

SIGNATURE SELF CLEANING HOT TUBS OWNER'S MANUAL



HYDROPOOL
hot tubs • swim spas



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Contents subject to change without notice

Models Covered	Domestic Model Codes	Export Model Codes
Self Clean 379 Gold	HSC379G	HSCE379G
Self Clean 455 Gold	HSC455G	HSCE455G
Self Clean 455 Platinum	HSC455P	HSCE455P
Self Clean 579 Gold	HSC579G	HSCE579G
Self Clean 579 Platinum	HSC579P	HSCE579P
Self Clean 655 Gold	HSC655G	HSCE655G
Self Clean 655 Platinum	HSC655P	HSCE655P
Self Clean 679 Gold	HSC679G	HSCE679G
Self Clean 679 Platinum	HSC679P	HSCE679P
Self Clean 728 Platinum	HSC728P	HSCE728P
Self Clean 779 Platinum	HSC779P	HSCE779P
Self Clean 799 Platinum	HSC799P	HSCE799P

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NOTE: Product specifications, warnings and labels are subject to change without notice. This user's manual should be used as a guide only. For further information, please contact your independent HydroPool dealer.

On behalf of everyone at the company, we thank you for your decision to purchase a HydroPool hot tub.

Recognized for quality worldwide, we are confident that your new hot tub will provide you, your family and friends, with years of enjoyment and fulfill all your hydrotherapy needs.

HydroPool hot tubs are not only healthful and relaxing, they can even add value to your home.

Please take the time to carefully read and understand all the safety, installation and operating instructions in this manual before electrically connecting your hot tub and adding water.

The following pages contain valuable information and pointers that will save you both time and money, as well as help you to simplify upkeep and maintenance.

Since we manufactured our first hot tub in 1985, the HydroPool team has been dedicated to producing a quality product catering to maximum hydrotherapy, comfort, energy efficiency and ease of operation.

We are confident that as you become more familiar with the various safety and maintenance features of your new hot tub you will be satisfied that you made the right decision in purchasing a HydroPool hot tub.

Happy hot tubbing...



SAVE THESE INSTRUCTIONS

IMPORTANT SAVE THESE INSTRUCTIONS

Your physiological response to hot water is subjective and depends on your age, health, and medical history. If you don't know your tolerance to hot water, or if you get a headache, or become dizzy or nauseous when using your hot tub, get out and cool off immediately.



WARNING

1. CHILDREN SHOULD NOT USE SPAS OR HOT TUBS WITHOUT ADULT SUPERVISION.
2. DO NOT USE SPAS OR HOT TUBS UNLESS ALL SUCTION GUARDS ARE INSTALLED TO PREVENT BODY AND HAIR ENTRAPMENT.
3. PEOPLE USING MEDICATIONS AND/OR HAVING ANY ADVERSE MEDICAL HISTORY SHOULD CONSULT A PHYSICIAN BEFORE USING A SPA OR HOT TUB.
4. PEOPLE WITH INFECTIOUS DISEASES SHOULD NOT USE A SPA OR HOT TUB.
5. TO AVOID INJURY, EXERCISE CARE WHEN ENTERING OR EXITING THE SPA OR HOT TUB.
6. DO NOT USE DRUGS OR ALCOHOL BEFORE OR DURING THE USE OF A SPA OR HOT TUB, TO AVOID UNCONSCIOUSNESS AND POSSIBLE DROWNING.
7. PREGNANT OR POSSIBLE PREGNANT WOMEN SHOULD CONSULT A PHYSICIAN BEFORE USING A SPA OR HOT TUB.
8. WATER TEMPERATURE IN EXCESS OF 38°C (100°F) MAY BE INJURIOUS TO YOUR HEALTH.
9. BEFORE ENTERING THE SPA OR HOT TUB, MEASURE THE WATER TEMPERATURE WITH AN ACCURATE THERMOMETER.
10. DO NOT USE A SPA OR A HOT TUB IMMEDIATELY FOLLOWING STRENUOUS EXERCISE.
11. PROLONGED IMMERSION IN A SPA OR HOT TUB MAY BE INJURIOUS TO YOUR HEALTH.
12. DO NOT PERMIT OR USE ELECTRIC APPLIANCES (SUCH AS LIGHT, TELEPHONE, RADIO OR TELEVISION) WITHIN 1.5M (5FT) OF THIS SPA OR HOT TUB.
13. CHILDREN SHOULD NOT ENTER A HOT TUB WHERE THE WATER TEMPERATURE EXCEEDS BODY TEMPERATURE (37°C / 98.6°F).
14. DO NOT ALLOW CHILDREN TO SUBMERGE THEIR HEAD UNDER WATER.
15. NEVER OPERATE THE HOT TUB PUMP AT HIGH SPEED WITHOUT HAVING ALL SUCTION AND RETURN LINES OPEN.
16. ALWAYS KEEP THE HARDCOVER INSTALLED AND LOCKED WHEN THE HOT TUB IS NOT IN USE.
17. TEST THE GFCI (GROUND FAULT CIRCUIT INTERRUPTER) MONTHLY.
18. POST EMERGENCY PHONE NUMBERS FOR POLICE, FIRE DEPARTMENT, AND AMBULANCE AT THE NEAREST PHONE.
19. TO REDUCE THE RISK OF INJURY
 - THE WATER IN A SPA SHOULD NEVER EXCEED 40°C (104°F). WATER TEMPERATURES BETWEEN 38°C (100°F) AND 40°C (104°F) ARE CONSIDERED SAFE FOR A HEALTHY ADULT. LOWER WATER TEMPERATURES ARE RECOMMENDED FOR YOUNG CHILDREN AND WHEN SPA USE EXCEEDS 10 MINUTES.
 - SINCE EXCESSIVE WATER TEMPERATURES HAVE A HIGH POTENTIAL FOR CAUSING FETAL DAMAGE DURING THE EARLY MONTHS OF PREGNANCY, PREGNANT OR POSSIBLY PREGNANT WOMEN SHOULD LIMIT SPA WATER TEMPERATURES TO 38°C (100°F).
 - BEFORE ENTERING A SPA, THE USER SHALL MEASURE THE WATER TEMPERATURE SINCE THE TOLERANCE FOR WATER TEMPERATURE-REGULATING DEVICES VARIES.
 - THE USE OF ALCOHOL, DRUGS, OR MEDICATION BEFORE OR DURING SPA USE MAY LEAD TO UNCONSCIOUSNESS, WITH THE POSSIBILITY OF DROWNING.
 - OBESE PERSONS AND PERSONS WITH A HISTORY OF HEART DISEASE, LOW OR HIGH BLOOD PRESSURE, CIRCULATORY SYSTEM PROBLEMS OR DIABETES SHOULD CONSULT A PHYSICIAN BEFORE USING A SPA.
 - PERSONS USING MEDICATION SHOULD CONSULT A PHYSICIAN BEFORE USING A SPA SINCE SOME MEDICATION MAY INDUCE DROWSINESS WHILE OTHER MEDICATION MAY EFFECT HEART RATE, BLOOD PRESSURE AND CIRCULATION.

SAVE THESE INSTRUCTIONS

IMPORTANT SAVE THESE INSTRUCTIONS

Your physiological response to hot water is subjective and depends on your age, health, and medical history. If you don't know your tolerance to hot water, or if you get a headache, or become dizzy or nauseous when using your hot tub, get out and cool off immediately.



CAUTION

1. MAINTAIN WATER CHEMISTRY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



DANGER

1. RISK OF ACCIDENTAL DROWNING. EXTREME CAUTION MUST BE EXERCISED TO PREVENT UNAUTHORIZED ACCESS BY CHILDREN. TO AVOID ACCIDENTS, ENSURE THAT CHILDREN CAN'T USE THE SPA UNLESS THEY ARE SUPERVISED AT ALL TIMES.
2. RISK OF INJURY. THE SUCTION FITTINGS IN THIS SPA ARE SIZED TO MATCH THE SPECIFIC WATER FLOW CREATED BY THE PUMP. SHOULD THE NEED ARISE TO REPLACE THE SUCTION FITTINGS OR THE PUMP, BE SURE THAT THE FLOW RATES ARE COMPATIBLE. NEVER OPERATE THE SPA IF THE SUCTION FITTINGS ARE BROKEN OR MISSING. NEVER REPLACE A SUCTION FITTING WITH ONE RATED LESS THAN THE FLOW RATE MARKED ON THE ORIGINAL SUCTION FITTING.
3. RISK OF ELECTRIC SHOCK. INSTALL AT LEAST 1.5M (5FT) FROM ALL METAL SURFACES. AS AN ALTERNATIVE, A SPA MAY BE INSTALLED WITHIN 1.5M (5FT) OF METAL SURFACES IF EACH METAL SURFACE IS PERMANENTLY CONNECTED BY A MINIMUM 8 AWG (8.4 mm²) SOLID COPPER CONDUCTOR TO THE WIRE CONNECTOR ON THE TERMINAL BOX THAT IS PROVIDED FOR THIS PURPOSE.
4. RISK OF ELECTRIC SHOCK. DO NOT PERMIT ANY APPLIANCE, SUCH AS A LIGHT, TELEPHONE, RADIO, OR TELEVISION, WITHIN 1.5M (5FT) OF THE SPA.

HYPERTHERMIA

Since your hot tub can be set to reach temperatures of 40°C (104°F), users should be aware that extended submersion in water that exceeds normal body temperature can lead to hyperthermia.

The causes, symptoms and effects of hyperthermia may be described as follows:

Hyperthermia occurs when the internal temperature of the body reaches several degrees above the normal body temperature of 37°C (98.6°F). The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include:

- Unawareness of impending hazard
- Failure to perceive heat
- Failure to recognize the need to exit the hot tub
- Physical inability to exit the hot tub
- Fetal damage in pregnant woman
- Unconsciousness resulting in the danger of drowning

If you sense any of the symptoms of hyperthermia, safely exit the hot tub immediately.

WARNING



THE USE OF ALCOHOL, DRUGS OR MEDICATION CAN SIGNIFICANTLY INCREASE THE RISK OF FATAL HYPERTHERMIA.

CHOOSING THE RIGHT LOCATION

Your Hydropool hot tub can be installed indoors or out, on the ground, in the ground or half-and-half. The following information will assist you in choosing the right location for your individual needs. When making your decision, always remember that hot tubs can be enjoyed year-round, indoors or out, regardless of the climate. Many Hydropool owners report that their favourite time to use a hot tub is in the cooler fall and winter months, while others praise the enjoyment of using their hot tub in the warmer spring and summer months.

INDOOR LOCATIONS

If members of your family are not cold weather enthusiasts, or if your backyard or patio area is not suitable for a hot tub installation, then an indoor location for your hot tub may be your best or only choice. You may wish to create an exercise/spa area in your home, or install your hot tub in a glass solarium or four-season room adjoining your home. Indoor installations not only add a unique look and appeal to your home, they provide the privacy and controlled climate to ensure that use and enjoyment of your hot tub is maximized. If you should choose an indoor location, you will find further information as outlined in the section **“SPECIAL CONSIDERATIONS FOR INDOOR INSTALLATIONS”**



OUTDOOR LOCATIONS

For a variety of reasons, outdoor locations are a far more popular choice. Some of the reasons include:

- **Limited indoor space**
- **Delivery complications due to door openings, stairwells, etc.**
- **Limited budget (indoor installations usually also involve interior home renovations)**
- **Desire for an outdoor entertainment center**
- **Hot tub is being installed adjacent to an existing or planned swimming pool**
- **Concerns over splashing water inside the home**

For those who choose an outdoor location, hot tub operating temperatures can be adjusted to match the season. In colder months, many owners will operate their hot tub in the range of 38-40°C (100 -104°F).

