
A woman with wet hair is smiling and resting her head on the edge of a hot tub. The water is bubbling around her. The background is a soft-focus outdoor setting.

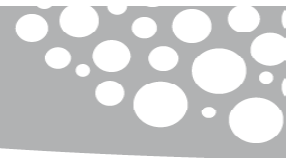
**SPA DE USO PRIVADO
SPA FOR PRIVATE USE
SPA POUR UN USAGE PRIVÉ
SPA FÜR PRIVATE NUTZUNG
SPA PER USO PRIVATO
SPA PARA USO PRIVADO
SPA VOOR PRIVE-GEBRUIK**

**MANUAL DE INSTRUCCIONES
OPERATING INSTRUCTIONS
MANUEL D'UTILISATION
BEDIENUNGSANLEITUNG
ISTRUZIONI PER L'USO
MANUAL DE UTILIZAÇÃO
GEBRUIKSAANWIJZING**

**RELEASE 01
01-2011**



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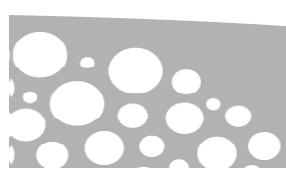
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IMPORTANT

This instructions manual contains fundamental information on the safety measures to be adopted when installing and starting-up the spa. It is therefore essential that both the Fitter and the User read these instructions before assembly and start-up.



1. GENERAL DETAILS

This manual contains all the information needed to fully enjoy your SPA. Please read carefully all the instructions provided as well as the installation manual that you will find with this user manual.

If you have any question or doubt on the operation or maintenance of this product, please contact your local dealer. They are professional specialists and their knowledge will help you enjoy this product.

Keep this manual in a safe place as you will find it very useful.



IMPORTANT

The manufacturer reserves the right to modify part of the design or specifications without prior notice and without entering into any obligation.

This Spa has been designed and conceived for private use only: any public use shall annul its guarantee.

2. SAFETY WARNINGS

2.1. GENERAL

- Avoid contact with electrical voltage
- Carefully follow current regulations regarding accident prevention.
- Any modification on the equipment requires prior authorisation from the manufacturer. Original spare parts and accessories authorised by the manufacturer guarantee greater safety. The manufacturer of the equipment is exempt from all liability for damages caused by using non-authorised spare parts or accessories.
- The user shall ensure that qualified adult professionals carry out both the assembly and maintenance works, who have previously carefully read the installation and service instructions.
- ATTENTION – Correct earthing connection is essential. The earth connection circuit of the building must be in perfect condition to guarantee the safety of the Spa user. If you have doubts on the matter, ensure the earth circuit is reviewed by qualified personnel. The manufacturer shall not be responsible for the damages caused by inadequate maintenance of the earth connection circuit.
- ATTENTION – It is essential that the owner of the Spa tests the differential switch at least once a month, to check its good working order.

- The manufacturer shall not be responsible for the damages caused by the assembly of non-authorized accessories, nor for those caused by a improper handling by non-qualified personnel. Please contact your authorised dealer or technical assistance service if you have any doubts or need technical assistance.
- During operation, some parts of the equipment are at dangerous electrical voltage levels. Work on each element or equipment can only be performed once it has been disconnected from the mains and with the start-up devices disconnected.
- Safety in the operation of the machine can only be guaranteed if installation and service instructions are followed.
- The limits indicated on the electrical control panel cannot be exceeded under any circumstances.
- Contact the Technical Service of the manufacturer or your local dealer in the event of malfunction or a breakdown.
- In this respect, the current regulations in each country should be followed.
- There is a risk of flooding with this equipment and therefore, the Spa should be installed in an area prepared to collect or drain leaking water (either from below or overflowing water) as a result of using the Spa or from possible leakage in any of its circuits. (See the Guarantee).
- The installation of the Spa must at all times meet current regulations applicable in each country, particularly those referring to electrical safety.
- This unit must be installed in an appropriately prepared area with easy access to all the components of the Spa. The Guarantee does not cover any building work required to position or replace the product. (See the Guarantee).



IMPORTANT

The manufacturer shall not be held responsible for any damage as a result of incorrect positioning or misuse of the Spa.

2.2. WARNINGS ON MAINTENANCE WORK

- Before carrying out any electrical or mechanical maintenance work, make sure that the machine is disconnected from the mains, and that the start-up devices are blocked.
- Do not handle the equipment with wet feet.

