

USER MANUAL

# Stainless spa bath



## Thank you for choosing us as your spa bath supplier.

We hope the bath will give you many wonderful baths and pleasant moments.

For the best conditions for a lifelong durability, we recommend that you read the manual before you start using your bath. This manual applies to the stainless spa bath series and will describe what is important to consider before, during and after the installation of your bath. If you have any questions, you are welcome to contact us at [info@svenskabadtunnor.se](mailto:info@svenskabadtunnor.se).

### Build-in

#### THE GROUNDWORK

The foundation is an important part of the installation, as the bath with water and many bathers can result in significant weights. The groundwork varies somewhat depending on the conditions you have. The bath should be placed on a flat and stable surface, such as compacted gravel, a concrete slab, or reinforced decking. If the bath is to be partially or fully buried, you need to assess whether the ground may need to be drained. The bath should never be placed in a location where water collects around it; it needs to be situated on a dry surface.

#### SUPPORT

The bath is delivered in a solid construction of Eps insulation. Therefore you have an extremely well insulated bath. No additional support needs to be built for the bath.

#### BUILT-IN INSTALLATION

When installing your bath, it is important that you think about future access for any service and/or replacement of parts. The connection side and sides with lighting need to have a free zone of 80 cm so that there is room for any service.

All parts are always tested and the bath is run before we deliver your bath. See your test protocol that comes with the bath. Nevertheless, it is good that you check that all lights work and that no connections are leaking before you build in your bath so much that it becomes difficult to adjust these parts. When the bath reaches over 35 degrees, you need to check the connections again as the hot water can affect the connections and may need to be tightened when the bath has been in hot water for a while.

### Receipt of delivery

Check that no transport damage has occurred during delivery, if it has occurred read further instructions under open purchase. If the bath is lifted by tractor or truck, the bath is lifted in the pallet it is on. If you have ordered for crane truck delivery, the bath is lifted in the straps that sit under the bath according to the marking on the pallet. The rails do not need to be removed but can remain where they are. The rails have no load-bearing function when the bath is in place. The bath must not be tilted and it is important that the bath is handled carefully during delivery and assembly.

On delivery, the technology box is in the bath. The technology box weighs about 40 kg and it is lifted out of the bath by two people, it is important that it is handled gently so that no parts get impact damage. The two straps around the technology box can be used for lifting. The technology box should be lifted from the floor and not from the walls.

The technology box is placed at the same floor level as the bath and it is important that the filter, which is the highest point, is below the water surface. Otherwise, you risk getting air in the system, which will lead to the system not working properly. The technology box should be placed within 3 meters of the bath and preferably as close as possible.

## Assembly of the bath

Once the baths and technical facilities are in place, the parts must be connected together.

**Step 1.** Take out the carton that is in the technology box, in the carton there should be 4 connections with sleeves and four hose clamps. Also take out the roll of 50 mm hose.

**Step 2.** Install the connections with sleeves on the two pipes that go out from the bath and the two pipes that go out from the technology box. Lay out the supplied culvert where the hose will go between the bath and the technology box.

Then measure the distance between the connection on the bath and the connection on the technical box. Then cut the 50 mm hose to the correct length. Cut the hose with a knife, for example. Place the hose in the culvert and check the measurements.

**Step 3.** Now remove the four connectors with sleeves from the bath and then fit the hose to the connectors. The hose is mounted with hose clamps. You tighten the hose clamp with a 7 mm hose chisel. It is very important that the hoses are not installed when the connections are mounted on the bath, you then risk breaking other parts of the system when the hose is threaded on.

**Step 4.** The lights should now be plugged in. There is a long black cord mounted in the heater. This cable should be plugged into the short black cable sticking out of the white junction box by the bath.

**Step 5.** The display from which you will control your bath is located in the technology box and is connected to the heater. Install the display in a suitable location near the bath. The display should be as weatherproof as possible to avoid direct contact with rain and snow, which means that it is best mounted on a horizontal part of the decking/house wall or similar. If it has a less protruding roof over it, you will have a longer service life of the display. There are splicing cords to order for the display.

**Step 6.** Your bath comes with wi-fi control. You need to download the balboa app to use it.

**Step 7.** The drain is mounted on your filtration system. To be able to drain the water when it's time to empty the bath, you need to install a Gardena coupling (male) into the Gardena coupling (female) mounted on the filter. The drain valve should always be closed except when you're emptying the bath. Attach a garden hose, 1.5 inches in size, to the Gardena coupling so that you can easily direct the water away from the bath.

