## **INSTRUCTIONS FOR USE**

# Harvia Frosty





Inspect the contents of the delivery immediately!

Read and save the instructions for further use.

### WARNINGS

Danger! - Risk of Accidental Drowning (especially children under 5 years). Caution shall be exercised to prevent unauthorized access to hot tub by children. This can be reached by adult supervisor securing the means of access or installing a safety protection device (lockable cover) to the hot tub. To avoid accidents during hot tub use, ensure that children are kept under constant supervision.

Danger! - Risk of Injury. If a pump is used with the hot tub e.g. with filtration system. Should the need arise to replace the suction fittings (protective grids), be sure that the flow rates are compatible. Never operate hot tub if the suction fittings (protective grids) are broken or missing. Only use original parts supplied by the factory.

WARNING – Risk of Suffocation. This hot tub is equipped with a combustion heater and is intended for outdoor use only.

WARNING - To reduce the risk of injury/illness:

- The water in a hot tub should never exceed 40 °C. Lower water temperatures are recommended for young children and when hot tub use exceeds 10 min. It is recommended to seek medical advice before use.
- Since excessive water temperatures have a high potential for causing foetal damage during the early months of pregnancy, women should limit hot tub water temperature and duration of use and should also seek medical advice.
- The user shall check the water temperature before entering the hot tub.
- The use of alcohol, drugs, or medication before or during hot tub use may lead to unconsciousness, with the possibility of drowning.
- Persons with any medical condition should seek medical advice before using a hot tub.
- Persons using medication should seek medical advice before using a hot tub since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.
- Avoid putting the head underwater.
- Avoid swallowing hot tub water.

Carefully read, understand, and follow all information in this user manual before installing and using the hot tub. These warnings, instructions, and safety guidelines address some common risks of water recreation, but they cannot cover all risks and dangers in all cases. Always use caution, common sense, and good judgment when enjoying any water activity.

The product is intended only for private outdoor use and for installation above ground or partly recessed with external support e.g. built in terrace. The tubs have a frame or a transport pallet for transport. It needs to be removed before the final placement of the tub. Do not lift the tub from its brims. The tub should always be lifted from its bottom. In case the tub has been supplied sideways, it needs to be turned to the correct position as soon as possible, so that the tub does not become disformed and the bottom will not come off from the sides.

If the product cannot be manually carried to the planned installation location it might require specialist lifting equipment (e.g. such as crane)

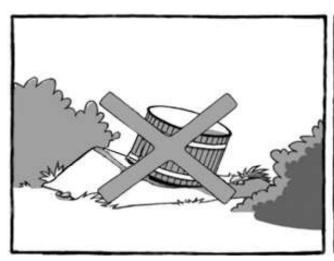
## INSTALLATION

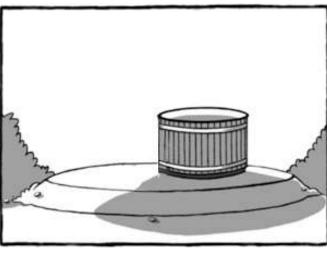
## Making the foundation

It is important to place the tub on an even surface that can bear the whole weight of the tub (approx. 800kg). The foundation can be evened out e.g. with chips (picture below) or if you want a more solid foundation, it can be cast of concrete or covered with slabs. When the bottom of the tub is clearly in the air, it airs well and dries. Ensure that the tub is not covered by grass or hay, as it will prevent the wood from breathing and will cause rotting.

Since the hot tub wall height is over 85 cm high, you should get a means of ingress (e.g. steps) to the outside. Or install the hot tub so that the ingress is easily possible e.g. via terrace.

Note possible maintenance operation when selecting the position for the tub. It must be possible to move the tub wherever necessary, even if it is embedded in a terrace, for example. The guarantee will not cover any indirect costs, such as removal or construction of terraces.



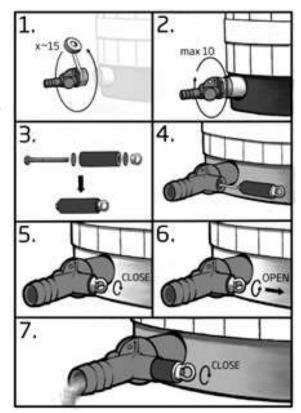


## Water discharge

The water discharge is the pipe (2 ½" female thread) on the opposite side of the cooling unit. Where the supplied shut-off valve with a 38 mm hose coupling is installed. Plan the location of your tub so that the water discharge will not cause any problems. Guide the water to the side with hoses – hoses with a 38 mm ID can be used.

