2009 HYDROPOOL self-cleaning hot tubs Quick Start Guide

HYDROPOOL
self-cleaning hot tubs

For complete instructions please refer to the Owner's Manual on CD

Hydropool Industries:
Tel: 905.565.6810
Toll Free: 1.800.465.2933
Fax: 905.565.6820
Email: info@hydropoolhottubs.com
www.hydropoolhottubs.com

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SAVE THESE INSTRUCTIONS

IMPORTANT USER SAFETY 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.

WARNINGS

1 Children should NOT use a hot tub without alert adult supervision.
2 Children should not enter a hot tub where water temperature exceeds body temperature (37˚C / 98.6˚F).
3 Prolonged immersion in water temperatures in excess of 38˚C (100˚F) may be injurious to your health. We recommend establishing lower temperatures and shorter use periods for young children and/or those users potentially affected by hot temperatures. **Always confirm water temperature with an accurate thermometer before entering your hot tub.**
4 Do not allow children to submerge their head under water.
5 Do not use a hot tub unless all suction guards are installed to prevent body and hair entrapment. Do not sit in front of, or on top of the suction fittings or skimmer, as this will obstruct proper circulation and may result in personal injury.
6 Never operate the hot tub pump at high speed without having all suction and return lines open.
7 Always keep the hardcover installed and locked when the hot tub is not in use.
8 People using medications and/or having any adverse medical history should consult a physician before using a hot tub.
9 People with infectious diseases should not use a hot tub.
10 Exercise caution when entering or exiting a hot tub. Where practical, install a safety grab bar or handrail. Turn off the jets before entering the hot tub to improve visibility of the steps or flat entry area.
11 To avoid unconsciousness and possible drowning, do not use drugs or alcohol before or during the use of a hot tub.
12 Pregnant woman should consult a physician before using a hot tub.
13 Do not use a hot tub immediately following strenuous exercise.
14 Do not permit or use electric appliances (such as a light, telephone, radio or television) within 1.5 m (5 ft) of this hot tub, unless such appliances are rated at 12VDC or less.
15 Test the GFCI (Ground Fault Circuit Interrupter) monthly.
16 Post emergency phone numbers for Police, Fire Dept., and Ambulance at the nearest phone.
17 Maintain water chemistry/balance in accordance with manufacturer's instruction

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.

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.

WIRE SIZE

NORTH AMERICA

- The *minimum* wire size for systems that require a 40A GFCI is #8/3 c/w ground
  (also refered to as #8 gauge / 4 conductor).
- The *minimum* wire size for systems that require a 50A or 60A GFCI is #6/3 c/w ground
  (also refered to as #6 gauge / 4 conductor).

EUROPE

- The *minimum* wire size for European system is 2.5 mm^2 copper wire.

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

Silver Series/Gold Series	40A
Platinum Series/Limited Edition/Luxury Edition	50A
Titanium Series/Titanium Plus Series	60A

