

**HANSCRAFT**<sup>®</sup>  
european spa producer

# USER MANUAL

TP 500

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For your own safety and the safety of your product, please observe the following instructions. Read the following information carefully and follow the user manual exactly when using the hot tub to avoid damaging the product or the risk of injury. This appliance is intended for use by children 8 years of age or older with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, provided they are under supervision or have been instructed on the use of the product and understand the risks. Children must not play with the product. Cleaning and maintenance must not be performed by children without supervision.

## 1 Hot tub performance parameters

### 1.1 Performance parameters of CELTIC SPAS hot tubs

#### Performance parameters

rated voltage:	three-phase connect. 230/400 V 50 Hz*
maximum working current:	3× 16 A
current surge:	up to 3× 25 A
voltage resistance:	1 250 V/min. without breakdown
insulation resistance:	≥ 1 M Ω
water resistance (cover):	IPX5
protection against electric shock:	first stage

\*The product does not use 400 V phase to phase voltage. It is possible to adjust it to 1× 230 V; however, this is not recommended due to limitation of the functions. (For more information on this connection – Ch. Supplements, p. 23)

#### Load capacity

heating:	1× 230 V/3 kW/13.6 A
ozone:	1× 230 V/50Hz/80 mA
blower:	1× 230 V/0.66 kW/2.9 A
pump 1/2:	2.2 kW
total input power (depending on type of hot tub):	6.26 kW/h
protection class:	I.
lighting:	LED 12 V alternating/10 W
maximum output power:	20 W
moisture resistant speakers:	yes

#### Preparation and electrical connection options – AC three-phase current 3× 230/400 V/16 A/20 A

Ensure that the hot tub is always connected to a circuit protected by a Residual Current protective Device with a rated tripping current of 0,03 A. It is necessary to use

# Performance parameters/Installation preparation

a Type C or Type D circuit breaker with a rated current of 16 A (motor circuit breaker) downstream of the Residual Current protective Device.

## Recommended Type C or Type D circuit breaker (motor circuit breaker)

Hot tubs with two massage motors: **3× 16 A/C or D**  
Hot tubs with three massage motors: **3× 20 A/C or D**

**!!!THE HOT TUB MUST ONLY BE CONNECTED BY A PERSON WITH PROFESSIONAL ELECTRICAL QUALIFICATION IN ACCORDANCE WITH DECREE NO. 50/1978 COLL.!!!**

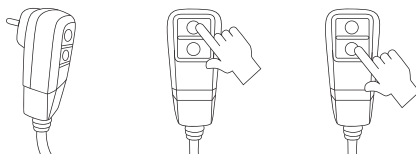
## 1.2 Performance parameters of PLUG & PLAY hot tubs

### Performance parameters

rated voltage:	single phase 230 V 50 Hz*
maximum working current:	1× 16 A
current surge:	up to 16 A
voltage resistance:	1 250 V/min. without breakdown
insulation resistance:	≥ 1 M Ω
water resistance (cover):	IPX5
protection against electric shock:	first stage

### Load capacity

heating:	1× 230 V/2 kW/9 A
ozone:	1× 230 V/50 Hz/80 mA
pump 1/2:	2.2 kW/9.6 A
total input power (depending on type of hot tub):	2.7 kW/h (11.7 A)
protection class:	I.
lighting:	LED 12 V AC/10 W
moisture resistant speakers:	yes



## 2 Hot tub installation preparation

**Inspect the hot tub prior to installation! If any part is damaged or missing, contact the seller immediately! Make sure that all components are in accordance with your order. Check the hot tub before each use. In the event of damage, do not use the hot tub!**

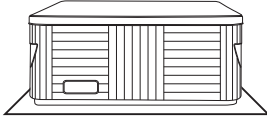
# Hot tub installation preparation

In case your spa is equipped with screwless cabinet, it is prohibited to install additional accessories or load the cabinet in a way not specified by the manufacturer. Damage caused by failure to follow this precaution is not covered by the warranty!

