	1998001J	-60	110	
Heliopak	16 DWCL HP 1 410 G 80 PVD Z	1998002A	-60	105	
Heliopak	16 DWCL HP 2 3366 G 80 ACD Z	1998001H	-60	125	
Heliopak	16 DWCL HP 2 408 G 120 ACD Z	1998001C	-60	135	
Heliopak	16 DWCL HP 2 408 G 80 ACD Z	1998001B	-60	130	
Heliopak	16 DWCL HP 2 410 G 120 ACD Z	1998001D	-60	140	
Helio-Pak Helix SS PV	HP HX SS 1 3366 G PV 50 EE D Z	2005004A	-60	90	
Helio-Pak Helix SS PV	HP HX SS 1 408 G PV 50 EE D Z	2005004B	-60	100	
Helio-Pak Helix SS PV	HP HX SS 1 410 G PV 80 EE D Z	2005004C	-60	115	
Helio-Pak Helix SS PV	HP HX SS 2 3366 G PV 80 EE D Z	2005004D	-60	135	
Helio-Pak Helix SS PV	HP HX SS 2 408 G PV 80 EE D Z	2005004E	-60	140	
Helio-Pak Helix SS PV	HP HX SS 2 410 G PV 120 SE D Z	2005004F	-60	150	

**Integrated Solar, LLC**

CopperSun	CS330-G	1999001B	20	55	
CopperSun	CS330SV-G	2002008A	20	50	
CopperSun	CS340-G	1999001C	20	60	
CopperSun	CS340SV-G	2002008B	20	55	
CopperSun	CS440-G	1999001A	20	65	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
CopperSun	CS450-G	1999001D	20	65	
Radco Drainback Heat Exchanger	R-DBHX-12-120-GD-80P	1998004C	-60	125	
Radco Drainback Heat Exchanger	R-DBHX-8-40-GS-32P	2002001A	-60	20	
Radco Drainback Heat Exchanger	R-DBHX-8-65-GD-40P	1998004A	-60	85	
Radco Drainback Heat Exchanger	R-DBHX-8-80-GD-64P	1998004B	-60	110	

**Mr. Sun Solar**

Sol-Reliant	SR 40/80 G PVDB	2004009B	-50	110	
Sol-Reliant	SR 56/80 G PVDB	2004009A	-50	135	
Sol-Reliant	SR112/120 G PVDB	2007026C	-50	160	
Sol-Reliant	SR112/80 G PVDB	2007026B	-50	160	
Sol-Reliant	SR80/80 G PVDB	2007026A	-50	145	

**Schuco USA L.P.**

Premium Package	Premium II-80G	2006011A	-40	115	
Premium Package	Premium III-120G	2006011B	-40	130	
Slimline Package	Slimline II-80G	2006013A	-40	105	
Slimline Package	Slimline III-120G	2006013B	-40	125	

**Solahart Industries**

SOLAHART	ASG 181BCXII	2001017B	19	70	
SOLAHART	ASG 181J & ASG 181J Free Heat	2001016A	19	65	
SOLAHART	ASG 181KF & ASG 181KF Free H	2001017A	19	70	
SOLAHART	ASG 181L	2001015A	41	60	
SOLAHART	ASG 182BCXII	2001017D	19	100	
SOLAHART	ASG 182J & ASG 182J Free Heat	2001016B	19	90	
SOLAHART	ASG 182KF & ASG 182KF Free H	2001017C	19	100	
SOLAHART	ASG 302BCXII	2001017F	19	100	
SOLAHART	ASG 302J & ASG 302J Free Heat	2001016C	19	90	
SOLAHART	ASG 302JXII	2001016D	19	90	
SOLAHART	ASG 302KF & ASG 302KF Free H	2001017E	19	100	
SOLAHART	ASG 302L	2001015B	41	85	
SOLAHART	ASG 303BCXII	2001017H	19	120	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
SOLAHART	ASG 303J & ASG 302J Free Heat	2001016E	19	105	
SOLAHART	ASG 303JXII	2001016F	19	105	
SOLAHART	ASG 303KF & ASG 303KF Free H	2001017G	19	120	
SOLAHART	ASG 303L	2001015C	41	100	
SOLAHART	ASG 443BCXII	2001017J	19	120	
SOLAHART	ASG 443J & ASG 443J Free Heat	2001016G	19	105	
SOLAHART	ASG 443JXII	2001016H	19	105	
SOLAHART	ASG 443KF & ASG 443KF Free H	2001017I	19	120	
SOLAHART	ASG 443L	2001015D	41	100	
SOLAHART	ASG 444BCXII	2001017L	19	130	
SOLAHART	ASG 444J & ASG 444J Free Heat	2001016I	19	110	
SOLAHART	ASG 444JXII	2001016J	19	110	
SOLAHART	ASG 444KF & ASG 444KF Free H	2001017K	19	130	
SOLAHART	ASG 444L	2001015E	41	105	

