

**ANNUAL PERFORMANCE**

**OF**

**OG-300 CERTIFIED SYSTEMS**

**IN**

**CALIFORNIA CLIMATE ZONE 13**



June 2008

Solar Rating & Certification Corporation  
c/o FSEC, 1679 Clearlake Road  
Cocoa, FL 32922-5703  
(321) 638-1537 (321) 638-1010 Fax

# SOLAR RATING AND CERTIFICATION CORPORATION

## Estimated Annual Performance of OG-300 Certified Solar Water Heating Systems in California Climate Zone 13

### 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.

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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).

Department of Energy for testing 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 Zone 13 values <sup>5</sup> .
Collector orientation	Facing south at a tilt of 30°.
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	California climate Zone 13 data from the California Energy Commission <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 4,000 kilowatt hours (kWh) per year under these conditions and a 50 gallon gas water heater with an energy factor of 0.6 would consume 200 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 Stogdill, 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> “Climate Zone Weather Data Analysis and Revision Project”, California Energy Commission, May 1992.

## 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**  
**California Climate Zone 13**  
**with Electric Backup**

System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
<b>ACR Solar International</b>					
Skyline System 3	100133C50	1999003G	30	2500	
Skyline System 3	200131C50	1999003A	30	2000	
Skyline System 3	200132C50	1999003B	30	2900	
Skyline System 3	200132C502TE	2002002A	30	2700	
Skyline System 3	200132C50T20E	2002004A	20	2600	
Skyline System 3	200132C80	1999003F	30	2900	
Skyline System 3	200133C50	1999003D	30	3200	
Skyline System 3	200133C80	1999003C	30	3200	
Skyline System 5	200152C80EX	2000007A	-54	2500	
Skyline System 5	200152C80EX2TE	2002003A	-54	2400	
Skyline System 5	200153C80EX	2000007B	-54	3000	
Skyline System 5	200153C80EX2TE	2002003B	-54	2900	
Skyline System 5	200154C80EX	2000007C	-54	3200	
<b>Alternate Energy Technologies</b>					
EagleSun	DB-120-64	2006006E	-20	2800	
EagleSun	DB-120-80	2006006F	-20	3000	
EagleSun	DB-120-96	2006006G	-20	3100	
EagleSun	DB-80-40	2006006A	-20	2400	
EagleSun	DB-80-52	2006006B	-20	2600	
EagleSun	DB-80-64	2006006C	-20	2800	
EagleSun	DB-80-80	2006006D	-20	3000	
EagleSun DX	DX-120-64	2006007E	-20	3100	
EagleSun DX	DX-120-80	2006007F	-20	3200	
EagleSun DX	DX-120-96	2006007G	-20	3300	
EagleSun DX	DX-80-40	2006007A	-20	2800	

**\* A conventional 50 gallon electric water heater would consume 4000 kWh under these rating conditions.**

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c/o FSEC ♦ 1679 Clearlake Road ♦ Cocoa, FL 32922 ♦ (321) 638-1537 ♦ Fax (321) 638-1010

<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	2900	
EagleSun DX	DX-80-64	2006007C	-20	3100	
EagleSun DX	DX-80-80	2006007D	-20	3200	
<b>Bobcat &amp; Sun, Inc.</b>					
Sun-Pak	SP32CHE	1994005E	-60	2000	
Sun-Pak	SP32CHE-1	1994004E	-60	2300	
Sun-Pak	SP32PHE	1994005A	-60	1900	
Sun-Pak	SP32PHE-1	1994004A	-60	2200	
Sun-Pak	SP40CHE	1994005G	-60	2300	
Sun-Pak	SP40CHE-1	1994004G	-60	2500	
Sun-Pak	SP40PHE	1994005C	-60	2200	
Sun-Pak	SP40PHE-1	1994004C	-60	2400	
Sun-Pak	SP64CHE	1994005F	-60	2800	
Sun-Pak	SP64CHE-1	1994004F	-60	2900	
Sun-Pak	SP64PHE	1994005B	-60	2700	
Sun-Pak	SP64PHE-1	1994004B	-60	2800	
Sun-Pak	SP80CHE	1994005H	-60	2900	
Sun-Pak	SP80CHE-1	1994004H	-60	3000	
Sun-Pak	SP80PHE	1994005D	-60	2800	
Sun-Pak	SP80PHE-1	1994004D	-60	2900	
<b>BTF, Ltd.</b>					
Solar Patriot <sup>TM</sup>	SP20-1-65G-PV-E	2006018A	-50	1700	
Solar Patriot <sup>TM</sup>	SP20-2-80G-PV-E	2006018B	-50	2600	
<b>Butler Sun Solutions</b>					
Solar Butler	BSS-PV1-40Ea	2005005A	-54	2300	
Solar Butler	BSS-PV1-40Eb	2005005B	-54	1400	
Solar Butler	BSS-PV1-40Ec	2005005I	-54	2000	
Solar Butler	BSS-PV1-40Ed	2005005J	-54	2000	
Solar Butler	BSS-PV1-50Ea	2005005C	-54	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>
Solar Butler	BSS-PV1-50Ec	2005005H	-54	2000	
Solar Butler	BSS-PV1-80E2a	2005008A	-54	2200	
Solar Butler	BSS-PV1-80E2b	2005008B	-54	2500	
Solar Butler	BSS-PV1-80Ea	2005005E	-54	2700	
Solar Butler	BSS-PV1-80Ec	2005005G	-54	2400	
Solar Butler	BSS-S1-40Ea	2003001A	-54	1700	
Solar Butler	BSS-S1-40Eb	2003001B	-54	1400	
Solar Butler	BSS-S1-40Ec	2003001I	-54	2000	
Solar Butler	BSS-S1-50Ea	2003001C	-54	2000	
Solar Butler	BSS-S1-50Ec	2003001H	-54	2000	
Solar Butler	BSS-S1-80E2a	2005007A	-54	2200	
Solar Butler	BSS-S1-80E2b	2005007B	-54	2500	
Solar Butler	BSS-S1-80Ea	2003001E	-54	2700	
Solar Butler	BSS-S1-80Ec	2003001G	-54	2400	

**Davis Energy Group**

SunCache	SCG-100-ES	2007007B	20	1700	
SunCache	SCG-50-ES	2007007A	20	1500	
SunCache	SCU-50-ES	2004007A	20	1000	

**Energy Laboratories, Inc.**

Roof Integrated Thermosiphon Sy	RITH 72 E	2004006A	22	2600	
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**Enerworks, Inc.**