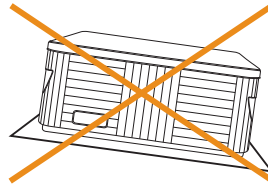
## 2.1 Preparation of the place for installation and connection to electricity

The hot tub must be installed on a flat, sufficiently strong pad with regard to the load-bearing capacity of the hot tub. If the hot tub is installed outdoors, we recommend making a monolithic concrete pad with a minimum thickness of 10 cm. It is always necessary to choose the load-bearing capacity of the pad with regard to the dimensions and weight of the hot tub. Consult your building supervisor. The weight is specified in the technical description of the hot tub.

YES



NO



Hot tubs of the **CELTIC SPAS** series are prepared by us for an electrical connection  $3 \times 230 \text{ V}/400 \text{ V}$ ~ alternating current. Therefore, use a circuit breaker  $3 \times 16 \text{ A/C}$  or  $\text{D}$ , alternatively  $3 \times 20 \text{ A/C}$  or  $\text{D}$  and a Residual Current protective Device corresponding to this connection. Furthermore, it is necessary to have a cable with parameters corresponding to the rightful regulations for this type of connection. **The cable must also have 4 usable meters at the location of the hot tub**, so that it can be pulled through and connected to the control unit without complications. Do not route the cable under the hot tub! Hot tubs of the **PLUG & PLAY** series are supplied by us for an electrical connection  $1 \times 230 \text{ V}$  with an installed Residual Current protective Device and conductor.

## 2.2 Preparation of indoor hot tub installation

If the hot tub is installed indoors, safety precautions must be observed. The basic requirements for the safe operation of the hot tub are anti-slip floors and drainage of the installation site in the event of a water overflow. It is also necessary to realize that humidity will rise around the hot tub, and this may damage surrounding electrical appliances. We therefore recommend adapting the installation site to these conditions. **The whirlpool should always be accessible from all sides for future service.** If it is not sufficiently accessible during the warranty period, the owner is obliged to provide this access. (Sufficient access is generally considered to be at least 60 cm from all sides of the hot tub.)

## 2.3 Preparation of outdoor hot tub installation

If the hot tub is installed outdoors, safety precautions must be observed. The basic requirements for the safe operation of the hot tub are anti-slip floors and drainage of the installation site in the event of a water overflow from the hot tub. We therefore recommend adapting the installation site to these conditions.

## 3 Hot tub installation

**Attention: the hot tub must be connected pursuant to standards valid in the Czech Republic according to ČSN 33 2000 -7-701**

### 3.1 General information

For the installation, electrical connection and the first commissioning of the hot tub, we recommend using the services of professionally trained technicians. If you decide to install the hot tub yourself, follow the recommendations below.

- a) Carefully remove all packing material in which the hot tub was shipped, and place the hot tub on the site prepared for installation.
- b) Remove the front panel located on the side of the hot tub control panel – does not apply to PLUG & PLAY. Only a professionally qualified person may connect it to the power cable.
- c) Because your hot tub has been thoroughly tested during the production process, it is possible that a certain percentage of dirt remains in the technological parts of the hot tub and on its surface; we therefore recommend that you clean the surface of the whirlpool first. Use lukewarm water to clean it. Always clean the surface with suitable soft cloths. Never use any coarse abrasives or textiles that could damage the surface of the hot tub. If you decide to use a cleaning product, this product must not damage the surfaces of the hot tub.
- d) Before filling the hot tub, make sure that all the screws on the equipment are tightened to prevent water leakage.

### 3.2 Filling the hot tub with water

Fill the hot tub with a sufficient amount of water. The water level in the hot tub must never fall below the level of the skimmer. If you find that there is a water leak when filling the hot tub with water, stop filling the hot tub until the fault has been corrected. Hot tubs do not have water softening technology and hard water damages them. Damage caused by misuse is not covered by the warranty.

- a) Fill the whirlpool through the skimmer to prevent the aeration of pumps.
- b) Do not fill the hot tub with water warmer than 104 °F.
- c) When the water reaches the desired level, insert the cartridge filter into the skimmer. When installing it, tilt the filter so that no air bubbles remain in it. After the air has been removed, install the filter.

## 3.3 Starting the hot tub power supply

If the hot tub is connected by a mobile power cable, the power supply cable must not be loaded by sharp objects or exposed to other influences. In this case, we recommend placing the supply cable in a protective cover (protector). Switch on the appropriate circuit breaker for the hot tub.

