



SPA USAGE MANUAL



USAGE MANUAL

Congratulations! The wait is over; you're now the owner of a Størvatt wooden spa! We hope that it will bring you plenty of enjoyment in the years to come.

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SAFETY INFORMATION



The spa is not a toy. Never let young children use the spa unsupervised or play near the uncovered spa. The spa is designed for sitting in and relaxing, not for playing or diving. Children must use the spa at the correct temperature; it must not be too hot.

1/ YOUR SPA: GETTING STARTED

1.1 Location

It is important to identify the exact spot where your spa will be located, taking into account the following factors:

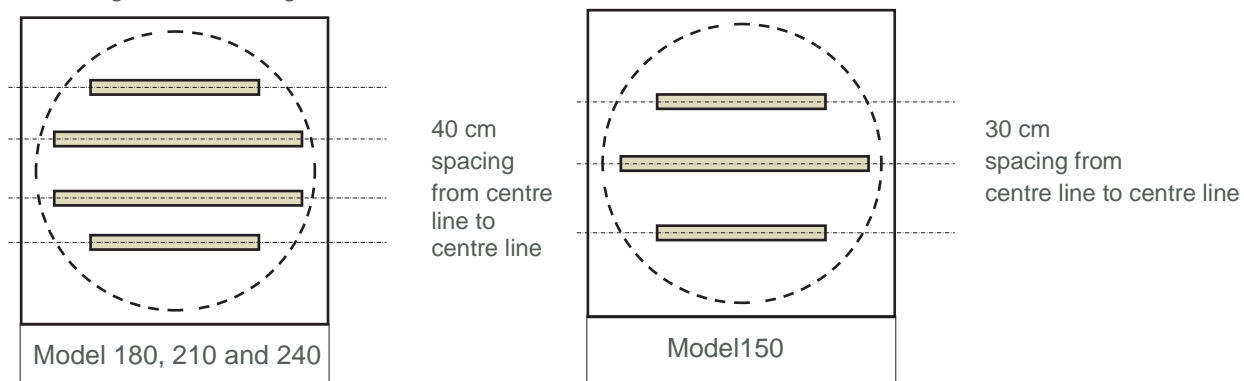
- The aesthetic value of the spa in your garden.
- The view from your spa.
- Privacy in the case of visibility by neighbours, a road, or a path
- Exposure to wind, sun, or a tree with falling leaves in the autumn.
- The spa's accessibility.

The most practical solution is to install your spa near a bedroom or bathroom. The bathroom, equipped with a shower and towels, is the ideal place to change, take a shower beforehand, and dry off after using the spa. Having the spa near a bedroom can also be an enjoyable option. After a relaxing moment spent enjoying the hot water, you can slide directly under the sheets and fall asleep relaxed.

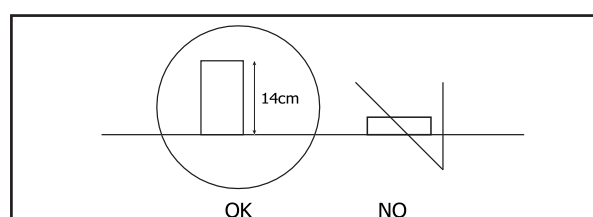
1.2 Installation

The installation surface must be flat and level. It must support the weight of the spa when full, about 1.5 to 4.7 tons depending on the model.

Once the surface is ready (tank lining, wood deck or slab), the spa must be installed on the larch beams provided, according to the drawing shown below.



The beams must always be installed perpendicular to the base planks, set on their edges and not flat.



Install the beams with a slight slope (1 cm maximum) towards the drainage hole. Install the spa on the beams, without clogging or blocking the drainage hole. The spa can also be installed flat, without a slope.

The spa has been transported, so the metal hoops may have loosened a little. You can tighten the lower hoop slightly before filling the spa.

On the lower hoop there is a nut and a locknut. To tighten the hoop, loosen the locknut.

The two upper hoops do not need to be tightened since the pressure from the water is mainly at the base.

Electrical connections for all types of Størvatt spas

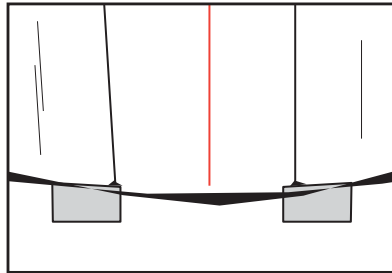
There is only one main electrical connection to be made, to the heater. The heater then distributes power to the pump and the lighting.