Solar Water Heating Appliance	EWRA1-E40	2005012A	-50	2500	
Solar Water Heating Appliance	EWRA1-E80	2005012B	-50	2500	
Solar Water Heating Appliance	EWRA2-E100	2005012D	-50	3100	
Solar Water Heating Appliance	EWRA2-E80	2005012C	-50	3100	
Solar Water Heating Appliance	EWRA3-E100	2005012E	-50	2800	
Solar Water Heating Appliance	EWRA3-E120	2005012F	-50	2900	
Solar Water Heating Appliance	EWRA4-E120	2005012G	-50	2900	
Solar Water Heating Appliance	EWRA4-E144	2005012H	-50	2900	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
<b>Fafco, Inc.</b>					
Polymer Drainback	VDB-48U-50E	2007002A	-20	2100	
Polymer Drainback	VDB-48U-50E-50S	2007003A	-20	1900	
Polymer Drainback	VDB-48U-50E-80S	2007003B	-20	2000	
Polymer Drainback	VDB-48U-80E	2007002B	-20	2700	
Polymer Drainback	VDB-48UX2-50E	2007002C	-20	2400	
Polymer Drainback	VDB-48UX2-50E-50S	2007003C	-20	2200	
Polymer Drainback	VDB-48UX2-50E-80S	2007003D	-20	2400	
Polymer Drainback	VDB-48UX2-80E	2007002D	-20	2700	
<b>Heat Transfer Products</b>					
SuperStor Conntender Solar	SSC-119SE	2007011C	-60	3000	
SuperStor Contender Solar	SSC-50SE	2007011A	-60	2400	
SuperStor Contender Solar	SSC-80SE	2007011B	-60	2700	
SuperStor Ultra Solar	SSU-119SE	2007019C	-60	3000	
SuperStor Ultra Solar	SSU119SE-DW	2007020B	-60	3000	
SuperStor Ultra Solar	SSU-60SE	2007019A	-60	2300	
SuperStor Ultra Solar	SSU-80SE	2007019B	-60	2700	
SuperStor Ultra Solar	SSU80SE-DW	2007020A	-60	2700	
<b>Heliodyne, Inc.</b>					
Helio-Flo	HF 1408 G 80 AC S E	2001023A	27	3000	
Helio-Flo	HF 1410 G 120 AC S E	2001023C	27	3200	
Helio-Flo	HF 1410 G 80 AC D E	2001024A	27	3000	
Helio-Flo	HF 1410 G 80 AC S E	2001023B	27	3200	
Helio-Flo	HF 23366 G 80 AC D E	2001024B	27	3200	
Helio-Flo	HF 23366 G 80 AC S E	2001023D	27	3300	
Helio-Flo	HF 2408 G 120 AC D E	2001024D	27	3300	
Helio-Flo	HF 2408 G 120 AC S E	2001023F	27	3400	
Helio-Flo	HF 2408 G 80 AC D E	2001024C	27	3300	
Helio-Flo	HF 2408 G 80 AC S E	2001023E	27	3400	

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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>
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	3400	
Helio-Flo	HF 3408 G 120 AC S E	2001023H	27	3400	
Helio-Flo	HF 3410 G 120 AC D E	2001024G	27	3500	
Helio-Flo	HF 3410 G 160 AC S E	2001023I	27	3500	
Heliopak	16 DWCL HP 1 3366 G 50 ACS	1992010J	-60	2500	
Heliopak	16 DWCL HP 1 3366 G 80 ACD	1992013G	-60	2200	
Heliopak	16 DWCL HP 1 3366 G 80 ACS	1992010K	-60	2500	
Heliopak	16 DWCL HP 1 408 G 65 ACD	1992013F	-60	2500	
Heliopak	16 DWCL HP 1 408 G 65 ACS	1992010A	-60	2700	
Heliopak	16 DWCL HP 1 408 G 65 PVD	1996004C	-60	2700	
Heliopak	16 DWCL HP 1 408 G 65 PVS	1996003C	-60	2900	
Heliopak	16 DWCL HP 1 408 G 80 ACD	1992013I	-60	2500	
Heliopak	16 DWCL HP 1 408 G 80 ACS	1992010N	-60	2700	
Heliopak	16 DWCL HP 1 410 G 65 ACD	1992013A	-60	2700	
Heliopak	16 DWCL HP 1 410 G 80 ACD	1992013J	-60	2700	
Heliopak	16 DWCL HP 1 410 G 80 ACS	1992010B	-60	2900	
Heliopak	16 DWCL HP 1 410 G 80 PVD	1996004A	-60	2900	
Heliopak	16 DWCL HP 1 410 G 80 PVS	1996003A	-60	3100	
Heliopak	16 DWCL HP 2 3366 G 120 ACS	1992010M	-60	3100	
Heliopak	16 DWCL HP 2 3366 G 80 ACD	1992013H	-60	3000	
Heliopak	16 DWCL HP 2 3366 G 80 ACS	1992010L	-60	3100	
Heliopak	16 DWCL HP 2 408 G 120 ACD	1992013C	-60	3000	
Heliopak	16 DWCL HP 2 408 G 120 ACS	1992010C	-60	3200	
Heliopak	16 DWCL HP 2 408 G 80 ACD	1992013B	-60	3000	
Heliopak	16 DWCL HP 2 410 G 120 ACD	1992013D	-60	3200	
Heliopak	16 DWCL HP 2 410 G 120 ACS	1992010O	-60	3300	
Heliopak	DWCL HE HP 1 3366 G 80 ACS	1992010I	-60	2400	
Heliopak	DWCL HE HP 1 408 G 80 ACS	1992010D	-60	2600	
Heliopak	DWCL HE HP 1 410 G 80 ACS	1992010E	-60	2900	

**\* A conventional 50 gallon electric water heater would consume 4000 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 3366 G PV 50 EE S	2005003A	-60	2600	
Helio-Pak Helix SS PV	HP HX SS 1 3366 G PV 65 EE S	2005003B	-60	2600	
Helio-Pak Helix SS PV	HP HX SS 1 408 G PV 50 EE S	2005003C	-60	2800	
Helio-Pak Helix SS PV	HP HX SS 1 408 G PV 65 EE S	2005003D	-60	2900	
Helio-Pak Helix SS PV	HP HX SS 1 408 G PV 80 EE S	2005003E	-60	2900	
Helio-Pak Helix SS PV	HP HX SS 1 410 G PV 65 EE S	2005003F	-60	3100	
Helio-Pak Helix SS PV	HP HX SS 1 410 G PV 80 EE S	2005003G	-60	3100	
Helio-Pak Helix SS PV	HP HX SS 2 3366 G PV 80 EE S	2005003H	-60	3300	
Helio-Pak Helix SS PV	HP HX SS 2 408 G PV 120 SE S	2005003I	-60	3400	
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	3500	
Helio-Pak Helix SS PV	HP HX SS 3 408 G PV 120 SE S	2005003L	-60	3500	
HP HELIX AC	HP 1 408 GAC WAC 50 S	1999004A	-60	2600	
HP HELIX AC	HP 1 410 GAC WAC 80 S	1999004B	-60	2900	