2.3. WARNINGS ON THE USE OF THE SPA

- Take extreme precautions to stop children from entering the Spa unattended. To avoid accidents, ensure that children are supervised at all times. Never leave children alone in the Spa. Take care when entering and leaving the Spa to avoid slipping on wet surfaces.
- Do not allow anybody to play with sharp or metal objects inside the Spa, which could damage the acrylic surface.
- Do not allow any user to access the electrical parts of the Spa.
- Do not start-up the Spa unless it is full of water.
- Do not use electrical or electronic apparatus inside the Spa.
- Do not let animals in the Spa.
- Do not fill the Spa with other liquid other than fresh, duly treated water.
- Do not fill the Spa with hot water (maximum 35°C); let the water heat by itself, otherwise it could damage the temperature probes (see "Temperature Adjustment").
- Do not use the Spa immediately after intense physical exercise.
- Do not use the Spa if you are suffering from a contagious disease or 14 days after recovering from a contagious disease.
- In order to guarantee maximum safety when bathing all our Spas use pumps designed to suction water from anti-vortex, safety drain covers, located on the floor of the Spa. Take special care that these drain covers are not covered by any object or the users (pieces of clothing, hair, legs, etc.). For safety reasons, your head should always be outside the Spa in order to avoid drowning. Do not use the Spa if the drain covers are broken, damaged or unassembled, as apart from damaging the Spa, it could also lead to a risk of drowning
- The headrests of your Spa are made of synthetic foam, which can be damaged in high concentrations of bromine or chlorine, or low levels of pH. Make sure that when adding chemical products, the headrests are neither totally nor partially immersed in the water. If necessary, remove them until the chemical products have taken effect. Damages resulting from improper use shall not be considered under the guarantee of the product.
- The Spa includes a cover designed to protect the acrylic surface from sunrays when it is not being used. This cover will also help to keep the water warm and for sun protection that could damage the acrylic material of the Spa. The cover will require additional means of protection in the event of heavy rain or snow. The cover is not designed to bear heavy weights, not even children or animals. Also, water in bad condition could damage the cover. Therefore, keep the chemical levels in accordance with the instructions provided in this manual. Do not clean the cover with detergent or abrasive products as they will cause damage. Improper use of the cover is not included in the guarantee.



WARNING

The water should be disinfected thoroughly before using the Spa, especially if it has not been used for a certain period of time, whether or not it has been left with or without water inside. During periods of non-use, traces of stagnant water may remain, which may cause the growth of micro organisms potentially dangerous for health. Therefore, disinfect the Spa as indicated in this manual, ensuring that the pH and disinfectant parameters are suitable.



WARNING

THE COMPENSATION TANKS OF PRIVATE OVERFLOW SPAS HAVE A LIMITED CAPACITY. THEY CAN HOLD 280 LITRES OF WATER, EQUIVALENT TO 4 PARTIALLY SUBMERGED PEOPLE. USERS SHOULD ENTER THE SPA ONE BY ONE AND SLOWLY TO ENABLE THE TANKS TO ABSORB THE DISPLACED WATER AND PREVENT WATER FROM FLOWING OUT OF THE SPA.

2.4. AVOIDING RISKS OF HYPERTHERMIA

- Prolonged, direct contact with hot water could cause HYPERTHERMIA. This occurs when the internal body temperature reaches levels above the normal temperature of 36.5°C. It is advised not to bathe for longer than 15 minutes
- Symptoms of hyperthermia are a sudden drop in blood pressure resulting in a sensation of dizziness with the possibility of fainting.
- The Spa water should never be above 40°C.
- Water temperatures between 37°C and 40°C are only considered safe for adults without any health problems. Lower temperatures are recommended for the majority of people and children.



THE USE OF ALCOHOL, DRUGS OR MEDICINES COULD INCREASE THE RISK OF HYPERTHERMIA. IT IS NOT ADVISABLE FOR PREGNANT WOMEN, PATIENTS WITH HIGH BLOOD PRESSURE, A HEART CONDITION, DIABETES OR UNDER MEDICATION TO USE THE SPA. SHOULD SEEK DOCTOR'S ADVICE. SEEK DOCTOR'S ADVICE.