## 3.4 Programming the hot tub control unit with the control panel

Now you can start programming the hot tub. The programming process is described in the Control panel chapter. After programming the hot tub, cover it with a thermal cover and let its temperature stabilize. Check the water level in the hot tub regularly.

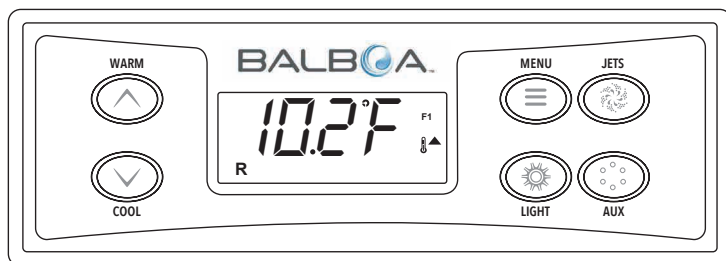
# 4 Aquatic audio system

**AQUATIC/MY MUSIC audio system** (if the hot tub is equipped with it)

To listen to music from an external device, you must first pair the device from which you will play the music (PHONE, TABLET, COMPUTER). On the external device, turn on bluetooth and search for the AQUATIC device. The connection is not coded, and only one connection can be active at a time. When everything is properly connected, you can start playing music. All functions such as switching, volume control, etc. are controlled from the connected device. In some cases, the connection to the audio system is conditioned by a password, in which case enter 0000 as the password.

# 5 Control panel (BALBOA TP 500)

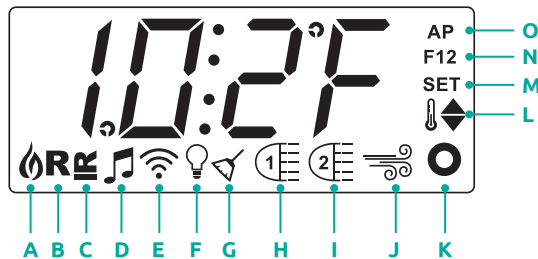
## 5.1 Panel description



# Control panel

- JETS** This button is used for quick control of massage jets. If the filter is not running, the *JETS* button must be pressed twice. The pressure of the water flow through the jets can be adjusted by turning the nozzles to the left or right. Therefore, if water is not flowing through the nozzle, it may not be due to a malfunction, the nozzle may just be closed. Not all jets can be controlled like this. It is also possible to regulate the pressure of the massage with the massage engine running by turning the air intake valve into the jets located at the top edge of the hot tub.
- AUX** The *AUX* button turns on the blower.
- WARM** The up arrow labeled *WARM* is used to increase the heating temperature. In other menus it is used to scroll up when selecting options.
- LIGHT** Switches on the lights.
- COOL** The down arrow labeled *COOL* is used to lower the heating temperature. In other menus it is used to scroll down when selecting options.

## 5.2 Detailed description of monitor



- |                                 |  |   |
|---------------------------------|--|---|
| <b>A.</b> heating               | <b>G.</b> cleaning cycle                   | <b>L.</b> temperature range (high/low)  |
| <b>B.</b> prepared mode         | <b>H.</b> jets 1                           | <b>M.</b> settings                      |
| <b>C.</b> rest mode             | <b>I.</b> jets 2                           | <b>N.</b> filter cycle (1 or 2 or both) |
| <b>D.</b> bba™2 audio bluetooth | <b>J.</b> blower                           | <b>O.</b> time (AM or PM)               |
| <b>E.</b> wifi                  | <b>K.</b> connection (jets 3 or MicroSilk) |   |
| <b>F.</b> light                 |  |   |

## 5.3 Entering the menu

To enter the menu, use the *MENU* button.





## 5.4 Setting the temperature

Use the arrow buttons (labeled *WARM* and *COOL*) to set the temperature directly on the monitor. The temperature range (high and low) is indicated by a thermometer pictogram and a small arrow next to it. If the arrow is up, a high temperature range is set, and if the arrow is pointing down, a low temperature range is set.



### Temperature range

high	<b>79.88–104 °F</b>
low	<b>50–98.6 °F</b>

To set the high temperature range, proceed by pressing the following buttons: *MENU* and then *arrow up WARM*.



To set the low temperature range, proceed by pressing the following buttons: *MENU* and then *arrow down COOL*.



