

FAFCO[®] Solar Water Heater Specifications

FAFCO's revolutionary solar water heating system sets an industry standard for efficiency and affordability.

Benefits

- Single box solution — system carton weighs less than 70 pounds
- Reduces water heating costs by up to 50%, or more in some applications
- Easy to install — typically requires less than a half day
- Simple user interface
- Lightweight, flexible, efficient solar collectors
- Freeze-tolerant drainback design
- Cannot overheat

System Includes

- Solar Collectors — two polymer solar collectors (48 sq. ft.)¹
- Solar Controller with Two Sensors — operates system automatically and provides user feedback
- Circulation Module — includes two pumps and a stainless steel heat exchanger
- Drainback Tank — allows water in collectors to drain when system is not operating — to prevent freezing
- Complete Accessories — easy to install tank adapter, flexible tubing, quick connect fittings, plumbing hardware, roof jacks and mounting hardware²

¹ A solar collector add-on kit (48 sq. ft.) is available as an option

² A mounting rack for installing solar collectors on a tile roof is available as an option kit

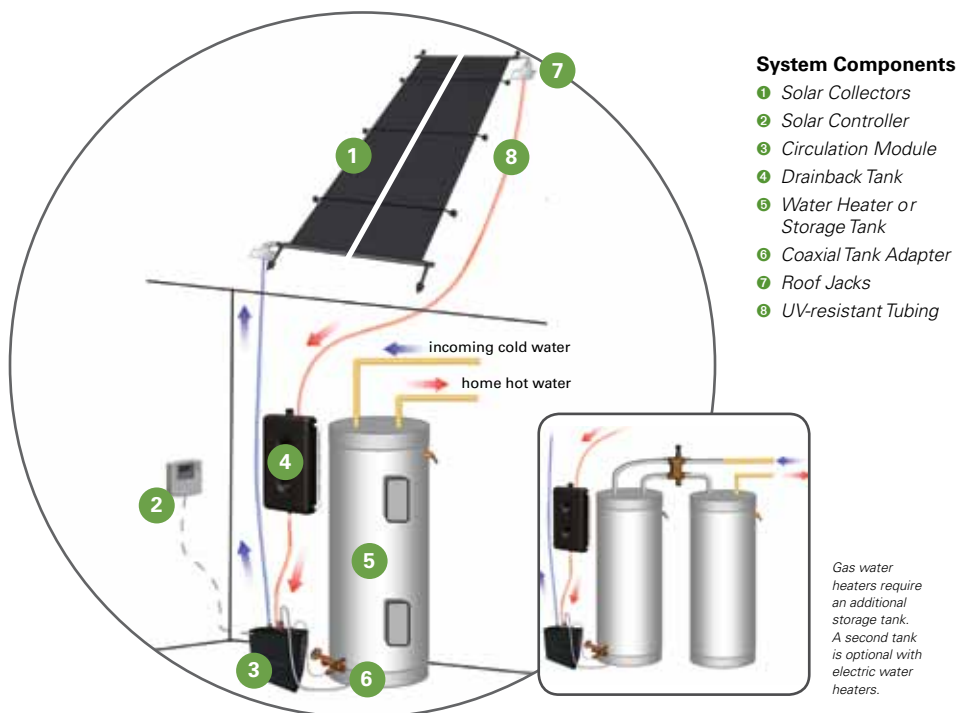
Solar Collectors



Solar Controller



Circulation Module



Performance and Certifications

The Solar Rating and Certification Corporation (SRCC) provides ratings for specific system configurations installed in major cities across the nation. Ratings estimate approximately 50% savings, but depending on the configuration, may be more or less. Actual system performance may vary from the ratings based on available solar energy, installation type, temperatures of incoming water and outside air, and the daily household hot water demand. These conditions, which may vary from home to home even in the same neighborhood, influence how much energy your solar system will save. Please go to www.solar-rating.org to view the system configurations approved by the SRCC.



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FAFCO[®]
SOLAR WATER HEATING
200 SERIES

PN 08930 4/10

Specifications

Overall System

The FAFCO 200 series meets the following specifications for the solar water heating system. The system is of a polymer drainback type that is freeze resistant, overheat protected, and utilizes unglazed collectors and polymer connection tubing. Polymer solar collectors, tubing and drainback tank operate at low pressure and are not in direct contact with high pressure potable water.

Solar Collector

FAFCO unglazed, ultraviolet (UV) resistant polymer collectors are designed specifically for solar domestic water heating. The dimensions of the collectors are 96 or 144 inches in length by 24 inches in width, with a 1/4" or less absorber thickness. The weight of the collectors is less than 1 lb./sqft. when full of water. The collectors are chemical and corrosion resistant beyond the capability of any metal. The collectors have excellent long-term weatherability as verified with over 35 years of field installed product, accelerated outdoor exposure, and other extensive laboratory testing. The maximum operating pressure is 30 psi, with a maximum operating temperature of 200 degrees F.

Collector Mounting Hardware and Roof Jacks

The mounted collectors are anchored using FAFCO mounting hardware. The roof jacks are FAFCO low profile galvanized steel roof jacks with 5/8" internal diameter (I.D.) water tight and UV-resistant rubber grommets.

Plumbing

The solar collectors are plumbed to the drainback tank and circulation module with 1/2" I.D. UV-resistant solar tubing rated for temperatures up to 200 degrees F. The tubing is secured every three feet with mounting clips. Connections are of the push fitting type with EPDM seals that require no tools for installation. All plumbing exposed to sunlight is made of UV-protected material. A drain valve is installed above the circulation module to drain the drainback tank and solar loop.

Drainback Tank

The drainback tank is made of a high temperature polymer capable of withstanding operating temperatures up to 200 degrees F. The tank capacity is 10 gallons with dimensions of 33" x 18" x 5". The drainback tank has an integrated sightglass for viewing the solar loop water level. The drainback is vented to the atmosphere at all times by way of a vented cap.

Circulation Module

The circulation module consists of a single unit with preassembled pumps, heat exchanger, filter, and wiring. The dimensions are 11" x 11" x 9". The voltage input is 120 volts AC. The heat exchanger is a copper brazed plate stainless steel heat exchanger. The potable loop consists of a low-head pump with union connections and integrated 20 mesh filter connecting the heat exchanger to the solar tank. The solar loop consists of a medium or high-head pump with union connections connecting the drainback tank and solar collectors to the heat exchanger. The pumps are prewired inside the enclosure such that a single cord exits the enclosure through a protection grommet. The vented enclosure is made of a rigid polymer capable of being easily opened to access inner components.

Solar Tank Connection

The solar tank connection is a coaxial tank adapter which allows the drainport of the solar tank to both feed and return the water in the solar tank to the circulation module. The coaxial tank adapter has a connection for the solar tank drain port, drain bib, inlet connection to the circulation module, and outlet connection to the circulation module. Flexible hoses approved for connecting domestic water heaters are used to connect the coaxial tank adapter to the circulation module.

Solar Controller

The solar controller activates and deactivates the circulation module based on temperature difference between the sensor installed at the bottom of the solar tank and the sensor installed adjacent to the solar collectors. The controller has digital accuracy and an animated LCD display that provides real time operating temperatures of the solar collectors, solar tank bottom, and optional solar tank top. The controller has varistor high voltage spike protection and fused output protection for the pump circuit. The sensors are either RTD type 1000 Ω or thermistor type. The controller has an adjustable high limit temperature for the storage tank. The controller has off, auto, and on switching.

Storage Tank

The solar storage tank is approved for domestic water heating use with a minimum pressure rating of 150 psi. The tank includes a pressure/temperature relief valve specified for 210 degrees F at 150 psi.

Specifications are subject to change without notice.