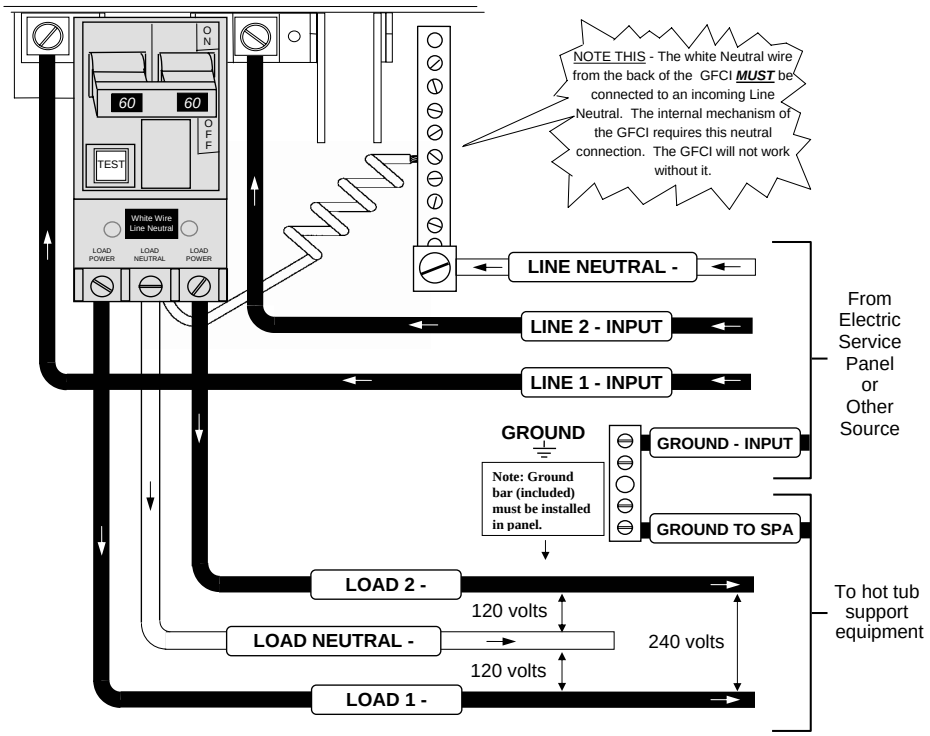
EUROPE

Silver Series/Gold Series/Platinum Series/Limited Edition	20A
Titanium Series/Titanium Plus Series	40A

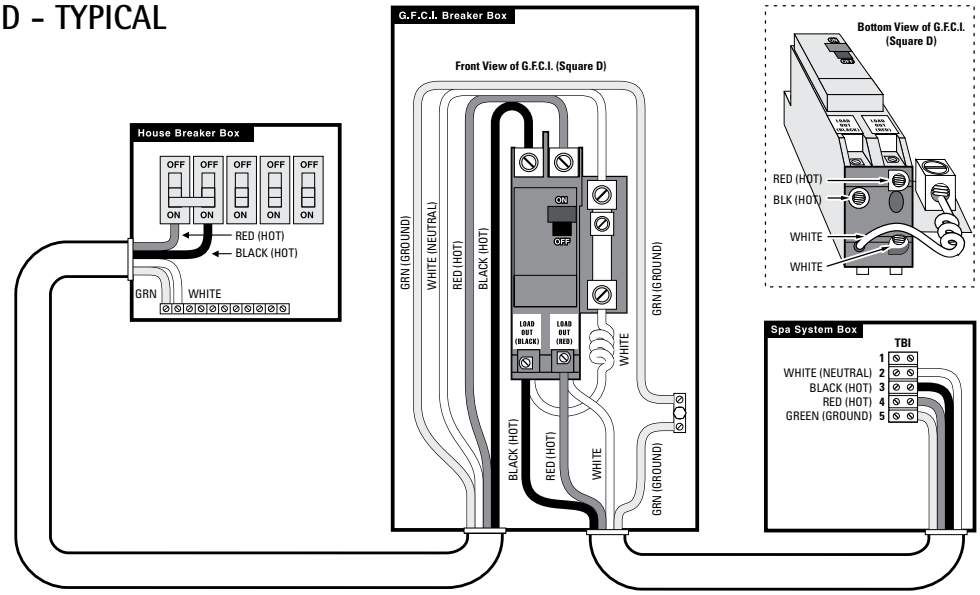
NORTH AMERICA – GFCI INSTALLATION

Important Note: 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.