## 5.5 Heating mode

Here you can set the following heating modes:

ready	<b>in this mode the hot tub heats the water to the set temperature</b>
rest	<b>in this mode the hot tub only heats the water during filtration</b>

To change the heating mode, use the following combination of buttons: *MENU 2x + arrow WARM or COOL*. Use the up or down arrow to select a mode. For mode pictograms, see description of the control panel (Chapter 5.2). Confirm your selection with the *MENU* button.



# Control panel

## 5.6 Setting the time

The time needs to be set for the hot tub to work properly. To do this, press **MENU 3x** then use the arrows (**WARM** and **COOL**) to select the value and confirm with **MENU**. The hours and minutes are set separately, and they must always be confirmed with the **MENU** button.



## 5.7 FLIP (flipping monitor)

Press **MENU 4x** then use the arrows to rotate the monitor. Save your selection with the **MENU** button.



## 5.8 LOCK (locking)

This control panel is equipped with a lock for both the entire monitor and a separate temperature lock, whereby the user can switch on the jets and lights, but cannot change the temperature setting. You can access this function by pressing **5x MENU** and then *the up arrow (WARM)* to move to the first **TEMP** (temperature lock) selection. If you want to lock the temperature, continue with *the up arrow (WARM)* to **ON**. Then press **MENU** to save the settings.



The entire panel is locked in the same way up to the **TEMP** point. To lock the panel **PANL**, press the **MENU** button, then use the up arrow to select **OFF/ON**. Finally, confirm your choice with the **MENU** button.



## Unlocking the control panel

To unlock all locks, hold down *the up arrow (WARM)* while pressing the *MENU* button twice slowly.



## 5.9 HOLD (hold mode – M037)

Hold mode is used to disconnect pumps during service work, such as cleaning or filter replacement. Hold mode lasts 1 hour, unless it is discontinued manually. If servicing the hot tub requires more time, it is better to turn off the power supply to the hot tub. You can access this setting by pressing *MENU 6x + up arrow (WARM)*.



You can tell that the mode is active by the text **HOLDING FOR 59:00** on the panel (countdown of time for which the hold mode will be active). You can cancel hold mode with the up/down arrow (*WARM/COOL*) or by pressing *MENU*.



## 5.10 Filtration

Control panel TP500 has two filtration cycles, 1 and 2. Each filtration cycle is set separately. Basically, the start time and duration are set, and the end time is displayed by the panel itself.

### a) Filtration cycle 1

(*MENU 7x + arrow to FLTR*)



## Control panel

Use the above combination to access the cycle start time setting. Press *the up arrow (WARM)* again to display the time. Use the arrows to set the value and press *MENU* to move to the next entry.



Pressing *MENU* again will display the text **RUN HRS** (filter cycle time setting). Press *the up arrow (WARM)* and set the time for which the filter cycle is to be active. Set the hours and minutes as shown above. Confirm by pressing *MENU*. The text **F1 ENDS** and the time when the cycle will end is displayed. Now the filtration cycle is set and will be automatically switched on.



### b) Filtration cycle 2

(*MENU 8x + up arrow WARM*)



Filtration cycle 2 is off in default settings. This cycle can be activated by pressing the *MENU* button **8x** and then using *the up arrow (WARM)*, which will move you to the **ON** option. Filtration cycles can be set to overlap. Flush cycles, which start other pumps to flush the piping, start automatically, always at the beginning of the filtration cycle.

## 5.11 Preference PREF

Here you set temperature units that the panel displays. To do so, use the combination *MENU 9x + up arrow WARM*. Like this you can select the desired option, then press *MENU* to confirm.



The menu offers the following options:

<i>F/C temperature display</i>	temperature switch between Celsius and Fahrenheit
<i>12/24 time display</i>	time switch 12/24 h mode
<i>RE-MIN-DERS reminders</i>	turns notifications on or off ( e. g. filter cleaning)
<i>CLN-UP cleaning</i>	this function does not always have to be enabled (may not be displayed), if enabled, you can set the operating time of pump 1 after each use of the hot tub in the range of 0–4 hours

## 5.12 System information (UTILITY)

Here you will find information about the control panel. Enter the combination **MENU 10x + up arrow WARM**.