**Integrated Solar, LLC**

CopperSun	CS330-E	1997001B	20	1700	
CopperSun	CS330SV-E	2002007A	20	1500	
CopperSun	CS340-E	1997001C	20	1700	
CopperSun	CS340SV-E	2002007B	20	1500	
CopperSun	CS440-E	1997001A	20	1900	
CopperSun	CS450-E	1997001D	20	1900	
Radco Drainback Heat Exchanger	R-DBHX-12-120-D-80P	1992007I	-60	2800	
Radco Drainback Heat Exchanger	R-DBHX-8-120S-80P	1994007C	-60	3000	
Radco Drainback Heat Exchanger	R-DBHX-8-65-D-40P	1992007A	-60	2200	
Radco Drainback Heat Exchanger	R-DBHX-8-65S-40P	1994007A	-60	2500	
Radco Drainback Heat Exchanger	R-DBHX-8-80-D-64P	1992007C	-60	2700	
Radco Drainback Heat Exchanger	R-DBHX-8-80S-40C	1994007E	-60	2700	
Radco Drainback Heat Exchanger	R-DBHX-8-80S-40P	1994007D	-60	2500	
Radco Drainback Heat Exchanger	R-DBHX-8-80S-64P	1994007B	-60	2800	

**\* A conventional 50 gallon electric water heater would consume 4000 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>
<b>Morley Manufacturing</b>					
High Sierra Drainback	HS60B/40	1992014A	-60	2600	
<b>Mr. Sun Solar</b>					
Sol-Reliant	SR 40/80 E PVDB	2004008B	-50	2200	
Sol-Reliant	SR 56/120 SE PVDB	2007015A	-50	3300	
Sol-Reliant	SR 56/80 E PVDB	2004008A	-50	2300	
Sol-Reliant	SR112/120 E PVDB	2007025C	-50	2500	
Sol-Reliant	SR112/80 E PVDB	2007025B	-50	2500	
Sol-Reliant	SR80/80 E PVDB	2007025A	-50	2400	
<b>Pacific West Solar</b>					
Freeze Safe SWH	FS410-80-1	2008001A	-9	2700	
<b>Power Partners, Inc.</b>					
System 3	100133C50	2008002G	30	2500	
System 3	200131C50	2008002A	30	2000	
System 3	200132C50	2008002B	30	2900	
System 3	200132C502TE	2008004A	30	2700	
System 3	200132C50T20E	2008006A	20	2600	
System 3	200132C80	2008002F	30	2900	
System 3	200133C50	2008002D	30	3200	
System 3	200133C80	2008002C	30	3200	
System 5	200152C80EX	2008003A	-54	2600	
System 5	200152C80EX2TE	2008005A	-54	2400	
System 5	200153C80EX	2008003B	-54	3000	
System 5	200153C80EX2TE	2008005B	-54	2900	
System 5	200154C80EX	2008003C	-54	3200	
<b>Rheem Water Heaters</b>					
Rheem Solaraide	RS47-21BP	2005013A	19	1700	
Rheem Solaraide	RS80-42BP	2005013B	19	2400	

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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>
<b>Schuco USA L.P.</b>					
Premium Package	Premium II-80E	2006012A	-40	2900	
Premium Package	Premium III-120E	2006012B	-40	3200	
Slimline Package	Slimline II-80E	2006014A	-40	2800	
Slimline Package	Slimline III-120E	2006014B	-40	3100	
<b>Solahart Industries</b>					
SOLAHART	181BCXII	2001011B	19	1800	
SOLAHART	181J & 181J Free Heat	2001010A	19	1700	
SOLAHART	181KF & 181KF Free Heat	2001011A	19	1800	
SOLAHART	181L	2001009A	41	1700	
SOLAHART	182BCXII	2001011D	19	2600	
SOLAHART	182J & 182J Free Heat	2001010B	19	2400	
SOLAHART	182KF & 182KF Free Heat	2001011C	19	2600	
SOLAHART	302BCXII	2001011F	19	2600	
SOLAHART	302J & 302J Free Heat	2001010C	19	2400	
SOLAHART	302JXII	2001010D	19	2400	
SOLAHART	302KF & 302KF Free Heat	2001011E	19	2600	
SOLAHART	302L	2001009B	41	2400	
SOLAHART	303BCXII	2001011H	19	2900	
SOLAHART	303J & 303J Free Heat	2001010E	19	2700	
SOLAHART	303JXII	2001010F	19	2700	
SOLAHART	303KF & 303KF Free Heat	2001011G	19	2900	
SOLAHART	303L	2001009C	41	2700	
SOLAHART	443BCXII	2001011J	19	2800	
SOLAHART	443J & 443J Free Heat	2001010G	19	2600	
SOLAHART	443JXII	2001010H	19	2600	
SOLAHART	443KF & 443KF Free Heat	2001011I	19	2800	
SOLAHART	443L	2001009D	41	2700	
SOLAHART	444BCXII	2001011L	19	2900	
SOLAHART	444J & 444J Free Heat	2001010I	19	2800	

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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	444JXII	2001010J	19	2800	
SOLAHART	444KF & 444KF Free Heat	2001011K	19	3000	
SOLAHART	444L	2001009E	41	2800	
SOLAHART	ASE 181BCXII	2001014B	19	2100	
SOLAHART	ASE 181J & ASE 181J Free Heat	2001013A	19	1900	
SOLAHART	ASE 181KF & ASE 181KF Free He	2001014A	19	2100	
SOLAHART	ASE 181L	2001012A	41	1800	
SOLAHART	ASE 182BCXII	2001014D	19	2800	
SOLAHART	ASE 182J & ASE 182J Free Heat	2001013B	19	2600	
SOLAHART	ASE 182KF & ASE 182KF Free He	2001014C	19	2800	
SOLAHART	ASE 302BCXII	2001014F	19	2800	
SOLAHART	ASE 302J & ASE 302J Free Heat	2001013C	19	2600	
SOLAHART	ASE 302JXII	2001013D	19	2600	
SOLAHART	ASE 302KF & ASE 302KF Free He	2001014E	19	2800	
SOLAHART	ASE 302L	2001012B	41	2500	
SOLAHART	ASE 303BCXII	2001014H	19	3000	
SOLAHART	ASE 303J & ASE 303J Free Heat	2001013E	19	2800	
SOLAHART	ASE 303JXII	2001013F	19	2800	
SOLAHART	ASE 303KF & ASE 303KF Free He	2001014G	19	3100	
SOLAHART	ASE 303L	2001012C	41	2800	
SOLAHART	ASE 443BCXII	2001014J	19	3100	
SOLAHART	ASE 443J & ASE 443J Free Heat	2001013G	19	2900	
SOLAHART	ASE 443JXII	2001013H	19	2900	
SOLAHART	ASE 443KF & ASE 443KF Free He	2001014I	19	3100	
SOLAHART	ASE 443L	2001012D	41	2800	
SOLAHART	ASE 444BCXII	2001014L	19	3200	
SOLAHART	ASE 444J & ASE 444J Free Heat	2001013I	19	3000	
SOLAHART	ASE 444JXII	2001013J	19	3000	
SOLAHART	ASE 444KF & ASE 444KF Free He	2001014K	19	3200	
SOLAHART	ASE 444L	2001012E	41	2900	
Streamline Electric	270SL-2Bt	2004012A	41	3000	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
Streamline Electric	270SL-2L	2004012B	41	2600	
Streamline Electric	270SL-3Bt	2004012C	41	3200	
Streamline Electric	270SL-3L	2004012D	41	2900	
Streamline Electric	340SL-2Bt	2004012E	41	3000	
Streamline Electric	340SL-2L	2004012F	41	2600	
Streamline Electric	340SL-3Bt	2004012G	41	3200	
Streamline Electric	340SL-3L	2004012H	41	2900	
Streamline Electric	430SL-2Bt	2004012I	41	3000	
Streamline Electric	430SL-2L	2004012J	41	2600	
Streamline Electric	430SL-3Bt	2004012K	41	3200	
Streamline Electric	430SL-3L	2004012L	41	2900	