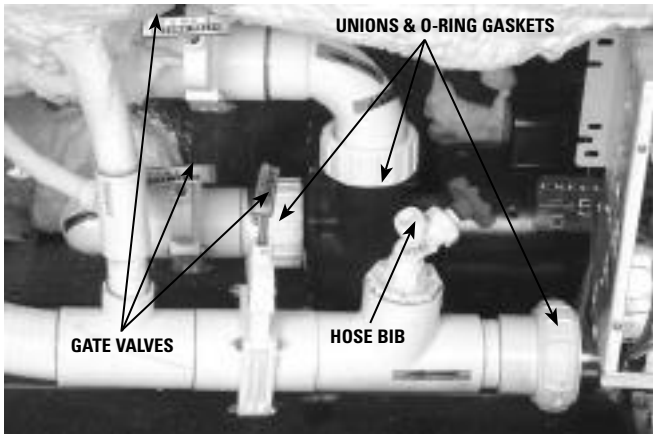
SIEMENS - TYPICAL



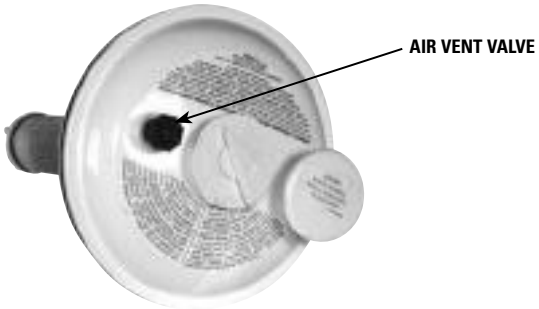
SQUARE D - TYPICAL



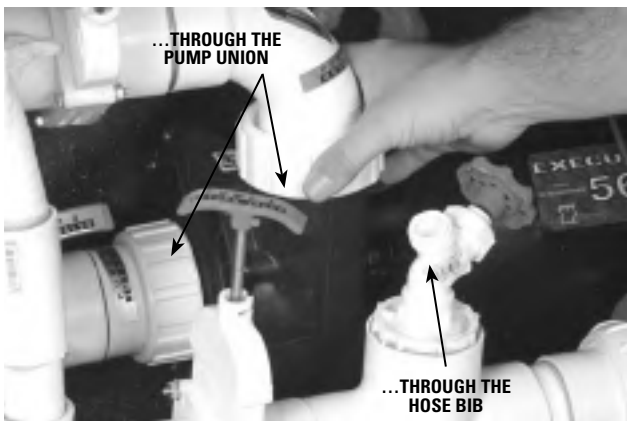
FILLING, CHECKING AND STARTING YOUR HOT TUB



RELEASING AIR TRAPPED IN FILTER...



RELEASING AN AIR LOCK...



FILLING

- When adding water for the first time, **the hot tub should be filled through the skimmer opening** (helps to prevent air locks) using a standard garden hose. Fill the hot tub to the recommended level, approximately 19 mm (3/4") from the top of the skimmer opening.
- Pull up the handles on the intake and return gate valves (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. See section JET & FEATURE OPERATION

CHECKING

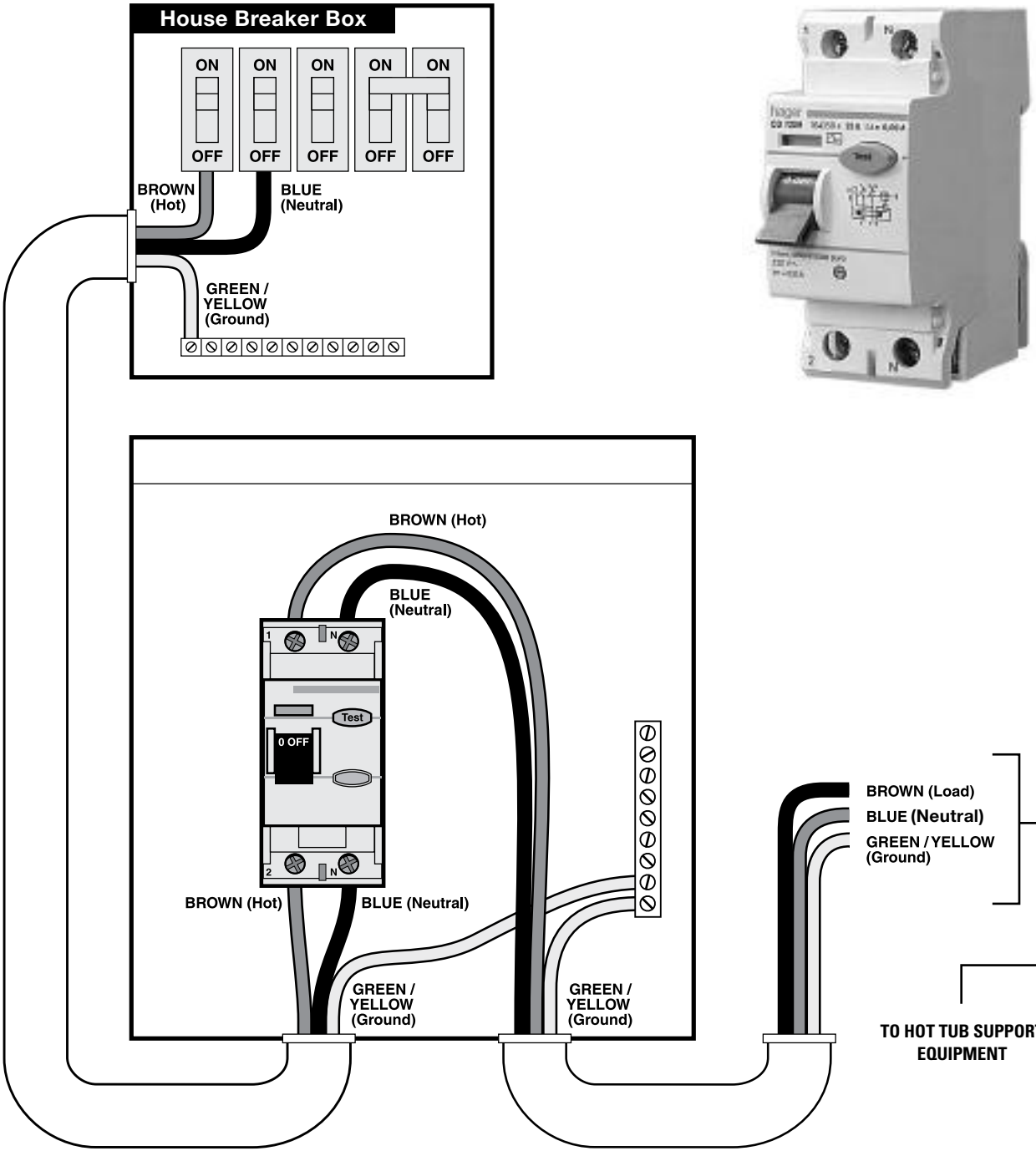
- Although your hot tub was thoroughly water-tested in the factory, some loosening of fittings can occur during shipping. **Before any decking, tiling or carpeting is completed around the installation, fill and operate your hot tub to test for leaks** (this ensures easy access and inexpensive correction). Check all union connections and plumbing for minor leaks.