- 1. Use pipe tape in valve thread connection about 15 rounds thickening towards the base of the thread.
- 2. Install the valve in its place. Turn the valve MAX 10 times clockwise. Stop turning the valve in correct position at once. Since turning back might leave the tape sealing leaking. The correct position is marked with upward arrow and word UP. The thread of the valve is not meant to go all the way in.
- 3. Assembly of the plug.
- 4. Notice that the end of the bolt shall enter the matching inlay in the valve.
- 5. Tighten the plug by turning the ring nut clockwise. Do not overtighten, only turn half a turn at once until the water stops running.
- 6. The plug is opened by turning the ring nut counter clockwise and pulling it horizontally out from the valve. If the plug seems to be stuck. Wait for a few minutes so the plugs shape reverts. That way it will come out easier.
- 7. When water starts running, tighten the plug so it stays in.

Notice! Do not leave the plug tightened in for prolonged periods of time to ensure that it does not get stuck in the valve body.

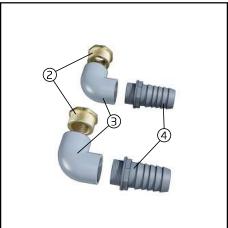


## **COOLING UNIT - INSTALLATION TO TUB**

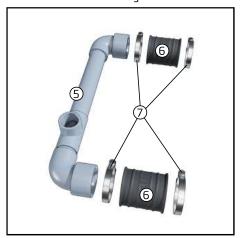
## PART LIST



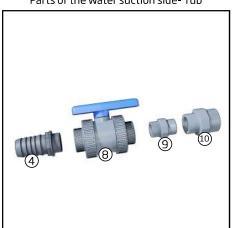
Hose connectors to cooling unit



Lead-through set



Parts of the water suction side- Tub



Parts of the water return side - Tub



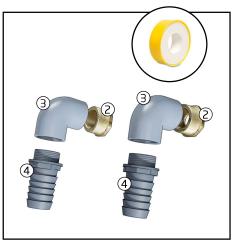
In addition



Number	Part	Quantity
1.	Cooling unit	1
2.	Socket nipple, Brass	2
3.	90 degree angle 1"	3
4.	Hose connector 1"	4
5.	Lead-through set	1
6.	Heater connection hose (Included in Lead-through set)	2
7.	Hose clamp 80-85 W1 (Included in Lead-through set)	4
8.	Ball valve 1" sk PVC	2
9.	Double nipple 1" uk pvc	3
10.	Socket nipple 1" inner x 1 1/2" outer, pvc	2
11.	Thread tape	1
12.	Hose clamp 9mm, 25-40 W5	4
13.	Hose 32	2 m

## INSTALLING HOSE CONNECTORS TO COOLING UNIT

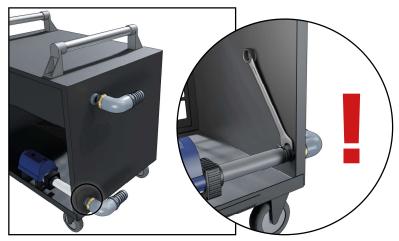






1. Open the side wall of the cooling unit (Fixed with two screws). Wrap thread tape around the outer threads of parts 2 and 4 about 15 turns. After that, attach parts 2, 3 and 4 to each other.





2. Wrap around 10 turns of thread tape around the outer connections on the back of the cooling unit. Attach the hose connectors you assembled in step 1 to the cooling unit. When attaching the lower (IN) hose connector, it is especially important to hold against with a wrench on the inside of the unit when tightening. After the hose outlets are closed, put the side wall of the cooling unit back on.

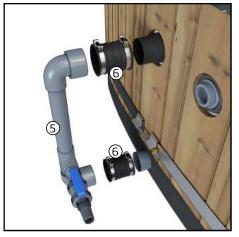
## INSTALLING LEAD-THROUGH SET







3. Wrap thread tape around 15 turns on the outer threads of parts 4, 9 and 10. Then attach parts 4, 8, 9 and 10 to each other. Attach connected parts you made to the lead-through set (5).





