

30 kW WOOD HEATER MANUAL



Marketing:
SpaDealers

www.**SpaDealers**.eu

Where Quality and Service meet

Korsnäs - FINLAND
+358-(0)10-239 5600

info@spadealers.eu
www.spadealers.eu

WARNING

Do not touch hot parts (chimney pipe, firebox and hatch).
Carefully read through the manual for the heater.



Ignition and usage:

- Heater must be under supervision when it is in use. Keep children away from heater.
- Place dry paper such as newspaper on the bottom.
- Use dry wood, 40-53cm long and split to about 4x4cm thickness.
- Don't burn plastic or items containing sulphur or salt.
- Do not lean against the part where the warm water enters the tub
- Read the technical descriptions before installing the heater
- Read the manual before starting the heater
- Improper use of the heater can be dangerous
- The heaters chimney pipes and fire door can become very hot during use.
- Never use damp wood as it drastically reduces efficiency.
- Do not drain the hot tub and heater before all the wood has burned out and the embers have faded.
- Follow product instructions when using chemicals.



USE DRY WOOD!

The heater is optimized to provide a good energy yield when dry wood is used as fuel. It will also decrease fuel consumption. For the heater to work efficiently, the wood must be dry. This is also mentioned in the manual. Wood containing high levels of moisture causes poor draft and combustion. Moisture can also begin to leak out from the heater's front edge.

Even a single session with such wood can result in a coating on the inner surface which extends heating time. Unless the surface is cleaned, the coating will increase and further reduce the heater's efficiency and prolong the heating time significantly. The pictures show what it can start to look like. It can easily extend the heating time by half or even longer.

The images show a different heater model, but the result is the same.

This wood heater is fired with wood and connected to a hot tub on the outside. Chimney pipes and chimney top for effective removal of sparks can be bought separately. Need varies based on location.

Wood-burning water heater

This is a precision-built water heater, especially designed for hot tubs. The water is self-circulating through the "thermosiphon principle" (hot water rises and creates low pressure, which sucks water from below).

It eliminates the need for a circulating pump and electricity, making it possible to heat the water in a hot tub with the heater placed externally. A big advantage is that there will be more space in the tub, which in turn means a smaller model can be selected.

The material is aluminum AL5052 which has good corrosion resistance in marine conditions. It also has excellent thermal conductivity. Rust (3) and gaps (2.6) is made of stainless steel. This ensures years of trouble free use. The heater must be emptied of water after each use. **NOTE! The chlorine levels should not exceed 1.5 ppm and pH levels should be within 7.0-7.6.**

The heat from the fire is efficiently transferred to the water through a unique and sophisticated design that makes the whole firebox a heat transferring surface. The nominal heat output is approx. 30 kW.



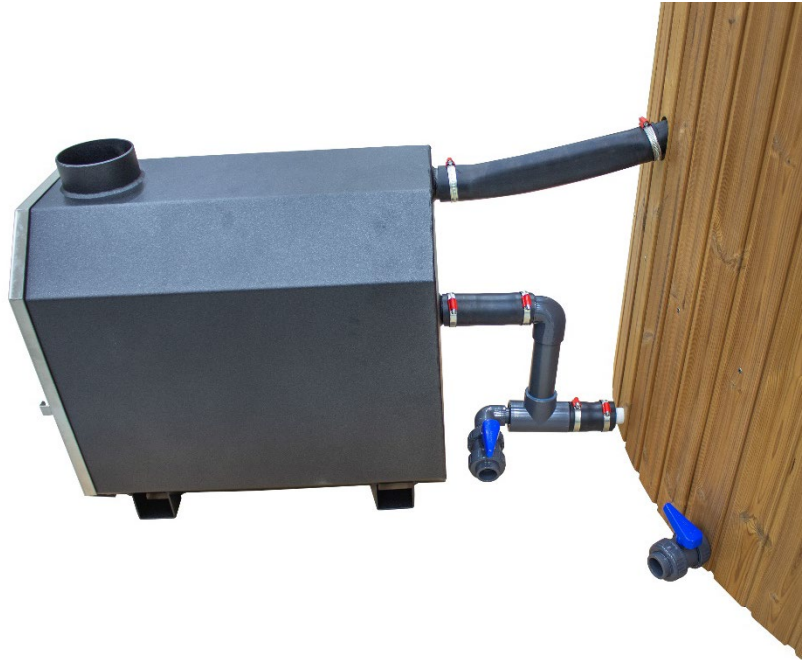
INSTALLATION

The heater is connected to a hot tub using a connection kit (included in complete hot tub packages).