**Solar Energy, Inc.**

Duro-Drainback Solar Water Heat	D2B-12009120	2004011E	-20	3200	
Duro-Drainback Solar Water Heat	D2B-12009-128	2004011F	-20	3200	
Duro-Drainback Solar Water Heat	D2B-12009-40	2004011A	-20	2600	
Duro-Drainback Solar Water Heat	D2B-12009-64	2004011B	-20	2900	
Duro-Drainback Solar Water Heat	D2B-12009-80	2004011C	-20	3000	
Duro-Drainback Solar Water Heat	D2B-12009-96	2004011D	-20	3100	
Duro-Drainback Solar Water Heat	D2B-8009-32	2004010A	-20	2200	
Duro-Drainback Solar Water Heat	D2B-8009-40	2004010B	-20	2500	
Duro-Drainback Solar Water Heat	D2B-8009-42	2004010C	-20	2600	
Duro-Drainback Solar Water Heat	D2B-8009-63	2004010D	-20	2900	
Duro-Drainback Solar Water Heat	D2B-8009-64	2004010E	-20	2900	
Duro-Drainback Solar Water Heat	D2B-8009-80	2004010F	-20	3000	

**Solarhot**

Solvelox DB	S-SV-DB100	2007008A	-10	3100	
Solvelox DB	S-SV-DB100P32	2007008C	-10	2400	
Solvelox DB	S-SV-DB100P64	2007008B	-10	3000	
Solvelox DB	S-SV-DBET30	2007008D	-10	2900	
Solvelox DB	S-SV-DBET60	2007008E	-10	3400	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
Sovelox Glycol	S-SV-G100	2007018A	-30	3100	
Sovelox Glycol	S-SV-G100ET	2007018B	-30	3400	
Sovelox Glycol	S-SV-GC100P64	2007018D	-30	3100	
Sovelox Glycol	S-SV-GET30	2007018C	-30	2900	
Sovelox Glycol	S-SV-GET30-120	2007018F	-30	3000	
Sovelox Glycol	S-SV-GET60-120	2007018E	-30	3500	

**Solene**

Solene/Chromagen DC Closed Lo	SLCR32DC-80HE	2006003A	-10	2500	
Solene/Chromagen DC Closed Lo	SLCR32DC-80HE-XE	2006031A	-10	2300	
Solene/Chromagen DC Closed Lo	SLCR40DC-80HE	2006003B	-10	2800	
Solene/Chromagen DC Closed Lo	SLCR40DC-80HE-XE	2006031B	-10	2600	
Solene/Chromagen DC Closed Lo	SLCR60DC-80HE	2006003E	-10	3100	
Solene/Chromagen DC Closed Lo	SLCR64DC-80HE	2006003C	-10	3100	
Solene/Chromagen DC Closed Lo	SLCR64DC-80HE-XE	2006031C	-10	3000	
Solene/Chromagen DC Closed Lo	SLCR80DC-80HE	2006003D	-10	3200	
Solene/Chromagen DC Closed Lo	SLCR80DC-80HE-XE	2006031D	-10	3100	
Solene/Chromagen DC Open Loo	SLCR32DC-66	2005011A	20	2900	
Solene/Chromagen DC Open Loo	SLCR40DC-80	2005011B	20	3100	
Solene/Chromagen DC Open Loo	SLCR60DC-80	2005011C	20	3400	
Solene/Chromagen DC Open Loo	SLCR64DC-120	2005011D	20	3400	
Solene/Chromagen DC Open Loo	SLCR80DC-120	2005011E	20	3500	
Solene/Chromagen Drain Back	SLCR32DC-80DB	2006001A	-10	2400	
Solene/Chromagen Drain Back	SLCR32DC-80DB-XE	2006030A	-10	2200	
Solene/Chromagen Drain Back	SLCR40DC-80DB	2006001B	-10	2700	
Solene/Chromagen Drain Back	SLCR40DC-80DB-XE	2006030B	-10	2500	
Solene/Chromagen Drain Back	SLCR60DC-80DB	2006001E	-10	3000	
Solene/Chromagen Drain Back	SLCR64DC-80DB	2006001C	-10	3100	
Solene/Chromagen Drain Back	SLCR64DC-80DB-XE	2006030C	-10	2900	
Solene/Chromagen Drain Back	SLCR80DC-80DB	2006001D	-10	3200	
Solene/Chromagen Drain Back	SLCR80DC-80DB-XE	2006030D	-10	3100	
Solene/Chromagen PV Open Loo	SLCR32PV-66	2006002A	20	3100	