MENU  
10x



WARM

## 6 Problem solutions

Most messages are displayed in the bottom left corner.

### GENERAL MESSAGES

<b>M019</b>	Each time the hot tub is started, it enters activation mode. The purpose of activation mode is to allow the user to start the pumps and manually verify that they are active (air is expelled) and water is flowing. Activation mode lasts 4 minutes, but it can be ended sooner by pressing the temperature button. The heat pump is not switched on during activation mode. <i>(If your hot tub has a circulation pump, it is switched on with the Light button in activation mode. The circulation pump starts after activation mode has ended.)</i>
<b>--°F--°C</b>	<b>Water temperature unknown</b> When the pump has been running for 1 minute, the current temperature is displayed.

## Problem solutions

<p><b>potential freeze-up conditions</b></p>	<p>If the possibility of potential freeze-up is detected, or the AUX freeze switch is off and all pumps and blower are activated. In some cases, the pumps may turn on and off and the heater may run during freeze protection mode. This is an operational message, not indication of failure.</p>
<p><b>M029</b></p>	<p><b>The water is too hot</b> One of the temperature sensors has detected a water temperature of 109.94 °F and the hot tub functions are blocked. The system automatically resets when the water temperature is below 107.96 °F. Check that the pump has not been running for too long, or that the ambient temperature is not too high.</p>

### HEATER RELATED MESSAGES

<p><b>M016</b></p>	<p><b>Water flow through the heater is reduced</b> This message indicates that not enough water is flowing through the heater to distribute heat away from the heater. The heater starts again after about 1 minute. See below "Relevant flow inspections".</p>
<p><b>M017</b></p>	<p><b>Water flow through the heater failed</b> This message indicates that not enough water is flowing through the heater to distribute heat away from the heater, so the heater was disconnected. See below "Relevant flow inspections". After the problem has been resolved, press any button to reset and turn on the heater again.</p>
<p><b>M028</b></p>	<p><b>There seems to be no water flowing through the heater</b> There is no water or very little water in the heater, and the heater cannot turn on. The hot tub switches off for 15 minutes. Press any button to restart the heater. See below "Relevant flow inspections".</p>
<p><b>M027</b></p>	<p><b>The heater has no water flow</b> There is not enough water in the heater for it to start. The hot tub is switched off. After the problem is resolved, press any button to reset and restart the heater. See below "Relevant flow inspections".</p>
<p><b>M030</b></p>	<p><b>The heater is too hot</b> One of the temperature sensors has detected a temperature of 118.04 °F in the heater and the hot tub is switched off. Press any reset button when the water reaches a temperature below 107.96 °F. See "Relevant flow inspections" below.</p>

#### Relevant flow inspections

Check whether the water flow is too low, whether there is an obstruction in the water suction area, whether valves, air pockets are closed, too many closed problems. In

some systems, even when the hot tub is turned off, some devices may occasionally turn on to allow temperature monitoring or when freeze protection is required.

## SENSOR ASSOCIATED MESSAGES

<b>M015</b>	<b>Sensor balance is wrong</b> The temperature sensor may be out of sync by 60.98 °F to 61.88 °F. Call service.
<b>M026</b>	<b>Sensor balance is wrong</b> Temperature sensors are out of sync. The error message is displayed for more than 1 hour. Call service.
<b>M031 (A) M032 (B)</b>	<b>Failure of sensor A, failure of sensor B</b> Either the temperature sensor or the electrical circuit sensor has failed. Call service.

## UNCLASSIFIABLE MESSAGES

<b>NO COMM</b>	<b>Communication failure</b> The top control panel is not receiving messages from the system. Call service.
<b>BETA VER-SION</b>	<b>Test software</b> The control system works together with the test system at the same time. Call service.
<b>degrees °T</b>	<b>°F or °C degrees are replaced by °T</b> The control system is in test mode. Call service.

## SYSTEM ASSOCIATED MESSAGES

<b>M033</b>	<b>Safety lock – pump suction lock</b> An error message indicates that the vacuum switch has closed. This occurs when a suction problem has occurred, or a possible capture situation has been avoided. <i>(Not all hot tubs have this function.)</i>
<b>MEM FAIL M022</b>	<b>Memory failure – control summary of errors</b> The system failed during startup in program test of error inspection. This indicates a problem with the firmware (operating program), and it is necessary to call for service.