The kit is not supplied with the purchase of only the heater but can be ordered separately.

Install according to instructions below if the connection pipe is of SpaDealers manufacture.

The heater is placed on a surface made from wood, brick or cement. Let it stand a little higher at the rear to prevent air pocket formation that can disrupt the circulation and cause damage to the heater.



1. For the upper connection pipe (outlet), drill a 60mm hole in the side of the hot tub, approx. 6 cm higher than the upper outlet of the heater. In the bottom of the opposite side of the hot tub, make a similar hole for the inlet water to the heater. (NOTE: For an assembled hot tub kit this step and step 2 are already made)
2. The skewed bushing is then screwed into the side. The curved bushing is screwed into the bottom.
3. The rubber pipes are attached between the heater and pipes from the hot tub. If the tubes are lubricated (for instance, cooking oil), it is easier to assemble. Fasten with the included clamps.
4. **In order to obtain good water circulation, the top pipe should slope upwards approx. 15°.**

WINTER USAGE

If there is a risk of freezing damage then the heater must be drained of water after use. Self-circulation will cease when the wood has burnt out and the small amount of water remaining in the heater can easily freeze and cause damage to the heater. If electricity is available then a freezing guard can be installed in the heaters firebox to avoid freezing damages when it is not in use. Upper and lower connection pipes must then be insulated.

Function

The heater functions as a conventional wood heater. The firebox is 60 cm long and 3 cm in diameter. Maximum effect is achieved by using dry wood (less than 15% moisture), 40-53 cm long and split into smaller parts. A load burns for approx. 20-30 minutes.

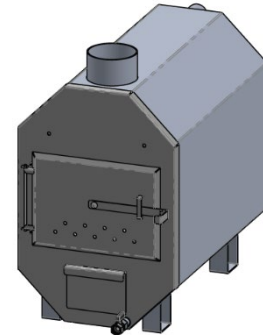
Never use wet wood as it reduces the effectiveness considerably and may cause heavy deposits on the heater's heat transfer surface. Also avoid alder wood. Controlling the draft and heating effect is done by regulating the lower draft door. For fast heating, open about 10cm and keep it closed to maintain temperature once the water is hot.

Construction

The heater is designed to sit on a firm and level surface. Never place it in sand or on soft ground as it causes air pockets that prevent circulation and damage to the heater will result. If the heater is installed with a pump (e.g. pool), the connection must be equipped with an adjustable tap on the "suction side" that makes it possible to regulate the water flow and pressure. High flow and pressure can damage the heater. Set the regulator so that the hot water from the heater is between 60-70 degrees Celsius.

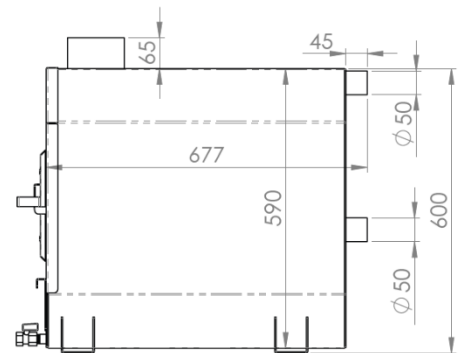
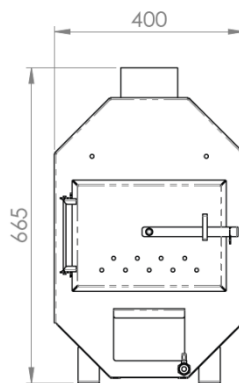
Properties

- Weatherproof design
- Heater in aluminum Al5052
- Grates and hatches in stainless steel
- Large effect
- Large firebox



Specifications

- Dimensions: 66,5 cm (height) x 67,7 cm (length) x 40 cm (width)
- Weight: 30 kg
- Firebox: 59 x 31 x 28 cm
- Heating surface: 1 m²



Heating

The heating effect varies depending on the quality of the firewood and how often the heater is refilled. The nominal output of the heater is 30 kW.