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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 PV Open Loo	SLCR40PV-80	2006002B	20	3300	
Solene/Chromagen PV Open Loo	SLCR60PV-80	2006002C	20	3500	
Solene/Chromagen PV Open Loo	SLCR64PV-120	2006002D	20	3600	
Solene/Chromagen PV Open Loo	SLCR80PV-120	2006002E	20	3700	
Solene/Corona DC Closed Loop	SLCO32DC-80HE	2006023A	-10	2500	
Solene/Corona DC Closed Loop	SLCO32DC-80HE-XE	2006029A	-10	2200	
Solene/Corona DC Closed Loop	SLCO40DC-80HE	2006023B	-10	2700	
Solene/Corona DC Closed Loop	SLCO40DC-80HE-XE	2006029B	-10	2500	
Solene/Corona DC Closed Loop	SLCO60DC-80HE	2006023C	-10	2900	
Solene/Corona DC Closed Loop	SLCO64DC-80HE	2006023D	-10	3100	
Solene/Corona DC Closed Loop	SLCO64DC-80HE-XE	2006029C	-10	3000	
Solene/Corona DC Closed Loop	SLCO80DC-80HE	2006023E	-10	3200	
Solene/Corona DC Closed Loop	SLCO80DC-80HE-XE	2006029D	-10	3100	
Solene/Corona DC Open Loop	SLCO32DC-66	2006021A	20	2900	
Solene/Corona DC Open Loop	SLCO40DC-80	2006021B	20	3100	
Solene/Corona DC Open Loop	SLCO60DC-80	2006021C	20	3200	
Solene/Corona DC Open Loop	SLCO64DC-120	2006021D	20	3400	
Solene/Corona DC Open Loop	SLCO80DC-120	2006021E	20	3500	
Solene/Corona Drainback	SLCO32DC-80DB	2006022A	-10	2400	
Solene/Corona Drainback	SLCO32DC-80DB-XE	2006028A	-10	2100	
Solene/Corona Drainback	SLCO40DC-80DB	2006022B	-10	2700	
Solene/Corona Drainback	SLCO40DC-80DB-XE	2006028B	-10	2500	
Solene/Corona Drainback	SLCO60DC-80DB	2006022C	-10	2900	
Solene/Corona Drainback	SLCO64DC-80DB	2006022D	-10	3000	
Solene/Corona Drainback	SLCO64DC-80DB-XE	2006028C	-10	2900	
Solene/Corona Drainback	SLCO80DC-80DB	2006022E	-10	3200	
Solene/Corona Drainback	SLCO80DC-80DB-XE	2006028D	-10	3100	
Solene/Corona PV Open Loop	SLCO32PV-66	2006020A	20	3100	
Solene/Corona PV Open Loop	SLCO40PV-80	2006020B	20	3300	
Solene/Corona PV Open Loop	SLCO60PV-80	2006020C	20	3400	
Solene/Corona PV Open Loop	SLCO64PV-120	2006020D	20	3500	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (kWhr)	Comments
Solene/Corona PV Open Loop	SLCO80PV-120	2006020E	20	3600	
<b>Stitt Energy Systems, Inc.</b>					
Sup.plen.ergy Solar Water Heater	SESI-120-80	2006008B	-40	3100	
Sup.plen.ergy Solar Water Heater	SESI-80-40	2006008A	-40	2400	
<b>SunEarth, Inc.</b>					
Cascade	ECRD-40-80	2001026B	-50	2700	
Cascade	ECRD-40-80-2	2001027B	-50	2500	
Cascade	ECRD-48-80	2001026F	-50	2800	
Cascade	ECRD-48-80-2	2001027F	-50	2700	
Cascade	ECRD-64-80	2001026H	-50	3000	
Cascade	ECRD-64-80-2	2001027H	-50	2900	
Cascade	EPRD-40-80	2001026A	-50	2700	
Cascade	EPRD-40-80-2	2001027A	-50	2400	
Cascade	EPRD-42-80	2001026C	-50	2700	
Cascade	EPRD-42-80-2	2001027C	-50	2500	
Cascade	EPRD-48-80	2001026E	-50	2800	
Cascade	EPRD-48-80-2	2001027E	-50	2600	
Cascade	EPRD-64-80	2001026G	-50	3000	
Cascade	EPRD-64-80-2	2001027G	-50	2800	
CopperHeart	CP-20	1992011I	20	1500	
CopperHeart	CP-30	1992011E	20	1900	
CopperHeart	CP-40	1992011F	20	2100	
CopperHeart	CP-60P	1992011G	20	2400	
CopperHeart	CP-80P	1992011J	20	2600	
SOLARAY	TE32C-80-1	1993001B	-60	2800	
SOLARAY	TE32C-80-2	1996001B	-60	2700	
SOLARAY	TE32P-80-1	1993001A	-60	2700	
SOLARAY	TE32P-80-2	1996001A	-60	2600	
SOLARAY	TE40C-120-1	1993001M	-60	3000	
SOLARAY	TE40C-120-2	1996001K	-60	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>
SOLARAY	TE40C-120-2-PV	2000003I	-60	2900	
SOLARAY	TE40C-120-PV	2000004I	-60	3000	
SOLARAY	TE40C-80-1	1993001D	-60	3000	
SOLARAY	TE40C-80-2	1996001D	-60	2900	
SOLARAY	TE40C-80-2-PV	2000003A	-60	2900	
SOLARAY	TE40C-80-PV	2000004A	-60	3000	
SOLARAY	TE40P-80-1	1993001C	-60	2900	
SOLARAY	TE40P-80-2	1996001C	-60	2800	
SOLARAY	TE40P-80-2-PV	2000003D	-60	2800	
SOLARAY	TE40P-80-PV	2000004D	-60	2900	
SOLARAY	TE48C-120-1	1993001O	-60	3100	
SOLARAY	TE48C-120-2	1996001M	-60	3000	
SOLARAY	TE48C-120-2-PV	2000003K	-60	3000	
SOLARAY	TE48C-120-PV	2000004K	-60	3100	
SOLARAY	TE48C-80-1	1993001L	-60	3100	
SOLARAY	TE48C-80-2	1996001J	-60	3000	
SOLARAY	TE48C-80-2-PV	2000003H	-60	3000	
SOLARAY	TE48C-80-PV	2000004H	-60	3100	
SOLARAY	TE48P-120-1	1993001N	-60	3100	
SOLARAY	TE48P-120-2	1996001L	-60	3000	
SOLARAY	TE48P-120-2-PV	2000003J	-60	3000	
SOLARAY	TE48P-120-PV	2000004J	-60	3100	
SOLARAY	TE48P-80-1	1993001K	-60	3100	
SOLARAY	TE48P-80-2	1996001I	-60	3000	
SOLARAY	TE48P-80-2-PV	2000003G	-60	3000	
SOLARAY	TE48P-80-PV	2000004G	-60	3100	
SOLARAY	TE64C-120-1	1993001Q	-60	3300	
SOLARAY	TE64C-120-2	1996001O	-60	3200	
SOLARAY	TE64C-120-2-PV	2000003M	-60	3200	
SOLARAY	TE64C-120-PV	2000004M	-60	3300	
SOLARAY	TE64C-80-1	1993001H	-60	3300	

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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>
SOLARAY	TE64C-80-2	1996001F	-60	3200	
SOLARAY	TE64C-80-2-PV	2000003B	-60	3300	
SOLARAY	TE64C-80-PV	2000004B	-60	3300	
SOLARAY	TE64P-120-1	1993001P	-60	3200	
SOLARAY	TE64P-120-2	1996001N	-60	3200	
SOLARAY	TE64P-120-2-PV	2000003L	-60	3200	
SOLARAY	TE64P-80-1	1993001G	-60	3200	
SOLARAY	TE64P-80-2	1996001E	-60	3200	
SOLARAY	TE64P-80-2-PV	2000003E	-60	3200	
SOLARAY	TE80C-120-1	1993001S	-60	3400	
SOLARAY	TE80C-120-2	1996001Q	-60	3300	
SOLARAY	TE80C-120-2-PV	2000003O	-60	3400	
SOLARAY	TE80C-120-PV	2000004O	-60	3400	
SOLARAY	TE80P-120-1	1993001R	-60	3300	
SOLARAY	TE80P-120-2	1996001P	-60	3300	
SOLARAY	TE80P-120-2-PV	2000003N	-60	3300	
SOLARAY	TE80P-120-PV	2000004N	-60	3400	
SunSaver	NF40P-80S	1995010M	41	2900	
SunSaver	NF40P-80T	1995009M	41	3000	
SunSiphon	EPGX116-63-2	2001004I	15	3000	
SunSiphon	EPGX116-64-2	2001004J	15	3000	
SunSiphon	EPGX116-80-2	2001004L	15	3200	
SunSiphon	EPGX48-21-2	2001004A	15	1700	
SunSiphon	EPGX48-24-2	2001004B	15	1800	
SunSiphon	EPGX48-32-2	2001004C	15	2200	
SunSiphon	EPGX80-40-2	2001004D	15	2500	
SunSiphon	EPGX80-42-2	2001004E	15	4000	
SunSiphon	EPGX80-48-2	2001004F	15	2700	
SunSiphon	EPGX80-63-2	2001004G	15	3000	
SunSiphon	EPGX80-64-2	2001004H	15	3000	
SunSource	HX40P-80	1995001E	-28	3000	