3. HOW TO USE YOUR SPA



DANGER OF ELECTRIC SHOCK

Users should not try to repair parts.

Do not try to repair this control. Call your vendor for technical support.

Do not turn on the light when the spa is empty. The bulb will blow due to overheating.

Your spa has been designed for private, intermittent use only. Users are advised against having more than two 15-minute sessions per day.

Follow all of the instructions on electrical connections described in this manual.

Only authorised electricians should install the spa.

3.1. SYSTEMS AND EQUIPMENT

Your spa is equipped with an electronic control system that will enable you to regulate the temperature of the water, choose the filter cycle that best suits your needs and activate the massage pumps and the blower pump. It will also enable you to turn on your spa lighting, change its colour and sequence.

Depending on the design, your spa will have one of the following systems:



Filter pump
Massage pump
Heater
Spotlight(s)



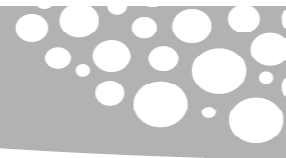
Filter pump
Massage pump
Heater
Turbo-Blower Pump
Spotlight(s)



Filter pump
2 Massage pump
Heater
Turbo-Blower Pump
Spotlight(s)



Auxiliary panel



3.2 INITIAL START-UP

Once activated, your spa will go into priming mode (**Pr**). Whilst in priming mode, press the jet buttons several times to ensure that none of the pumps contains air. The priming mode lasts for at least 5 minutes. Press either the "Warm" or "Cool" button to exit the priming mode. On completion of the priming mode, your spa will work in the standard mode (see the section Mode/Prog).

Functions that require the use of a sequence of buttons may not be recorded if the combination of buttons is pressed in quick succession.

3.3 CONTROL AND PROGRAMMING



Temperature control (80°F-104°F/26.0°C-40.0°C)

The screen displays the last recorded temperature of the water at all times.

The temperature displayed on the screen is only valid when the pump has stopped working for at least 2 minutes.

In order for the screen to display the programmed temperature, press "Warm" or "Cool" once only. To change the programmed temperature, press one of the temperature buttons repeatedly until the desired temperature is reached. The temperature of the spa will appear 3 seconds after one of the above buttons has been released.



Jets 1/Jets 2 (*)/Blower (*)

(*)Available in some designs only

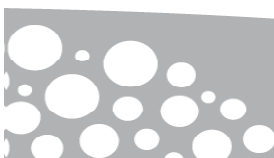
Press the pump button to activate or deactivate it. The pump will deactivate after 15 minutes.



Light/Chromotherapy/Environmental Lighting System

Press the "Light" button to switch on the spa lighting. It will automatically switch off after 4 hours.

In designs with chromotherapy lighting or with an environmental lighting system, the sequence and colour of the spotlight/s can be changed by pressing the "Light" button in quick succession.





Mode/Prog

The operating modes can be changed by pressing the "Warm" or "Cool" button and then "Mode/Prog".

- The **standard** mode will keep the spa at its programmed temperature. "**Std**" will appear on the screen for a few seconds when the standard mode has been selected.
- The **economy** mode only heats the spa to the programmed temperature during filter cycles. "**Ecn**" will appear on the screen when the temperature of the water is not the current temperature and it will alternate with the temperature of the water when the pump is working.
- The **sleep** mode only heats the spa up to 20°F (10°C) below the programmed temperature during filter cycles. "**Slp**" will appear on the screen when the temperature of the water is not the current temperature and it will alternate with the temperature of the water when the pump is working.

3.4 PRE-SET FILTER CYCLES

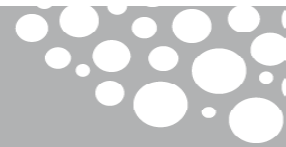
The filter cycle can be programmed for 2 ("**FIL2**"), 4 ("**FIL4**"), 6 ("**FIL6**") or 8 hours ("**FIL8**"), or for a continuous filter cycle ("**FILC**"). The pre-set filter time is 2 hours.

To programme the cycle, press "Warm" or "Cool" and then press "Jets 1". Press either the "Warm" or "Cool" button to reset a programme.

Press "Jets 1" to exit the programming system.