Model	Water amount	Starting temperature	Approximate heating time to 35 °C
HT150	1200 L	5 °C	About 3 hours

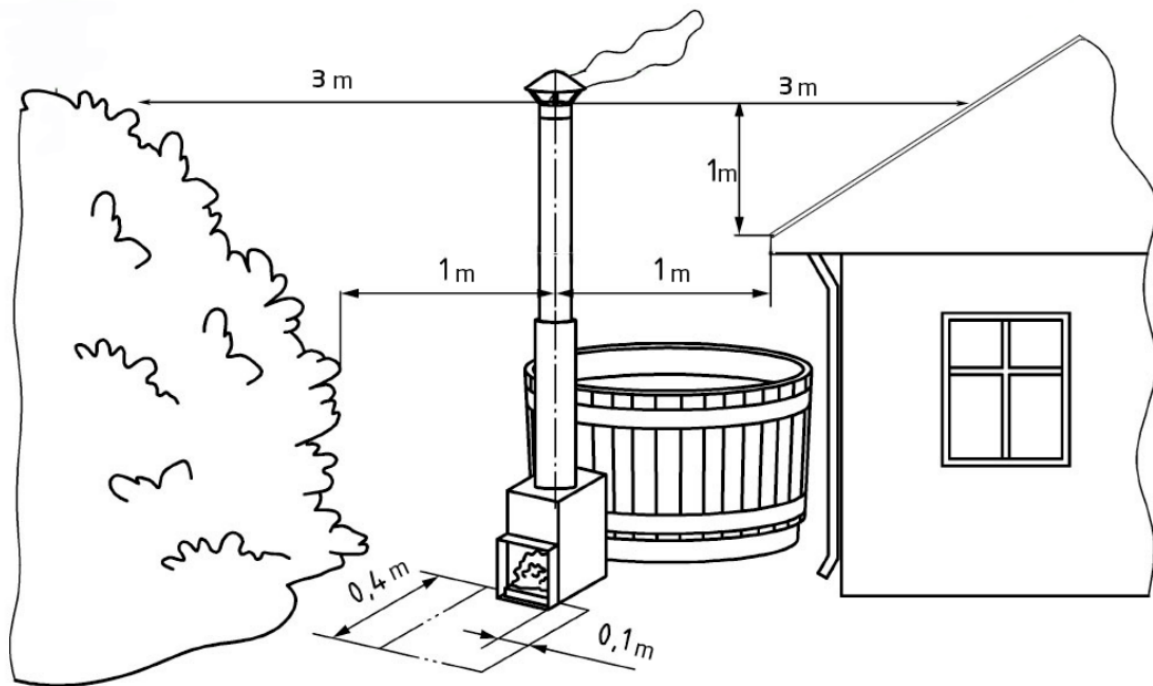
TIP! The heater has a large exterior surface that's in direct contact with the air, therefore it could be good to insulate the outside or place it in an insulated box. The heating time in the winter can then be significantly reduced.



1. Chimney top
2. Chimney pipe
3. Chimney pipe heat shield
4. Heater 30 kW

NOTE! Parts 1 – 3 are only included when buying a complete hot tub. When buying just the heater they have to be bought separately.

FIRE SAFETY



When placing the hot tub near buildings, the distance between the fireplace pipe and combustible structures must be at least that shown in the sketch. Remember to check the distance both sideways and vertically. It is important to prevent the risk of ignition. Local regulations may vary.

There must be no flammable material in front of and under the heater. As an example, refractory material such as sand, metal plate or concrete can be laid in front of the heater according to the attached picture.

The outer surface of the heater does not get hotter than the water as it is double-jacketed with water in between. Both the chimney and the front and door of the heater will still be hot.