STARTING & PRIMING

- Release the air trapped in the filter, open the hose bib to allow the air out until water starts to flow.
- 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. P. 5-10
- Check that the jets are funtioning.
- Should the jets not function. This means you need to prime the pump by releasing an air lock: **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).
- Turn the pump onto high speed and re-check for leaks. The control system will automatically return the pump to low speed 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 sanitizor. See section HOT TUB WATER MAINTENANCE
- The hot tub will require 8-10 hours to reach the desired temperature.
- Keep insulated safety hard cover on the hot tub, and the air controls closed during the entire heat up process.

EUROPE – R.C.D. INSTALLATION - TYPICAL

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.



HOT TUB WATER BALANCE & ROUTINE MAINTENANCE

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, safe 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

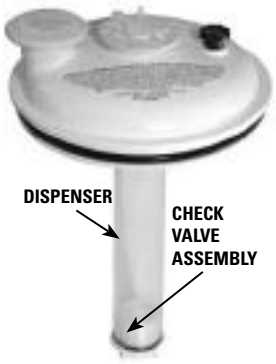
For these reasons, it is very important to develop proper hot tub water maintenance habits and follow your Hydropool retailer's recommended water maintenance procedures.

CHEMICAL HANDLING SAFETY HINTS

- Always refer to the instructions specified by the chemical manufacturer on the packaging
- 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
- 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:



- Built in dispenser: if your Hydropool hot tub was ordered with the optional 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. Unscrew the check valve assembly at the end of the tube and add 5 or 6 tablets. Do not overfill dispenser as performance will be affected. Set the dial initially to '5', and allow water to circulate for 3 to 4 hours before testing level. Adjust dial more or less as necessary.

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

5 Test pH and Total Alkalinity and adjust accordingly.

ROUTINE MAINTENANCE

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 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

1 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

1 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

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

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 Press down the lock tab to disengage and turn the locking ring counter clockwise.
4 Pull the filter lid upwards, and lift the cartridge element 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 recomends 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 devise to clean cartridge element. Do not put in dishwasher or washing machine.

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 recomends that the lid o-ring be lubricated with a non-petroleum based lubricant (ie. 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.

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.

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 handles are placed so that even one person can easily carry a large cover. 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. Fold the cover first, then lift by the handles. 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.

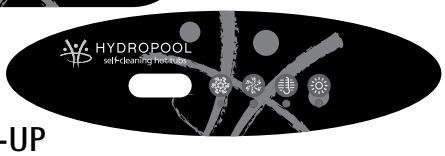
The cover should be cleaned at least twice a year with a vinyl moisturizer and protector.

HYDROPOOL SELF CLEAN SERIES CONTROL SYSTEMS
NORTH AMERICA/ EUROPE

HYDROPOOL SELF CLEAN – SILVER & GOLD SERIES

North America

Europe



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 can be primed efficiently and damage to the system can be avoided.

At initial power-up, this display will appear, and the system will show 4 sets of numbers in succession (ie. 49 then 63 then 37 then 24). These numbers represent the current software revision, and the system input voltage.

After the initial software indicators are shown, this display will appear. This display is indicating that the system is in PUMP **PRIMING** MODE. This mode will last for 4 to 5 minutes before automatically exiting and entering the normal operation mode. You can also manually exit PUMP PRIMING MODE after the pump is primed.

While in this mode, the heater circuit is disabled to allow the priming process to be completed without the possibility of energizing the heater element during low flow or no flow conditions. The system will not automatically activate any of the functions, however, by pushing the pad on the topside control, the pump can be manually activated to facilitate priming.