During warmer months, an operating temperature of 36-37°C (97-99°F) will provide a refreshing retreat. If you should choose an outdoor location, you will find further information as outlined in the section **“SPECIAL CONSIDERATIONS FOR OUTDOOR INSTALLATIONS”**



GENERAL INSTALLATION CONSIDERATIONS

1. Your **HYDROPOOL** hot tub is a self-contained pre-plumbed unit, so that no on-site plumbing connections to the residential water supply or drain are required.
2. Ensure that your **HYDROPOOL** hot tub is properly supported by either a level concrete pad, or a properly constructed deck capable of supporting 1220 kg/m² (250 lbs./ft.²). If there is a possibility that the pad could shift by freezing/thawing ground movement (such as in clay regions, and/or areas with high water tables) concrete footings extending below the frost line are recommended.
3. Decking should be chosen and constructed in a manner that minimizes the chance of slipping or falling.
4. If you do not have a factory installed insulated cabinet, it is assumed that you are building your own custom cabinet, tiling or decking.

Please consider the following:

- a) Your **HYDROPOOL** hot tub is self-supporting on its base. The cabinet should be decorative only, not for support. Never suspend the hot tub from the deck or cabinet.
- b) Where the hot tub is not equipped with a factory installed cabinet, it is the installer's responsibility to ensure all electrical equipment is **completely weather protected** and meets all of the regulatory requirements.
- c) Always provide adequate access for servicing the support equipment.
- d) Decking must be constructed to allow repair access around the entire hot tub.
- e) In remote equipment or no-cabinet installations, you may add extra insulation, but the equipment area must have adequate cross-flow ventilation.
5. Installation of a safety grab rail or reachable support for use when entering or exiting the hot tub is recommended.
6. A nearby garden hose connection is recommended for filling and "topping up" the hot tub.



WARNING

The hot tub equipment and all electrical plugs, outlets and lights within 1.5m (5ft) of the hot tub must be G.F.C.I protected. Consult your electrician or local electrical authority for further details.

Access to the hot tub must always be secured:

Outdoors - in accordance with local property by-laws and/or via an approved fence with a self-closing gate and a safety hardcover;

SPECIAL CONSIDERATIONS

INDOOR INSTALLATIONS

- It is beneficial to have the hot tub room located near wash room and shower facilities
- The hot tub room should have a floor drain to handle splash water, a window, outside exhaust fan or humidistat controlled exhaust fan for ventilation and a humidifier.
- Consider plumbing a water tap and drain location nearby to facilitate draining and top-up
- Always provide adequate ventilation for the support equipment
- Consult your local Hydropool retailer for further information

OUTDOOR INSTALLATIONS

- Contact your local building code department to determine if a building permit is necessary and for information on applicable bylaws (distance from property lines, buildings, fencing requirements, etc.)
- If you are doing any excavating, contact your local gas, electric, and cable-company to ensure that there are no underground lines
- Locate the hot tub, where practical, within close distance of a door to the house to maximize potential winter use.
- Ensure that all hot tub support equipment is easily accessible and protected from the elements
- The hot tub support equipment is designed for indoor (out of the direct elements) use. When your **HYDROPOOL** hot tub is equipped with a factory-installed cabinet, and installed as per the guidelines of this manual, the equipment will be adequately protected. If the hot tub is shipped without a cabinet, your custom cabinet or other structure must be designed to supply protection for the hot tub support equipment from rain, snow, splash water, etc., but still designed in a manner to ensure adequate ventilation.

SITE PREPARATION

ABOVE-GROUND INSTALLATIONS

Where the hot tub is a “stand-alone” above-ground installation to be installed in regions where freeze/thaw conditions may occur, a level patio stone or pre-formed paver type base may be sufficient if there is no abutting deck(s) that could be damaged during potential seasonal movement of the ground. The potential drawback to this type of base is that splash water could eventually de-stabilize the ground under the base, with the resultant shift of the support base causing damage to the hot tub structure.

For best results, we recommend the installation of a level concrete pad:

- **Dig out and level the ground 20-30 cm (8-12 in.) below your desired base level.**
- **Install 10-15 cm (4-6 in.) of crushed stone.**
- **Next, install 10-15 cm (4-6 in.) of poured concrete.**
- **Level the concrete and apply a broom-type finish.**
- **We recommend that the pad be made 15 cm (6 in.) larger than the hot tub on three sides, and 1 m (3 ft.) larger on the side where the access steps and/or planters will be installed.**
- **Hot tub must be installed on a level pad**

In regions where freeze/thaw occurs, or where there will be custom decking abutting the hot tub we recommend the installation of sono-tubes beneath the pad to prevent shifting.

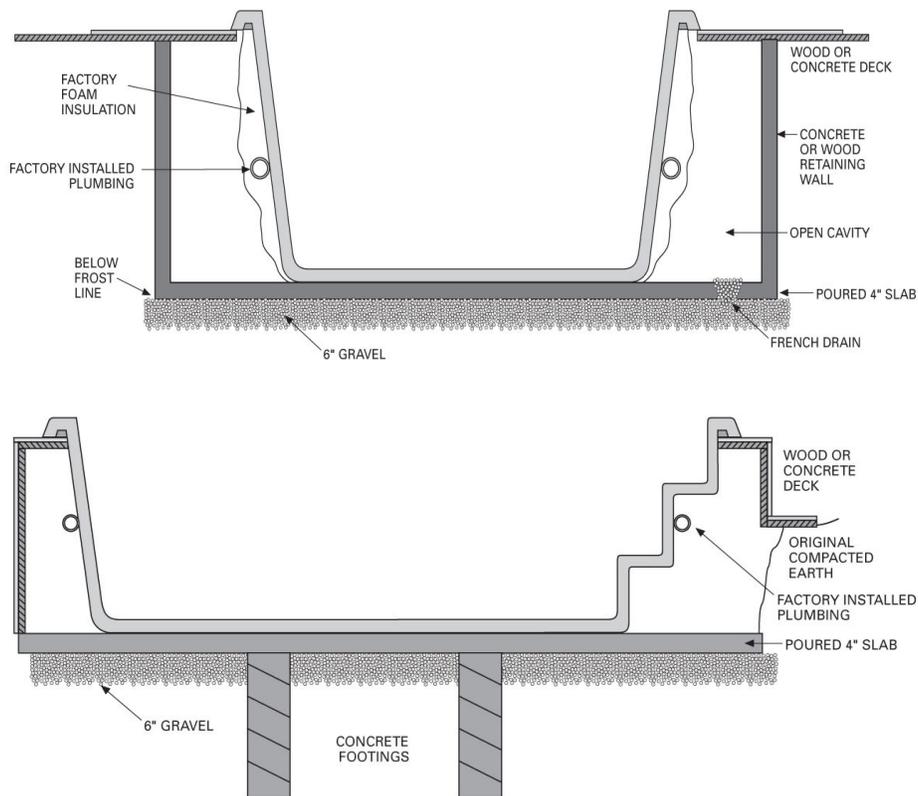
IN-GROUND & PARTIAL IN-GROUND INSTALLATIONS

For units being installed fully or partially in the ground, the type of support will again vary based on whether or not the tub is being installed in an area with freeze/thaw conditions. HydroPool does **not** recommend back-filling full in-ground or partial in-ground installations.

- Non-freezing climates – it is sufficient to ensure that the base of the hole or cavity created for the tub has a dry, stable, compacted level base and proper drainage.
- Climates where freeze/thaw occurs – it is necessary that a poured level reinforced concrete base, complete with concrete footings, be installed as outlined in the section **ABOVE-GROUND INSTALLATIONS**.

Areas with a high ground water table – a level concrete base, as well as a concrete or wood retaining wall to hold back the earth, is recommended. This forms a box or ‘bunker’, in which the hot tub is placed.

- **ALWAYS** ensure that there is good drainage, via a properly designed French drain (gravel) system and/or a sump pump, to prevent ground water flooding damage to the support equipment or hot tub structure.
- Install protective waterproof conduit to house any cables that will be buried.
- Access for future service must be considered at the time of design and installation. You must be able to access all sides and areas of your hot tub. Difficult access will result in supplemental service labor charges not covered by the factory warranty. Consider easily removable deck materials.
- Make sure the hot tub or swim spa is tested for 48 hours before you prepare the installation of the surrounding/finish deck around your hot tub. Even though all units are tested in our plant, some transport/site handling damage can occur and we suggest you make sure the tub is perfectly waterproof before finalizing your installation.



EQUIPMENT ACCESSIBILITY AND PROTECTION

The equipment must be located in an area where it will remain serviceable, dry and will not be exposed to rain, snow or ground water.

UNLOADING / HANDLING YOUR HOT TUB

All Hydropool hot tubs are shipped with a protective combination layer of foam wrap, cardboard and plastic film. Each hot tub is factory strapped onto a wood skid. If your hot tub is to be delivered by your local dealer, it will generally arrive on a flat bed truck or low profile trailer. Most dealers are equipped with the necessary equipment to maneuver the hot tub from the truck to the dolly or cart that will be used to move your hot tub to the installation location.

Should your hot tub arrive in a common closed box trailer, it may be necessary to arrange with a local towing company for a tilt and load tow truck, with a pulley winch system, to pull the skid from the larger trailer to the lower profile tow truck flat bed. The hot tub can be gently slid off the low profile trailer and positioned on its side on a cart or dolly on its back side only.

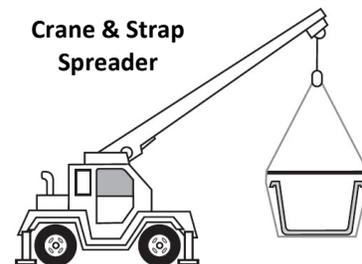
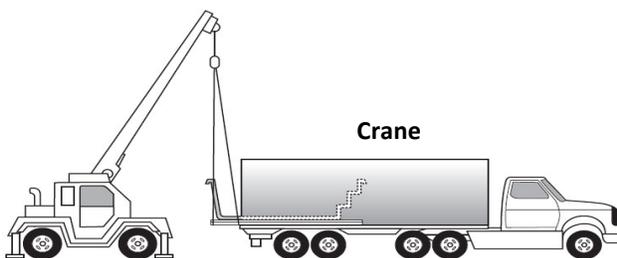
Most Hydropool models require a clearance width of at least 100 cm. (39 in.) to allow movement of the unit on its side through alley-ways, fence openings, etc. Where this is not possible, the use of a crane to lift the hot tub from the truck or trailer over the house to the patio or yard is often a simple and economical option.



WARNING

- Do not move or place the hot tub on the side where the equipment is located as damage could occur.
- Never roll or flip the hot tub end over end as the cabinet could be damaged.
- Never lift or handle the hot tub by the plumbing.
- Make sure that there is sufficient assistance to gently slide the hot tub off the dolly or cart to the support base without any damage.

Important Note: Damage caused during transportation or by improper handling is not covered by the factory warranty.



IMPORTANT ELECTRICAL SAFETY INSTRUCTIONS

SAFETY COMES FIRST. WHEN INSTALLING & USING THIS ELECTRICAL EQUIPMENT, BASIC SAFETY PRECAUTIONS MUST ALWAYS BE FOLLOWED!