## Problem solutions

<b>MEM RSET M021</b>	<b>Settings reset (permanent memory error)</b> Contact your dealer or service organization if this message appears more than once.
<b>CLOCK FAIL M020</b>	<b>Timer failure</b> Contact your dealer or service organization.
<b>CNFG FAIL</b>	<b>Configuration error (the hot tub does not switch on)</b> Contact your dealer or service organization.
<b>STUK PUMP M034</b>	<b>The pump seems stuck.</b> The water may be too hot. <b>DISCONNECT THE HOT TUB FROM THE POWER SUPPLY. DO NOT ENTER THE HOT TUB.</b> Contact your dealer or service organization.
<b>HOT FALT ---- CALL FOR SRVC M035</b>	<b>Heating failure</b> The pump seemed stuck when the hot tub was last switched on. <b>DISCONNECT THE HOT TUB FROM THE POWER SUPPLY. DO NOT ENTER THE HOT TUB.</b> Contact your dealer or service organization.

## REMINDER MESSAGES

<b>general maintenance</b>	<b>Help for general maintenance</b> Reminder messages can be suppressed. Reminder messages may be selected individually by the manufacturer. They can be completely canceled, or a limited number of reminders can be allowed for a specific model. The frequency of each reminder (e.g. 7 days) can be specified by the manufacturer.
<b>CHEK PH</b>	<b>Check pH</b> Appears with a regular frequency, e.g. every seventh day. Check the pH of the water with the test kit and adjust the pH with suitable chemicals.
<b>CHEK CHEM</b>	<b>Check disinfection</b> May appear regularly, i.e. every 7 days. Check the level of disinfectant and other aqueous chemicals with the test kit and adjust it with suitable chemicals.
<b>CLN FLTR</b>	<b>Clean the filter</b> May appear regularly, i.e. every 30 days. Clean the filter medium according to manufacturer instructions. See hold mode on page 11.



<b>GFCI test (or RCD)</b>	Appears with a regular frequency, e.g. every 30 days. GFCI – a ground fault circuit breaker or a residual current device (RCD) are important safety devices and must be tested regularly to verify their reliability. Each user should be instructed on how to perform a GFCI or RCD safety test associated with hot tub installation. The GFCI or RCD will have TEST and RESET buttons to use that will allow the user to confirm that the device is working properly.
<b>CHNG WATR</b>	<b>Change the water</b> Appears with a regular frequency, e.g. every 90th day. Change the water in the hot tub regularly to maintain its chemical balance and good hygiene.
<b>CLN COVR</b>	<b>Clean the cover</b> Appears with a regular frequency, e.g. every 180th day. Vinyl covers should be cleaned and treated for maximum durability.
<b>TRT WOOD</b>	<b>Treat wood surface</b> Appears with a regular frequency, e.g. every 180th day. The casing and wooden equipment of the hot tub should be cleaned and treated according to the manufacturer's instructions for their maximum durability.
<b>CHNG CART</b>	<b>Change the filter cartridge</b> Appears with a regular frequency, e.g. every 365th day. Filter cartridges should be replaced from time to time to maintain proper hot tub functionality and good hygiene.
<b>CHEK OZ</b>	<b>Check the ozonator and UV lamp</b> We recommend an inspection by a qualified technician during regular service.
<b>SRV CHEK</b>	<b>Service check</b> Have a service technician check the condition of your hot tub (repeat every 365 days).

## 7 Hot tub care

### 7.1 General information

Do not expose the hot tub to sun without water inside or a cover on top. The direct sunlight can cause fading and deformation of the surface material. When you are not using the hot tub, cover it with the thermo cover, regardless of whether it is empty or full. Protect the hot tub from rain and snow. Place the hot tub under a gazebo or a roof if possible.

## Hot tub care

- a) Do not open the control unit. There are no user-fixable parts inside.
- b) Drain, clean and fill the hot tub with clean water on regular schedule.
- c) Clean the filter cartridge at least once a week.
- d) The hot tub user should have a proper shower before and after the use of the hot tub.

### 7.2 Removal and cleaning of the filter cartridge

The hot tub filter cartridge can get clogged by calcareous and mineral particles from a hard water, which can lead to a restricted water flow inside the filtration system.

