

A Greener, Cleaner, Healthier way to enjoy your Hot Tub!



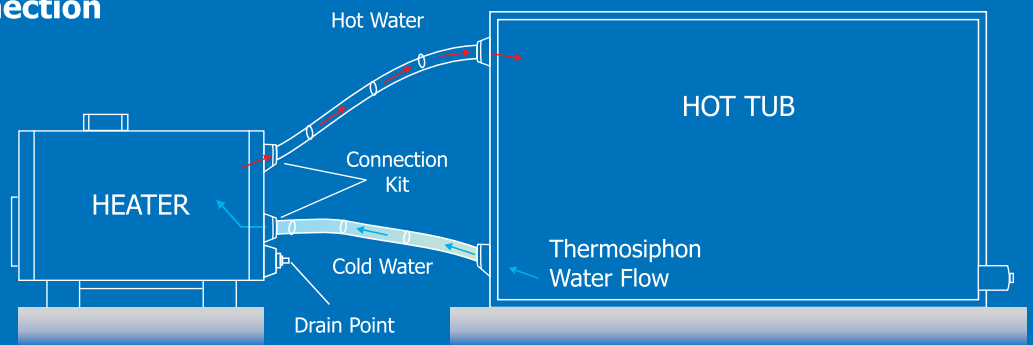
Sunline

Wood-fired Hot Tub Water Heaters:

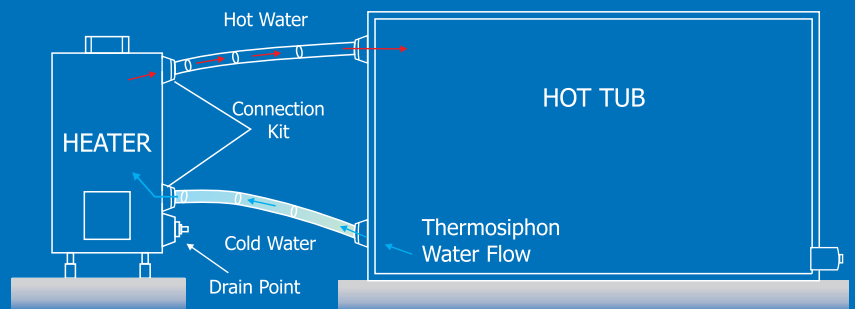


USER'S INSTRUCTION MANUAL

Heater & Hot Tub Connection Horizontal Model



Heater & Hot Tub Connection Vertical Model



Sunline Wood-fired Hot Tub Water-heater:

How to Assemble and Install it

The Sunline Heater is extremely easy to assemble and install. Just follow these steps :

1. To assemble, first open the door of the fire box and place the Ash Grate inside it. Take care to keep the Grate within two strips.
2. The Ash Drawer is placed under this Grate and fitted to the front and back stand of the Heater. When it is required to be cleaned, just pull out the door, and Drawer will be exposed for cleaning. When the Hot Tub is in regular use, the Ash Drawer must be emptied and cleaned daily. (Only for horizontal model)
3. Then fit the adaptor to the smoke outlet at the top of the heater.
4. A standard 4-inch dia stove pipe (easily available in the market) must be fitted here. Make sure that the height of this pipe is at least 7 feet so that the Heater works properly and the smoke does not disturb the Hot Tub users. The stove pipe should be secured very well.
5. It is advisable that you use the Hot Tub Connection Kit (Optional Accessory) available with the heater to connect the heater with the Hot Tub.
6. Once you decide where you want to place the Heater vis-à-vis the Hot Tub, it is desirable to prepare a proper concrete foundation on which to place the heater. It is advisable to install the Heater and the Hot Tub on a parallel surface.
7. According to the positioning of the Heater, you will have to make the Port holes (one at Top and another at Bottom) in the wall of the Hot Tub with the help of a hole-saw.
8. The bottom Port hole, which will be the outlet for cold water, should be about 3-4 inches above the inner floor of the Hot Tub and should connect to the Heater in an upward tilted angle. The top Port hole must be exactly above the bottom one, in correct vertical alignment, and the minimum distance between the two should be 8 inches.
9. The top Port hole should be about 4-5 inches above that of the top circulation hose from the heater (see illustration), and at least 5-6 inches below the level of water in the Hot Tub.
10. The top Port hole in the Tub should ALWAYS be under water; it should never be exposed (water level should not fall below the Port hole) while the heater is in operation. This will ensure good thermo-siphon process. It is also safer as it will not expose the person/s inside the Tub to very hot streams of water, nor cause damage to the heater.
11. The hose pipes should be securely fitted to the top and bottom Port holes with a rubber gasket between the Port flange and the inside of the Tub wall. Make sure that the nut on the outside of the Tub wall is tightened so that the rubber gasket is a little compressed. This will ensure a water-tight