1. READ AND FOLLOW ALL INSTRUCTIONS

2. Electrical installation must be completed by a qualified electrician in accordance with all National, Regional and Local Codes and Regulations in effect at the time of installation.
3. Connect only to a dedicated circuit protected by a class 'A' two-pole ground fault circuit interrupter (GFCI)
4. **Use copper conductors only!**
5. The hot tub equipment and all electrical plugs, outlets and lights within 1.5m (5ft) of the unit must be G.F.C.I protected. Consult your electrician or local electrical authority for further details.
6. A green colored terminal or a terminal marked "G", "GR", "Ground", or "Grounding" is located inside the supply terminal box or compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.
7. At least two lugs marked "**BONDING LUGS**" are provided on the external surface or on the inside of the supply terminal box or compartment. To reduce the risk of electric shock, connect the local common bonding grid in the area of the hot tub to these terminals with an insulated or bare copper conductor not smaller than No.6 AWG (Canada/Europe) / No.8 AWG (USA).
8. All field installed metal components such as rails, ladders, drains or other similar hardware within 3 m (10 ft) of the hot tub shall be bonded to the equipment grounding bus with copper conductors not smaller than No.6 AWG.

IMPORTANT NOTE:

- This guide is for standard installations where the wire run is 15 m (50 ft.) or less. For longer wire runs, consult a qualified electrician.

G.F.C.I./R.C.D. APPLICATION GUIDE FOR HYDROPOOL SELF CLEAN SERIES

NORTH AMERICA	
Gold Series	40A
Platinum Series	50A
EUROPE	
Gold Series	20A
Platinum Series	20A

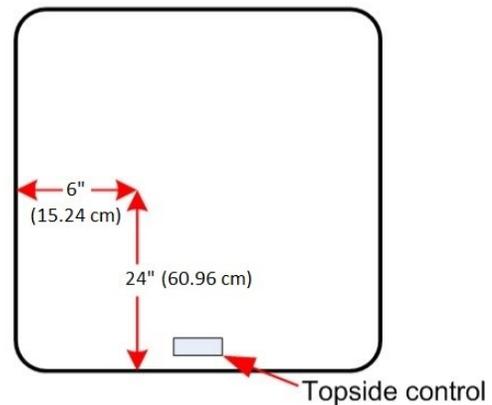


FIGURE 1: ELECTRICAL CONDUIT LOCATION

IMPORTANT NOTE: (FIGURE 1)

The following dimensions can be used to determine the proper location of submerged conduits in concrete slab installations. The dimensions are made from the outside of the spa / hot tub frame with the access for panels removed. The topside control panel is shown at the bottom of the diagram as a reference.

WIRE SIZE

NORTH AMERICA

- The minimum wire size for systems that require a 40A GFCI is # 8/3 c/w ground (also referred to as # 8 gauge / 4 conductor).
- The minimum wire size for systems that require a 50A GFCI is # 8/3 c/w ground (also referred to as # 8 gauge / 4 conductor).

EUROPE

Standards for amperage breakers may vary from country to country in the CE controlled area. Please consult your local installer for advice on breaker level and wire specifications. Some examples are below:

Breaker of 13A –wire must be 1.5 mm²

Breaker of 16A—wire must be 2.5 mm²

Breaker of 20A—wire must be 4.0 mm²

Breaker of 32A—wire must be 6.0 mm²

NOTE: Please consult your applicable electrical codes related to the size of conductors as they may vary from what is stated above. Take into consideration the length of cable as well and increase as required.

NORTH AMERICA – GFCI INSTALLATION

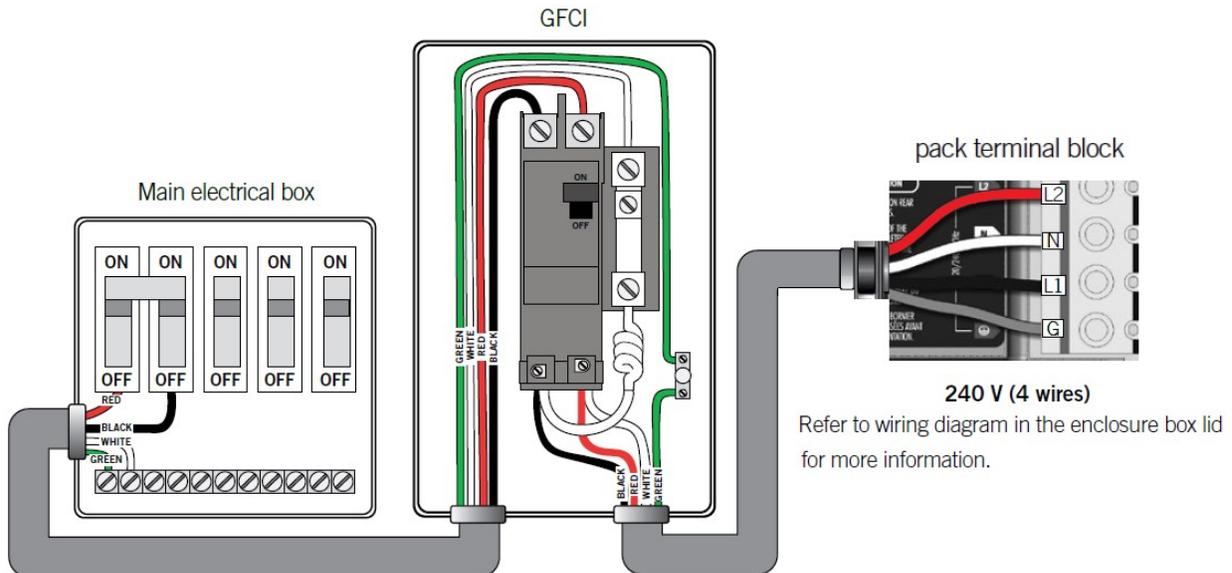


NOTICE

Installation of the GFCI - Circuit Breaker, including ampere sizing and selection of conductor size and type, must be performed by a qualified electrician in accordance with the National Electrical Code, or the Canadian Electrical Code, and all Federal, State/Provincial and local codes and regulations in effect at the time of installation. HydroPool highly recommends the use of a new Siemens GFCI breaker for all of its products. Other GFCI's and older Siemens GFCI's may have tripping issues.

240 VOLT 60 Hz GFCI WIRING

Electrical wiring: North American model in.ye and in.yt



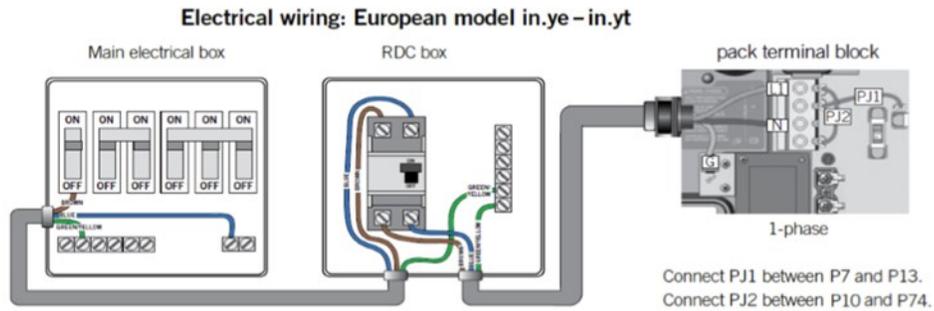
EUROPE – R.C.D. INSTALLATION - TYPICAL



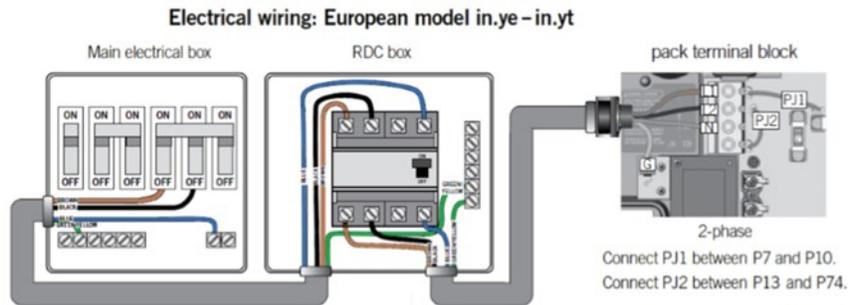
NOTICE

Important Note: Installation of the R.C.D. - Circuit Breaker, including ampere sizing and selection of conductor size and type, must be performed by a qualified electrician in accordance with National, Regional and Local Codes and Regulations in effect at the time of installation.

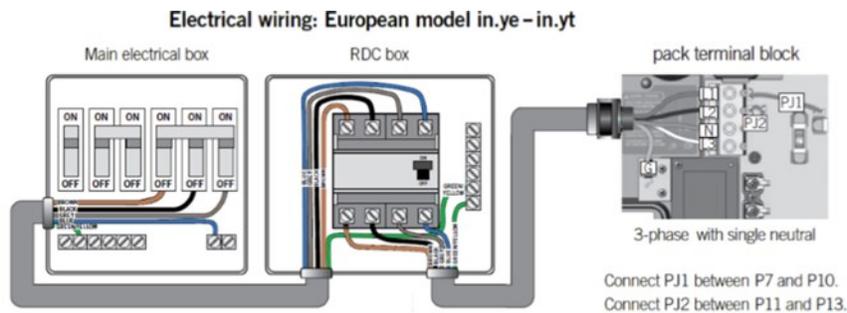
230 VOLT 50 Hz SINGLE PHASE RCD WIRING



230 VOLT 50 Hz DUAL PHASE RCD WIRING



230 VOLT 50 Hz THREE PHASE RCD WIRING



FILLING, CHECKING AND STARTING YOUR HOT TUB



UNIONS



HOSE BIB



PROPER WATER LEVEL

FILLING

When adding water for the first time, the hot tub should be filled through the skim filter (helps to prevent air locks) using a standard garden hose, turning the tap on slowly to prevent damage to the surface by a jerking hose connection.

- Pull up the handles on the intake and return gate valves and clip on the stem locks. (handles are pulled up when valves are open and pushed down when valves are closed).
- Ensure the drain hose-bib is closed.
- Ensure that all jets are open.
- Fill the hot tub to the recommended level ensuring that all the jets are under water (roughly 6" from the top surface).

CHECKING

Although your hot tub was thoroughly water-tested in the factory, some loosening of fittings can occur during shipping. Before any decking, tiling or carpeting is completed around the installation, fill and operate your hot tub to test for leaks (this ensures easy access and inexpensive correction). Check all union connections and plumbing for minor leaks. In the event of a leak, ensure all union connections and pump plugs are tight and all o-rings/gaskets are in place.

STARTING

Before applying voltage to power-up your hot tub, it is very important that you understand the sequence of events that occur when the system is activated in order that the pump can be primed efficiently and damage to the system can be avoided.

- Turn the main power "on" at your electrical panel.
- Follow the control instructions for your particular model hot tub to put the pump into low speed.

See section **HYDROPOOL CONTROL SYSTEMS**

PUMP PRIMING/RELEASING AN AIR LOCK

On some systems a message will appear on the display indicating that the system is in **PUMP PRIMING MODE**. This mode will last for 4 to 5 minutes before automatically entering the normal operation mode. See complete details for your spa in section **HYDROPOOL CONTROL SYSTEMS**

When the hot tub pump is located below water level, the water should start circulating immediately. If the motor works but if you do not notice water circulation within the first 15 seconds, the pump may require priming due to trapped air (referred to as an 'air lock'). To prime (inset 2), open the hose-bib to allow trapped air to escape. Close as soon as the water flow from the jets becomes regular. If the pumps have not primed after 2 minutes, and water is not flowing from the jets, **DO NOT** allow the pumps to continue to run. Turn power off at the main house panel (or GFCI) and try releasing the air again by loosening the union on the discharge side of the pump(s) while the motor is not running. Turn the power back on. If the pump(s) does not prime after 15 seconds, sometimes momentarily turning the pump(s) off and on will help the system to prime (note: do not do this more than 5 times). Repeat if necessary.