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

PUMP PRIMING MODE

As soon as 'PR' is indicated on the topside panel, push the pad to start Pump 1 in low speed, then again to switch to high speed to facilitate priming. See FILLING, CHECKING AND STARTING YOUR HOT TUB for complete instructions on pump priming.

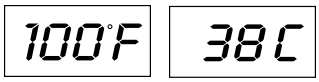
Once pump priming has been successfully completed, press the pad to turn off the pump.

Next, manually exit PRIMING MODE by pressing the pad. If you do not manually exit PRIMING MODE, it will automatically terminate after 4 to 5 minutes. Be sure that the pump is primed before exiting this mode.

TEMPERATURE CONTROL FUNCTIONALITY AND ADJUSTMENT

After you manually exit or the system automatically exits PRIMING MODE, your hot tub will automatically heat to the factory preset default temperature of 38˚C (100˚F) The topside panel will briefly show the default temperature, and then the display will appear as follows:

Note that the water temperature is not yet displayed, as the system requires approximately 2 minutes of water flow through the heater to determine temperature. This is referred to as 'polling' and is indicated on the display by the - - icon. After 2 minutes the display will show the current measured water temperature



Press the pad to increase the temperature to the desired setting. The **Heat** indicator light on the Topside Panel will shimmer for 90 seconds, indicating that the system is not yet heating, then will illuminate solidly to indicate that the heater circuit has been energized and the spa water is being heated.

In Standard Operating Mode, the system automatically activates Pump 1 low speed every 30 minutes for at least 2 minutes. After 2 minutes, the spa water temperature is determined. At this point, if the water temperature is lower than the set temperature, P1 will continue to run and the **Heat** indicator light on the Topside Panel will illuminate. The heater will operate until the water temperature reaches the set temperature point, after which, both the heater and Pump 1 low will automatically turn off.

TO CHECK/CHANGE THE SET TEMPERATURE

The last measured temperature is constantly displayed on the topside panel. When this pad is pressed once any time during normal operation, the display will show the set temperature for 3 seconds. Press this pad a second time to increase or decrease the set temperature. To change the direction of the temperature settings (ie. lower vs. raise the temperature), allow the display to revert back to the current water temperature then press the pad again.

The temperature can be adjusted from 21˚C (70˚F) to 40˚C (104˚F) in 1˚ increments.

HEATER FUNCTION

The heater operates with pump low-speed only, and turns off when ever pump high-speed or blower is activated.

PUMP / JETS FUNCTION

Press this pad to activate the pump

1st press – turns on low speed
2nd press – turns on high speed
3rd press – turns off pump

When low speed is already operating, the 1st press of the pad puts the pump directly into high speed.

Low speed starts automatically every 30 minutes to measure water temperature (in STANDARD Mode only – see MODE FUNCTION), when a filter cycle is activated, or when a freeze condition is detected.

When the blower (optional) is manually activated, the pump low speed is automatically activated and operates until the blower times out. If the blower is turned on even briefly, and then turned back off, low speed will operate for a minimum of 2 minutes.

PUMP AUTOMATIC TIME-OUT

High speed – 15 minutes
Low speed – 4 hours

FILTER CYCLES

The system will automatically activate the pump low speed to filter the water either once or twice each day, and can be programmed by the user. The first filter cycle begins 6 minutes after the spa is initially powered up. The second filter cycle begins 12 hours after the start of the first filter cycle. The filter cycle duration - length of time the pump low runs - is programmable from 1 to 12 hours (F1 to F12). The factory default is 2 hours, twice daily.

PROGRAMMING FILTER CYCLES

To change the factory default filter cycle settings

Press then - the current filter cycle duration will be displayed

Press again to adjust the filter cycle duration

Press to exit programming mode and save changes.

BLOWER OPTIONAL – FACTORY INSTALLED

Press this pad to turn the blower on and off.

The system will automatically turn off the blower after 15 minutes.

PURGE CYCLES BLOWER ONLY

The system automatically activates the blower for 30 seconds at the beginning of each filter cycle to introduce fresh, sanitized water into the blower plumbing circuit.

MODE FUNCTION

A combination of keypads is used to change hot tub operation to either 'STANDARD', 'ECONOMY' or 'SLEEP' mode.

PROGRAMMING MODE FUNCTION

Press then - the current mode setting will flash on the display

Press then repeatedly to select mode

STANDARD MODE

The system automatically starts the pump low speed every 30 minutes to measure water temperature, and maintain the set temperature. The display will show briefly, then the last measured water temperature. The current water temperature is displayed only after the pump has been operating for at least 2 minutes.

ECONOMY MODE

The system will heat to the set temperature only during the filter cycles. The display will show when the temperature is non-current. When the temperature is current, the display will alternate between and the water temperature.

