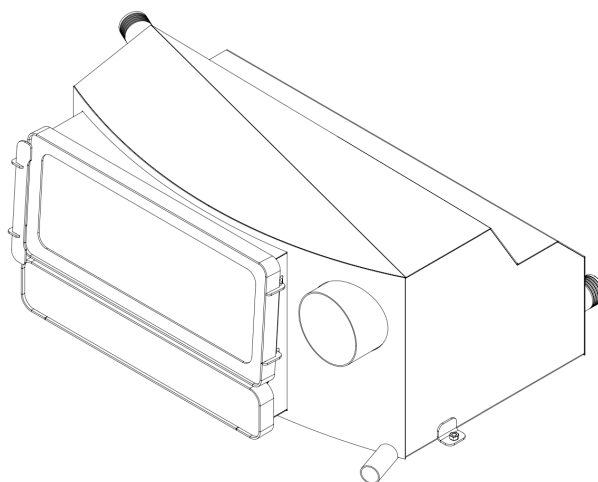


# USER MANUAL FOR SSF HOT TUB HEATER HORIZON

Version 01/05/2023



THE INTEGRATED HEATER FOR ALLSEATER HOT TUB

Congratulation on your choice. Already for more than 10 years company SSF is specializing in stainless steel stoves for hot tubs. All SSF stoves are produced under strict quality rules and are provided with 2-year warranty. **For warranty coverage from your purchase of hot tub please fill out the last sheet of this manual and keep it as a proof of your purchase.**


SSF hot tub stove works best and serves longest when used and maintained according to instructions. Read them carefully before using stove and keep instructions for future references.

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## GENERAL

Horizon is wood fuelled stove specialized for hot tubs. Stove is designed to be integrated into hot tub with stove being concealed between insert and outer wall of hot tub. This allows to have minimal space required for spacing hot tub while maintaining high efficiency.

Intended use	Hot tub stove fired by solid wood fuel	
The product conforms to the following standards	Products are tested in accordance to the methods described in the standard EN 15821:2010	

### Main technical information of Horizon integrated heater

Projected heating power	25 kw
Fuel type	Wood logs up to 30 cm
Furnace depth	380 mm
Width	660 mm
Height	445 mm
Length	475 mm
Weight	40 kg

### Main components of the heater

Basic stove comes with main parts required for usage are:

- A) Horizon heater (1 pc.)
- B) Door with glass insert 1 pc.)
- C) Ash drawer (1 pc.)
- D) Cast iron ash grates (1 pc)
- E) Shamoto bricks (4 pcs)

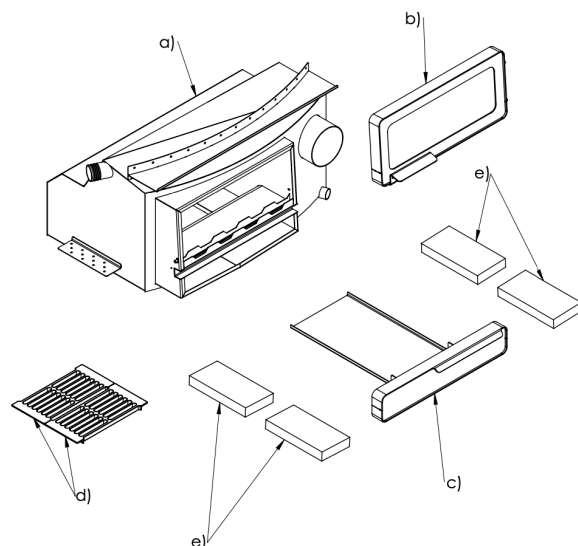
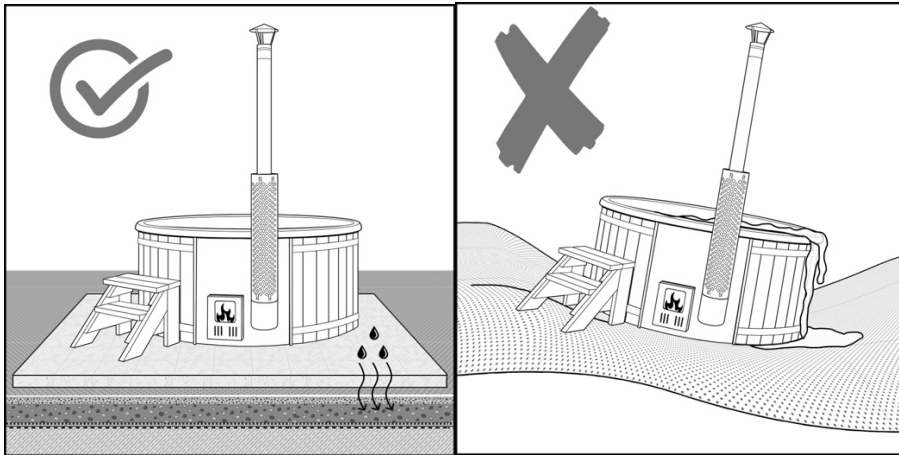