• **Important:** Under NO circumstances should the pump(s) be allowed to operate without priming beyond 5 minutes, as this may not only cause unwarrantable damage to the pump, it may also cause the control system to go into an overheat condition.

Definition: 'Priming' a pump is a term used to describe the process in which air trapped in the plumbing and pump wetend (referred to as an 'air lock') is released, allowing the pump to move water efficiently through the plumbing system and to the jets.

RELEASING AIR TRAPPED IN FILTER...



- When the pump starts circulating, it will be necessary to release trapped air in the filter. Carefully loosen the air vent valve counter-clockwise until there is the hissing sound of air escaping. Once there is a steady stream of water, close the vent valve, ensuring that the o-ring does not become pinched.
- Turn the Hydrotherapy pump(s) on and re-check for leaks. The control system will automatically return the pump(s) off after 15 minutes.
- Adjust the hot tub heat control at the topside panel to the desired water temperature.
- Adjust water balance (pH, TA, calcium hardness) to recommended levels and add sanitizer once the water temperature reaches 20°C (68°F).

See section **HOT TUB WATER BALANCE**

- Keep insulated safety hard cover on the hot tub, and the air controls closed during the entire heat up process.

NOTE:

In order to prevent damage to your pillows caused by the gassing effect of the chemicals, we do recommend to remove them when the spa is not in use. By removing them you will extend considerably the life length of your pillows. We do design ours pillows to be removed easily in order to make sure they will not remain in the spa when it's not in use.

HYDROPOOL SELF CLEAN SERIES CONTROL SYSTEMS NORTH AMERICA / EUROPE GECKO IN.YE SPA PACK SERIES



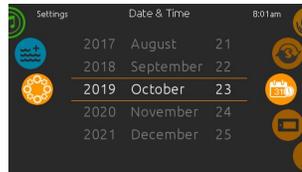
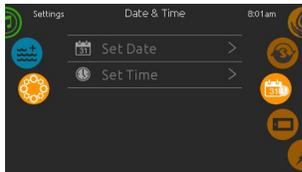
INITIAL START-UP

Before applying voltage to power-up your hot tub, it is very important that you understand the sequence of events that occur when the system is activated in order that the pump(s) can be primed efficiently and damage to the system can be avoided.

At initial power-up, the system will show the following screen.

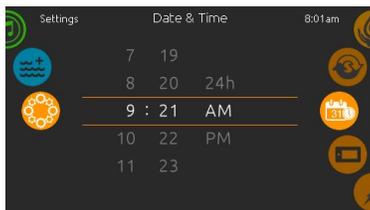


The keypad does store the date and time for a limited time so when the system starts up after a loss of power it may be necessary to reprogram the time and date if the power down duration is greater than 48 hours.



PROGRAMMING THE DATE AND TIME

Here you can adjust the time format (AM/PM or 24h), day of the week and time. Use the icons to choose the setting that you want to adjust and select it by scrolling through the menu.



**TEMPERATURE CONTROL
FUNCTIONALITY AND
ADJUSTMENT**



After you exit the programming mode your hot tub will automatically heat to the factory preset default temperature of 38°C (100°F).

The temperature shown in white on the screen is the current water temperature. Use the UP and DOWN icon to set the desired temperature.

The set point will appear in blue on the screen. After 3 seconds without any change to the set temperature value, the keypad will resume the normal display of messages.

When the set value is lower than the current temperature “Cooling to XX”F (“C)” will appear. When the value is set higher than the current temperature, “Heating to XX”F (“C)” will be indicated.



HYDROPOOL SELF CLEAN SERIES CONTROL SYSTEMS

GOLD SERIES CONTROLS



KEYPAD FUNCTIONS AND DISPLAY ICONS



SPA
FUNCTION
KEY



PUMP 1
FUNCTION
KEY



INVERT
DISPLAY
KEY



SETTINGS
FUNCTION
KEY



BLOWER
FUNCTION
KEY



DAY
NIGHT
CONTRAST



QUICK START /
STOP KEY



LIGHT
FUNCTION
KEY



SLEEP
MODE
KEY



TEMP
UP
KEY



TEMP
DOWN
KEY

HYDROPOOL SELF CLEAN SERIES CONTROL SYSTEMS
PLATINUM SERIES CONTROLS



KEYPAD FUNCTIONS AND DISPLAY ICONS



SPA
FUNCTION
KEY



SETTINGS
FUNCTION
KEY



QUICK START /
STOP KEY



PUMP 1
FUNCTION
KEY



PUMP 2
FUNCTION
KEY



BLOWER
FUNCTION
KEY



LIGHT
FUNCTION
KEY



TEMP
UP
KEY



TEMP
DOWN
KEY



INVERT
DISPLAY
KEY



DAY
NIGHT
CONTRAST



SLEEP
MODE
KEY

PUMP 1 FUNCTION

Press this pad to activate the pump

- 1st press – low speed (**icon rotates slow**)
- 2nd press – high speed (**icon rotates fast**)
- 3rd press – turns off

PUMP AUTOMATIC TIME-OUT

Low and High speed – 15 minutes

PUMP 2 FUNCTION (if included)

Press this pad to activate the pump

- 1st press – high speed (**icon rotates fast**)
- 2nd press – turns off

PUMP AUTOMATIC TIME-OUT

High speed – 15 minutes

LIGHT FUNCTION

Press this pad to activate the light

- 1st press: rotating colours
- 2nd press: solid blue colour
- 3rd press: solid green colour
- 4th press: solid red colour

Note: Pressing the light key in intervals less than three seconds will scroll to the next colour. Once you have selected the colour another press will turn the light off.

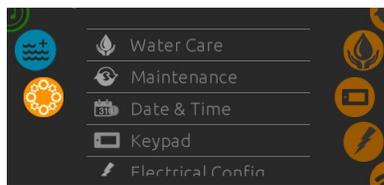
LIGHT AUTOMATIC TIME-OUT

Time out – 60 minutes

SETTINGS KEY

From the home page you can access the Settings, where you will find:

- Water Care
- Maintenance
- Day & Time
- Keypad Settings
- Miscellaneous
- Electrical Configuration
- About



Use the icon keys to scroll up and down in the list. To select an option, press the text.

At any point you can press the Spa Function icon to return to the home screen.

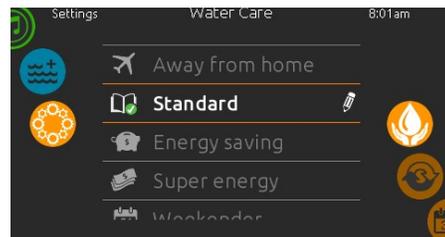


WATER CARE

The Water Care section will help you set up your ideal filtration and heating settings. Choose from Away, Beginner, Energy Savings, Super Energy Savings and Weekender, depending on your needs.

Use the Light key to choose your setting. A checkmark will appear on the selected icon to confirm.

In Energy Savings mode, the set point will be reduced by 20°F (11°C), which means that the heating system will not be engaged unless the temperature falls to 20°F (11°C) below the spa's set temperature.



Water Care Modes:

Away:

In this mode the spa will always be in economy; the set point will be reduced by 20°F (11°C) and the filtration can be reduced.

Beginner:

The spa will never be in economy mode, and will run a normal 24 hours of filtration a day.

Energy Savings:

The spa will be in economy mode during the peak hours of the day and resume normal mode on the weekend.

Super Energy Savings:

The spa will always be in economy mode during peak hours, every day of the week.

Weekender:

The spa will be in economy mode from Monday to Friday, and will run normally on the weekend.

MODIFYING SCHEDULES

To see and / or modify the Water Care category, use the Settings icon to open the selected Water Care menu.

Scroll through the menu to choose a schedule to modify (choice of economy and filtration schedules).

You have several possibilities for the schedule (Mon-Fri, weekend, every day, or single days). The schedules will be repeated every week. The time and duration are set in 30 minute increments. Once you have set the schedule, use Spa Function Icon to go back. Ensure that you have selected the desired Water Care option in the main Water Care menu.

The filtration schedule shown on the screen will apply to the main filtration pump. Your spa uses a circulation pump configured to run 24 hours by default and the screen will show you the purge setting instead of filtration. The purges are pre-programmed for a fixed number of minutes, therefore the duration will be set to N/A on the screen, and only the start time can be modified.



FILTERING

Your spa is equipped with a circulation pump that filters your water for 24 hours a day. If the water temperature exceeds the set temperature by 4°F (and set point is 95°F or higher) then this pump will shut off automatically until the temperature drops below the set point by approximately 1.5°F.

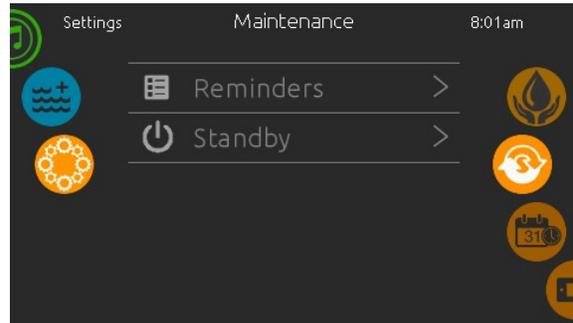
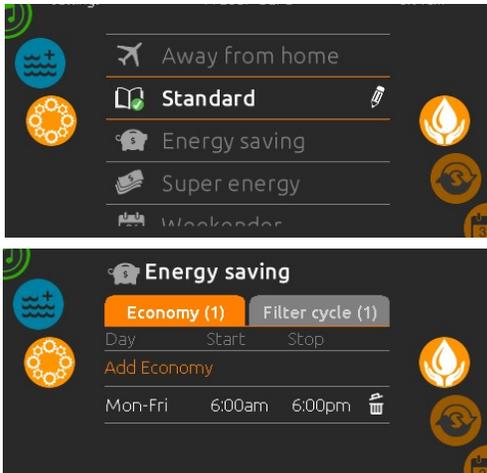
You can bypass the pack filtration over-temperature feature. When Warm weather is "Off", the filtration over-temperature is disabled. This feature allows the spa to continue filtering even through the water temperature is high.

MAINTENANCE

From the Settings page you can access the Maintenance Menu, which gives you access to the following options:

- Maintenance reminders
- Standby

Press the text to make a selection.

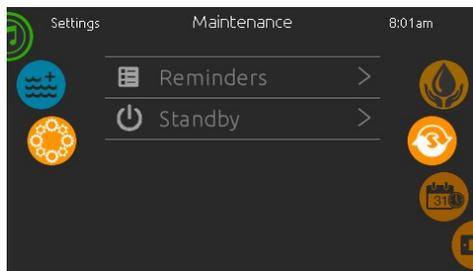
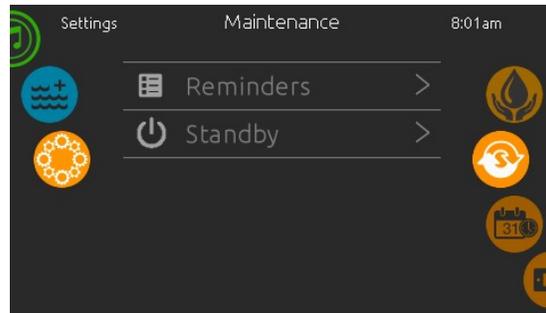


MAINTENANCE REMINDERS

The in.k1000 keypad will remind you of maintenance required on your spa, like rinsing or cleaning the filter. Each task has its own duration, based on normal use.