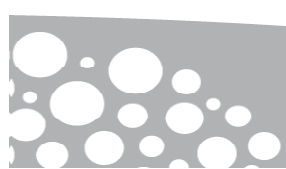
The first filter cycle starts 6 minutes after the spa has been activated. The second filter cycle starts 12 hours later.

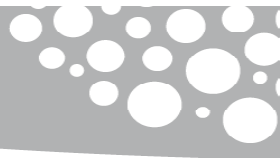
If you want the filter cycle to start at a set time, disconnect the spa from the mains supply and reconnect it at the desired time.



3.5 ERROR MESSAGES

Message	Meaning	Action required
	No message is displayed on the screen. The energy supply to the spa has been cut off.	The control panel will not work until the energy supply to the spa has been turned back on. Spa settings will be stored until the next start-up.
--	Temperature unknown.	Once the pump has been working for 2 minutes, the temperature of the water will appear on the screen.
OHH	Overheating. The spa has been deactivated. One of the sensors has detected that the temperature of the heater is 118°F/47.8°C.	DO NOT GO INTO THE WATER. Take the spa cover off and let the water cool down. Once the heater has cooled, switch the system back on by pressing any button. If the spa does not come back on, turn off the energy supply to the spa and call your vendor or a service engineer.
OHS	Overheating. The spa has been deactivated. One of the sensors has detected that the temperature of the heater is 110°F/43.5°C.	DO NOT GO INTO THE WATER. Take the spa cover off and let the water cool down. When the spa reaches 107°F/41.7°C, it will automatically switch itself back on. If it fails to switch back on, turn off the energy supply to the spa and call your vendor or a service engineer.
SnA	The spa has been deactivated.* The sensor plugged into sensor "A" is not working.	If the problem persists, contact your vendor or a service engineer. (The message may appear temporarily if the system has overheated).
Snb	The spa has been deactivated.* The sensor plugged into sensor "B" is not working.	If the problem persists, contact your vendor or a service engineer. (The message may appear temporarily if the system has overheated).
SnS	The sensors are out of balance. If the message alternates with a reading of the spa temperature, this may be a temporary problem. If only this flashing message is displayed, the spa has been deactivated.*	If the problem persists, contact your vendor or a service engineer.
HFL	The sensors have recorded a substantial difference in temperature. This may be due to a problem of water flow.	If the water level is normal, check that the pumps are primed. If the problem persists, contact your vendor or a service engineer.
LF	Persistent low water flow problems. (Appears the fifth time the HFL message has been displayed in 24 hours). The heater has been deactivated but all other functions of the spa will continue to work normally.	Follow the instructions for the HFL message. The spa's heating function will not be automatically switched back on; press any button to reset the system.
dr	May be due to unsuitable level of water, insufficient water flow or air bubbles in the heater. The spa has been deactivated for 15 minutes.	If the water level is normal, check that the pumps are primed. Press any button to reset the system. This message will reappear in 15 minutes. If the problem persists, contact your vendor or a service engineer.
dry	Insufficient water level in the heater. (Appears the third time the dr message has been displayed.) The spa has been deactivated.	Follow the instructions for the dr message. The spa will not be automatically switched back on. Press any button to reset the system manually.
ICE	Potential freezing conditions have been detected.	No action is required. All the units in the spa will be automatically reactivated regardless of the conditions of the spa. The spa will continue working for 4 minutes after the heat sensors have detected a temperature of 45°F/7.2°C or higher. An optional freeze sensor can be fitted to protect the spa against extreme freezing conditions. Auxiliary freeze sensors are recommended for colder climates. Consult your vendor for details.





3.6 JETS OPERATION

The water jets provide a hydrotherapy pressure jet. It is a closed circuit, where the water is absorbed by 1, 2 or 3 pumps (depending on the SPA model) through the drain and driven to the jets.

The hydromassage effect is provided by the jet, when the circuit water mixes with the outside air, in the so-called Venturi effect.

To adjust the amount of air driven into the jets, simply turn the air input tab (venturis) as follows:

Turn clockwise to reduce the amount of air mixed in the jets. This will reduce the intensity of the jet massage.

Turn anti-clockwise to increase the amount of air mixed in the jets. This will increase the intensity of the jet massage.