1.2.1 Installation

1.2.1.1 Positioning

A built-in spa is most often installed in a concrete tank. The tank must be equipped with a drain at the bottom, to drain off rainwater and overflow. This is a very important feature, because it prevents the technical components from being flooded.

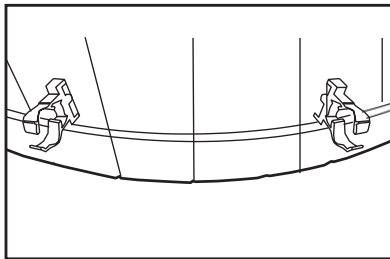
The concrete tank holding the spa must be properly cleaned (no shavings, dust, or gravel inside) before the spa is installed, and particularly after the construction of a wooden deck. Make sure that there are no wood shavings that could clog the drain.



The spa must be installed at the centre of the slab or deck. The red line indicates the axis of the spa on the side where the technical components are located.

Centre this line precisely; it indicates the middle of the housing for the technical components.

1.2.1.2 Water system installation



Begin by installing the water system for the jets:

The black brackets should be installed using the screws that are provided (5x60).

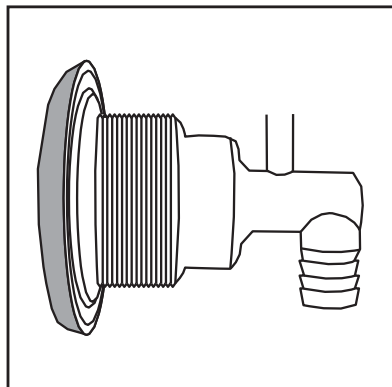
The bracket locations are marked on the spa.



CAUTION:

Use only screws of the correct length in order to prevent them from piercing the walls of the spa.

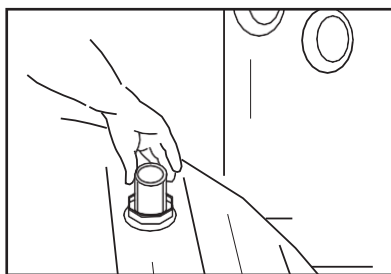
Jets:



Install the pipes on the body of the jets, and screw until passing the small notch. If you need to change a pipe in the future, it will be easier to disconnect it. Once correctly screwed in, the pipes can be opened or closed by turning a quarter turn.

Install the jets on the spa and tighten the nut. The seal must be located **on the interior side of the spa.**

Suction outlets:



Then install the system of suction outlets: floor suction outlet, lower outlet, and skimmer, with **the seal located on the exterior**. A wrench is provided for tightening. Make sure to carefully tighten the floor plug, without over tightening. If it is difficult to tighten it is because the plug is not properly threaded; unscrew it and start again.

Go back to the jets:

Connect the clear tubes to the jets, then install the clip brackets, tightening firmly with pliers. You can also glue these tubes using special pool glue. This will further ensure watertightness over time.

If the air temperature is cool at the time of installation, you can heat the tubes with a hair dryer or a heat gun. The PVC will shrink slightly as it cools.

Air system:



Install the small brackets using the screws provided (4x30) at the locations marked on the spa. (In general there is a round marking about 4 cm in diameter).

Set up the air circuit with the air manifolds pointed upwards.

Attach the 3/8 tubes to the jets, cutting the tubes if necessary.

Secure them with the black brackets provided.

Adjusting the air flow:

Once the elements have been connected, cut the \varnothing 32 pipe to install a T joint and connect it to the air vent that will be installed on the shelf next to the keypad.

Suction outlets:

A wrench is provided to tighten the wall bushings. The seals must be located on the exterior side of the spa. The suction outlet system uses 50 mm tube, then 2" tube up to the technical components.

Installing the venturi air valve:

Once the flooring is fitted around the spa, find the location for the venturi air valve, drill an opening with a hole saw and install the venturi air valve, tightening firmly. Attach the air system.

1.2.1.3 Lighting

LED spotlight:

The spotlight must be installed with the seal on the interior of the spa. Connect the bulb, then extend the cable if necessary.

The connection to the heater is made with the AMP connector at the location labelled “light”.