Figure 1. Basic Horizon heater kit: a) Horizon integrated, b) ash drawer, c) cast iron ash grates, d) doors, e) chimney elbow, f) chimney elbow fastener

### Placement of heater and hot tub

Due to safety reasons hot tub must be placed in a significant distance from buildings, trees, bushes, or surrounding objects which might catch fire. The minimum distance should be at least 1 meter from such objects.

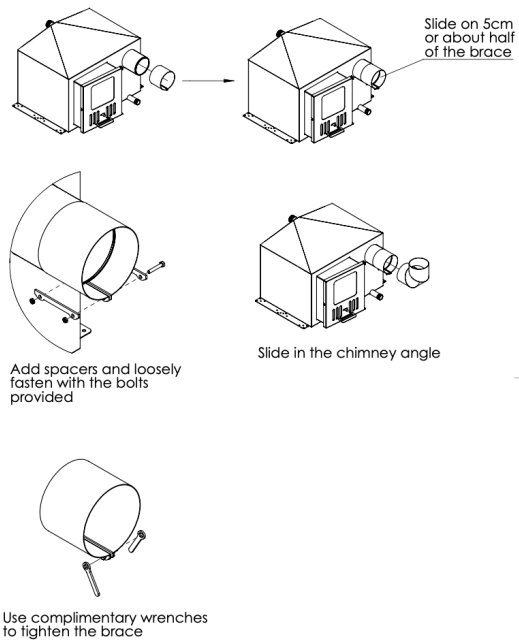


The ground in front of heater's burning chamber should be fireproof.

Hot tub must be placed on stable level ground or platform. Uneven placing might cause disruption of heated water flow from heater to hot tub. The base for hot tub must be load bearing with sufficient drainage of water.

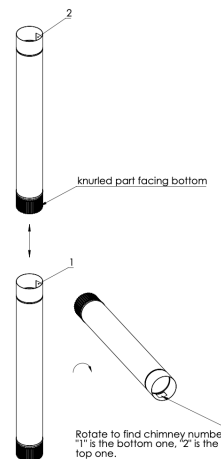
### Fixing chimney elbow

Before installing chimney, a chimney elbow must be fixed to the heater



### Chimney installation

Chimney must be installed in a specific order. The first part to be put into chimney elbow is marked with number 1. Second or third part of chimney are marked with number 2.