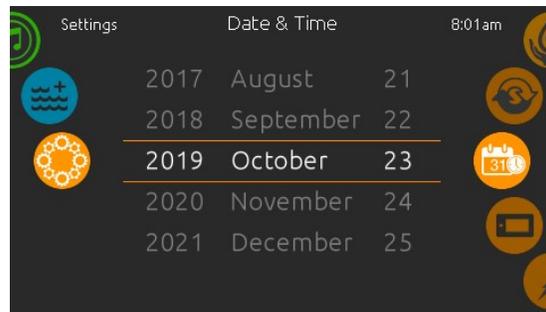
The Maintenance Reminders menu allows you to verify the time left before maintenance is required, as well as to reset the time once a task is completed.

Scroll through the menu to move through the list.



DATE AND TIME

Here you can adjust the time format (AM/PM or 24h), day of the week and time. Use the icons to choose the setting that you want to adjust and select it by scrolling through the menu.

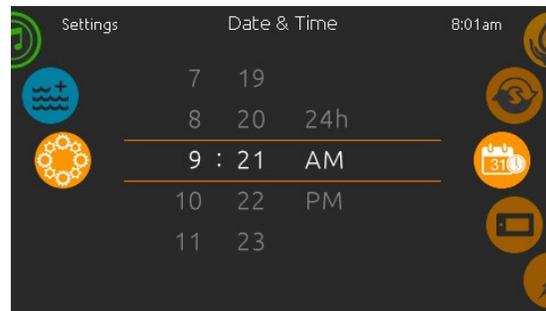


STANDBY

The Standby mode allows you to service your spa. Pumps will stop for 30 minutes, and automatically restart after this time.

Once Standby mode has been activated a screen will appear to show the pumps are stopped. The normal spa page will return at the end of the maintenance.

Press Cancel to leave Standby mode and restart the spa.



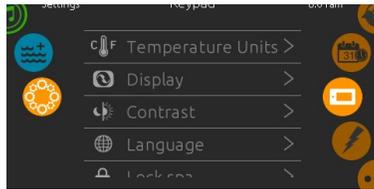
NOTE: If the heater is activated it could take up to 20 minutes for the Standby Mode to be activated as it needs to finish its heat cycle. In order to avoid this you will need to drop the set temperature below the water temperature in order for the Standby Mode to be activated immediately.

KEYPAD SETTINGS

In this section you can change the temperature unit and language. Use the arrow keys and move to the setting that you would like to change. Use the Light key to choose and the arrow keys to modify

For the temperature setting you have a choice between Fahrenheit or Celsius.

For the language setting you have a choice between English and French.

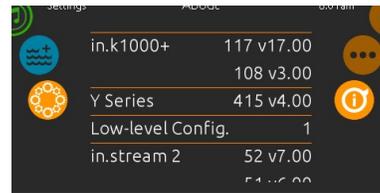


ELECTRICAL CONFIGURATION

Please do not make changes in this section unless you are a qualified electrician.

ABOUT

This section shows information about the keypad software number and the revision numbers of the different components of your system.



PURGE CYCLES

The purge cycles are programmed to begin at the start of each filter cycle. Pump 2 activates for 1 minute, shuts off and then Pump 1 activates for 1 minute then shuts off.

SMART WINTER MODE

Smart Winter Mode protects your system from the cold by turning the pumps on several times a day to prevent water from freezing in the pipes. The Smart Winter Mode indicator turns on when in this mode of operation. If the temperature drops to 4°C (39°F) within the heater chamber, the system automatically activates the pump to provide freeze protection. The pump will operate until the temperature reaches 5°C (41°F) before returning to normal system mode.

COOLING DOWN

After heating the spa water to the desired set point, the heater is turned off, but the filtration pump remains on for a certain amount of time to ensure adequate cooling of the heating element in order to prolong the useful life of the heater. "Cooling to XX°F (°C)" message will appear at the bottom of the screen.

STANDBY MODE



A press of the **SETTINGS** icon and scroll to the **MAINTENANCE** menu options. Press the **MAINTENANCE** icon to display the **STANDBY** icon. Press the **STANDBY** icon and the following message will appear.

“All pumps off! Press Cancel to exit Standby mode or Drain to drain spa”

This mode allows you to stop all outputs including all automatic functions such as a filter cycle, heating requests and smart winter mode purging for 30 minutes to perform quick spa maintenance.

DRAIN MODE

If you wish to put your spa into **“DRAIN MODE”** follow the instructions above for putting the spa into **“STANDBY MODE”** and then press **DRAIN** on the display. Once you do that the display will indicate **“Drain in progress”**. The filtration pump will turn on and run for 60 minutes.

In order to exit this mode, press **CANCEL** to exit **DRAIN MODE**. This will put you back into **STANDBY MODE** and if you wish to exit that press the same key to go back to the main screen.

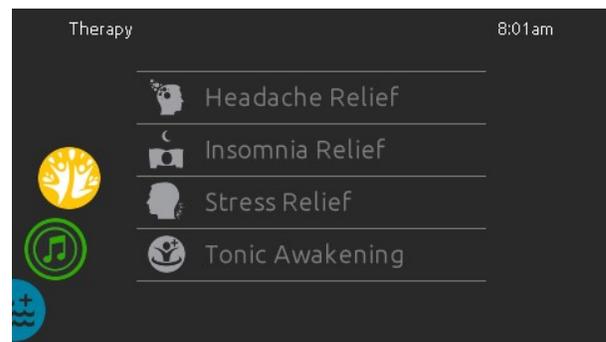
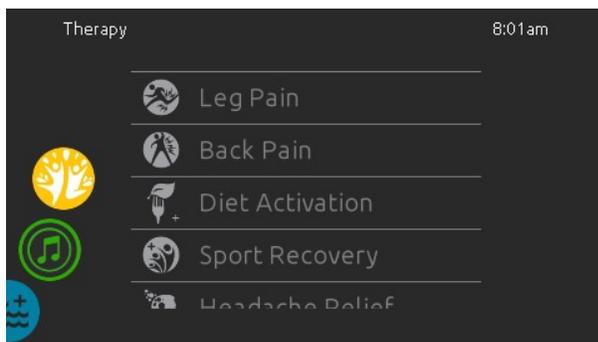
HYDROTHER CONTROL AND WELLNESS THERAPY PACKAGE



This optional feature allows you to select from eight different therapy packages to help soothe your aches and pains or focus on key parts of your body that need some attention. In order to select the therapy you are looking for please reference the **“Wellness Guide”** that came with your hot tub and follow the instructions below.

PROGRAMMING THE HYDROTHER / WELLNESS THERAPY

From the main display page, press the **WELLNESS** icon to navigate into the submenu. From there you will see the first selection page which offers your four optional therapy packages (**Leg Pain, Back Pain, Diet Activation, Sport Recovery**). If you wish to select one of these packages simply press the text description you are looking for. If not, scroll through the menu to go to the second page which offers you another four optional therapy package (**Headache Relief, Insomnia Relief, Stress Relief, Tonic Awakening**). Press the text description you are looking for.



TOPSIDE PANEL DISPLAY MESSAGES

Hr - An internal hardware error has been detected

Prr - The Prr error message indicates a problem with the regulation probe. The system is constantly verifying if the temperature probe reading is within its normal limits.

HL - The water temperature at the heater has reached 119°F (48°C). **Do not enter spa water.**

FLO -The system did not detect any water flow while the filtration pump was running.

UPL -No low level configuration software has been downloaded into the system.

AOH - The temperature inside the spa skirt is too high, causing the internal temperature in the spa pack to increase above the normal limits.

OH - The water temperature in the spa has reached 108°F (42°C). **Do not enter spa water.**

OPTIONAL VARIABLE AIR THERAPY SYSTEM CONTROL FUNCTIONS:

Press: Blower button on main control to activate system.

1) ON/OFF :

1st Press: The Blower starts at maximum Speed. LED: ON

2nd Press: The blower stops. LED: OFF

2) TO CONTROL SPEED:

Press and hold: Speed goes up or down, LED: ON when pressing.

Release pressure at the desired speed.

3) TO CONTROL PULSATION:

1st Press: Slow Pulsation Cycle, LED: ON.

2nd Press: Quick Pulsation Cycle, LED: Flashes.

3rd Press: Pulsation Cycle OFF, LED: OFF.



AUXILIARY HEATER BYPASS LOOP

When your installation calls for an auxiliary heater, our swim spas can be built with special plumbing that will easily and reliably allow for the additional installation of an alternative heat source (heat pump, electric heat, gas heat or solar). Simple connect your additional system plumbing to our pre-installed plumbing and check valve system for optimal performance and safety.



OPTIONAL SMARTTUB® SYSTEM

Advances in technology have allowed us to create a better and smarter swim spa. Our SmartTub® system operates on a cellular network. The advantages of this system are:

- A more stable connection to internet for outdoor environment. The SmartTub® device uses much less data than a typical voice connection via cellular networks. We contract through the largest wireless carriers to ensure maximum uptime. The system enables firmware updates via the cell connection so your system's performance will continuously be optimized remotely.
- Maintenance is made easy by alerts sent to your phone.
- Diagnostic alerts are sent to you and your dealer when attention is required.

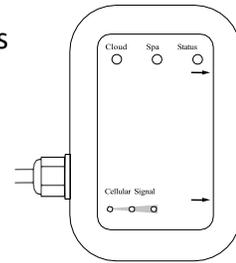
A. Pairing process

1. Download the SmartTub® app from the Google Play store or Apple App store.
2. Open the app and create an account.
3. Locate the SmartTub® sticker next the control panel of the swim spa. You can either scan the QR code with the SmartTub® app or manually input the serial number located below the QR code on the sticker.
4. After you pair the swim spa's serial number to the SmartTub® app, the app will load and connect the hot tub to the internet.
5. Follow the instructions on the app to begin enjoying the benefits of your internet connected swim spa.

Note: The first year of data service is included. You will need to renew the subscription after the first year. Please refer to the terms of service and privacy policy links in the SmartTub® app for additional information.

Indicator Lights

There are indicator lights on the SmartTub® controller that relay the status of the system. Below are meanings of the lights.



1. Cloud:

- Blue light on - connected to cloud.
- Blue light off - not connected to cloud.

2. Swim Spa:

- Blue light on - connected to swim spa controller
- Blue light off - not connected to swim spa controller

3. Status:

- Cyan light - breathing (slow pulsing) indicates the status is good.
- Cyan light - flashing indicates that the system is completing a connection to the cloud.
- Green light - flashing indicates waiting for a connection to the cellular tower.
- Dark blue light - flashing indicates a SIM error.

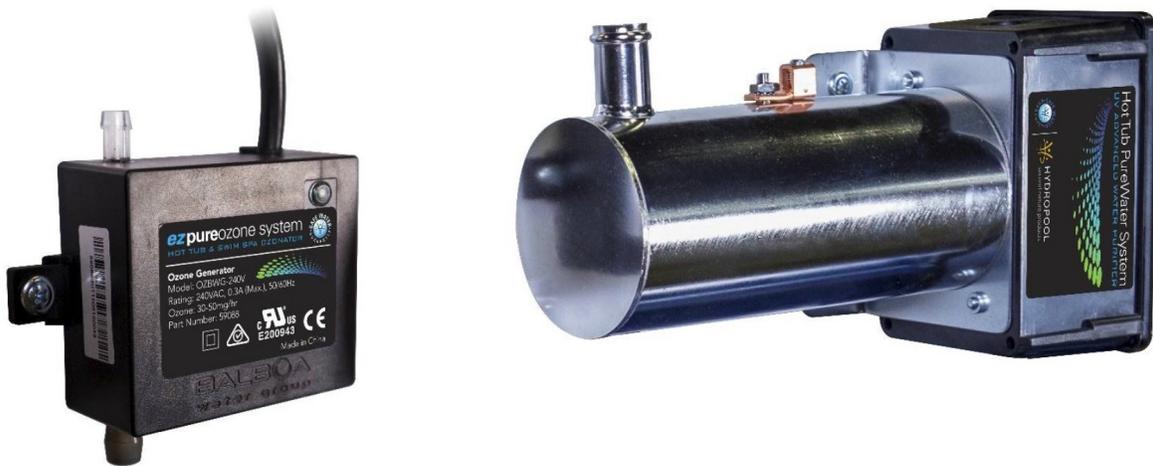
4. Cell signal strength:

- 3 blue LED lights indicates cell signal strength.