LED lighting on jets (certain models):

The LED lights are wired in series on both sides of the spa. They are composed of four clusters of LEDs. Attach the cables with the cable ties provided. You will have one series to the left and another to the right. The splitter (small grey component) connects to the heater, and the two other cables are used to connect the left series to the right series.

1.2.2.1 Technical components

The technical components include the filter system and the massage system:

- Two speed pump
- Cartridge filter
- Balboa electric heater

The technical components include a “Stirodur” insulating foam panel that is installed underneath.

The technical components are already fully assembled; you only need to screw the junctions together.

1.2.2.2 Start up

Fill the spa with just enough water to cover the jets. The water level should not be too high because the air system must be shut to install the T joint and the venturi air valve; otherwise you will have to empty the spa a little.

Make sure that all the valves are open.

Turn on the spa.

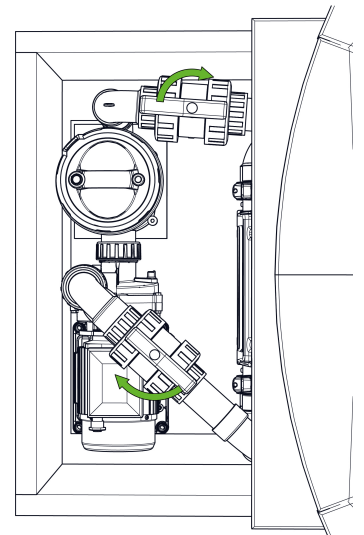
The screen will come on and the system will be in “priming” mode.

The system initialises itself and checks that no air bubbles are present in the heater (4 to 5 min.).

To exit this process, press “jet 1”.

Check that all the connections are watertight, then turn off the spa by turning off the power.

WE HIGHLY RECOMMEND THAT YOU START THE SPA BEFORE CLOSING OFF THE DECKING OR VERTICAL PANELS AROUND THE SPA. ANY LEAKS WILL BE VISIBLE IMMEDIATELY AND WILL BE MUCH EASIER TO FIX.



1.2.2.3 Spa trim (above ground or partially built-in spa)

The spa trim includes lateral circular shelving, a built in step, and vertical wooden panels.

The shelving sections are attached to the spa using the brackets provided. They are then connected to each other using a ring of marine grade plywood. The locations for the sections are marked with pencil.

These circular plywood segments are also used to attach the vertical wooden panels. A ring of circular segments must also be assembled on the ground, with the outside edge of the segments located 15 cm from the spa.

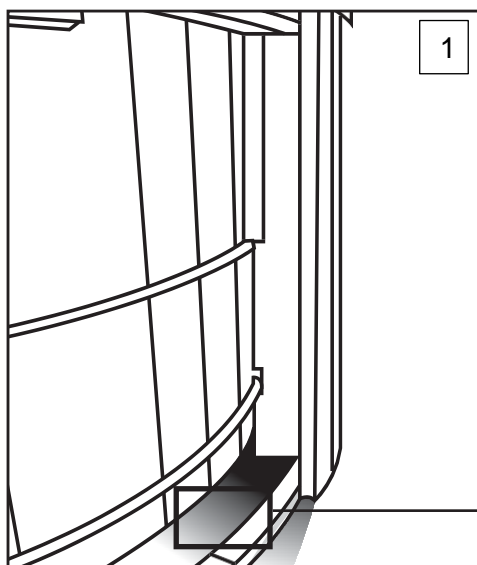
The vertical wooden panels must also be attached to these circular segments. The shelving is supported by the vertical wooden panels.



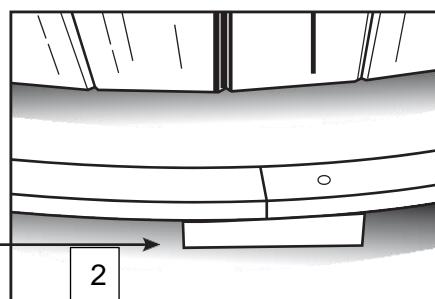
Tip:

All the pieces are numbered with their specific location on the spa.