4. Attach the lead-through set (5) to the pool using connecting hoses (6) and hose clamps (7).

## INSTALLING WATER RETURN







5. Wrap around 15 turns of thread tape around the outer threads of parts 4, 9 and 10. After that, attach parts 3, 4, 8, 9 and 10 to each other. Attach the set you made to the Lead-through in the pool.

## HOSE CONNECTIONS





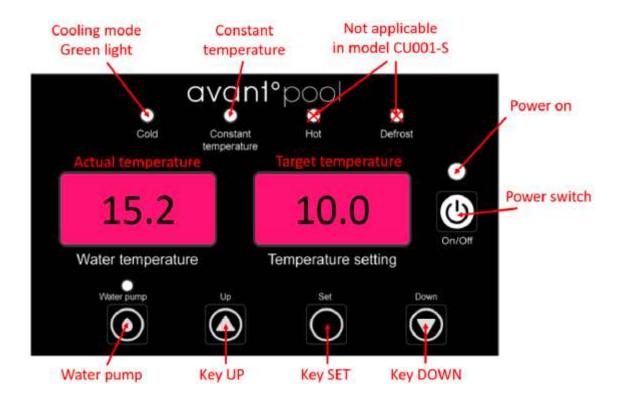
6. Cut the hose (13) into two parts. Fasten the hoses between the cooling unit and the pool using hose clamps (12). The suction hose is installed between the hose connector at the bottom of the cooling unit and the lead-through set. The water return hose is installed between the hose connector on the top of the cooling unit and the 90 degree hose connector. The hose can be heated to facilitate installation.

## COOLING UNIT - OPERATING THE CONTROL

The cooling unit is operative when the power in turned on and you see the "Power on" light. The pump starts running either automatically or after pressing the "On/Off" button and you see the "Water pump" light.

## Control panel description

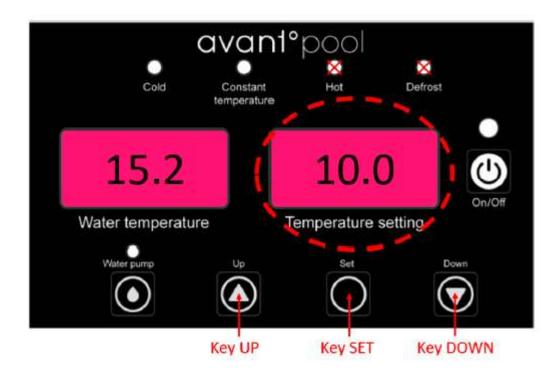
"Water temperature" display = actual water temperature "Temperature setting" display = set target temperature



## SETTING THE TARGET TEMPERATURE

Press the "Set" key and the "Target temperature" display starts flashing. Press the "Up" or "Down" key for setting the target temperature.

If the new target temperature is not set within 5 seconds, the system will automatically exit the menu and continue operating with the previously set target temperature.

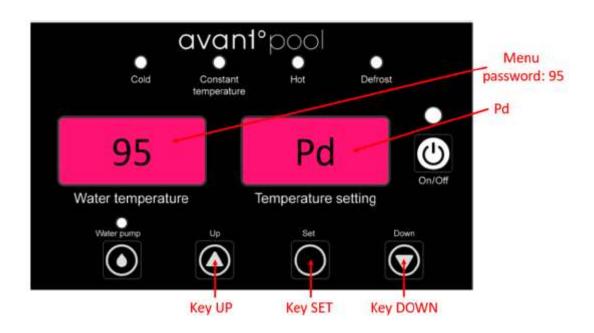


## PROGRAM MENU ENTRY (NO NEEDTO MODIFY IF DEFAULR SETTINGS OK)

Press the "set" key for 5 seconds. "Pd" will appear on the "Temperature setting" display.

Scroll the password numbers by pushing "Up" / "Down" key until you have "95" on the "Water temperature" display. Then push "Set" key.

Press the "Set" key go to the next menu.



CODE	FUNCTION	RANGE	DEFAULT SETTING
F1	Temperature tolerance	0,3°C - 8°C	0,5°C
F2	Temperature modification	-5°C - +5°C	0
F3	Compressor delay time	1-7 min	3 min
F4	Manu password	1 - 255	95
F9	Celcius – Fahrenheit conversion	00 - 01	00 = °C
FA	NOT APPLICABLE IN MODEL CU001-S		C = Cooling Do not change
F5			Do not change
F6			Do not change
F7			Do not change
F8			Do not change

Note 1: Codes F5, F6, F7, F8 and FA are not in use in this unit. Do not change those codes!