C. Resetting the SmartTub® controller

Should the SmartTub® controller need to be reset, hold a magnet to the reset label on the side of the SmartTub® device.

HYDROCLEAR PUREWATER SYSTEM



HOW IT WORKS

This system combines the benefits of both Ozone and UV-C creates hydroxyl radicals to burn off contaminants and dissolved solids within the water to significantly increase the clarity of the spa water. The UV-C rays also breakdown chloramines which are the main cause of respiratory, eye and skin irritation typically associated with chlorine. Harmful/corrosive off gassing is also dramatically reduced through this process.

MAINTENANCE AND SERVICE

While operating, check regularly to see if bubbles are entering the spa.

After 10,000 hours the UV LED will begin flashing yellow indicating its time to replace the UV-C lamp.

Replace the check valve assembly annually to ensure continued optimal performance from the Hydroclear Pure Water System.

To replace the UV-C lamp or check valve please go to www.balboawatergroup.com/UVSanitizer for the procedure on how to do this.

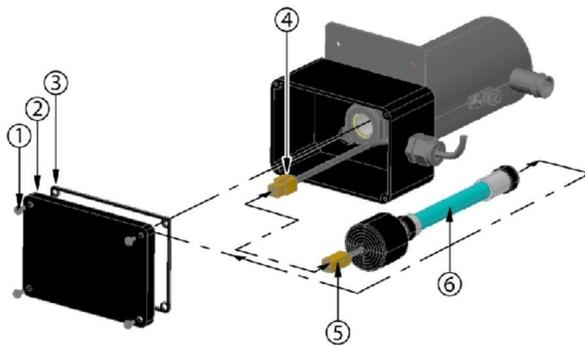
IMPORTANT

YOU MUST CONTINUE TO CHECK YOUR WATER CHEMISTRY REGULARLY AND SANITIZING CHEMICALS WILL BE NECESSARY TO TREAT THE WATER. CONSULT YOUR SPA PROFESSIONAL FOR FURTHER ADVICE.

HYDROCLEAR PUREWATER SYSTEM (continued)

UV-C LAMP REPLACEMENT INSTRUCTIONS

Important: It is mandatory that the UV-C lamp is replaced every 12 months to maintain optimum performance.



KEY	DESCRIPTION
1	SCREW
2	ENCLOSURE COVER
3	ENCLOSURE GASKET
4	BALLAST CONNECTOR
5	UV-C LAMP CONNECTOR
6	UV-C LAMP

NOTE: Your UV System unit may look different than shown in the picture



DANGER

- Turn the spa breaker to the **OFF** position.
- Allow the UV-C lamp (6) to cool down prior to removing it from the UV system.
- Never look at the lit UV-C lamp (6). This can cause severe eye damage or blindness.

INSTRUCTIONS:

1. Remove the UV system enclosure cover (2) by removing 4 Phillips screws (1). Keep the gasket (3) together with the enclosure cover (2) for later use.
2. Make sure to use latex glove when handling the UV-C lamp (6).
3. Slowly disconnect the old UV-C lamp connector (5) from the ballast connector (4).
4. Slowly remove the old UV-C lamp (6) from the UV unit.
5. Slide the new UV-C lamp (6) into the UV unit.
6. Reconnect the new UV-C lamp connector (5) to the ballast connector (4). Make sure the connectors mate completely. Do not force.
7. Reinstall the enclosure cover (2) with the gasket (3) and secure with screws (1).
8. Reconnect the unit to the spa controller and reinstall the spa controller's cover.
9. Turn on the power to the spa.
10. Once power is activated you can check the ballast to see if the unit is functioning. A solid green light indicates the unit is being provided power and should always be on. A solid red light indicates that the UV-C lamp is activated.



WARNING

The UV-C lamp used in this unit contains mercury. Properly dispose of the old UV-C lamp in accordance with disposal laws. See www.lamprecycle.org.

HOT TUB WATER BALANCE – GENERAL OVERVIEW

NOTABLE POINTS

- The reliability and longevity of your hot tub support equipment are directly related to how well water quality is maintained!
- The small volume of water in your hot tub is easily affected by the introduction of oils, lotions, perspiration and chemicals. It is imperative that you give your hot tub regular attention to maintain clean, and balanced water to prevent premature damage and/or failure (corrosion/calcification) to the support equipment. Maintaining proper hot tub water balance and sanitizer levels is extremely important. Neglected hot water will allow bacteria to quickly spread.
- The mineral content of hot tub water increases due to water evaporation, sanitizers and other chemicals. If the mineral concentration, particularly calcium, becomes too high, the minerals will literally “drop” or precipitate out of the water and deposit on the hot tub walls, plumbing, jets, in the filter and on the heater element.
- It is very important that pH be checked frequently and maintained in the recommended range as indicated in the chart **WATER BALANCE SUMMARY FOR YOUR HOT TUB**
- It is also very important that Total Alkalinity (the ability of the water to resist a change in pH) be maintained in the recommended range as indicated in the chart **WATER BALANCE SUMMARY FOR YOUR HOT TUB**
- Although there may be two identical hot tub models right next door to each other, the maintenance requirements will be different, dependant on such factors as:
 - bather load
 - frequency of use/quantity of bathers
 - different body chemistry
 - sun vs. shade
 - temperature

For these reasons, it is very important to develop proper hot tub water maintenance habits and follow your HydroPool retailer’s recommended water maintenance procedures.



Heater and other component failure due to improper water balance is not covered under warranty.

Expose the large Refill hole at the end of the tube and add 5 or 6 tablets. Do not overfill dispenser as performance will be affected. Turn to expose the largest area and allow water to circulate for 3 or 4 hours before testing level. Adjust to lesser area as necessary to maintain a level of 2–4 PPM Sanitizer.

Floating dispenser: As above, add 6 or 7 tablets, adjust initially to ‘5’, allow water to circulate for 3 to 4 hours, then test.

The tablets will dissolve slowly over a 10-14 day period, depending on setting, and use of the hot tub.

5 Test pH and Total Alkalinity and also adjust accordingly.

Expose the large Refill hole at the end of the tube and add 5 or 6 tablets.

Do not overfill dispenser as performance will be affected. Turn to

expose the largest area and allow water to circulate for 3 to 4 hours before testing level. Adjust to lesser area as necessary to maintain a level of 2-4 PPM Sanitizer.



WARNING

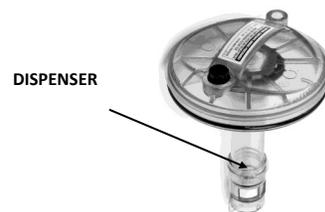
CHEMICAL HANDLING SAFETY HINTS

- **Never pre-mix chemicals with each other prior to adding to hot tub water.**
- **Add only one chemical to the water at a time.**
- **Always add chemicals to water and not vice-versa.**
- **Chemicals may be corrosive, so handle with care and store in a cool dark place.**
- **Never smoke near chemicals as most are flammable**
- **Ensure any spilled chemicals are carefully cleaned up immediately.**
- **Always have the POISON CONTROL telephone number handy in the event of an emergency.**
- **Keep chemicals out of children’s reach**
- **Wear safety glasses and gloves when handling chemicals.**

INITIAL WATER FILL & BALANCE

1. Make sure the hot tub water is circulating.
2. Add a sequesterant (stain and scale controller). Allow water to circulate for an hour before adding anything else to the hot tub water.
3. Add a Shock / oxidizing agent .
4. Add sanitizing tablets (Bromine or Chlorine) to the dispenser:

Your HydroPool hot tub comes with a built in bromine/chlorine dispenser, (located in the lid of the cartridge filter housing), refer to section **CARTRIDGE FILTER** for details on removing and re-installing the lid. Once the filter lid is removed, you’ll notice a clear 2.5 cm (1”) diameter tube extending from the bottom of the lid.



GLOSSARY OF COMMON WATER MAINTENANCE TERMS

1. **CHLORINE** – in granular, liquid or puck/tablet form, is an oxidant and biocidal agent. It is very effective and fast acting. Recommended chlorine residual level is 3.0 to 5.0 ppm.
2. **CHLORAMINES** – a compound formed when chlorine combines with nitrogen or ammonia present in the water. When allowed to go unchecked, it causes eye and skin irritation and is indicated by a strong chlorine odor.
3. **ONE-PART BROMINE** – also available in puck/tablet form, is another type of oxidant/biocidal agent, and is introduced into the hot tub water via a brominator. Recommended bromine residual level is 3.0 to 5.0 ppm
4. **TWO-PART BROMINE** – composed of a liquid or powder component introduced manually into the water on a weekly basis, and a granular component that is added daily or as the hot tub is used.
5. **BROMAMINES** – are formed when bromine destroys nitrogen-bearing organic matter. Unlike chloramines, bromamines don't cause eye irritation, however, when allowed to go unchecked, will cause an objectionable odour.
6. **SHOCK** – the practice of adding an oxidizing agent to hot tub water to destroy ammonia, nitrogenous and organic contaminants (chloramines and bromamines)
7. **pH** – a logarithmic value expressing the relative acidity or basicity of a substance (such as hot tub water) as indicated by the hydrogen ion concentration. pH is expressed as a number on a scale of 0 to 14, where 0 is most acidic, 1 to 7 being acidic, 7 considered neutral, 7 to 14 being basic, and 14 being most basic. The ideal range for hot tub water is 7.4 to 7.6 ppm
8. **pH INCREASER** – raises the pH level of the water.
9. **pH DECREASER** – lowers the pH level of the water.
10. **TOTAL ALKALINITY (TA)** – the amount of carbonate, bicarbonate and hydroxide compounds present in the water that determines the ability or capacity of the water to resist change in pH. Also known as the 'buffering' capacity.
11. **ALKALINITY BOOSTER** – raises the alkalinity.
12. **CALCIUM HARDNESS** – the calcium portion of the total alkalinity which represents 70 to 75% of total hardness. Calcium concentrations determine whether water is 'soft' - too little calcium, or 'hard' -too much calcium.
13. **CALCIUM BOOSTER** – increases the calcium level.
14. **TOTAL DISSOLVED SOLIDS (TDS)** – a measure of the total amount of dissolved matter in the water (calcium, carbonates, bicarbonates, magnesium, metallic compounds, etc.)
15. **SEQUESTERANTS (STAIN AND SCALE CONTROLLERS)** – keeps dissolved metals and minerals in the water from attacking the hot tub shell and support equipment components.
16. **DEFOAMER** – removes foam build-up from the water surface. At best, this is a temporary remedy, as excessive foam is merely a symptom of improper water balance (typically high organic residue and/or high pH).
17. **CARTRIDGE FILTER CLEANER** – degreases and cleans cartridge filters.
18. **OZONATOR** – generates Ozone (a gaseous molecule composed of 3 atoms of oxygen) and is injected into the hot tub water for the oxidation of water contaminants.
19. **TEST KIT** – used to monitor specific chemical residual or demands in the water. May be in the form of litmus strips or liquid drops.
20. **PPM** – abbreviation for 'parts per million', the unit of measurement used in chemical testing which indicates the parts by weight in relation to one million parts by weight of water. Essentially identical to the term mg/L - milligrams per liter.