**Step 8.** Vacuum the bath and then carefully remove the plastic from the inside of the bath.

**Step 9.** Close the hatch valves on the inlet and outlet that are in the technology box. It is now time to fill the bath with water. The bath should have water up to and including about 10 cm from the top edge. The bath is tested and checked without leakage in our factory before delivery, but still check all connections in the bath so that nothing leaks.

**Step 10.** Now the electrician will connect the electricity to the bath. It should be wired according to the wiring diagram provided.

**Step 11:** The bath needs to be grounded. The pump, the slave heater and the ozone purifier have grounding connectors that go to the grounding of the main heater. The electrician also grounds the bath by putting an earthing contact on one of the screws on the back of the skimmer and then attaching it to the main heater. Grounding should be done with a minimum of 4m<sup>2</sup> of cable.

**Step 12.** Pull up the handle of hatch valves 1 and 2. The technical system will now be filled with water.

**Step 13.** Turn the black nut (marked in the picture with 4) on the top of the filter head about 1 to 1 & 1/2 turns. There will be some air blowing and finally some water flowing. Then tighten the nut again.

**Step 14.** Now open the hatch valve marked with number 3.

**Step 15.** You can now reinstall the insulation that will cover the plumbing in the bathroom. You can also put the upper part of the culvert on the hose between the bath and the technical installation. To increase protection against pests, you may want to foam the cavity left by the pipes.



### Start the bath

Now the bath is ready to be started. Turn on the power and follow the separate manual to the display to set the clock, temperature and purification cycles. We recommend starting with two purification cycles of 2x3 hours. The length of the purification cycles may then need to be adjusted depending on how the bath is used.

Make sure there is no air in the filter container. This could cause the pump to suck air and break down.

To vent the filter, use the black nut (no. 4 in the picture, see previous page) on the filter.

## Maintenance

Only fill your bath with tap water. If you have a lot of iron, lime, hard or soft water, this needs to be adjusted so as not to cause damage to the bath.

To maintain good water hygiene, it is important that you keep track of your water values. Normally, it is pH and chlorine you need to test and adjust. If you have very hard or soft water or iron-rich water, you also need to adjust this to avoid the risk of deposits, discoloration or damage to your bath.

**It is extremely important that you are careful not to overdose or shock chlorinate your stainless steel bath. Too much chlorine can damage your bath, no guarantees apply in case of damage caused by high chlorine dosage.**

The filter you have in your bath is a cartridge filter. These filters need to be picked up and cleaned regularly, how often depends on how your bath is used. You can advantageously have two filters at home so you can clean one and let it dry while the other is used. There is a special agent for cleaning these that you can find on our website.

The technology box must have a temperature of 10 degrees or more to ensure that all parts work properly.

### SALT WATER

Do not use salt water in these baths. There is no warranty on the bath if salt water is used.

## Open purchase & shipping damage

As your bath is a custom-made product, open purchase does not apply. In the unlikely event that you feel that this bath upon delivery was not at all what you had expected, please contact us to review the possibilities for a possible return. You will be charged for shipping costs and any additional costs.

If the bath has been damaged in transit, it is important that you take photos of the damage before unloading from the transport vehicle. **A signature by the driver on the delivery note is also necessary to claim any compensation.**

Send an email to [info@svenskabadtunnor.se](mailto:info@svenskabadtunnor.se) with pictures and an explanation of what happened within three days.

Otherwise, we comply with the Consumer Purchase Act and the Distance Contracts Act. In the event of a dispute, we follow the recommendations of the General Complaints Board.

For more information, read our terms of purchase on the website.

## Ideal values for your bathing water

pH-value	7,0 – 7,4
Alkalinity value	80 - 120 mg/l (ppm)
Hardness level	125 - 200 mg/l (ppm)
Chlorine	1,0 - 2,0 mg/l (ppm)

**It is good if you leave the lid of your bath off for about 20 minutes after adding chlorine. This is to protect the lid from the chlorine vapors that are produced during dosing.**

- As soon as you fill your bath with water, you should start checking your water quality.

- All dosing instructions are average values that may need to be slightly adjusted to your measured values.

- Clean hoses every time you change the water.

- NOTE! Never mix the chemicals, it can lead to strong reactions and release dangerous gases! Chemicals should never be added at the same time.