Note 2 (F9): Fahrenheit Degree and Celsius conversion, 00 = Degree Celsius and 01 = Fahrenheit degree.

#### **OPERATIONAL ADVICE**

Filter shall be cleaned and dried if possible whenever the hot tub is emptied.

No manual dosing of chemicals shall be performed while bathers are present in the hot tub.

When filling the tub, note the number of people because people entering the tub will displace the water when they enter the tub. If there will be many people in the tub, leave the water surface at the minimum.

In case you are using your own pump for filling the tub, remove the pumping hose after you have filled the tub. Many pumps do not have a return valve to prevent the water discharge from the tub when the pumps are switched off. Before filling the tub, check that the bottom plug of the tub is closed, ensure that the plug is in place after you have some 10 cm of water in the tub.

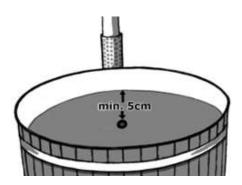
#### Minimum fill:

The tub needs to be filled at least 5 cm above the upper connection of the cooling unit.

#### Do not let a full tub freeze in the winter.

Do not leave the water unattended, in case there is a risk of subzero temperatures. The bottom plugs and exhaust valves need to be left open, so that any water collected in the tub can be discharged and it will not freeze at subzero temperatures.

You can use 19 mm spanners for the outer edge of the hoop tighteners. These tighteners are used for adjusting the hoops. You do not usually need to adjust these in a plastic tub. If the side planks dry and shrink you can adjust the hoops accordingly. Check that the planks are situated nicely before tightening so that they will not bend out or in between the hoops and actual tub.





## MAINTENANCE AND SAFETY OF THE TUB

#### Surface treatment

#### Thermowood

A tub lined with thermally modified wood is beautifully brown. If you want to keep the brown tone, the tub shall be oiled from the outside at least once a year with an UV-protected impregnant. Water-based wood oil Teknoshield 4015 has been used at the factory. The re-treatment should be made with similar oil and with selected brown tones. Teknos Woodex Aqua suits for treatment in Finland. On top of Teknoshield 4015 you can use different kinds of wood oils and transparent paints (solvent and water based).

#### Other remarks

Note that the discharge tap should always be left open in an empty tub. If water gets inside the tank from somewhere when the discharge tap is closed, water can freeze in the pipes and break parts.

Note! When emptying the tub you shall leave the cover slightly open, so that no vacuum forms in the tub.

### Hygiene

In order to use the same water for a long time, use both chemicals and a filter and other cleaning solutions if necessary. Only chemicals and the filter can keep the water clean and hygienic for a long time. Ask more about filters and chemicals from your dealer.

When using swimmable water (not potable water) without any chemicals, the bathing time should not exceed one hour together with that the heating time of the tub should not exceed 2 h, to avoid growth of unwanted bacteria. To achieve this, a cover should be used during the heating period.

Chemicals killing bacteria, i.e. chlorine, are for public use. There are oxygen-based chemicals to replace chlorine for home use and they are suitable for disinfecting small tubs. The dosage instructions for chemicals can be found in the packages and they should be followed. Excessively large dosages may cause the corrosion of the tub parts.

NOTE! When using chemicals, the pH of the water should always be monitored and kept in the given limits, i.e. 7.0-7.6. When using chemicals, the pH usually decreases, which may corrode the tub parts. The use of trichlorine or other combination tablets in the tub is forbidden, excluding 20 g tablets whose concentrations are not too high. Use only chemicals recommended by the manufacturer. Substances in tablet formats shall always be dissolved in the tub using a dispenser, never directly to the tub.

Do not use swimming pool chemicals in these small tubs. The dosages will be too high and they will corrode the materials. Remember also that even automatic chemical devices should be supervised and the water pH and other values should be measured regularly.

In case the tub is filled with water for exhibition purposes, the water shall always be chemically treated.

### Clean-up

Take care of the cleanliness and hygiene of the tub by washing and drying it carefully and often. We recommend rinsing the pipes of the stove and the tub after each use. Washing can be made, for example, with pine soap and cloth or Kirami Bio solution. After emptying and cleaning the tub, leave the drain tap open to allow water to drain off the pipes.