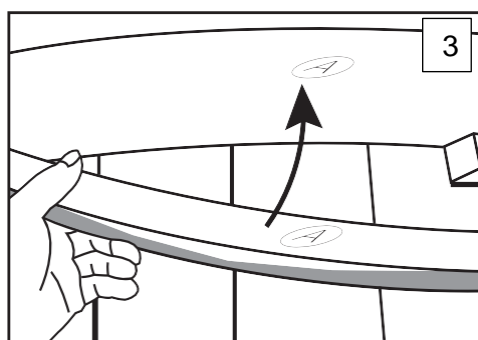
1- Attach the built in step to the spa at the specified location.



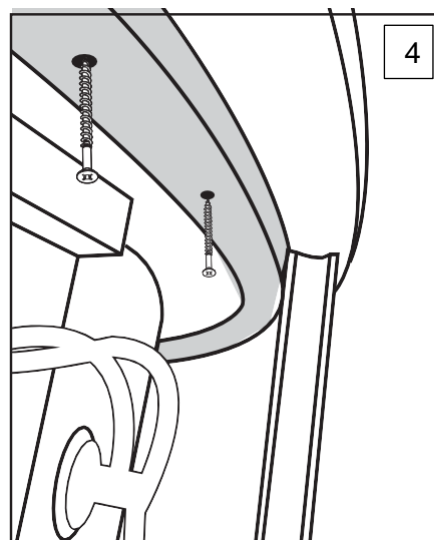
2- Assemble the ring around the circumference of the spa, attaching it to the 21 mm plywood blocks, at a distance of 15 cm from the spa. If necessary you can attach the blocks to the flooring.

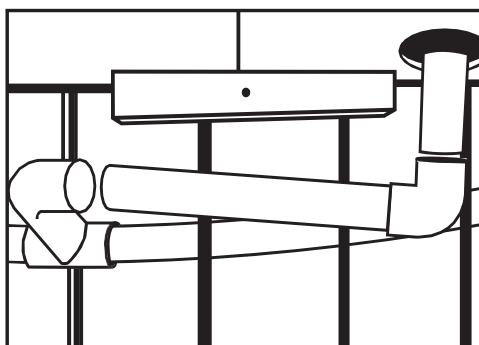


3- Attach the first section of shelving, then the second.



4- Attach the ring below the shelving with the 4x45 screws.





5- Hook up the venturi air valve at the hole drilled in the shelving.



CAUTION:

Check that everything functions correctly before fixing the lateral wooden panels on your spa.

Wooden panels

It is important that the lower structure be properly installed. The vertical wooden panels must be attached to the lower structure, and the shelving rests on the vertical wooden panels.

If a person were to climb on the shelving, it must support their weight. The vertical wooden panels also serve to support any weight placed on the shelving.

Once the shelving and housing unit have been installed, attach and connect the keypad to the indicated port (4 pins).

Tighten the venturi air valve securely to the shelving.

1.3 Preparing the installation surface

We provide you with technical installation plans for each type of spa, whether it is a built-in, partially built-in, or aboveground model. These plans can be used by individuals or by professionals (architects, carpenters, builders...).

1.4 Spa watertightness

Before completing the spa's vertical and horizontal trim, put some water in the tub in order to test for leaks.

Start by filling the spa to a depth of just 10 cm in order to avoid creating too much pressure at the base. If there is only minor leakage, continue filling the spa. Otherwise let the wood swell a little.

Don't worry if you see a lot of water leaking out. Each construction is different. Wood is a heterogeneous material. Certain installations are immediately watertight, while others require several days for leaks to disappear.



Tip

Fill just the very bottom (5 cm) with very hot water. Hot water makes wood swell very quickly. Wait a couple of hours, then finish filling the tub, or wait a couple of hours more if there are still leaks. Never try to tighten the hoops when the spa is full or damp. This may damage the hoops or the vertical wooden panels, which are more fragile when they are wet.

1.5 Spa hygiene

Bathers should shower with soap and water before entering the spa. If spa water is insufficiently treated or filtered it can cause rashes. With correct use, the spa's filtration system allows you to use the same water for 1 to 3 months. Ideally, long hair should be tied back so that it doesn't get in the water.

1.6 Wood maintenance

Størvatt spas are made entirely from Red Cedar, which is naturally rot resistant and requires no maintenance. With time, the spa exterior will change colour, taking on a beautiful silver grey patina.

The inside of the spa is less exposed to UV light, so its colour will change much more slowly and it will keep its vibrant hue for a long time.

You can wash the wood with a pressure washer (make sure to adjust the pressure), or with a soft sponge and water with a little bleach diluted in it.