## Test your water values

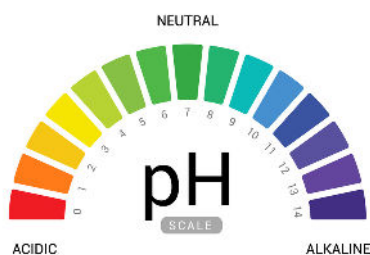
To test your bathing water you will need test sticks/autocheck or Scuba tester. If you use chlorine, you will need to test the pH, chlorine, alkalinity and in some cases the hardness of your water. If you choose to disinfect your water with something other than chlorine, such as bromine or active oxygen, measure that instead. Salt cannot be used in our stainless spa baths.

It is good to know that if your chlorine levels are too high (above 6 mg/l), the color of your test strips will only be visible for a few seconds before fading. If you suspect that your chlorine levels are too high or you notice that the color is fading, do the following: Dilute the water you are measuring with tap water (1/10) and test again. If you get a color rash now, your chlorine levels are too high for swimming. Wait until the chlorine levels have gone down or use DELPHIN AntiChlorine. **Excessive chlorine levels are harmful to your bath and any damage caused is not covered by the warranty.**

Normally, all chemicals should be diluted with water in a bucket before being added to the bath. Make sure that the circulation is on in the water when the chemicals are added. This applies unless otherwise stated on the bottle/can when dosing. **Make sure you only use products suitable for spa baths, NOT for pools.**

## The right pH in your bath

The right pH value is essential for good water quality. It is therefore absolutely necessary to set the pH value so that it is within the ideal range of 7.0 - 7.4. The pH value affects all water values.



### **pH above 7.4 is too high and can cause:**

- skin and eye problems
- Lime deposits
- The effectiveness of the disinfectant is reduced.
- The greater the deviation from the ideal pH of 7.4, the greater the side effects.

### **pH below 7.0 is too low and can cause:**

- May cause irritation to mucous membranes and eyes.
- Corrosion on metallic parts

To regulate your pH, use pH + or pH - in your bath. A strongly fluctuating pH can be due to a low alkalinity value.

## Alkalinity

In a spa, it can be difficult to set the correct pH value compared to a pool. It can also vary greatly when adding a pH agent. In many cases, a too low alkalinity value is the reason for the strong variation. You can increase the alkalinity with the Delphin spa alkalinity up, which makes it easier to adjust the pH value. The optimal alkalinity value is between 80-120 mg/l.

## Hardness

The ideal total hardness is 125 - 200 mg/l. Water with too low a hardness level can be very aggressive. Metal parts corrode and the surface can be attacked. The hardness of water is mainly determined by minerals such as calcium and magnesium. The Delphin spa Hardness Up adds calcium to the water, thus increasing the hardness level and ensuring an even level of hardness in the water.

If the water is hard, there is a risk of calcium deposits and the spa water may become cloudy and discolored. Lime and metal ions are usually dissolved in the water, but if the water is too hard it can lead to deposits on the walls and in the filter. Delphin spa Lime Stabilizer reduces the hardness of the water and thus prevents precipitation and deposits. **It is very important that you check the hardness of the water in our stainless spa baths.**

## Disinfection based on chlorine

Ideal chlorine value: 1,0 - 2,0 mg/l (ppm)

When disinfecting with chlorine, the chlorine content should always be in the range of 1.0 - 2.0 mg/l (ppm). We recommend dolphin chlorine in granular form which is mixed in a bucket of water before being added to the bath. The chlorine needs to be tested regularly.

As the stainless spa baths are sensitive to harsh chlorination, it is important that you keep an eye on them and add chlorine in small amounts regularly to keep an even chlorination. Shock chlorination of stainless spa baths is not recommended and should be avoided. **Also, do not use chlorine pucks in dispensers but use chlorine in granules that are dissolved before dosing.**

Remember that disinfection always follows testing and adjusting the pH value. If the pH is wrong, the chlorine agent will not work. The chlorine value must not exceed the recommended range. If the test results show that the chlorine value is too high, there are two options. The quickest way to reduce the value is to add Delphin Antichlor, which removes excess chlorine from the water. Alternatively, all or part of the water can be replaced.

There are also other disinfectants that can be used such as active oxygen or bromine, these contain smaller amounts of chlorine, which is less risk of damage to your bath as a result of dosing with chemicals. **However, salt water cannot be used in our baths.**

## Cleaning of pipe systems

The spa's piping system needs to be cleaned regularly to prevent bacterial growth in the coating that forms in the pipes. Coating in the pipes also impairs the functionality of the spa. Delphin SPA Pipe Cleaner removes this biological layer and cleans the pipe system. Clean the pipes just before each water change. To clean the pipes, add the Delphin SPA Pipe Cleaner to your spa which should be completely filled with water, run the water circulation for a short time, drain the water and then rinse the spa. Fill up with fresh water again.