SLEEP MODE

The system will heat to within 10˚C (20˚F) of the set temperature only during filter cycles. The display will show until the mode is changed.

STANDBY / DRAIN ASSIST

The standby/drain assist feature stops the system from operating automatically, allowing for convenient filter cartridge removal and for safe draining of the hot tub. The following pads must be pressed within 3 seconds of each other.

Press then the pad - the display will flash .

If the system is heating when Standby Mode is activated, will flash on the display and the pump will continue to operate for 15 seconds to allow the heater to cool off before stopping.

All functions will turn off, but the pump low speed can be activated (by pressing the pad) to facilitate draining the hot tub - the display will show .

Press any pad other than the pad to return the system to normal operation.
See DRAINING YOUR HOT TUB for detailed instructions.

HYDROPOOL SELF CLEAN SERIES CONTROL SYSTEMS EUROPE/NORTH AMERICA

HYDROPOOL SELF CLEAN – PLATINUM & TITANIUM SERIES / LIMITED & LUXURY EDITION

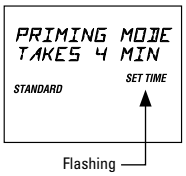
Titanium

Platinum, Limited Edition, Luxury Edition

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 pumps can be primed efficiently and damage to the pumps can be avoided.

At initial power-up, this display will appear, and the system will show 4 sets of numbers in succession (ie. 100 then 114 then 28 then 240). These numbers represent the current software revision, and the system input voltage.

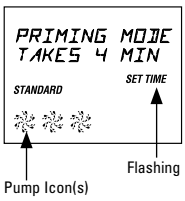


After the initial software indicators are shown, this display will appear. This display is indicating that the system is in PUMP PRIMING MODE. This mode will last for 4 to 5 minutes before automatically exiting and entering the normal operation mode. You can also manually exit the PUMP PRIMING MODE after the pumps are primed.

While in this mode, the heater circuit is disabled to allow the priming process to be completed without the possibility of energizing the heater element during low flow or no flow conditions. The system will not automatically activate any of the functions, however, by pushing the pads on the topside control, the pumps can be manually activated to facilitate priming.

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

PUMP PRIMING MODE

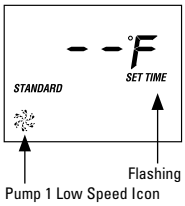


As soon as *PRIMING MODE* is indicated on the topside panel, push the left pad to start Pump 1 in low speed, then again to switch to high speed. Push the center pad and right pad to start Pump 2 and *Pump 3 respectively (*Titanium Series only). These are both single speed - high only. All of the pumps will now be operating in high speed to facilitate priming. See FILLING, CHECKING AND STARTING YOUR HOT TUB for complete instructions on pump priming.

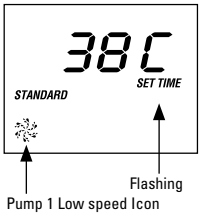
Once pump priming has been successfully completed, press the pads to turn off the pumps. Next, manually exit PRIMING MODE by pressing either the pad or the pad. If you do not manually exit Priming Mode, it will automatically terminate after 4 to 5 minutes. Be sure that the pumps have been primed before exiting this mode.

TEMPERATURE CONTROL FUNCTIONALITY AND ADJUSTMENT

After you manually exit or the system automatically exits PRIMING MODE, your hot tub will automatically heat to the factory preset default temperature of 38˚C (100˚F). The topside panel will briefly show the default temperature, and then the display will appear as follows:



Note that the water temperature is not yet displayed, as the system requires approximately 2 minutes of water flow through the heater to determine temperature. This is referred to as 'polling' and is indicated on the display by the icon. After 2 minutes the display will show the current measured water temperature.



Press the pad to increase the temperature to the desired setting. The icon will appear on the display indicating that the heater has been activated.

In Standard Operating Mode, the system automatically activates Pump 1 low speed every 30 minutes for at least 2 minutes. After 2 minutes, the spa water temperature is determined. At this point, if the water temperature is lower than the set temperature, P1 will continue to run and the icon will appear on the display. The heater will operate until the water temperature reaches the set temperature point, after which, both the heater and Pump 1 low will automatically turn off.

TO CHECK/CHANGE THE SET TEMPERATURE

The last measured temperature is constantly displayed on the topside control. When either of these pads is pressed once, the display will show the set temperature. Press either pad a second time to increase or decrease the set temperature. After 3 seconds the display will once again show the last measured temperature.