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SunSource	HX64P-120	1995001K	-28	3300	
<b>Synergy Solar</b>					
Drainback Stainless HX	107-2T	2004005D	-50	3200	
Drainback Stainless HX	133-2T	2004005F	-50	3300	
Drainback Stainless HX	40-1T	2006019A	-50	2600	
Drainback Stainless HX	53-1T	2006019B	-50	2900	
Drainback Stainless HX	53-2T	2004005B	-50	2700	
Drainback Stainless HX	60-2T	2004005A	-50	2800	
Drainback Stainless HX	80-2T	2004005C	-50	3000	
Drainback Stainless HX	S53-2T	2004005E	-50	2500	
<b>Thermal Conversion Technology, Inc. (TCT Solar)</b>					
ProgressivTube®	PT-30-CN	1995002A	10	2000	
ProgressivTube®	PT-35-CN	1995002B	10	2000	
ProgressivTube®	PT-40-CN	1995002C	10	2300	
ProgressivTube®	PT-50-CN	1995002D	10	2400	
<b>Thermomax Industries Ltd.</b>					
Thermomax Mazdon	Mazdon 30-R120	2001029H	-60	2700	
Thermomax Mazdon	Mazdon 30-R80	2001029A	-60	2800	
Thermomax Mazdon	Mazdon 40-R120	2001029I	-60	3000	
Thermomax Mazdon	Mazdon 40-R80	2001029B	-60	3100	
Thermomax Mazdon	Mazdon 50-R120	2001029J	-60	3200	
Thermomax Mazdon	Mazdon 50-R80	2001029C	-60	3200	
Thermomax Mazdon	Mazdon 60-R120	2001029K	-60	3300	
Thermomax Mazdon	Mazdon 60-R80	2001029D	-60	3300	
Thermomax Mazdon	Mazdon 70-R120	2001029L	-60	3400	
Thermomax Mazdon	Mazdon 70-R80	2001029E	-60	3400	
Thermomax Mazdon	Mazdon 80-R120	2001029M	-60	3400	
Thermomax Mazdon	Mazdon 80-R80	2001029F	-60	3400	
Thermomax Mazdon	Mazdon 90-R120	2001029N	-60	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>
Thermomax Mazdon	Mazdon 90-R80	2001029G	-60	3500	
Thermomax Solamax	Solamax 20R-R120	2004001I	-50	2100	
Thermomax Solamax	Solamax 20R-R80	2004001A	-50	2200	
Thermomax Solamax	Solamax 20W	2004002A	-50	2100	
Thermomax Solamax	Solamax 30R-R120	2004001J	-50	2700	
Thermomax Solamax	Solamax 30R-R80	2004001B	-50	2700	
Thermomax Solamax	Solamax 30W	2004002B	-50	2500	
Thermomax Solamax	Solamax 40R-R120	2004001K	-50	2900	
Thermomax Solamax	Solamax 40R-R80	2004001C	-50	3000	
Thermomax Solamax	Solamax 40W	2004002C	-50	2900	
Thermomax Solamax	Solamax 50R-R120	2004001L	-50	3100	
Thermomax Solamax	Solamax 50R-R80	2004001D	-50	3100	
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	3300	
Thermomax Solamax	Solamax 80R-R80	2004001G	-50	3300	
Thermomax Solamax	Solamax 90R-R120	2004001P	-50	3400	
Thermomax Solamax	Solamax 90R-R80	2004001H	-50	3400	

**TrendSetter Industries**

Six Rivers Solar	SRS-100-2-40-PC-E	2001007A	-20	2600	
Six Rivers Solar	SRS-200-3-40-PC-E	2001007B	-20	2800	
Six Rivers Solar	SRS-200-4-40-PC-E	2001007C	-20	2900	
Six Rivers Solar	SRS-300-5-40-PC-E	2001007D	-20	3000	
Six Rivers Solar	SRS-300-6-40-PC-E	2001007E	-20	3000	

**\* A conventional 50 gallon electric water heater would consume 4000 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**  
**California Climate Zone 13**  
**with Gas Backup**

<b>System Name</b>	<b>System Model</b>	<b>System Number</b>	<b>FTL (°F)</b>	<b>Energy Savings* (Therms)</b>	<b>Comments</b>
<b>ACR Solar International</b>					
Skyline System 3	200132C502TG	2001018B	30	120	
Skyline System 3	200132C50T20G	2002005A	20	100	
Skyline System 5	200152C80EX2TG	2001019A	-54	100	
Skyline System 5	200153C80EX2TG	2001019B	-54	130	
<b>BTF, Ltd.</b>					
Solar Patriot™	SP20-1-65G-DT-G	2007001A	-50	100	
Solar Patriot™	SP20-2-80G-DT-G	2007001B	-50	150	
<b>Butler Sun Solutions</b>					
Solar Butler	BSS-PV1-40Ga	2005006A	-54	115	
Solar Butler	BSS-PV1-40Gb	2005006B	-54	95	
Solar Butler	BSS-PV1-40Gc	2005006I	-54	125	
Solar Butler	BSS-PV1-40Gd	2005006K	-54	130	
Solar Butler	BSS-PV1-50Ga	2005006C	-54	135	
Solar Butler	BSS-PV1-50Gb	2005006J	-54	140	
Solar Butler	BSS-PV1-50Gc	2005006H	-54	130	
Solar Butler	BSS-PV1-80G2a	2005010A	-54	100	
Solar Butler	BSS-PV1-80G2b	2005010B	-54	115	
Solar Butler	BSS-PV1-80Ga	2005006E	-54	145	
Solar Butler	BSS-PV1-80Gc	2005006G	-54	130	
Solar Butler	BSS-S1-40Ga	2003016A	-54	60	
Solar Butler	BSS-S1-40Gb	2003016B	-54	40	
Solar Butler	BSS-S1-40Gc	2003016I	-54	65	
Solar Butler	BSS-S1-50Ga	2003016C	-54	70	
Solar Butler	BSS-S1-50Gc	2003016H	-54	70	
Solar Butler	BSS-S1-80G2a	2005009A	-54	100	