Don't forget that the sun damages wood as much or even more than the rain.

Always cover your spa to prevent the sun from drying out the interior.

If the inside walls of the spa become slippery, empty the spa and clean it with a soft sponge and water with a little bleach in it.

Red Cedar is a very tannic wood, so the spa water will quickly turn amber and even dark red. This phenomenon will diminish after a couple of months and eventually disappear. The colour of the water has no negative impact on the water quality.



Tips

The high concentration of tannins can eventually cause a significant amount of foam when you use the bubble massage jets. An anti-foaming agent will prevent this inconvenience.

During the first weeks of use, the wooden cover may curl because of the dramatic changes in humidity.

After some time, the cover will regain its initial shape. If it curls significantly, turn it over for a night or two.

1.7 When the spa is not in use

Recommendations:

Leave water in the spa all year long, even when it's not in use. It is very difficult to purge a spa completely; stagnant water can often remain in the pipes.

With the high risk of freezing in winter, the technical components, if not properly purged, can freeze (not covered by warranty). To put your spa into "hibernation", you can put it in "Ready" mode, diminish the filtration cycles, set the temperature to 10°C, and treat the water.

To begin using the spa again, we recommend that you empty it completely and then rinse the tub and pipes before refilling it:

- Air system: to rinse the air system, unscrew the venturi air valve on the shelf, then rinse with clean water for 2 to 3 minutes. The water will come out of the jets.
- Water system: open the cartridge filter, partially unscrew the joint with the pump and one of the joints with the heater. Then fill the cartridge filter, letting the water flow out from the joints for 2 to 3 minutes.

ONCE THE SPA IS REFILLED, SHOCK THE WATER WITH CHLORINE SPA SHOCK.

2/ WATER TREATMENT

2.1 Sanitation issues

At 38°C, bacteria grow very quickly. The number of bathers per m³ in a spa is also very high. If you count the number of uses of the spa in one week, that number can easily amount to 20 people. Over one month, this amounts to a total of 80 bathers using a very small volume of water, 2m³.

The main risks:

- *Pseudomonas aeruginosa* is a bacteria that lives in soil, water and humid environments and adapts easily to hostile conditions. Its numerous virulence factors make it a highly pathogenic agent for fragile or immunocompromised individuals, leading to a high rate of morbidity and mortality.
- Multiple types of bacteria, some more harmful than others, can grow in humid environments. They are difficult to eradicate because numerous strains are resistant to multiple antibiotics.
- Legionnaires' disease is a potentially fatal disease caused by bacteria. It causes acute lung infections. The recent emergence of the disease is attributed to the bacteria's affinity for modern water supply systems like cooling towers, air conditioners, jet whirlpool baths, Jacuzzis, hot water pipes, etc.



ATTENTION :

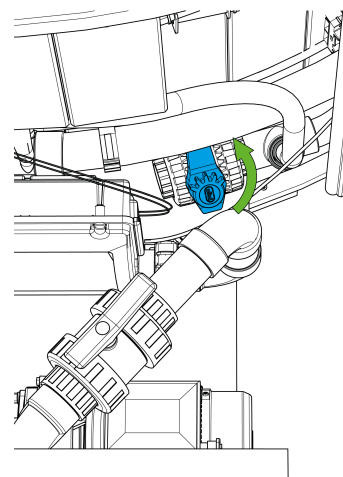
Sanitation issues are thus to be taken very seriously. Two key points must be observed: water treatment and water filtration.

2.2 Filling and emptying

The spa can be filled with a regular garden hose. Check that the spa's emptying valve is properly closed as shown in the photo.

The spa can be emptied using a ball valve at the bottom of the technical components. The emptying valve must be turned counter-clockwise.

If you leave the spa empty, leave the emptying valve open and purge the entire system. If the spa is partially filled with rainwater it may freeze and damage the circuits.





CAUTION:

It is difficult to completely purge all of the water from a spa, and in the case of freezing, even a small amount of water left in the system may cause serious damage (not covered by the warranty).



CAUTION:

A garden hose left for several weeks in a warm garage with a little water stagnating in it is a perfect haven for bacteria.

Before filling your spa, always let the water run from the hose for a couple of minutes in order to rinse it thoroughly.

2.3 Heating and filtering system

Your spa includes a pump, a filter, and a heater.

The pump has two speeds: a low speed for filtration and a high speed for massage.

The filter has a cartridge system with a bypass. The bypass is a small flap that opens quickly to facilitate water flow. A built-in brominator allows for continuous release of bactericide (bromine).

2.4 Water treatment

The need to change the water depends on several factors:

- The quality of filtration.
- The quality of water treatment.
- The number and frequency of bathers.
- The hygiene of bathers (compulsory showering).

We recommend bromine, which is very stable at high temperatures, less sensitive to changes in pH, and less irritating than chlorine. Bromine is placed in the tube of the cartridge filter, which allows for continuous release of the product. It is released continuously according to the filtration cycles. Once the tube is full, the bromine product will be released for at least fifteen days.

Chlorine is the most effective disinfectant, so you should “shock” your water regularly with either chlorine or chlorine-free spa shock, particularly after intensive use or before a weekend when you know the spa or bath will be heavily used.

The keys to effective water treatment are:

- Two filtration cycles per day, lasting 6 to 10 hours each, depending on the number of bathers and the water temperature.
- pH checked every week and correctly balanced, ideally at 7.2 (between 7.0 and 7.6 or 7.0 and 7.4 for chlorine).
- A shock treatment after intensive usage, using a chlorine free spa shock (or preferably a chlorine spa shock such as “HTH FLASH DISINFECTION”).
- A filter that is properly maintained, clean, and disinfected once a week.

The very first time you fill the spa, you should treat the water preventively with a shock treatment, either chlorine or chlorine free spa shock.

Then, whether you're using chlorine, bromine, or active oxygen, follow the manufacturers' recommendations.

You must also check the pH indicators once a week. If the pH is too high it can considerably reduce the effectiveness of the treatment.

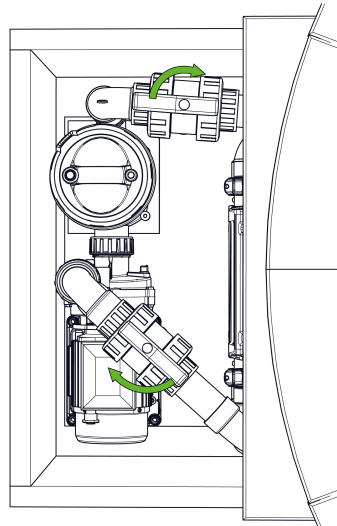
2.5 Filtration

Cartridge filters ensure very fine filtration.

Clean your filter every one to two weeks, depending on spa usage. The spa is delivered with two cartridges, making it possible to alternate between the two.

Filtration time: filtration time = the water temperature divided by 2 + 1 hour. For example: $38/2 + 1 = 20$ hours of filtration per day.

Cleaning and changing the filter



Stop the pump either by:

- 1- Turning off the electricity to the spa at the circuit breaker of the home's electric panel.
- 2- Using the "HOLD" mode on the keypad, which turns off the pump for 60 minutes, the time to carry out the procedure.

Once the pump has been turned off, close gate valves 1 and 2 as indicated in the photo.

Once the valves are closed, partially unscrew the cartridge filter's air release valve, unscrew the retaining ring, and then carefully lift the cover.

Clean or change the filter, then replace the cover, pressing down firmly. Replace the retaining ring. Once it is completely tightened, turn it back $\frac{1}{4}$ to $\frac{1}{2}$ turn to engage the small stop on the ring.

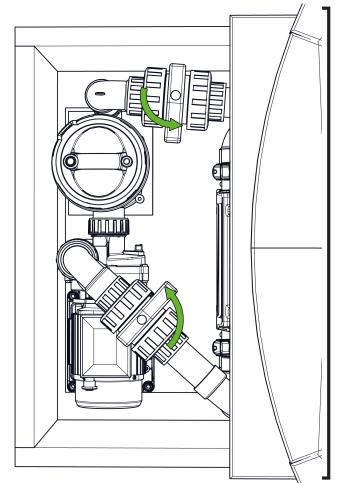
Open the two gate valves and use the small air release valve to allow the air to escape from the filter.

Before turning the pump back on, make sure that the valves are open and the filter's air release valve is closed as shown in the photo.

You may seriously damage the pump if you restart it while the valves are closed (not covered by warranty).

Check regularly to make sure that the submerged intake grilles are clean. Clean them once or twice a month depending on your spa's usage.