The temperature can be adjusted from 21˚C (70˚F) to 40˚C (104˚F) in 1˚ increments

HEATER FUNCTION

Platinum Series, Limited & Luxury Edition: for units connected to a 16A electrical supply service, the heater operates only on pump 1 low speed and turns off when either pump high-speed or blower is activated.

Titanium Series: for units connected to a 32A electrical supply service, the heater operates with any 2 high-speed pumps or 1 high-speed pump and blower.

PUMPS / JETS FUNCTION

from left to right on topside control – P1, P2, *P3 (*Titanium series only)

PUMP 1 (P1)

1st press	– turns on low speed	–	the P1 icon spins slowly
2nd press	– turns on high speed	–	the P1 icon spins faster
3rd press	– turns off pump	–	no icon displayed when P1 is off

When P1 low is already operating, the 1st press of the P1 pad puts the pump directly into high speed.

Low speed P1 starts automatically every 30 minutes to measure water temperature (in STANDARD Mode only – see MODE FUNCTION), when a filter cycle is activated, or when a freeze condition is detected.

When P2, P3 or the blower is manually activated, P1 low speed is automatically activated and operates until the pump(s) or blower time out. If P2, P3 or the blower is turned on even briefly, and then turned back off, P1 low will operate for a minimum of 2 minutes.

PUMP 2 (P2)

1st press	– turns on high speed	–	the P2 icon spins fast
2nd press	– turns off pump	–	no icon displayed when P2 is off.

PUMP 3 (P3) – TITANIUM SERIES ONLY

1st press	– turns on high speed	–	the P3 icon spins fast
2nd press	– turns off pump	–	no icon displayed when P3 is off.

PUMPS AUTOMATIC TIME-OUT

P1 high speed, P2 & P3 – 15 minutes
P1 low speed – 4 hours.

PUMP & BLOWER OPERATING CONDITIONS

Platinum Series, Limited & Luxury Edition
P1 and P2 have priority over the blower. If either pump is on high-speed, the system will not activate the blower until either pump automatically times-out or is manually deactivated by the user. Alternately, if only one of the high-speed pumps is ON and the blower is already ON, when the second high-speed pump is activated, the blower will turn OFF.

Example 1: If P1 and P2 high-speed are activated at the same time, and the blower button is pressed 5 minutes later, the blower will turn ON after a 10 minute delay (balance of the P1 and P2 high-speed time-outs) and operate for 5 minutes (15 minutes minus 10 minutes)

Example 2: If one high-speed pump (either P1 or P2) and blower are activated at the same time, and the second high-speed pump button is pressed 5 minutes later, the blower will automatically turn OFF, but the system will continue the time-out countdown. If 5 minutes later, P1 or P2 is manually turned OFF by the user, the blower will automatically turn ON again and operate for the 5 minutes remaining before the end of the automatic time-out.

CLEAN-UP CYCLE

The Clean-up Cycle begins 30 minutes after the pump(s) or blower have been turned off or have automatically timed-out. P1 low speed and the ozonator (optional) will operate for one hour.

SETTING THE SYSTEM CLOCK TIME

The word *TIME* flashes on the topside control display upon initial start-up. This reminder will disappear once the clock time is programmed.

Press then to enter programming mode.

To set the hour: Press or - each press changes the time by 1 hour.

Press to enter, and to continue to set minutes.

To set minutes: Press or - each press changes the time by 1 minute.

Press the pad again to continue to the filter cycle programming mode (see below) OR Press the pad to exit programming mode.

During normal operation, pressing the pad will display the current time for 3 seconds.

FILTER CYCLES

Once the system clock time has been programmed, the system will automatically activate P1 low speed to filter the water for 2 hours twice each day. During the filter cycle, the display will show *FILTER 1* or *FILTER 2*.

FACTORY PRESET DEFAULT

'FILTER 1' the system automatically activates P1 low to operate from 8 AM to 10 AM. The filter 1 (F1) LED indicator on the left side of the topside control panel will light during filter cycle 1 operation.

'FILTER 2' the system automatically activates P1 low to operate from 8 PM to 10 PM. The filter 2 (F2) LED indicator on the left side of the topside control panel will light during filter cycle 2 operation.

PROGRAMMING FILTER CYCLES

To change the factory default filter cycle settings
Press ☼ then ✳ then ✳ then ✳ within three seconds.

(You will already have advanced to this point if you pressed ✳ after completing the SETTING THE SYSTEM CLOCK TIME sequence)

At this point *PROGRAM*, *FILTER 1* and *START TIME* will appear on the display

To set the hour: Press ▲ or ▼ - each press changes the time by 1 hour.

Press ✳ to enter, and to continue to set minutes.