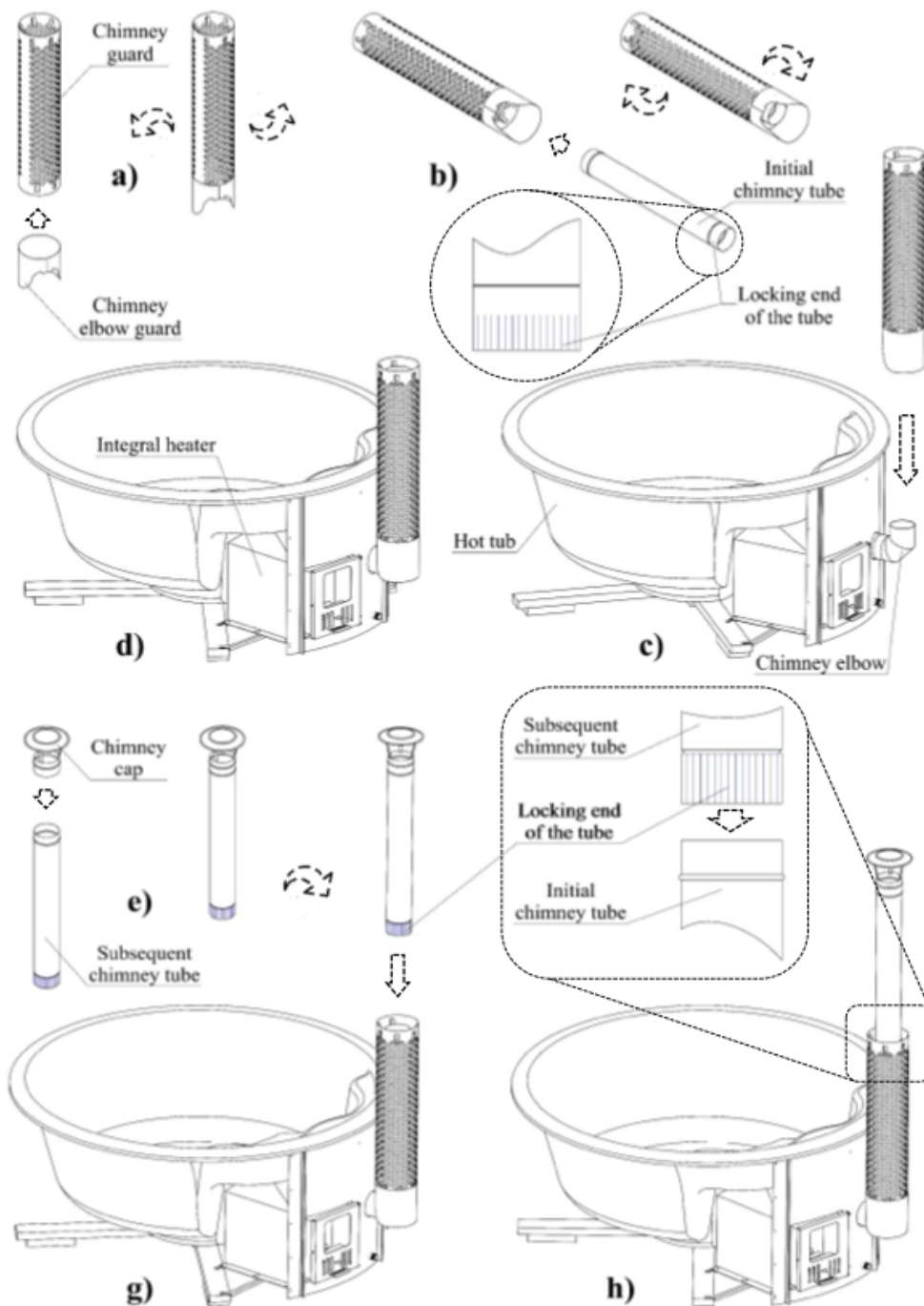
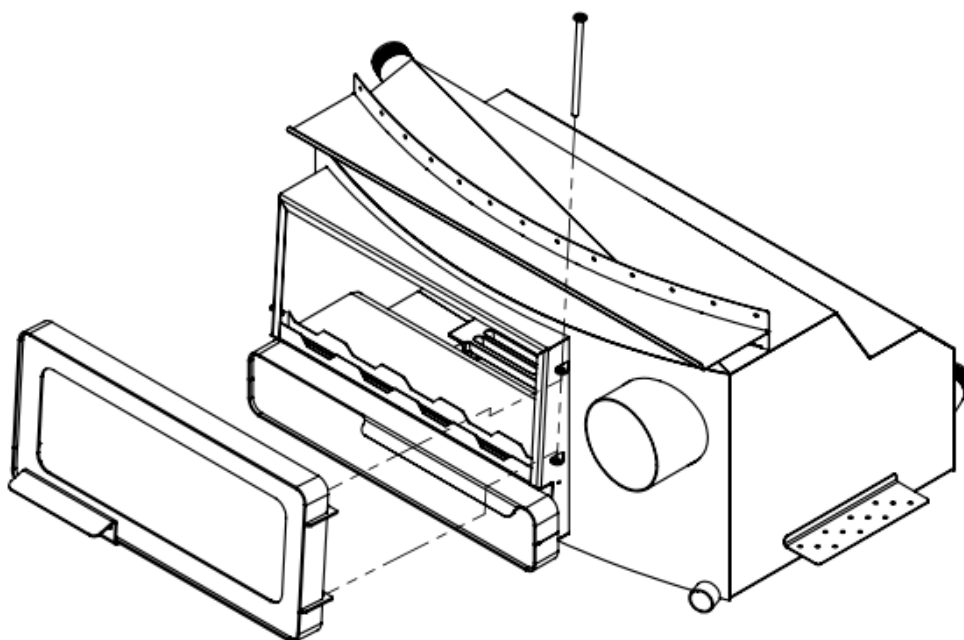
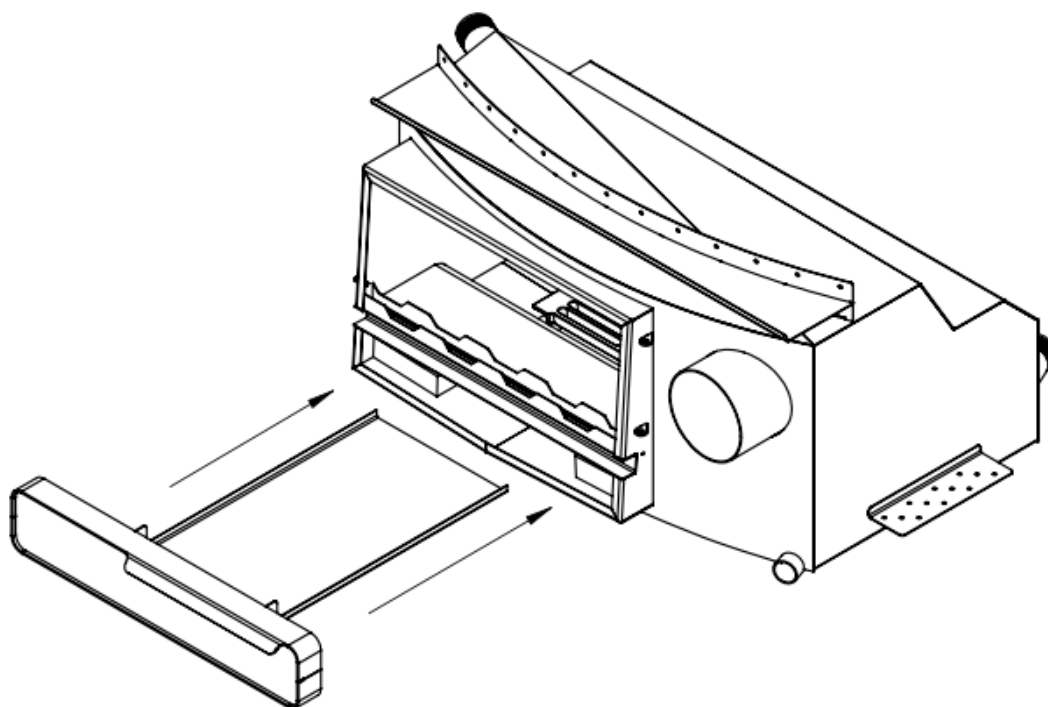


