



ICC-SRCC™ LISTING

ICC-SRCC™ Solar Thermal Listing Program

Listing Number: SRCC-16004

Effective Date: May 31, 2018

This listing is subject to re-examination in one year.

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A Program of the ICC Evaluation Service (ICC-ES) – www.icc-es.org

CSI: DIVISION: 22 00 00 – PLUMBING
Section: 22 33 30.23 - Residential Solar Domestic Water Heater System

DIVISION: 23 00 00 – HEATING
Section: 23 56 13 – Heating Solar Collectors
Section: 23 56 16 – Packaged Solar Heating Equipment

Product certification program:

The ICC-SRCC Solar Thermal Standard Listing Program is conducted in accordance with the latest version of the ICC-SRCC™ Solar Thermal Listing Program Guidelines. The program includes evaluation of the manufacturer's quality assurance systems to assess continued compliance with applicable codes and standards.

Products: Solar Water Heating Systems and Solar Thermal Collectors

Listee: Apricus, Inc. www.apricus.com
6060 West Manchester, #109 (909) 374-9800
Los Angeles, CA 90045, U.S.A.

Compliance with the following codes:

- ❖ 2015 Uniform Solar Energy and Hydronics Code® (USEHC)*
- ❖ 2015 Uniform Plumbing Code® (UPC)*

**Uniform Plumbing Code and Uniform Solar Energy & Hydronics Code are copyrighted publications and trademarks of the International Association of Plumbing and Mechanical Officials (IAPMO)*



Compliance with the following standards and criteria:

- ❖ ICC 901/SRCC 100-2015, Solar Thermal Collector Standard
- ❖ ICC 900/SRCC 300-2015, Solar Thermal Systems Standard
- ❖ SRCC EM-1, Methodology for Determining Compliance with State and Federal Lead in Plumbing Laws for Solar Heating and Cooling Equipment, 10/28/2015. Shows compliance with:
 - Reduction of Lead in Drinking Water Act, California Health and Safety Code § 116875
 - Vermont Lead Reduction Law (Vermont Act 193)
 - Louisiana Reduction of Lead Act (Louisiana Act 362)
 - Maryland Lead-Free Materials Act (HB 372)
 - Reduction of Lead in Drinking Water Act (Section 1417, Federal Safe Drinking Water Act)
 - NSF 372-2010, Drinking Water System Components – Lead Content**

** NSF 372 is a copyrighted publication of NSF International.

Models:

The solar thermal products listed below have been evaluated by the Solar Rating & Certification Corporation (ICC-SRCC™), an ISO/IEC 17065 accredited and EPA recognized Certification Body, in accordance with the *ICC-SRCC Solar Thermal Listing Program Operating Guidelines*, and has been listed by ICC-SRCC to the codes standards listed above. This award of this listing is subject to all terms and conditions of the *ICC-SRCC Solar Thermal Listing Program Agreement* and the documents incorporated therein by reference.

Solar Thermal Collectors

Collector Type	Brand Name	Model Number	ICC-SRCC OG-100 Certification*
Tubular	Apricus	AP-30C	2007033D
Tubular	Apricus	AP-10	2007033C
Tubular	Apricus	AP-20	2007033B
Tubular	Apricus	AP-30	2007033A
Tubular	Apricus	ETC-10	10001910
Tubular	Apricus	ETC-20	10001911
Tubular	Apricus	ETC-30 / ETC-30C	10001909
Glazed Flat Plate	Apricus	FPC-A40	10001901
Glazed Flat Plate	Apricus	FPC-A26	10001900
Glazed Flat Plate	Apricus	FPC-A32	10001899



Solar Thermal Systems

Brand Name	Model Number	ICC-SRCC OG-300 Certification*
Apricus	APSS_CLOSED_BPHE_AP60_DT-FTD-TBGT	2009151B
Apricus	APSS_CLOSED_BPHE_AP30_DT-FTD-TBGT	2009151A
Apricus	APSS_CLOSED_BPHE_AP60_DT-FTD_PBGT	2009150B
Apricus	APSS_CLOSED_BPHE_AP30_DT-FTD_PBGT	2009150A
Apricus	APSS_CLOSED_BPHE_AP60_FTD_TBGT	2009149B
Apricus	APSS_CLOSED_BPHE_AP30_FTD_TBGT	2009149A
Apricus	APSS_CLOSED_BPHE_AP60_FTD_PBGT	2009148B
Apricus	APSS_CLOSED_BPHE_AP30_FTD_PBGT	2009148A
Apricus	APSS_CLOSED_AP60_FTW_TBGB	2009147B
Apricus	APSS_CLOSED_AP30_FTW_TBGB	2009147A
Apricus	APSS_CLOSED_AP60_FTB_PBGT	2009146B
Apricus	APSS_CLOSED_AP30_FTB_PBGT	2009146A
Apricus	APSS_CLOSED_AP60_FTB_STD-G	2009145B
Apricus	APSS_CLOSED_AP30_FTB_STD-G	2009145A
Apricus	APSS_CLOSED_BPHE_AP60_DT-FTD_STD-G	2010046B
Apricus	APSS_CLOSED_BPHE_AP30_DT-FTD_STD-G	2010046A
Apricus	APSS_CLOSED_AP30_FTB-3_STD-G	2011079A
Apricus	APSS_CLOSED_AP60_FTB-3_STD-G	2011079B

* Certifications to the ICC-SRCC OG-100 & OG-300 programs are available on the ICC-SRCC website at www.solar-rating.org

Installation:

Solar water heating systems and solar collectors must be installed in accordance with the manufacturer’s published installation instruction, the applicable code(s) and this listing. Where differences exist, the instructions in this listing must govern.