### Solene

Solene/Chromagen DC Closed Lo	SLCR32DC-80HE-XG	2006027A	-10	80	
Solene/Chromagen DC Closed Lo	SLCR40DC-80HE-XG	2006027B	-10	95	
Solene/Chromagen DC Closed Lo	SLCR64DC-80HE-XG	2006027C	-10	120	
Solene/Chromagen DC Closed Lo	SLCR80DC-80HE-XG	2006027D	-10	130	
Solene/Chromagen Drain Back	SLCR32DC-80DB-XG	2006026A	-10	80	
Solene/Chromagen Drain Back	SLCR40DC-80DB-XG	2006026B	-10	95	
Solene/Chromagen Drain Back	SLCR64DC-80DB-XG	2006026C	-10	120	
Solene/Chromagen Drain Back	SLCR80DC-80DB-XG	2006026D	-10	130	
Solene/Corona DC Closed Loop	SLCO32DC-80HE-XG	2006025A	-10	80	
Solene/Corona DC Closed Loop	SLCO40DC-80HE-XG	2006025B	-10	90	
Solene/Corona DC Closed Loop	SLCO64DC-80HE-XG	2006025C	-10	120	
Solene/Corona DC Closed Loop	SLCO80DC-80HE-XG	2006025D	-10	130	
Solene/Corona DC Open Loop	SLCO32DC-80-XG	2007016A	32	105	
Solene/Corona DC Open Loop	SLCO40DC-80-XG	2007016B	32	120	
Solene/Corona DC Open Loop	SLCO64DC-80-XG	2007016C	32	140	
Solene/Corona DC Open Loop	SLCO80DC-80-XG	2007016D	32	150	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
Solene/Corona Drainback	SLCO32DC-80DB-XG	2006024A	-10	75	
Solene/Corona Drainback	SLCO40DC-80DB-XG	2006024B	-10	90	
Solene/Corona Drainback	SLCO64DC-80DB-XG	2006024C	-10	115	
Solene/Corona Drainback	SLCO80DC-80DB-XG	2006024D	-10	125	