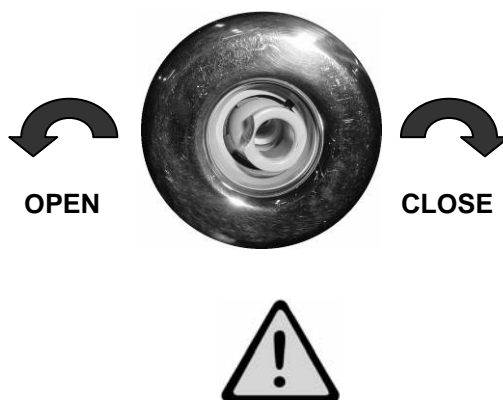


Each air inlet activates a certain group of jets.

Some jets can also adjust the flow intensity on opening and closing the water flow. To do this, proceed as follows:

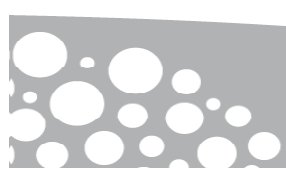
Turn the outer ring a quarter clockwise to close the jet.

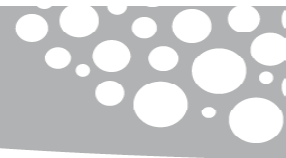
Turn the outer ring a quarter anti-clockwise to open the jet.



ATTENTION!

Do not attempt to forcibly turn the outer ring of the jet, as you could damage it.





3.7 ANTI-FREEZE PROTECTION

If the temperature sensors detect a drop in temperature to below 6.7°C, the heating element and filter pump will connect automatically to prevent the water from freezing and the damage this could cause the Spa.

The equipment will remain connected for 4 minutes after the temperature reaches 7.2°C.

In colder climates, an additional temperature sensor can be added as a precaution and to avoid freezing conditions not detected by the standard sensor.

If the pump turns off in this situation, empty the Spa and contact your authorised dealer or Technical Assistance Service.

4. MAINTENANCE INSTRUCTIONS OF THE SPA

The Spas are built with maximum quality and with the hardest wearing materials available. Proper care and maintenance will ensure a long life-span of the Spa and its components.

4.1. RENEWING THE SPA WATER.

To change the Spa water:

- Disconnect the electrical equipment, placing the differential switch (installed in the main input of the home) in the OFF position.
- Locate the drain valve (see *Spa drainage of the Installation Manual*) and turn the valve to the OPEN position. The Spa will empty by gravity through the general drain.
- Once the Spa is empty, inspect the acrylic and clean if necessary (see point 4.3. Maintenance of the acrylic). Turn the drain valve to the CLOSED position.
- Fill the Spa with clean water (see Filling the Spa of the *Installation Manual*).

4.2. MAINTENANCE OF THE FILTER.

All Spas include either a cartridge filter or a pressure filter. Check the type of filter in your Spa and follow the maintenance instructions below.

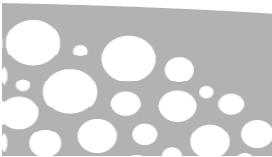


PRIVATE OVERFLOW SPAS:
Before opening the filter lid ensure that the 3 valves that regulate the filtration circuit are closed. If they are open the spa would be emptied through the filter

4.2.1. MAINTENANCE OF CARTRIDGE FILTERS.



It is advisable to periodically check the condition of the cartridge filter. Clean them or replace them if dirt is observed.
Remember that if a filter is blocked, it will reduce the water flow and therefore, the Spa will operate incorrectly.



To change or clean the filter, follow these instructions:

1. Disconnect the electrical supply. Differential in the *OFF* position.
2. Locate the filter and remove it as shown:
3. Clean the filtering cartridge with a garden hose jet spray at low pressure until it is clean. Clean from top to bottom spraying the water at an angle of 45°.



4. After several washing cycles, it may be necessary to change the filtering cartridge. Contact your supplier.
5. Replace the filtering cartridge and pre-filter.
6. Turn on the electrical equipment. Differential in the *ON* position.



The Spa should always operate with the pre-filter and the filtering cartridge in the correct position. Never place objects that could block the inlet to the filter.

4.2.2 MAINTENANCE OF THE PRESSURE CARTRIDGE FILTER.



It is advisable to periodically check the condition of the cartridge filter. Clean them or substitute them if dirt is observed.

Remember that if a filter is blocked, it will reduce the water flow and therefore, the Spa will operate incorrectly.

These filters are made up of a single part.