WATER BALANCE SUMMARY FOR YOUR HOT TUB*

SANITIZER (ppm)	MIN	IDEAL	MAX
Chlorine	1.0	3.0 - 5.0	5.0
Bromine	1.0	3.0 - 5.0	5.0
CHEMICAL			
PH	7.2	7.4 - 7.6	7.8
Total Alkalinity (TA)	80	80 - 120	180
Calcium Hardness	150	200 -400	500 -1000

*National Spa & Pool Institute recommended levels for residential spas/hot tubs

WATER BALANCE TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
Cloudy Water	Microscopic particles too small to filter out.	Test and adjust all water balance elements and add flocculent* to cause the particles to combine together so they can be filtered out. Increase filter cycle time.
High Total Alkalinity High pH levels High Calcium Hardness		Test these water balance elements and adjust to recommended parameters.
Scale (White/Grayish Deposit)	High Calcium Hardness	Test calcium hardness level and treat with sequestering agent* or perform partial drain/refill.
Skin Eye Irritation	Improper pH and/or Total Alkalinity levels	Test water balance and make the appropriate changes.
Excessive Foam	Buildup of body oils or cosmetics	If no water line is present you can try using defoamer* to break up the contaminants and then a clarifier* to help filter them away. If a water line is present the spa may need to be drained and cleaned. Either way, the filter should be thoroughly cleaned by soaking overnight in bleach. An oil absorbing sponge can help in preventing this in the future. Increase filter cycle time.
	Laundry detergent residual in swimwear	Prevent by running an extra rinse cycle on washing machine or re-rinse well by hand
	Excess organic contaminants	Some organic matter is prone to causing foamy water as it breaks down in the filter (maple leaves especially). Generally using defoamer* to break up the contaminants, then a clarifier* To help filter them away followed by thoroughly cleaning your filter will clear up the problem. It may however be necessary to drain and refill your spa if the foaming is quite excessive.
	Low Calcium Hardness	Test calcium hardness and if necessary increase with calcium chloride*
Corrosion/Etching	Presence of metals in water (iron, copper, etc)	Test total alkalinity levels and if necessary increase with sodium bicarbonate*
Discoloured Water (Clear v. turbid water)	Presence of metals in water (iron, copper, etc)	Treat with chelating* or sequestering agent*
Unstable pH	Low Total Alkalinity levels	Test total alkalinity levels and if necessary increase with sodium bicarbonate*
pH resistant to changing	High Total Alkalinity levels	Test total alkalinity levels and if necessary decrease with sodium bisulfate* or muriatic acid*
		* Contact your local Hydropool retailer for specific product recommendation

ROUTINE HOT TUB MAINTENANCE



REVIEW CHEMICAL HANDLING SAFETY HINTS

DAILY

1. Test water, and if necessary, add shock.
2. Ensure proper water level is maintained.

WEEKLY

1. Test pH and Alkalinity. Adjust accordingly
2. Top-up chemical dispenser
3. Add a sequesterant (stain and scale controller)
4. Remove and spray cartridge filter with garden hose and re-install (see section **CARTRIDGE FILTER**)
5. Remove and clean out skimmer basket (see section **CLEANING THE SKIMMER BASKET**)
6. Add Shock / oxidizing agent
7. Inspect union connections for o-ring and gasket leaks. Tighten if loose

MONTHLY

Soak your filter cartridge in a filter cartridge cleaning solution. Rinse thoroughly and, if possible, allow to dry before re-installing. HydroPool recommends purchasing a second filter so that while the first is cleaning, the other is clean and ready to install

QUARTERLY

Drain hot tub at least once per quarter and clean the acrylic shell surface with a non-abrasive cleaner designed specifically for acrylic surfaces. See sections **CHANGING THE HOT TUB WATER** and **DRAINING YOUR HOT TUB**

NOTE:

HYDROPOOL reserves the right to void the warranty of your spa if there is any indication of the use of products containing Hydrogen Peroxide.



CLEANING THE SKIMMER BASKET

1. Activate the **STANDBY/DRAIN ASSIST** mode
2. Remove the skimmer basket by pulling the weir door forward, and pulling the basket up and towards the front
3. Remove debris from basket. (**Note: Avoid hitting the basket against objects to knock debris loose as this may damage the unit.**)
4. Reinsert basket
5. Take the system out of **STANDBY/DRAIN ASSIST** mode, and as the pump begins to operate, monitor water flow over the weir door to assure that it is free floating.



SAFETY HARD COVER

When a hot tub is uncovered, over 90% of heat is lost from the water surface. This evaporation also affects the chemical balance and could create humidity problems indoors.

HYDROPOOL Safety Hard Covers are engineered for maximum thermal efficiency and appearance. They are hinged in the middle for easier handling, and the zip fastener allows the tapered foam inserts to be changed if damaged. The skirt of the safety hard cover hugs the lip of the hot tub for a tight fit. The locks, with one part fastened to the deck or skirt, prevent small children or animals from entering the hot tub.

Do not drag the safety hard cover across the hot tub or decking. Standing on the hardcover could cause the tapered foam inserts to crack, which will lead to water absorption.

NEVER LEAN OR STAND ON YOUR HARDCOVER.

The cover should be cleaned at least twice a year with a vinyl moisturizer and protector.

NOTE: ALWAYS ENSURE THE SAFETY HARDCOVER IS IN PLACE AND LOCKED WHENEVER THE HOT TUB IS NOT BEING USED. FAILURE TO DO SO MAY CAUSE DAMAGE OR CRACKING OF THE ACRYLIC SURFACE NOT COVERED UNDER THE WARRANTY.

CARTRIDGE FILTER

The cartridge should be cleaned every two to four weeks, depending on the amount of use. Signs that the filter requires cleaning include:

- **Reduced jet power**
- **Hazy gray water**
- **Rattling noise in the pump or filter**
- **Heater not working**

REMOVAL

1. Activate the **STANDBY/DRAIN ASSIST** mode.
2. Remove the filter cover and open the small, black air vent / bleeder valve on the top of the filter lid.
3. Lift the gray lock tab to disengage and turn the locking ring counter clockwise.
4. Pull the filter lid upwards, and lift the cartridge elements straight up and out of filter housing.

CLEANING

5. With a garden hose and spray nozzle, hose off the cartridge element, ensuring to carefully separate every pleat.
6. To remove collected lotions, body oils, etc. soak the cartridge in warm water and a filter cleaning/emulsifying compound (**available at your HYDROPOOL retailer**).
7. A cleaning cylinder may be purchased from your **HYDROPOOL** Hot tub Retailer.
8. Rinse thoroughly and dry before replacing.
9. HydroPool recommends purchasing a spare filter cartridge so that you always have a clean substitute ready to rotate.
10. After the element has dried - if necessary, lightly brush between pleats with a fine paint-brush to remove remaining dirt particles.



Do not use a wire brush or other device to clean cartridge element.
Do not put in dishwasher or washing machine.

CLEANING THE ACRYLIC SURFACE

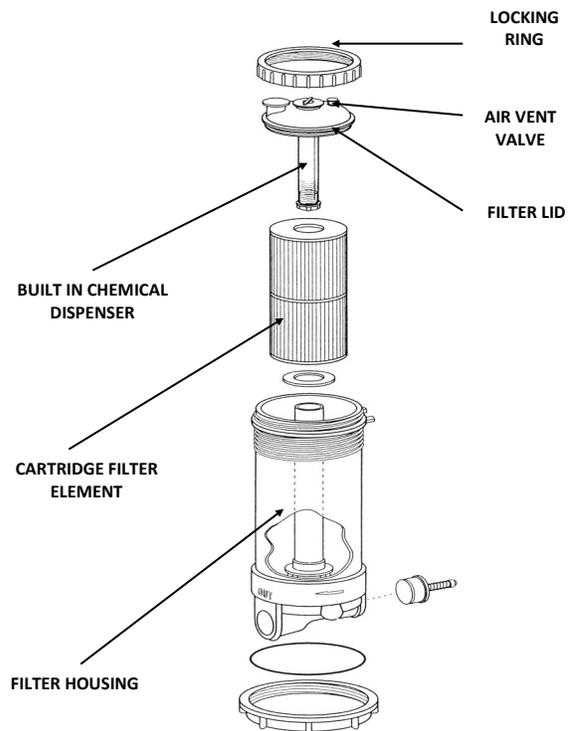
The acrylic surface can be cleaned and polished using a soft cloth and acrylic cleaner, available at your HydroPool retailer.



- **Important: Do not use detergents - the remaining residues will adversely affect water chemistry, making it difficult to maintain proper water balance**
- **Do Not use abrasive cleaners – damage to the acrylic surface will occur.**

RE-INSTALLATION

11. Place the cartridge filter back into the filter housing.
12. Replace the filter housing lid, pushing it down to seat, ensuring that the lid o-ring does not become twisted.
13. HydroPool recommends that the lid o-ring be lubricated with a non-petroleum based lubricant (i.e. Silicone gel) when it becomes dry. This will help to prevent twisting and pinching as the lid is installed, and significantly increase longevity of the o-ring.
14. Install the filter lock-ring, turning clockwise until the lock tab snaps into place.
15. Close the air vent/bleeder valve.
16. Take the system out of **STANDBY/DRAIN ASSIST** mode.
17. When the pump starts circulating on low speed, it will be necessary to release trapped air in the filter. Carefully loosen the air vent/bleeder valve counter-clockwise until there is the hissing sound of air escaping. Once there is a steady stream of water, close the vent valve, ensuring that the o-ring does not become pinched.



CHANGING THE HOT TUB WATER

A hot tub should be drained every 8-12 weeks, depending on size and amount of use. If your hot tub is used daily or by a large number of bathers, the water should be drained more often. One method to determine the approximate length of time between water changes is to divide the water volume (in liters) of your hot tub by 13.5 and then divide by the average number of bathers each day.

Formula

$$\left(\frac{\text{Volume of water in liters}}{13.5} \right) \div \left(\frac{\text{Average daily bathers}}{\text{Days between water changes}} \right) = \text{Days between water changes}$$

Volume of water in liters Average daily bathers Days between water changes

EXAMPLE:

1000 liters divided by 13.5 divided by 2 = 37 days. The hot tub water must be changed when the amount of dissolved solids becomes excessive, and is usually indicated by "gray" or dull looking water.

DRAINING YOUR HOT TUB HYDROPOOL EXCLUSIVE QUICK-DRAIN™ & FILL REFER TO DIAGRAM

OVERVIEW

- Requires the use of 2 garden hoses - drain hose and fill hose
- While first garden hose is draining old water from hot tub...
- ...second hose is used to wash down interior surface of the hot tub and for fresh water fill.

REFER TO FIGURE 1 & FIGURE 2

1. Locate nearest drain facility (Check your local bylaws).
2. Put the hot tub control system into **STANDBY/DRAIN ASSIST*** mode. The system will automatically exit Standby Mode after 1 hour and resume normal operating functions.
3. Remove the skimmer basket so that the hole beneath it is accessible, and insert the rubber expansion plug or plastic threaded plug provided.
4. Attach garden hose to hose bib located on plumbing line beside the hot tub control system.
5. Run garden hose to drain location.
6. Open hose bib.
7. Close filtration pump return gate valve next to the hose bib (this directs the water out the drain hose).
8. Activate the filtration pump.
9. Monitor the hot tub while it drains.
10. Use the second garden hose to wash down interior surface as the hot tub continues to drain. A sponge may also be used to wipe down the interior surface.