## Troubleshooting for water problems

Do you have cloudy, milky brown or green water? or the water smells bad or foams? Then you need to troubleshoot to find out what is causing these problems.

**Step 1:** Test the water values. Start by checking pH and chlorine. Then alkalinity and hardness may need to be tested.

The pH must be between 7.0 and 7.4. This is important because the pH affects disinfection and other water values. If the pH is too high, the chlorine will not work. Double check the pH value again after performing a chlorination and adjust if necessary. If necessary, adjust the pH value so that it is between 7.0 and 7.4. If you measure a pH value below 7.0, increase the pH value with Delphin Spa pH Plus. If the test result is higher, lower the pH with delphin SPA pH Minus.

**Step 2:** What does the filter look like? The filter needs to be cleaned regularly. If you bathe a lot or have bad water and growth, it needs to be cleaned more often. A good tip is to always have an extra filter at home to clean the dirty filter while the other one is in use. If the filter is very worn and ugly, it needs to be thrown away and replaced with a new one. The filter must dry completely after washing before being reused.

**Step 3:** What filter cycles do you have set? How much the filter needs to run varies between seasons, how many bathers, how often you bathe. Usually you need to let the filter run more during the summer months when the bath is often used more. If you have problems with water quality, set the filter cycles to 2x10 hours and then reduce the hours accordingly.

**Step 4:** Chlorinate your water. Wait a day and measure the chlorine level again. The chlorine value should now be between 1 - 3 mg/l (ppm). If the chlorine value is zero after chlorination (no free chlorine in the water), carry out another chlorination. NOTE! Always check that the pH is correct before performing a chlorination. As the stainless spa material is sensitive to excessive chlorination, shock chlorination is not recommended.

**Step 5:** Check the hardness and alkalinity of your water if you still haven't achieved good water quality. Read more under hardness and alkalinity if you need to change these values.

## Contamination of the piping system

Coatings or contaminants in the piping system can make good disinfection impossible. How long has it been since the plumbing system was cleaned? It is recommended to clean the plumbing system at every water change.

### The water doesn't get really clear

Are there small particles in the water that make it cloudy but are too small to be caught in the filter? They can be flocculated with DELPHIN SPA Gentle Clarifier so that they get stuck in the filter. Clean the filter after dosing a flocculant, otherwise they will clump together.

### It smells of chlorine

Chloramines are the cause of chlorine odor. Chlorine odor occurs when free chlorine in the water is "used up" and there is no or little free chlorine left. As such, it is a sign that the water quality is becoming poor and more free chlorine is needed. Go through the five troubleshooting steps, if there is still a chlorine smell after that, we recommend that you replace all or part of the water.

### Cyanuric acid

It is fine to have a cyanuric acid level of 30-50 mg/l in the water. If the level increases to over 100 mg/l, our recommendation is to reduce the amount by draining some of the water and replacing it with new water.

### Discoloration of water

Metal particles in the water can cause discolored green, brown or black water. Usually you solve the problem by going through the five previous problem solving steps. If that does not help, you can add Delphin SPA Calcium Stabilizer which binds metal particles in the water. Adding Delphin SPA Gentle Clarifier also helps to get the particles out of the spa water. Keep the filter running and then change the filter after dosing these agents.

### Cloudy water and limescale deposits

Cloudy water can be caused by lime in the water. Lime particles are normally dissolved in the water, but if the water is too hard, it can lead to lime precipitation and deposits on the wall. Check the hardness when you suspect or know that you have hard water and add Delphin SPA Lime Stabilizer if the hardness level is above 200 mg/l.

### Foaming water

Soaps, body care products and detergents are often the cause of excessive foam in the spa. Spray Delphin SPA Foam Fighter on the foam. Replace the water or part of the water if there is a lot of foam. Always rinse very thoroughly if you have used soap or similar to clean your bath, it is usually enough to wipe the walls with a cloth of warm water after changing the water.

### Metal parts corrode

The reason is probably that the pH is too low or has been too low for a longer period. Increase the pH with DELPHIN SPA pH Plus to the ideal range of 7.0 to 7.4. Also check the hardness level and increase the hardness if necessary with DELPHIN SPA Hardness Up. The hardness should be between 125 - 200 mg/l (ppm).