All individual components of the system which may require periodic examination, adjustment, service and or maintenance must be easily and safely accessible by the owner in accordance with the codes in force at the installation site.

Interconnection of the auxiliary system to the solar energy system shall be made in a manner which will not result in excessive temperature or pressure in the auxiliary system or bypassing of safety devices of the auxiliary system.

Collectors and support shall be installed in such a manner that water flowing off the collector will not damage the building or cause premature erosion of the roof. Water tanks located in or above the living space shall be installed on a drip pan with a drain line to safely remove any excess liquid.

Structural supports shall be selected and installed in such a manner that thermal expansion of the collector and piping will not cause damage to the collector, structural frame or building. Hangers shall provide adequate support and correct pitch of piping and shall be designed to avoid compressing or damaging any pipe insulation material.



Control sensors and the means for transmitting sensor outputs to control devices shall be protected from environmental influence such as wind, moisture, temperature or other factors that may alter their intended sensing function.

Conditions of Listing:

1. Devices and components shall be installed in accordance with the manufacturer's published installation instructions and the applicable code(s) and standard(s).
2. System components requiring access for maintenance and inspection shall be installed to provide required access in accordance with manufacturer's instructions and local codes.
3. Systems and components shall be installed in accordance with the requirements of ICC 900/SRCC 300, Section 503 of the IPC, Chapter 5 of the UPC and Chapter 3, 4 and 5 of the USEHC and must provide provision for bypass, adjustment or override controls as are required to facilitate installation, startup, operation, shutdown and maintenance.
4. Systems utilizing a non-potable heat transfer fluid must not be connected to the potable water system except through the use of approved devices such as backflow preventers and/or double-walled heat exchangers.
5. Systems shall be sized in accordance with the demand, manufacturer's requirement, and local codes.
6. Systems shall not be installed below flood elevation level.
7. Systems shall only be used with water or aqueous solutions of ethylene glycol or propylene glycol up to 100% concentration per manufacturer's requirements.
8. Relief valves shall discharge to an approved receptor for disposal in accordance with local codes and requirements.
9. Each installation must be pressure-tested for leaks in the presence of the code official or code official's designated representative.
10. When installation is in fire-resistance-rated assemblies, evidence of compliance with IBC Section 712 (penetrations) must be provided to the code official for approval.
11. System components shall be assembled such that firestopping shall be possible at the time of installation, if required by local codes and ordinances.
12. Devices and components shall not reduce or increase humidity, temperature or thermal radiation beyond acceptable levels or interfere with required headroom or air circulation space.
13. Neither wind loading nor the additional weight of filled collectors shall exceed the live or dead load ratings of the building, roof, roof anchorage, foundation or soil. Collector supports shall not impose undue stresses on the collectors. The design load shall be as specified by the codes in force at the installation site and shall include an additional load due to snow accumulation for applicable locations.
14. Piping should be sloped toward drain ports with a drainage slope of no less than 2 cm of vertical drop for each meter of horizontal length (1/4 inch per foot). Underground piping shall be installed to withstand surface loads. The trenches and backfill shall be free of sharp objects in contact with the pipe.
15. Field-applied pipe and tank insulation shall comply with local code requirements for thermal insulation value, flame spread, smoke development and finishing.
16. System components shall be compatible with contacting fluids. Components and devices contacting potable water shall comply with NSF 61, NSF 372 and Federal Safe Drinking Water Act requirements for lead content.
17. Devices and components are manufactured by Apricus, Inc. under a quality control program with surveillance inspection every other year conducted in accordance with the requirements of ICC-SRCC.



Marking:

Models listed above were evaluated to the codes and standards listed in accordance with *the ICC-SRCC Solar Thermal Listing Program Guidelines* and are eligible to display the following mark as governed by the *ICC-SRCC Solar Thermal Listing Program Agreement* and the *ICC-SRCC Trademark Certification Mark and Certificate Use Policy*.



Each device or component shall also be permanently marked with manufacturer's name or trademark, model name and/or number, recommended working fluids, maximum working temperature and pressure, and recommended flow rate(s).

All warning lights, switches and controls shall be clearly identified. Where a pump station includes electrical components, the station shall be labeled with the electrical rating in volts, amperes and motor phase.

Any operation, maintenance and installation instruction manuals from the manufacturer shall be supplied with the system. Supplier's contact information shall be included with these documents.

Listings are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the listing or a recommendation for its use. There is no warranty by the Solar Rating and Certification Corporation, express or implied as to any finding or other matter in this listing, or as to any product covered by the listing. This document must be reproduced in its entirety.