**\* A conventional 50 gallon gas water heater would consume 200 therms 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* (Therms)</b>	<b>Comments</b>
Solar Butler	BSS-S1-80G2b	2005009B	-54	115	
Solar Butler	BSS-S1-80Ga	2003016E	-54	80	
Solar Butler	BSS-S1-80Gc	2003016G	-54	70	
<b>Davis Energy Group</b>					
SunCache	SCG-100-GS	2008009B	20	75	
SunCache	SCG-100-GTL	2008010B	20	115	
SunCache	SCG-50-GS	2008009A	20	65	
SunCache	SCG-50-GTL	2008010A	20	105	
SunCache	SCU-50-GS	2008007A	20	45	
SunCache	SCU-50-GTL	2008008A	20	85	
<b>Enerworks, Inc.</b>					
Solar Water Heating Appliance	EWRA1-G40	2006004A	-50	115	
Solar Water Heating Appliance	EWRA1-G80	2006004B	-50	120	
Solar Water Heating Appliance	EWRA2-G100	2006004D	-50	145	
Solar Water Heating Appliance	EWRA2-G80	2006004C	-50	140	
Solar Water Heating Appliance	EWRA3-G100	2006004E	-50	135	
Solar Water Heating Appliance	EWRA3-G120	2006004F	-50	140	
Solar Water Heating Appliance	EWRA4-G120	2006004G	-50	140	
Solar Water Heating Appliance	EWRA4-G144	2006004H	-50	140	
<b>Fafco, Inc.</b>					
Polymer Drainback	VDB-48U-50G-50S	2007004A	-20	90	
Polymer Drainback	VDB-48U-50G-80S	2007004B	-20	95	
Polymer Drainback	VDB-48UX2-50G-50S	2007004C	-20	105	
Polymer Drainback	VDB-48UX2-50G-80S	2007004D	-20	115	
<b>Heat Transfer Products</b>					
Phoenix Solar	PH-119S	2007023B	-60	170	
Phoenix Solar	PH-80S	2007023A	-60	150	
SuperStor Contender Solar	SSC-119SB	2007012C	-60	175	
SuperStor Contender Solar	SSC-50SB	2007012A	-60	155	
SuperStor Contender Solar	SSC-80SB	2007012B	-60	165	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
SuperStor Ultra Solar	SSU-119SB	2007021C	-60	170	
SuperStor Ultra Solar	SSU-119SB-DW	2007022B	-60	175	
SuperStor Ultra Solar	SSU-60SB	2007021A	-60	150	
SuperStor Ultra Solar	SSU-80SB	2007021B	-60	165	
SuperStor Ultra Solar	SSU-80SB-DW	2007022A	-60	160	

**Heliodyne, Inc.**

Helio-Flo	HF 13366 G 50 AC D Z	2001025A	27	120	
Helio-Flo	HF 1408 G 50 AC D Z	2001025B	27	130	
Helio-Flo	HF 1410 G 80 AC D Z	2001025C	27	150	
Helio-Flo	HF 23366 G 80 AC D Z	2001025D	27	165	
Helio-Flo	HF 2408 G 120 AC D Z	2001025F	27	170	
Helio-Flo	HF 2408 G 80 AC D Z	2001025E	27	165	
Helio-Flo	HF 2410 G 120 AC D Z	2001025G	27	175	
Helio-Flo	HF 3408 G 120 AC D Z	2001025H	27	175	
Helio-Flo	HF 3410 G 120 AC D Z	2001025I	27	180	
Heliopak	16 DWCL HP 1 3366 G 80 ACD Z	1998001G	-60	105	
Heliopak	16 DWCL HP 1 408 G 65 ACD Z	1998001F	-60	110	
Heliopak	16 DWCL HP 1 408 G 65 PVD Z	1998002C	-60	115	
Heliopak	16 DWCL HP 1 408 G 80 ACD Z	1998001I	-60	110	
Heliopak	16 DWCL HP 1 410 G 65 ACD Z	1998001A	-60	120	
Heliopak	16 DWCL HP 1 410 G 80 ACD Z	1998001J	-60	120	
Heliopak	16 DWCL HP 1 410 G 80 PVD Z	1998002A	-60	125	
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	130	
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	135	
Helio-Pak Helix SS PV	HP HX SS 1 3366 G PV 50 EE D Z	2005004A	-60	115	
Helio-Pak Helix SS PV	HP HX SS 1 408 G PV 50 EE D Z	2005004B	-60	120	
Helio-Pak Helix SS PV	HP HX SS 1 410 G PV 80 EE D Z	2005004C	-60	130	
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	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
Helio-Pak Helix SS PV	HP HX SS 2 410 G PV 120 SE D Z	2005004F	-60	145	
<b>Integrated Solar, LLC</b>					
CopperSun	CS330-G	1999001B	20	70	
CopperSun	CS330SV-G	2002008A	20	70	
CopperSun	CS340-G	1999001C	20	75	
CopperSun	CS340SV-G	2002008B	20	70	
CopperSun	CS440-G	1999001A	20	80	
CopperSun	CS450-G	1999001D	20	85	
Radco Drainback Heat Exchanger	R-DBHX-12-120-GD-80P	1998004C	-60	145	
Radco Drainback Heat Exchanger	R-DBHX-8-40-GS-32P	2002001A	-60	0	
Radco Drainback Heat Exchanger	R-DBHX-8-65-GD-40P	1998004A	-60	115	
Radco Drainback Heat Exchanger	R-DBHX-8-80-GD-64P	1998004B	-60	140	
<b>Mr. Sun Solar</b>					
Sol-Reliant	SR 40/80 G PVDB	2004009B	-50	105	
Sol-Reliant	SR 56/80 G PVDB	2004009A	-50	115	
Sol-Reliant	SR112/120 G PVDB	2007026C	-50	125	
Sol-Reliant	SR112/80 G PVDB	2007026B	-50	125	
Sol-Reliant	SR80/80 G PVDB	2007026A	-50	120	
<b>Oventrop Corporation</b>					
OVSOL System 5	OV-5 Regusol Indirect	2007017A	-20	80	
<b>Schuco USA L.P.</b>					
Premium Package	Premium II-80G	2006011A	-40	125	
Premium Package	Premium III-120G	2006011B	-40	130	
Slimline Package	Slimline II-80G	2006013A	-40	120	
Slimline Package	Slimline III-120G	2006013B	-40	130	
<b>Solahart Industries</b>					
SOLAHART	ASG 181BCXII	2001017B	19	95	
SOLAHART	ASG 181J & ASG 181J Free Heat	2001016A	19	90	
SOLAHART	ASG 181KF & ASG 181KF Free H	2001017A	19	95	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
SOLAHART	ASG 181L	2001015A	41	85	
SOLAHART	ASG 182BCXII	2001017D	19	130	
SOLAHART	ASG 182J & ASG 182J Free Heat	2001016B	19	120	
SOLAHART	ASG 182KF & ASG 182KF Free H	2001017C	19	130	
SOLAHART	ASG 302BCXII	2001017F	19	135	
SOLAHART	ASG 302J & ASG 302J Free Heat	2001016C	19	125	
SOLAHART	ASG 302JXII	2001016D	19	125	
SOLAHART	ASG 302KF & ASG 302KF Free H	2001017E	19	135	
SOLAHART	ASG 302L	2001015B	41	120	
SOLAHART	ASG 303BCXII	2001017H	19	150	
SOLAHART	ASG 303J & ASG 302J Free Heat	2001016E	19	135	
SOLAHART	ASG 303JXII	2001016F	19	135	
SOLAHART	ASG 303KF & ASG 303KF Free H	2001017G	19	150	
SOLAHART	ASG 303L	2001015C	41	135	
SOLAHART	ASG 443BCXII	2001017J	19	150	
SOLAHART	ASG 443J & ASG 443J Free Heat	2001016G	19	140	
SOLAHART	ASG 443JXII	2001016H	19	140	
SOLAHART	ASG 443KF & ASG 443KF Free H	2001017I	19	150	
SOLAHART	ASG 443L	2001015D	41	135	
SOLAHART	ASG 444BCXII	2001017L	19	155	
SOLAHART	ASG 444J & ASG 444J Free Heat	2001016I	19	145	
SOLAHART	ASG 444JXII	2001016J	19	145	
SOLAHART	ASG 444KF & ASG 444KF Free H	2001017K	19	160	
SOLAHART	ASG 444L	2001015E	41	145	