WATER SOFTENERS

Never fill a hot tub with water from a water softener, as it could adversely effect the water chemistry, making it difficult to maintain proper water balance. If you live in an area with hard or soft water, give careful attention to your Calcium Hardness level. Topping up with soft water is acceptable.

11. To completely flush the old water from the plumbing lines: allow fresh water to fill into the foot-well area while the old water continues to be pumped out. Always keep at least 10cm (4 in.) of water in the foot-well so that pump 1 remains primed.
12. When the water from the drain hose turns clear (indicating fresh fill water), flush is complete.
13. Turn OFF the filtration pump.
14. Close the drain-hose bib on the hot tub plumbing line and continue filling hot tub with fresh water.
15. Place cover on hot tub (to avoid splash-out).
16. Open filtration pump return gate valve.
17. Press the stop key and cancel to exit the drain mode on the topside control panel (other than the pump 1 button) to take the system out of **STANDBY/DRAIN ASSIST*** mode. Filtration pump and the heater will activate to circulate and heat the water while filling continues. This also reduces the possibility of an airlock occurring.
18. Continue adding fresh fill water until level is approximately 19mm (3/4 in.) from the top of the skimmer opening.
19. Once fill is complete, remove the rubber expansion plug from the bottom of the skimmer housing.**
20. If the filter housing was opened to replace the cartridge filter, it will be necessary to release trapped air from the filter housing by carefully loosening the small black air vent/bleeder valve located on the top of the filter housing. When water begins to escape close the air vent valve.
21. In the unlikely event of a pump air lock (pump 1 is operating but there is no water movement from the jets), refer to section **PUMP PRIMING/RELEASING AN AIR LOCK**



FIGURE 1

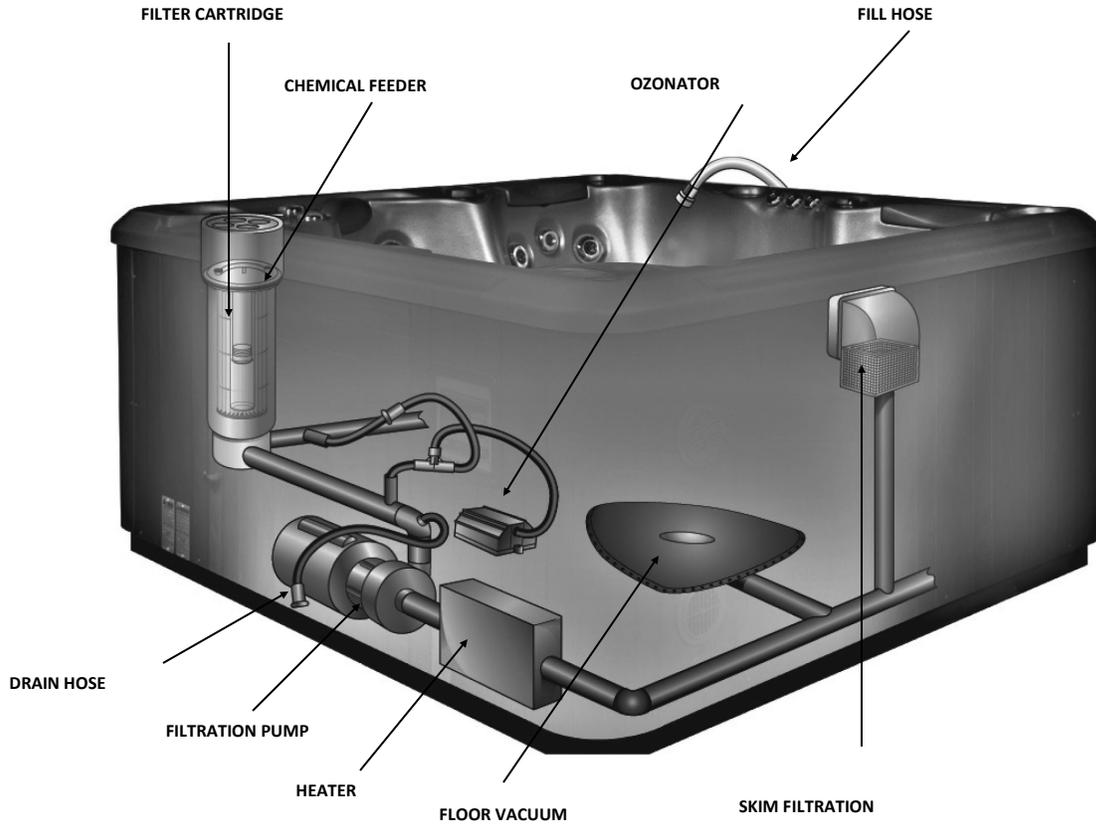


FIGURE 2

TRICHLOR WATER TREATMENT

TriChlor tablets dissolve very fast in comparison to Bromine tablets and also decreases the pH levels. TriChlor is commonly used in swimming pools and is added to the water using an in-line chlorinator, feeder or floating feeder. Trichlor should not be used in spas and swim spas due to its corrosive nature and due to the adverse affects it can have on the pumps, jets and acrylic surface. Since many chlorine tabs or pucks contain TriChlor, we do not recommend the use of them in any form and in most cases this will void the warranty.

HYDROPOOL EXCLUSIVE QUICK-DRAIN™



THE SELF-CLEANING MODE INDICATOR



This worry-free indicator is located on the topside control display. The display will indicate **"Self Clean Mode"** on the screen ensuring that the Self-Clean and Eco Heat Systems are both functioning and reassuring you of your family's safety and protection.

PROTECTING YOUR CABINET EVERLAST FINISH

Some **HYDROPOOL** hot tub cabinets are made from Everlast synthetic plastic material. These cabinets utilize a magnetic latching system to fasten and hold the exterior panels in place. In order to remove a panel for access you need to start at the lower right hand corner of the panel and disengage the first magnetic latch by pulling the panel forward enough to allow your hand to get behind the panel. Once you have done that you can run your hand behind the panel to disengage the other magnetic latches and be able to remove the panel completely.

To reinstall the panel, line the panel up in the opening and lift it in place and the magnetic latches will engage with the panel so you can shift it place and complete the reinstallation.

HYDROPOOL spa Everlast Synthetic cabinets are made from a unique, non-porous all-weather plastic material and with proper care will maintain its beauty for many years.

CLEANING

Using hot soapy water and a stiff bristle brush, a soft cloth or sponge will remove surface dirt and grime. Stains can be removed with a water-based cleaner (E.g. Windex, Pledge, Simple Green, etc.). You can also use a power washer with a medium/ wide nozzle setting to clean the surface of the product. Cleaning every few months is recommended.



...**CAUTION:** Do not use cleaners containing aromatic solvents or harsh detergent /chemicals on Everlast™ material.

If dirt and surface contaminants are causing a dirty/brownish tint, an extra step can be taken. Use a 75% bleach and 25% water mixture and wipe the surfaces down. Allow the mixture to remain on the product for an hour, then rinse thoroughly. (Be sure to do this in a safe location and protect your eyes, skin, and wear old clothes).

MAINTENANCE

Your **HYDROPOOL** 'Everlast' cabinet is made from a next-generation outdoor premium synthetic material. If the material is damaged during use (scratched or chipped), it can often be repaired.

Repairing Scratches — Take a very fine grade of steel wool (0000 grade) and “sand” the scratched area in the same direction that the embossing pattern runs. Apply enough pressure to gradually minimize the scratched area. Once the scratches are reduced, the surface area may appear dull and possibly even lighter in color; however, this will be less noticeable over time and with outdoor exposure. To finish the repair, apply liquid paste such as Finesse-it, furniture polish or carnauba wax and buff using auto paint repair buffing wheel to a finish.

WINTERIZING YOUR HYDROPOOL HOT TUB

In the event that you do not wish to use your hot tub year-round, it is very important that you properly winterize it to protect against damage from freezing. Your **HYDROPOOL** retailer can perform this service for a nominal fee. If you choose to winterize your hot tub yourself, please follow the directions outlined below:

1. Drain the hot tub entirely. See section - **DRAINING YOUR HOT TUB**.
2. Remove and clean the filter cartridge. See section - **CARTRIDGE FILTER**.
3. Remove all of the jet inserts that are removable, any suction covers, water diverter cap(s) and waterfall control valve cap(s).
4. Using a wet / dry utility vacuum, remove remaining water from the jet openings, filter cartridge housing and footwell.
5. Using the blower side of the vacuum, position the blower nozzle into the top of the water diverter cap to blow out any water remaining in the plumbing lines so that the excess water will come out the jet bodies.
6. Replace all of the water diverter caps and waterfall control valve caps ensuring all gaskets are in place.
7. At the equipment end, loosen one union from each pump so that any excess water in each pump can be vacuumed out completely.
8. Either pour or use a turkey baster where necessary to add potable biodegradable RV antifreeze to areas such as pump wet ends, jet channels, filter housing and any blower channels.
9. Reinstall all jet inserts and all suction covers.

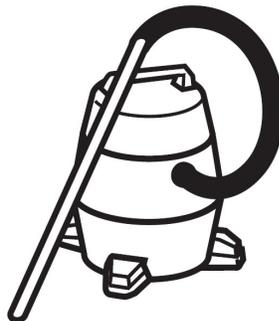
DO NOT USE AUTOMOTIVE ANTIFREEZE.

- **Important:** mixing potable biodegradable RV antifreeze with water significantly reduces its ability to protect against freezing. Therefore, it is very important ALL water is removed from the hot tub plumbing before adding.
- Add potable RV antifreeze to the holes in the bottom suction/drain to prevent any trapped water in the false floor from freezing and damaging the hot tub shell.
- Turn pump on for only a few seconds to circulate the antifreeze.
- Unthread and disconnect all unions in the support equipment area. Remove lowest winter drain plug on pump face plate. Repeat for all pumps, where applicable.

- Cover exposed plumbing connections with plastic bags and duct tape.
- Where practical, disconnect hot tub support equipment and store in a dry heated area.
- Install the safety hardcover, and cover the entire hot tub with a tarp to prevent premature weathering of the cabinet and the safety hard cover.
- Remove snow build up regularly to prevent damage to the safety hard cover.
- It is assumed that your **HYDROPOOL** hot tub has been properly installed on a reinforced concrete pad to eliminate lifting of the hot tub due to hydrostatic ground water pressure.



DRAIN PLUG LOCATIONS



If you are not 100% confident that your hot tub is properly winterized, please consult your authorized HYDROPOOL Hot Tub Retailer. Caution recommends that an authorized Hydropool Retailer winterize your hot tub in the initial year. Damage as a result of freezing is not covered by the warranty.

GENERAL TROUBLESHOOTING

WHAT TO DO IN THE EVENT OF POWER FLUCTUATIONS

The power supply into your home is, for the most part, fairly consistent. However, when local power demand is high, there is a tendency for the voltage entering your home to drop (sometimes significantly) or fluctuate. This condition is referred to as a 'brown-out'. Although safeguards have been built into the system to protect against this condition, supply voltage may drop low enough, if even for a second, to cause the system to display a 'ghost' message. Should this occur or if the display shows partial messages, try resetting the system by turning power to the swim spa, waiting a few minutes, then turning power on again. If this does not reset the system, contact your local **HYDROPOOL** retailer or service organization.

POWER FAILURE OR SYSTEM FAULT DURING COLD WEATHER CONDITIONS

If your control system will not reset, (i.e. GFCI trips) or if your pump will not circulate for any other reason, place a low wattage space heater under the cabinet in the equipment area. This will delay the risk of freezing while a service appointment is scheduled.



Always follow the manufacturers instructions when locating and placing a portable electric space heater into service. Ensure that safe clearance to combustibles surfaces is maintained. Do not leave unattended.

NOTES:

