

SETBACK CONTROL – SOLAR SUPPLEMENT

This supplement sheet will show how to properly program the Setback Control for solar thermal operation. It is to be used in conjunction with the supplied Installation and Operation Manual for Setback Control operation.

Overview

The Setback Control has the capability to adjust the setpoint of the solar water heater during periods where little or no gas-fired backup is desired. The Setback Control adjusts the setpoint of a solar water heater similarly to that of a programmable wall thermostat does for a furnace.

Setback Control Installation

Refer to the Accessory Module and Setback Control Installation and Operation Manuals on how to properly install the Accessory Module and Setback Control. The Setback Control can be installed on the solar water heater or a nearby wall. The Setback Control Installation and Operation Manual provides step by step instructions to properly program the Setback Control.

WARNING


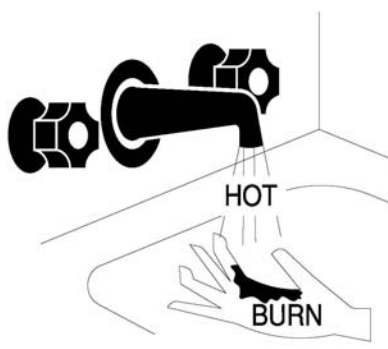
The Setback Control and Accessory Module must be installed as shown in their respective manuals for proper operation.

ASSE Mixing Device Installation

Install the ASSE mixing device that came with the solar water heater as indicated in the mixing device's supplied Installation and Operation Manual. The temperature setting on the supplied ASSE mixing device should be adjusted to provide a safe maximum outlet water temperature from the solar water heater.

WARNING

Ensure that the supplied ASSE mixing device supplied with the solar water heater is installed.

<div data-bbox="402 1360 787 1432"> DANGER</div> 	<p>Water temperature over 125°F can cause severe burns instantly or death from scalds.</p> <p>Children, disabled and elderly are at highest risk of being scalded.</p> <p>Review this instruction manual before setting temperature at water heater.</p> <p>Feel water before bathing or showering.</p> <p>Temperature limiting valves are available.</p>
--	---

Determine the Setback Schedule

Use the following steps to define the schedule necessary to optimize the Setback Control for solar thermal use. Once the schedule is determined, the Setback Control can be programmed according to the Setback Control Installation and Operation Manual.

The Setback Control has four customizable periods per day. The water temperature setpoint and time can be set for each of the following periods: Wake, Leave, Return and Sleep. A Reference Time / Water Temperature chart is included in the Setback Control Installation and Operation Manual to record the chosen values.

NOTICE

The Setback Control maximum water temperatures are limited to the maximum temperature setting on the gas control.

Wake:

Determine the earliest time in the day that a substantial amount of hot water would be used. Take into consideration larger hot water usage such as showers, baths, washing dishes and laundry. Subtract one hour and use as the Wake time. The water temperature setting must be at a safe level for household use.

NOTICE

It is recommended that the Leave and Arrive times be updated for the upcoming season (winter or summer) at Daylight Savings Time, if applicable.

Leave:

In the continental United States, it is recommended to use 9:30 AM for winter and 8:30 AM for the summer Leave times. If a more location specific time is desired, determine the local average sunrise time for the upcoming season. Add two hours to allow for sunrise variation in the season and for the sun to reach an appropriate angle to provide usable heat. The water temperature should be set low enough to optimize solar heat transfer while still providing the minimum amount of hot water backup in the event of unfavorable weather conditions.

Return:

In the continental United States, it is recommended to use 3:30 PM for winter and 4:30 PM for the summer Return times. If a more location specific time is desired, determine the local average sunset time for the upcoming season. Subtract two hours to allow for sunset variation in the season. When close to sunset, the sun is not at an appropriate angle to provide usable heat. The water temperature setting must be at a safe level for household use.

Sleep:

Determine the latest time in the day that a substantial amount of hot water would be used and use as the Sleep time. The water temperature setting should be set back to reduce standby losses.

Example Schedule:

The Setback Control scheduled times and temperatures will vary from household to household, depending on location and activities. The example below represents waking at 6:30 AM to shower, the dishwasher started at 8:00 PM and children's baths at approximately 8:30 PM. The installed ASSE mixing valve is adjusted to provide a safe maximum outlet water temperature.

Season	Wake		Leave		Return		Sleep	
	Time	Temperature	Time	Temperature	Time	Temperature	Time	Temperature
Winter	5:30 AM	125 °F	9:30 AM	90°F	3:30 PM	125 °F	9:00 PM	85 °F
Summer	5:30 AM	120 °F	8:30 AM	90°F	4:30 PM	120 °F	9:00 PM	85 °F