To replace or clean the filter, follow these steps:

1. Turn the electric unit off. Differential in the *OFF* position.
2. Locate the filter and remove it as follows:

3. Unscrew the bleeding drain marked with an arrow, to remove the air. This step is very important.



4. Lift the part blocking the filter (see figure) and unscrew the part fastening the unit (anticlockwise).



5. Lift the remaining part by the handle to reach the cartridge filter.



6. Clean the pre-filter with water until no particles remain. Clean the filtering cartridge with a low-pressure garden hose, until it is clean. Clean from top to bottom, spraying the water at a 45° angle.



7. After several cleaning cycles you may have to replace the filtering cartridge. To do this, please contact your supplier.

8. Reinsert the filtering cartridge, the press-on cover and the threaded part. It is very important to lift the part you have previously lifted (in point 4) and insert it properly in the corresponding slot of the filter.

9. Close the valve you opened in point 1. Always remember to check that this valve is closed properly, otherwise your spa could be seriously damaged.

10. Turn the electric unit on. Differential in the ON position.



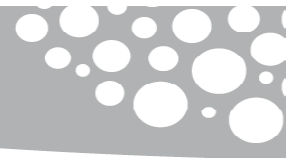
**Never place objects that could block the inlet to the filter
Remember to follow all the steps and to close the valve as indicated in order not
to damage the Spa or hurt yourself.**

4.3. MAINTENANCE OF THE ACRYLIC

To clean the acrylic surface, use a non-abrasive cleaner and warm water. Once the Spa is clean, rinse with water to remove the detergent. Clean the non-submerged part of the spa with good quality Spa polish once a week.



**Remember: never leave the Spa uncovered and exposed to sunlight, as this could
cause damage not covered by the guarantee.**



4.4. MAINTENANCE OF THE CABINET (Only Spas with natural wood cabinet)

The unit is treated with special oil that protects the wood from water absorption. It is recommended to repeat this treatment periodically, at least once a year.

Extra treatment given to the unit when it is new will prolong its life-span.

In time, the wood will darken, and because it is live matter, it is normal for small cracks to appear. This is a normal reaction to environmental conditions that do not damage the wood. It should simply be polished and treated with oil.

Good quality "Teak oil" should be used or any other wood protection oil.

4.5. MAINTENANCE OF THE LIGHT

A plastic spanner is provided with this manual to dismantle the projector.

Replacing the lamp is the only required maintenance on the spotlight. To replace the lamp, follow these steps:



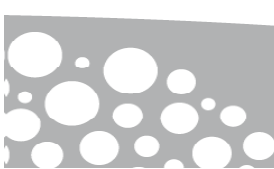
WARNING! - RISK OF ELECTRIC SHOCK

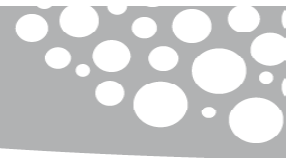
**Make sure the power of the Spa is turned off.
The new lamp must have the same features as the lamp supplied.
Never install lamps without the front lens.
To ensure perfect watertightness, clean the mounting base of the flat gasket of the glass or replace it if you observe any dents or permanent damage.**

Depending on spotlight model, the lamp is replaced in the following way:

Draining the Spa (depending on the model of spotlight)

- Empty the Spa (See section *Spa Drainage*).
- Fit the aforementioned plastic spanner in the front side of the spotlight and turn it in order to release its bayonet fastening.
- Change the lamp (press fastening).
- Reassemble the spotlight making sure to fasten the bayonet of the front part with the spanner and pressing sufficiently to prevent water from entering the spotlight.
- Assemble the trim of the spotlight in the colour you wish.





Without draining the Spa (depending on the model of spotlight) :

- Dismantle the wooden side panel where the spotlight is installed using a medium-sized stecker screwdriver.
- To replace the lamp, turn the lamp-holder bushing anticlockwise and lift it from its position.
- Once the faulty lamp has been replaced, place the lamp-holder back in position and reassemble the wooden side panel of the Spa.
- If you have any doubt about the explanation of this operation, contact your authorised dealer or authorised technical service .

4.6. MAINTENANCE IN PERIODS OF NON-USE OR ABSENCE

SHORT PERIODS (3-5 DAYS)

- Adjust the pH and treat the water (see Water Maintenance section).
- Cover the spa.
- Before using the Spa again, readjust the pH and treat the water again.

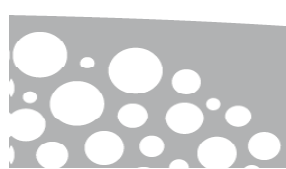
PROLONGED PERIODS (5-14 DAYS)

- Set the temperature at its lowest level.
- Adjust the pH and treat the water (see Water Maintenance section)
- Cover the Spa.
- Before using the Spa again, reset the temperature as required , readjust the pH and treat the water again.

PREPARATION FOR WINTER

If it is not planned to use the Spa through the winter season or for prolonged periods of time, the following operations should be done:

- Disconnect the electrical equipment, placing the differential switch tab in the OFF position.
- Locate the drain valve (see *Drainage of the Spa*) and turn the red lever of the valve to the OPEN position. The Spa will empty by gravity through the general drain.
- Leave the drain valve open.
- Remove the filter cartridge/s from the filter (See Maintenance of the filter) and keep in a dry place.
- Clean and dry the Spa.
- Cover the Spa.





Do not leave water in the Spa without electrical connection outdoors at temperatures below 4°C, as the pipes can freeze and damage the Spa.

5. MAINTENANCE OF THE WATER

The user must pay particular attention to the maintenance of water. Maintenance will depend on the mineral content of the water used, how often the Spa is used and how many people use the Spa.

There are three essential points for the maintenance of the water:

- ❑ FILTERING OF WATER
- ❑ CHEMICAL ANALYSIS AND pH CONTROL
- ❑ DISINFECTION OF WATER

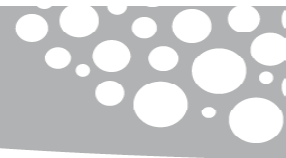
5.1. SAFETY IN THE USE OF CHEMICAL PRODUCTS

Before using a chemical product, read the instructions on the product label carefully.



IMPORTANT

- **It is advisable that always the same person handles the chemical products. Keep these products away from children.**
- **Add the exact amounts to the water, as specified.**
- **Keep containers tightly closed in dry, well-ventilated places.**
- **Do not inhale chemical products, and take care not to let them come into contact with the eyes, nose or mouth. Wash hands after use.**
- **Follow the emergency instructions on the product label in the event of an accident or ingestion.**
- **Do not smoke while handling these products – they may be flammable.**
- **Do not store these products inside the Spa unit.**
- **Do not mix products. Add first one and then the other to the water, to avoid possible reactions.**
- **Do not add chemical products to the water if there is someone in the Spa.**



5.2. MAINTENANCE SCHEDULE OF THE SPA WATER

All chemical products: Bromine in tablet form, Algaecides, Anti-calcareous and pH reducer, must be added to a floating dispenser (not supplied), with the massage pump on for at least ten minutes.

5.3. pH ADJUSTMENT

A pH index of between 7.2 and 7.6 is recommended.

The pH level measures the acidity and alkalinity: Values above 7 are alkali and below 7, are acid.



It is very important to maintain the correct pH level both for the disinfectant to work properly and to prevent corrosion or deposits on the Spa. Any damage caused by an inadequate pH level is not covered by your Spa guarantee.

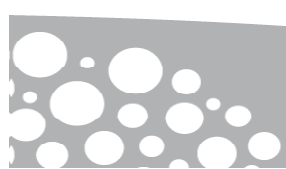
- The effects of a very low pH level are:
 - The disinfectant will quickly dissipate.
 - The equipment of the Spa become rusty.
 - The water can start causing skin irritations to bathers.
- The effects of a very high pH level are:
 - The disinfectant is less effective.
 - Scale may appear on the acrylic and equipment.
 - The water may become cloudy.
 - The filter cartridge can become blocked.

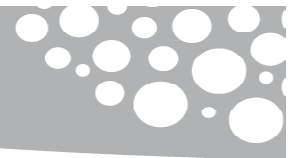
Check the pH of the Spa water daily using the pH test set. (not supplied)

If the pH is above the indexes, use pH MINOR SPA. Wait for two hours and re-do the pH test.

If the pH is below indexes, use pH MAJOR SPA. Wait for two hours and re-do the pH test.

Once the pH index has been adjusted to the values indicated above, proceed to the next point.