Please feel free to contact us with any other questions regarding spa use.



Specific issues for in-ground spas

In-ground spas are installed in the cavity of a concrete tank with a drain at the bottom. This drain must be accessible and cleaned regularly. If it clogs, the water level will rise below and around the spa and the spa's components will be submerged. The pump may be damaged and will probably have to be replaced. Such damage is not covered under warranty.

2.6 Freezing

Spas are very sensitive to freezing. The tub itself is not sensitive to damage from freezing, but the water system will not tolerate any expansion.

In winter, the spa must always be turned on. The heater is equipped with temperature sensors to keep the spa above freezing.

EXAMPLE OF WATER MAINTENANCE ROUTINE

Filling & starting

- Let the hose run for several minutes next to the spa or bath, in order to eliminate stagnant water that may remain in the hose and is unclear for bathing
- Fill the spa.
- During this time, fill up the appropriate tube with bromine disinfectant (2-3 tablets of bromine).
- Check the state of the filter. If it is not clean it should be changed.
- When the spa is full and the upper water intake is submerged, turn on the filter.

Warning: if you turn on the filter before the upper water intake is submerged, you risk air binding the filter system and creating permanent damage (not covered under warranty).

- Check the pH (ideally 7.2) and the level of alkalinity. Adjust if necessary by adding pH+ or pH- directly to the tub.
- Check the level again after 15 minutes.
- Once the pH is balanced, add chlorine spa shock to disinfect the water (directly to the tub).

Caution: all products in powder form must be added directly to the tub while the filter is running. Sprinkle powder evenly over the surface of the water. The filter must be running, otherwise the powder will sink to the bottom and may permanently stain the wood.

WEEKLY MAINTENANCE – PRIVATE SPA

Every Saturday

- Clean the cartridge filter by washing it in a diluted bleach solution and rinsing it before putting it back in place.
- Check the pH (ideally 7.2) – Readjust if necessary.
- Check the alkalinity – Adjust if necessary.
- Check the level of bromine remaining (located in the tube of the cartridge filter), refill if necessary, about 2-3 tablets per week.
- Check that the intake grills are clean and clean if necessary.

Every Wednesday

- Disinfect the water with chlorine-free spa shock (“CHOC SANS CHLORE”) to reactivate the bromine or “FLASH DISINFECTION”. These products are mixed directly into the water with the filtration system running.

CAUTION: do not use the spa just after using these products. Consult the product instructions.

In case of heavy use

- The day before, with the filter running, shock the water with FLASH DISINFECTION. Repeat the procedure at the end of the weekend
- Empty the spa every 1 to 3 months (depending on usage).

WEEKLY MAINTENANCE PROCEDURE – RENTAL PROPERTY SPA

Every Saturday

- Empty the spa
- Clean the cartridge filter by washing it in a diluted bleach solution and rinsing it before putting it back in place
- Check the pH (ideally 7.2) – Readjust if necessary.
- Check the alkalinity – Adjust if necessary
- Check the level of bromine remaining (located in the tube of the cartridge filter), refill if necessary, about 2-3 tablets per week
- Check that the intake grills are clean and clean if necessary.
- Treat with flash disinfection.

Every other day when the property is occupied

- Use chlorine-free spa shock to reactivate the bromine (“CHOC SANS CHLORE”).

CAUTION: do not use the spa just after using these products. Consult the product instructions.

Empty the tub after each rental. After each refilling:

- Check the pH (it must be between 7.0 and 7.6).
- Check the level of bromine remaining (located in the tube of the cartridge filter), refill if necessary.
- Use FLASH DISINFECTION (chlorine spa shock): be careful not to use the spa just after using these products. Consult the product instructions.

WHEN THE SPA IS NOT IN USE

In the case of a prolonged period without use, choose the “READY” mode, lower the temperature to the minimum (10°C), shock the water and keep the brominator full.
Before resuming use, shock the water or empty the spa.

The spa must always be full of water, and the water must be filtered and treated.

PRODUCTS MUST BE STORED IN THEIR ORIGINAL PACKAGING IN A DRY, CLOSED ROOM.



TIP: To easily open the filtration system, do as if you were uncapping a bottle.



**Excessive use of treatment products can damage the wooden walls, causing the red cedar to shed cellulose (white filaments)
If this occurs, empty the spa, sand the inner walls lightly, rinse and refill with water.**



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