Figure 2. Attachment of the chimney to integral „Horizon“ heater (Assembly step 4).

a) direction of attachment of the chimney guards; b) direction of attachment of the initial chimney tube; c) direction of attachment of initial chimney tube to the elbow; d) initial chimney tube assembled to a heater; e) attachment of the chimney cap; g/h) mounting second part of chimney.

## Installing doors



## INSTRUCTIONS FOR USE

### Warnings

- Make sure hot tub is stable.
- Fill in the water to the level of at least 10 cm above top water outlet in hot tub.



- Make sure chimney are correctly assembled.
- Fill in dry wood and ignite.
- After first batch of wood is close to burning up add additional load and repeat this until you reached desired water temperature.
- Due to possibility of production dust gathering on hot tub, it is recommended to have first heating of the hot tub as a cleaning. After heating the first-time hot tub filled with water, change the water to fresh one.

### Using the heater

#### WARNING!

- Never start fire if the water level in hot tub is no sufficient. This will damage the heater.**
- Do not start emptying water in the hot tub if heater is burning or even if there are hot ashes left in the heater.**
- The water in the heater must not be allowed to freeze, as this will damage the heater.**
- Do not splash water on heated heater door glass, as it might cause break of glass.**
- Do not overheat the hot tub. Recommended hot tub temperature is 37 °C.**

The water in the hot tub must be above top water outlet when heater is in use.

For fastest heating results use dry wood. Do not over stack heater chamber to allow enough air for burning process. Remove ash after each use of hot tub.

Heater can be used during winter, but precautions against water freezing must be maintained. Frozen water expands. This can damage heater structure, making it faulty. **Water from heater and hot tub must be drained, before outside temperature goes below zero degrees in Celcius.** For using heater during below freezing temperature follows this sequence:

- Fill hot tub with water.
- Set fire burning in heater after water is above the top water outlet in hot tub.
- After using the hot tub, water must be drained out of it and heater before it freezes.

For faster heating of hot tub:

- Use hot tub cover to decrease temperature loss.
- Use smaller pieces of wood.
- Fill back of burning chamber with wood.
- Use dry wood.
- Don't over stack fire chamber with wood to maintain air flow. For most effective heating it is advisable to load 2/3 of burning chamber.
- At some times, like low air pressure or wet wood, opening doors might be necessary to let enough air flow in the burning chamber.

**Do not use aggressive chemicals for disinfecting hot tub and heater. It is recommended to maintain a pH level of water within 7,0-7,6.**

**Do not use pump forcing water flow in or out of the heater.**

### After use

Empty the ashtray after each use! Ash left in the stove shortens the life of the combustion chamber. Do not leave the ash shovel in the ash pan during the fire, as this will lead to damage. The ash shovel can only be used to empty the ash pan.

Do not empty water from hot tub till wood is still burning in heater chamber.

### Troubleshooting

Issue	Solution
Burning to slow	<p>Slow burn might be caused either of not enough air intake into heater or wet fuel. The problem can be solved:</p> <ul style="list-style-type: none"> <li>• Adding dry wood</li> <li>• Not overcrowding burning chamber with wood</li> <li>• Leaving doors open</li> <li>• Adding additional chimney pipe to increase height of chimney and thus improving air flow.</li> <li>• Check for soot inside chimney and chimney elbow. Clean it for next use.</li> </ul>



Issue	Solution
High condensation or moist inside burning chamber	High condensation can be caused by wet wood or low burning temperature. Soot formed in heating chamber and in chimney accumulates water and releases. To solve this problem: <ul style="list-style-type: none"><li>• Use dry wood for burning.</li><li>• Open doors or ash tray to get additional air inside heating chamber.</li><li>• If required increase chimney height with additional 1 or 2 pipes of chimney. This will improve air flow for burning.</li></ul>
Heater makes noise while heating	Loud bubbling noises can be caused by formed air in the heater. This could be due to incorrect installation of heater, uneven base for hot tub or by lack of water in hot tub. Check to solve these problems before continuing the usage of hot tub.
High volumes of smoke	High levels of smoke are caused either by wet wood burning or low burning temperatures. Use dry wood and assure enough air flow for burning chamber.

## WARRANTY

This heater come with 2-year warranty on materials and workmanship. The warranty is valid under normal usage of heater – as per recommendations in user manual and with correct installation of the heater.

Differing from mentioned above, products used for commercial purposes are granted 1 year of warranty.

Warranty does not cover:

- Normal wear and tear caused by use, rusted, or burnt through grates.
- Damage caused by misuse.
- Damage caused by incorrect heater installation,
- Corrosions due to use of incorrect use of chemical.
- Indirect costs incurred.

Concerning warranty contact your hot tub dealer or directly company SSF via [quality@ssf.it](mailto:quality@ssf.it) or [support@ssf.it](mailto:support@ssf.it). If repairs to the heater are performed not by SSF or not supervised by SSF, it will cancel warranty for product.

## SSF HEATER WARRANTY SHEET

For warranty of heater to be valid for owner of the hot tub from date of purchase the below information must be filled. While applying for warranty a receipt or invoice with corresponding data must be added.

Seller information		Owner information	
Name		Name	
Address		Address	
City		City	
Country		Country	
E-mail		E-mail	
Phone		Phone	
Seller's confirmation <i>(stamp or signature of salesmen)</i>			
Date of purchase			
Serial number of heater <i>(serial number of the stove can be found on CE labeling on the stove. See Figure 3)</i>			
Invoice/receipt number			

Please select one of the below options:

- Hot tub used for commercial use.
- Hot tub used for private use.

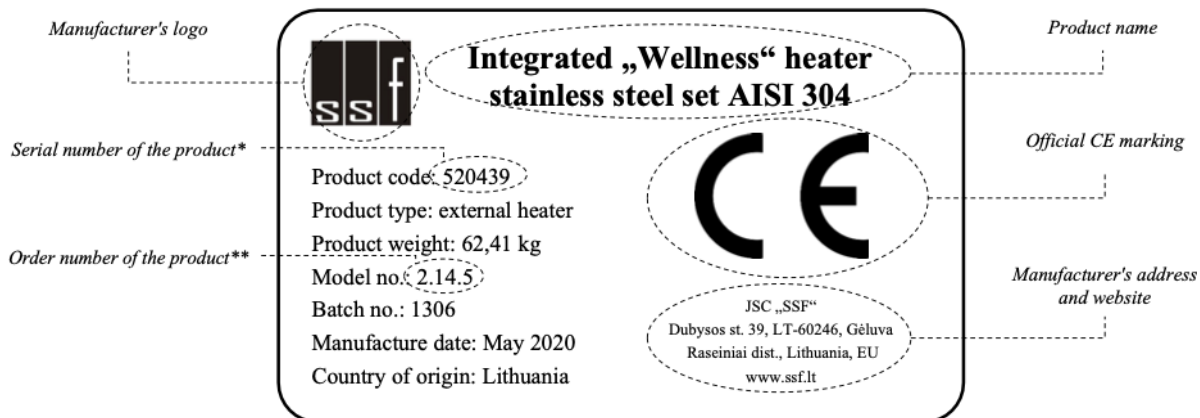


Figure 3