## **Child safety**

Take care of safety of children in the hot tub and in the surroundings. Continuous, active, and vigilant supervision of weak swimmers and non-swimmers by a competent adult is required at all times. (Remembering that children under five are at the highest risk of drowning). Designate a competent adult to supervise the hot tub each time it is being used. Weak swimmers or non-swimmers should wear personal protection equipment.

When the hot tub is not in use, or unsupervised, remove all toys from the hot tub and its surrounding area to avoid attracting children to the hot tub. A safety cover (lockable cover) or other safety protection device shall be used, to prevent unauthorized access to the hot tub. There is a locking kit and lockable covers available for Kirami hot tubs.

Barriers, covers, alarms, or similar safety devices are helpful aids, but they are not substitute for continuous and competent adult supervision. It is recommended to keep rescue equipment (e.g. a ring buoy) by the hot tub. Keep a working phone and a list of emergency phone numbers near the hot tub.

#### Safe use of the hot tub

Encourage all users especially children to learn how to swim.

Learn Basic Life Support (Cardiopulmonary Resuscitation – CPR) and refresh this knowledge regularly. This can make a life-saving difference in the event of an emergency.

Instruct all hot tub users, including children, what to do in case of an emergency.

Never jump/dive into any shallow body of water. This can lead to serious injury or death.

Do not use the hot tub when using alcohol or medication that may impair the bather's ability to safely use the hot tub.

When covers are used, remove them completely from the water surface before entering the hot tub.

Protect hot tub occupants from water related illnesses by advising them to keep water treated and practicing good hygiene. Consult the water treatment guidelines in the user's manual.

Store chemicals out of the reach of children.

Use the signage provided on the hot tub or within 2 m of the hot tub in a prominent visible position.

Removable ladders, when removed, shall be stored safely where children cannot climb on it

Take care of the stairs – leading to the tub especially at subzero temperatures when the water turns into slippery ice.

People with contagious skin infections should not use the tub. The bath water temperature should be below 37°C for patients with heart problems.

When bathing in cold weather, use a bathing cap to avoid catching a cold.

Avoid using the tub if you are tired or feeling unwell.

Prolonged bathing may cause dehydration, and bathing in excessively hot water may even cause heat stroke.

The cover of the hot tub should always be placed off the ground when it is not in use, to avoid any impurities getting to the tub.

## TECHNICAL INFORMATION

Recommended person capacity	1-2
Outside wall height of the tub	98 cm
Outside measures of the tub	170 x 72 cm
Minimum water depth of the tub	50 cm
Maximum water depth of the tub	83 cm
Maximum water volume	615 l

## **GUARANTEE**

We provide a 24-month material and manufacturing guarantee for our hot tubs and tubs. The guarantee is valid when the user has read the instructions and follows them.

NOTE! The commercial products have a 6-month guarantee.

- The guarantee does not cover any errors that are typical for wood. E.g. discolouration, changes in humidity, cracking and similar. Leakage caused by normal humidity is not covered.
- The guarantee does not cover damage caused by misuse.
- The guarantee does not cover damage caused by freezing, because they can be avoided with correct use.
- The guarantee does not cover corrosion due to the faulty use of chemicals. Especially the pH value should be appropriate and the dosages of chemicals cannot be too high. Do not use automatic chemical dispensers in the tub.
- The warranty does not cover any indirect costs incurred, e.g. costs of building or disassembling the terrace.
- Contact the dealer about guarantee matters. If you try to repair the product yourself, it will cancel the quarantee.

## DISPOSAL OF THE PRODUCT

Any metal parts of the product shall be recycled and wooden parts can be disposed of by burning. The stained wood is toxic waste. The composite- and ecoplank panels can be disposed of by burning with other wood in small doses. The inner tub is recyclable LDPE plastic. Other parts are household waste.

Symbol	Place where used in Kirami's tubs	Disposal
23) PVC	PVC plastic; pipe components	Landfill waste
LDPE	LDPE plastic; inner plastic tub	Can be disposed of by burning and as energy waste, for example.
6) PS	Polystyrene; tub bottom frame	Can be disposed of by burning and as energy waste, for example.
جي	ABS plastic; Bottom tray, lead-in parts and the exhaust valve.  EPDM rubber; brim collar and seals	Suitability for disposal as waste other than mixed waste must checked with the local waste management company.