**We recommend to clean the filter cartridge at least once a week.**

Remove the cartridge and the skimmer insertion. Using a garden hose, clean the cartridge so that no settled dirt remains in the corners of the filter. Once clean, put the insertion back to the skimmer. Put the cartridge inside the skimmer tank next and close it. Remember that the filter cartridge has to be replaced every 3–6 months. Replace it even sooner if it is damaged or clogged, it is not usable in such state.

Make-up, sunscreens and other types of body lotion decrease the quality of the water and lower the filter cartridge longevity.

### 7.3 Maintaining the quality of the water in the hot tub

**WARNING: Always add the chemicals to the water, never the other way around. Add the chemicals to the water only when there are no people inside. Use the circulation pumps to mix the chemicals with the water. Store the chemicals according to the instruction on their label.**

- a) Use a suitable water hardness regulator regularly (the **HANSCRAFT SPA Water hardness regulator** is recommended) and follow the instructions on the chemicals' label.
- b) Depending on the frequency of use of the hot tub, test the water quality regularly by a suitable water quality tester.
- c) Adjust the water pH level accordingly by suitable water chemicals (the **HANSCRAFT SPA – pH PLUS** and **pH MINUS** is recommended).
- d) Adjust the Cl (chlorine) level with suitable water chemicals (**HANSCRAFT SPA – MULTI MINI 3 in 1 tablets** are recommended). Follow the instructions on the chemicals' label.  
**For the chlorine to have the desired effect, the pH level needs to be adjusted first.**
- e) We recommend you to clean/replace the filter cartridge before adding the chemicals.

**Chlorine shock** – in case of extreme pollution, it is necessary to treat the water with a dose of fast dissolving chlorine and thus perform a chlorine shock. The pH level of the hot tub water has to be adjusted to 7.0–7.6 first and the chlorine level has to be checked. Once a week or after adding a large amount of fresh water to the hot tub, add a shock dose of chlorine 10–20 g/m<sup>3</sup> (2 table spoons) into the water. Add the chlorine only when there are no people in the hot tub. After you add the chlorine, turn on the circulation pumps so that the chemicals mix well with the water. If you are using a granulated form of the chemical, dissolve it in a small amount of water first. Let the chlorine level drop to 3 mg/l before you start using the hot tub.

**Oxygen shock** – in case of extreme pollution, it is necessary to treat the water with a large dose of fast dissolving oxygen and thus perform an oxygen shock. The pH level of the hot tub water has to be adjusted to 7.0–7.6 first and the oxygen concentration in the water has to be checked. Once a week or after adding a large amount of fresh water to the hot tub, add a shock dose of oxygen (2 tablets) into the water. Add the oxygen only when there are no people in the hot tub. After you add the oxygen, turn on the circulation pumps so that the chemicals mix well with the water. Let the oxygen level drop to 15 mg/l before you start using the hot tub.

**Store the chemicals according to the instructions on the label.**

## Ideal chemical levels

<b>Free chlorine concentration (active oxygen concentration)</b>	0.7–1.0 mg/l (10–15 mg/l)
<b>pH level</b>	7.0–7.6
<b>Calcium</b>	100–180 mg/l
<b>Overall alkalinity</b>	80–120 mg/l

## 7.4 Replacing the water

It is important to keep the hot tub water fresh and clean. We recommend you to replace the water at least every 3 months unless the water quality drops sooner. The hot tub water can be used for watering the garden for example, given that it has not been chemically treated at least one week prior.

- a) Disconnect the hot tub from the power supply (turn off the residual current device).
- b) Check the power supply cable and make sure it is not wet.

## Hot tub care

- c) Drain the water through a water drainage system, close it carefully and fill the hot tub with fresh water.
- d) Connect the hot tub back to the electrical circuit (turn on the residual current device).

### 7.5 Cleaning the outer shell of the hot tub

Use a mild, not abrasive cleaning detergent and a soft cloth.

### 7.6 Hot tub hygiene and disinfection

Taking care of hygiene is extremely important for elimination of any germs, algae and other harmful organisms polluting the water in the hot tub. Test the water using the testing kit first (to find out the pH and Cl level) and follow by using suitable water chemicals accordingly. Follow the instructions on the chemicals' label carefully.