**SunEarth, Inc.**

Cascade	ECRD-40-80-2G	2001028B	-50	95	
Cascade	ECRD-42-80-2G	2001028D	-50	95	
Cascade	ECRD-48-80-2G	2001028F	-50	105	
Cascade	ECRD-64-80-2G	2001028H	-50	125	
Cascade	EPRD-40-80-2G	2001028A	-50	90	
Cascade	EPRD-42-80-2G	2001028C	-50	95	
Cascade	EPRD-48-80-2G	2001028E	-50	105	
Cascade	EPRD-64-80-100G	2001028J	-50	90	
Cascade	EPRD-64-80-2G	2001028G	-50	120	
Cascade	EPRD-64-80-75G	2001028I	-50	95	
CopperHeart	CP-20G	2001002A	20	50	
CopperHeart	CP-20-TLG	2002006A	20	90	
CopperHeart	CP-30G	2001002B	20	65	
CopperHeart	CP-30-TLG	2002006B	20	105	
CopperHeart	CP-40G	2001002C	20	75	
CopperHeart	CP-40-TLG	2002006C	20	110	
CopperHeart	CP-60PG	2001002D	20	85	
CopperHeart	CP-80PG	2001002E	20	95	
SOLARAY	TE40C-80-2G	2001001B	-60	110	
SOLARAY	TE40C-80-2G-PV	2001003B	-60	105	
SOLARAY	TE40P-80-2G	2001001A	-60	105	
SOLARAY	TE40P-80-2G-PV	2001003A	-60	100	
SOLARAY	TE48C-80-2G	2001001D	-60	120	
SOLARAY	TE48C-80-2G-PV	2001003D	-60	115	
SOLARAY	TE48P-80-2G	2001001C	-60	115	
SOLARAY	TE48P-80-2G-PV	2001003C	-60	110	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
SOLARAY	TE48P-80-75G	2001001G	-60	90	
SOLARAY	TE64C-80-2G	2001001F	-60	140	
SOLARAY	TE64C-80-2G-PV	2001003F	-60	130	
SOLARAY	TE64P-80-2G	2001001E	-60	135	
SOLARAY	TE64P-80-2G-PV	2001003E	-60	130	
SunSiphon	EPGX116-63-2G	2001005I	15	115	
SunSiphon	EPGX116-64-2G	2001005J	15	115	
SunSiphon	EPGX116-80-2G	2001005L	15	125	
SunSiphon	EPGX48-21-2G	2001005A	15	60	
SunSiphon	EPGX48-24-2G	2001005B	15	65	
SunSiphon	EPGX48-32-2G	2001005C	15	75	
SunSiphon	EPGX80-40-2G	2001005D	15	90	
SunSiphon	EPGX80-42-2G	2001005E	15	90	
SunSiphon	EPGX80-48-2G	2001005F	15	100	
SunSiphon	EPGX80-63-2G	2001005G	15	110	
SunSiphon	EPGX80-64-2G	2001005H	15	115	

**Thermal Conversion Technology, Inc. (TCT Solar)**

ProgressivTube®	PT-40-CN2-GX100	1999002A	10	90	
ProgressivTube®	PT-30-CN-G	1998006A	10	70	
ProgressivTube®	PT-35-CN-G	1998006B	10	70	
ProgressivTube®	PT-40-CN2-GX75	1998007A	10	85	
ProgressivTube®	PT-40-CN-G	1998006C	10	80	
ProgressivTube®	PT-40-CN-GX	1998006E	10	85	
ProgressivTube®	PT-50-CN-G	1998006D	10	85	
ProgressivTube®	PT-50-CN-GX	1998006F	10	85	

**TrendSetter Industries**

Six Rivers Solar	SRS-050-1-32-PC	2001006F	-20	70	
Six Rivers Solar	SRS-050-1-40-PC	2001006G	-20	80	
Six Rivers Solar	SRS-070-1-40-PC	2001006I	-20	130	
Six Rivers Solar	SRS-100-2-32-PC	2001006H	-20	110	
Six Rivers Solar	SRS-100-2-40-PC	2001006A	-20	115	

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<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (Therms)</b>	<b>Comments</b>
Six Rivers Solar	SRS-150-2-40-PC	2001006J	-20	165	
Six Rivers Solar	SRS-150-3-32-PC	2001006K	-20	170	
Six Rivers Solar	SRS-200-3-40-PC	2001006B	-20	135	
Six Rivers Solar	SRS-200-4-40-PC	2001006C	-20	140	
Six Rivers Solar	SRS-300-5-40-PC	2001006D	-20	150	
Six Rivers Solar	SRS-300-6-40-PC	2001006E	-20	150	
Six Rivers Solar	TS-100-1-30-PC	2005002A	-20	135	
Six Rivers Solar	TS-150-2-22-PC	2005002B	-20	160	
Six Rivers Solar	TS-200-3-30-PC	2005002C	-20	195	
Six Rivers Solar	TS-200-4-30-PC	2005002D	-20	200	
Six Rivers Solar	TS-300-5-30-PC	2005002E	-20	205	
Six Rivers Solar	TS-300-6-30-PC	2005002F	-20	205	

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