seal. After this, connect the CPVC pipe stubs on the Port holes to the short rubber flex connectors and fasten them well with the hose clamps. Connect the other end of the rubber flex connectors to the CPVC coupler to the Heater pipe.

12. The distance between the Heater and the Hot Tub should be at least 2-3 feet. This distance can be adjusted by manipulating the length of the hose pipes connecting the heater and the Hot Tub. You could replace the connecting tubes with 1.25 inch CPVC plumbing pipe.

Sunline **Wood-fired Hot Tub Water-heater: Operational Guidelines**

As its name indicates, the Sunline Hot Tub Water-heater uses dry, seasoned wood as its energy feed (you may use paper or coal but never plastic waste, textile or even recycled material whose composition you are not sure of). If you use wet/green wood, the heater may slow down and water vapour may condense on the Fire Box walls and drip. In that case please let the condensation run off; there is nothing wrong with the heater.

The Fire Box of the heater will accommodate dry woods of 23 inch length, with the best results obtained from cut wood of sizes 23 x 2 x 2 inches. It needs to be re-loaded every 30 minutes, depending on the burning and heat efficiency quality of the wood, size of the Hot Tub, and for how long it is to be used. The heater is equipped with a two-speed (high and low) draft control monitor that needs to be adjusted as per the need. In normal circumstances, at the start of the heating process, the draft speed should be on high (wide open) so that the heating speed is accelerated and as the water reaches the desired temperature, the draft speed can be slowed.

Sunline **Wood-fired Hot Tub Water-heater: Operating Instructions**

Check that Sunline Heater and the Hot Tub are properly connected. Fill up the Hot Tub with water to the level required in the Tub. Load the fire box with enough dry wood cut to the recommended size. When you light up the wood pieces, the door to the fire box should be kept open for 5-10 minutes with the help of the lever on top of the fire box door. This will allow free flow of air inside the firebox, causing the fire to burn efficiently, in a clean way with less smoke. When the water in the Hot Tub reaches the desired temperature, you can close the draft window.

After use, drain the water from the heater by opening the drain plug in the back of the heater to empty it completely. You can save hot water in the Tub by inserting drain plugs in the bottom Port holes. Clean the baffle chamber with the long-handled scraper and remove the ash from the grate and drawer.

Freeze Protection: Most Water-heaters for Hot Tub need to be protected against freezing temperature. In the first place, ensure that your Heater is completely empty of all water.



Accessories



Sunline

Wood-fired Hot Tub Water Heaters:



Solar Energy Services: Leading Renewable Energy-based Water Heaters from India

Solar Energy Services is a certified ISO 9001-2008(TUV) organization. It is one of the leading and most trusted manufacturers of Renewable Energy-based Water-heaters in India, especially Solar Water-heaters and Storage Gas-fired Water-heaters. Our state-of-the-art manufacturing plant is situated in Vadodara, Gujarat state, India, which has been very supportive of alternative sources of energy. We have a highly motivated team of professionals in design and manufacture, of our Water-heaters who are committed to excellence in their fields of expertise.



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