### 7.7 Thermo cover

Using the thermo cover helps saving up energy expenditures by minimizing temperature loss and evaporation. The cover is an effective way of protecting your hot tub from impurities and fallen leaves.

**WARNING: For safety and damage prevention reasons, do not sit, stand or lie on top of the cover. Do not place any objects on top of it. The thermo cover does not serve as a fence around the bathing area either. Do not let animals walk on top of the thermo cover. Prevent a large snow layer build up on top of the thermo cover.**

### 7.8 Upkeep of the thermo cover and upkeep instructions

It is important to take a proper care of the thermo cover: clean it when necessary and treat it with a product intended especially for an eco-leather or fake leather. The guarantee does not cover damages caused by an inappropriate cleaning product.

- a) The right balance of water chemicals represents an important factor in prolonging the longevity of your hot tub thermo cover.
- b) Remove the hot tub's cover and place it on the ground surface down.
- c) Wash the cover with a large amount of water from a garden hose or a water bucket.
- d) Clean the thermo cover surface using a soft brush and a mild dish soap solution (1 tea spoon of dish soap per 8 litres of water).

**Attention: Do not let the dish soap solution dry on the thermo cover before washing it off!**

- e) Wash off the cleaning solution thoroughly.
- f) Return the cover back on the hot tub.
- g) Open the thermo cover regularly so that the chemical vapours can disperse. Flip the thermo cover inner side up at least twice a year for 3–4 hours.
- h) If the thermo cover does not get regularly cleaned twice a month, the surface material can become frail or age prematurely. The seams can separate. If you do not clean the thermo cover appropriately, the guarantee becomes invalid.

**WARNING: Do not lift the thermo cover by the handles. A vacuum forms between the thermo cover and the hot tub therefore lifting by the handles could result in a damage. It is necessary to support the thermo cover from below by hand.**

## 8 Winter and summer

**Winterizing the hot tub, a process recommended by the producer.**

It is required that all water gets drained from the hot tub during the process of winterizing it, as well as water from all the technical parts of the hot tub (circulation pumps, pipes, etc.) We recommend you to use our specialized service for this purpose because flawed winterizing of the hot tub can result in a loss of the guarantee. If you decide to use our professional services, it is necessary to order them sufficient amount of time in advance. In case of winterizing the hot tub by yourself, it is crucial to do it when the air temperature is still above zero. If the winterizing is done in temperatures below zero, it can be very difficult because water in the motors could have frozen already and damaged some parts of the hot tub.

### 8.1 Winter time – using the hot tub, all year operation (SLP)

If you decide to keep using the hot tub during the winter time, it is necessary to keep checking the hot tub for cases of for example: circuit break failure, motor not working, heating not working, filter cartridge getting clogged.

**If the instructions above are not complied with and it results in a damage of the hot tub, the warranty cannot be claimed.**

### 8.2 Summer time

Do not expose the hot tub to direct sunlight; do not use inappropriate cleaning detergents for upkeep. Prevent the hot tub surface coming in direct contact with chemicals as well as surface scratches cause by sharp objects. Ensure the safety of

## Final information/Service table

children in the hot tub by a continuous adult supervision. Only eligible persons over 18 years of age, educated about the whole process, can be operating the hot tub. The same goes for handling the water chemicals, which have to be stored out of children's reach.

## 9 Final information

### 9.1 Guarantee conditions

Guarantee conditions abide by terms and conditions of your distributor.

### 9.2 Safe disposal of the product after the service life

Hire a professional service to dispose of the hot tub after it reaches the end of its longevity. According to the WEEE directive (Electronics and electrical appliances waste) this device cannot be disposed of like a regular waste.

### 9.3 Warranty claims and repair services

Potential warranty claims abide by the consumer protection laws and the warranty claims policy of your distributor.



## 10 Service table

**A TABLE FOR YOUR NOTES, PLEASE FILL OUT THE FOLLOWING INFORMATION. You will need the filled out information in case of a repair requested through the customer service line.**

<b>Purchase date</b>	
<b>Delivery date</b>	
<b>Model name</b>	
<b>Serial number</b>	
<b>Seller information (name, phone number)</b>	



**HANSCRAFT**<sup>®</sup>  
european spa producer

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