**Solene**

Solene/Chromagen DC Closed Lo	SLCR32DC-80HE-XG	2006027A	-10	105	
Solene/Chromagen DC Closed Lo	SLCR40DC-80HE-XG	2006027B	-10	115	
Solene/Chromagen DC Closed Lo	SLCR64DC-80HE-XG	2006027C	-10	130	
Solene/Chromagen DC Closed Lo	SLCR80DC-80HE-XG	2006027D	-10	135	
Solene/Chromagen Drain Back	SLCR32DC-80DB-XG	2006026A	-10	100	
Solene/Chromagen Drain Back	SLCR40DC-80DB-XG	2006026B	-10	110	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
Solene/Chromagen Drain Back	SLCR64DC-80DB-XG	2006026C	-10	125	
Solene/Chromagen Drain Back	SLCR80DC-80DB-XG	2006026D	-10	130	
Solene/Corona DC Closed Loop	SLCO32DC-80HE-XG	2006025A	-10	105	
Solene/Corona DC Closed Loop	SLCO40DC-80HE-XG	2006025B	-10	115	
Solene/Corona DC Closed Loop	SLCO64DC-80HE-XG	2006025C	-10	125	
Solene/Corona DC Closed Loop	SLCO80DC-80HE-XG	2006025D	-10	130	
Solene/Corona DC Open Loop	SLCO32DC-80-XG	2007016A	32	120	
Solene/Corona DC Open Loop	SLCO40DC-80-XG	2007016B	32	125	
Solene/Corona DC Open Loop	SLCO64DC-80-XG	2007016C	32	135	
Solene/Corona DC Open Loop	SLCO80DC-80-XG	2007016D	32	140	
Solene/Corona Drainback	SLCO32DC-80DB-XG	2006024A	-10	100	
Solene/Corona Drainback	SLCO40DC-80DB-XG	2006024B	-10	110	
Solene/Corona Drainback	SLCO64DC-80DB-XG	2006024C	-10	125	
Solene/Corona Drainback	SLCO80DC-80DB-XG	2006024D	-10	130	

**SunEarth, Inc.**

Cascade	ECRD-40-80-2G	2001028B	-50	130	
Cascade	ECRD-48-80-2G	2001028F	-50	140	
Cascade	ECRD-64-80-2G	2001028H	-50	150	
Cascade	EPRD-40-80-2G	2001028A	-50	125	
Cascade	EPRD-42-80-2G	2001028C	-50	125	
Cascade	EPRD-48-80-2G	2001028E	-50	135	
Cascade	EPRD-64-80-100G	2001028J	-50	130	
Cascade	EPRD-64-80-2G	2001028G	-50	150	
Cascade	EPRD-64-80-75G	2001028I	-50	130	
CopperHeart	CP-20G	2001002A	20	65	
CopperHeart	CP-20-TLG	2002006A	20	100	
CopperHeart	CP-30G	2001002B	20	85	
CopperHeart	CP-30-TLG	2002006B	20	120	
CopperHeart	CP-40G	2001002C	20	95	
CopperHeart	CP-40-TLG	2002006C	20	125	
CopperHeart	CP-60PG	2001002D	20	110	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
CopperHeart	CP-80PG	2001002E	20	120	
SOLARAY	TE40C-80-2G	2001001B	-60	140	
SOLARAY	TE40C-80-2G-PV	2001003B	-60	135	
SOLARAY	TE40P-80-2G	2001001A	-60	135	
SOLARAY	TE40P-80-2G-PV	2001003A	-60	130	
SOLARAY	TE48C-80-2G	2001001D	-60	150	
SOLARAY	TE48C-80-2G-PV	2001003D	-60	145	
SOLARAY	TE48P-80-2G	2001001C	-60	150	
SOLARAY	TE48P-80-2G-PV	2001003C	-60	140	
SOLARAY	TE48P-80-75G	2001001G	-60	115	
SOLARAY	TE64C-80-2G	2001001F	-60	160	
SOLARAY	TE64C-80-2G-PV	2001003F	-60	160	
SOLARAY	TE64P-80-2G	2001001E	-60	160	
SOLARAY	TE64P-80-2G-PV	2001003E	-60	160	
SunSiphon	EPGX116-63-2G	2001005I	15	145	
SunSiphon	EPGX116-64-2G	2001005J	15	145	
SunSiphon	EPGX116-80-2G	2001005L	15	155	
SunSiphon	EPGX48-21-2G	2001005A	15	70	
SunSiphon	EPGX48-24-2G	2001005B	15	80	
SunSiphon	EPGX48-32-2G	2001005C	15	95	
SunSiphon	EPGX80-40-2G	2001005D	15	115	
SunSiphon	EPGX80-42-2G	2001005E	15	115	
SunSiphon	EPGX80-48-2G	2001005F	15	125	
SunSiphon	EPGX80-63-2G	2001005G	15	140	
SunSiphon	EPGX80-64-2G	2001005H	15	140	

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

ProgressivTube®	PT-40-CN2-GX100	1999002A	10	130	
ProgressivTube®	PT-30-CN-G	1998006A	10	90	
ProgressivTube®	PT-35-CN-G	1998006B	10	90	
ProgressivTube®	PT-40-CN2-GX75	1998007A	10	120	
ProgressivTube®	PT-40-CN-G	1998006C	10	105	

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System Name	System Model	System Number	FTL (°F)	Energy Savings* (Therms)	Comments
ProgressivTube®	PT-40-CN-GX	1998006E	10	110	
ProgressivTube®	PT-50-CN-G	1998006D	10	110	
ProgressivTube®	PT-50-CN-GX	1998006F	10	115	

**TrendSetter Industries**

Six Rivers Solar	SRS-050-1-32-PC	2001006F	-20	90	
Six Rivers Solar	SRS-050-1-40-PC	2001006G	-20	100	
Six Rivers Solar	SRS-070-1-40-PC	2001006I	-20	145	
Six Rivers Solar	SRS-100-2-32-PC	2001006H	-20	120	
Six Rivers Solar	SRS-100-2-40-PC	2001006A	-20	125	
Six Rivers Solar	SRS-150-2-40-PC	2001006J	-20	170	
Six Rivers Solar	SRS-150-3-32-PC	2001006K	-20	175	
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	140	
Six Rivers Solar	SRS-300-6-40-PC	2001006E	-20	145	
Six Rivers Solar	TS-100-1-30-PC	2005002A	-20	160	
Six Rivers Solar	TS-150-2-22-PC	2005002B	-20	170	
Six Rivers Solar	TS-200-3-30-PC	2005002C	-20	190	
Six Rivers Solar	TS-200-4-30-PC	2005002D	-20	195	
Six Rivers Solar	TS-300-5-30-PC	2005002E	-20	195	
Six Rivers Solar	TS-300-6-30-PC	2005002F	-20	195	

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