5.4. DISINFECTION OF THE WATER

Disinfection of the water is of utmost importance in order to destroy algae, bacteria and organisms that could develop in the water. However, excessive disinfection could cause skin and eye irritation.

BROMIDE TABLETS are a suitable disinfectant for the Spa water. This product is placed in the pre-filter and gradually dissolves.

Check the residual bromide level daily using the Br analyser set.

The recommended level of residual bromide is between 2.2 and 3.3 ppm.

5.5. USE OF SPECIAL PRODUCTS

Apart from products to maintain the pH and disinfectant level, there are other products formulated especially for use in Spas that will help you to maintain the water and installation in perfect condition.

- **SPA-ANTI-CALCAREOUS:** This prevents the precipitation of calcium salts (scale), particularly in hard water. This product should be added weekly and whenever the water is renewed.
- **SPA-ALGAECIDE:** This algaecide prevents algae from growing in the Spa water. This product is added weekly and whenever the water is renewed.
- **SPA-ANTIFOAM:** Foam is often formed owing to the agitation of the water and grease present in the water. Whenever there is a significant amount of foam, remove it with Spa-Antifoam.
- **SPA-DEGREASER:** To remove rings of dirt and grease that form on the walls of the Spa. To use this product, it is recommended to empty the Spa and apply a degreaser with a sponge on the parts to be cleaned. Rinse immediately with plenty of water.

5.6 OZONE GENERATOR (only in spas with this option).

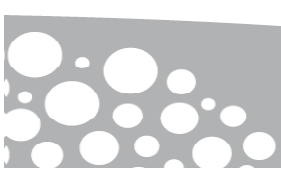
Ozone, O₃, is an oxidizing chemical compound, which is very effective for disinfecting water. The main advantage of ozone is that it leaves no chemical trace and is odourless.

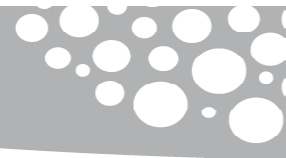
The capacity of ozone as a disinfectant is due to its potential as an oxidizing agent, which eliminates any organic matter that may be present in the water.

In order to produce ozone, electricity is passed through an ozonator to produce ozone ions from oxygen in the atmosphere. This is an automatic process and the resulting product is injected through the jets of the Spa. The process does not require the user to use any other mechanism.

The water is collected in the drains and skimmer, by the absorption action of the massage pump.

It is then sent through the heat exchanger and as it leaves, the ozone is injected. The water is distributed by the filtering back-flow. Part of this flow is also distributed through the drain outlet in order to avoid stagnant water from collecting.





Ozone treatment does not exclude the use of other chemical products such as Bromide or Chlorine. Ozone is considered a complementary process to them, therefore reducing the use of Bromide or Chlorine.

QUICK GUIDE TO THE APPLICATION OF CHEMICAL PRODUCTS

	Reason for Use	Amounts per m ³ of water	Frequency of use
pH MINOR SPA	Add if the pH level is above acceptable levels (7.2-7.6 ppm).	Add following recommendations of the chemical product manufacturer.	Analyse the pH daily with the pH Test.
pH MAJOR SPA	Add if the pH level is below acceptable levels (7.2-7.6 ppm).	Add following recommendations of the chemical product manufacturer.	Analyse the pH daily with the pH Test.
BROMIDE TABLETS	Add if the Br level is above acceptable values (3-5 ppm).	Add following recommendations of the chemical product manufacturer.	Analyse the Br daily with the Br Test.
ANTI-CALCAREOUS	To prevent precipitation of calcium salts (scale).	Add following recommendations of the chemical product manufacturer.	Once a week and whenever the water is renewed.
SPA ALGAECIDE	Prevents algae from growing in the water.	Add following recommendations of the chemical products manufacturer.	Once a week and whenever the water is renewed.
DEGREASER	To eliminate rings of dirt on the walls of the Spa.	Rub with a sponge and immediately rinse with abundant water.	Whenever dirt is observed on the walls of the Spa.
ANTIFOAM	Foam in the water.	Add following recommendations of the chemical product manufacturer.	Whenever foam appears in the water.

6. RECYCLING AND THE ENVIRONMENT



The Spa includes electric and/or electronic material, which at the end of its life-span, should be suitably treated as special waste. Contact your local authorities to find out the collection and waste disposal procedure for electric and electronic material.