To set minutes: Press ▲ or ▼ - each press changes the time by 5 minutes

Press ✳ to enter, and to proceed

At this point *PROGRAM*, *FILTER 1* and *END TIME* will appear on the display

To set the hour: Press ▲ or ▼ - each press changes the time by 1 hour.

Press ✳ to enter, and to continue to set minutes

To set minutes: Press ▲ or ▼ - each press changes the time by 5 minutes

Press ✳ to enter, and to proceed

At this point *PROGRAM*, *FILTER 2* and *START TIME* will appear on the display

Adjust time as above Press ✳ to enter, and to proceed

At this point *PROGRAM*, *FILTER 2* and *END TIME* will appear on the display

Adjust time as above

Press the ✳ pad again to enter the filter cycle times into the system and exit programming mode.

The 'F1' light on the left side of the topside control panel will illuminate to indicate that the system is in Filter 1 cycle.

The 'F2' light on the left side of the topside control panel will illuminate to indicate that the system is in Filter 2 cycle.

PURGE CYCLES

The system automatically activates P2, P3 and the blower for 30 seconds at the beginning of each filter cycle to introduce fresh, sanitized water into these plumbing circuits.

MODE FUNCTION

✳ This pad is used to change hot tub operation to either *STANDARD*, *ECONOMY* or *SLEEP* mode. Press ✳ to enter mode programming and press ▼ to select the desired mode. The LCD will flash until ✳ is pressed again to confirm the selection.

STANDARD MODE

The system automatically starts P1 low speed every 30 minutes to measure water temperature, and maintain the set temperature. The word *STANDARD* will remain on the display along with the last measured temperature. The current water temperature is displayed only after the pump has been operating for at least 2 minutes.

ECONOMY MODE

The system will heat to the set temperature only during the filter cycles. The display will show the word *ECONOMY*.

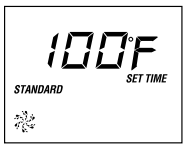
STANDARD-IN-ECONOMY MODE

While the system is in Economy Mode, pressing any ☼ pad or the ⁘ pad will cause the system to activate Standard Mode for 1 hour, after which the system will revert back to Economy Mode. Pressing the ✳ pad during this time will put the system back into Economy Mode immediately.

SLEEP MODE

The system will heat to within 10˚C (20˚F) below the set temperature only during filter cycles. The display will show the word *SLEEP*.

LIQUID CRYSTAL DISPLAY (LCD)



Continually provides feedback on the operating status of the hot tub. Icons indicate various functions and programming information.

LCD INVERT

This feature inverts the LCD readout for convenient viewing from inside the hot tub. To invert the readout,

Platinum Series: press ▲ or ▼ then ⁘
Titanium Series: press ☰

To return the LCD readout to normal viewing (from outside of the hot tub), repeat.

TOPSIDE PANEL LOCK FEATURES

TEMPERATURE LOCK

The temperature lock feature prevents unauthorized temperature adjustment of the hot tub water. When the temperature lock is activated, all automatic functions will continue to operate normally.

The following pads must be pressed within 3 seconds of each other to activate the lock:

▲ then ☼ then P1 ❄ then ▲

TEMPERATURE UNLOCK

The following pads must be pressed within 3 seconds of each other to deactivate the lock:

▼ then ☼ then P1 ❄ then ▼

When locked, the TL (Temperature Lock) light on the left side of the topside control panel will illuminate. Only the topside control panel temperature pads will be deactivated.

TOPSIDE PANEL FULL LOCK

The topside panel lock feature prevents unauthorized use of the hot tub controls. When the topside control panel lock is activated, all automatic functions will continue to operate normally.

The following pads must be pressed within 3 seconds of each other to activate the lock:

☼ then P1 ❄ then ▲

TOPSIDE PANEL UNLOCK

The following pads must be pressed within 3 seconds of each other to deactivate the lock:

☼ then P1 ❄ then ▼

When locked, the PL light (Panel Lock) on the left side of the topside control panel will illuminate. All of the topside control panel pads will be deactivated except for the ☼ pad.

STANDBY / DRAIN ASSIST

The standby/drain assist feature stops the system from operating automatically, allowing for convenient filter cartridge removal and for safe draining of the hot tub. The following pads must be pressed within 3 seconds of each other.

The system will automatically exit Standy Mode after 1 hour and resume normal operating functions.

Press ▼ then the P2 ❄ pad and the display will flash:
SBY (*Platinum series*)
STANDBY (*Titanium series*)

If the system is heating when Standby Mode is activated, *SbY* will flash on the display and the pump will continue to operate for 15 seconds to allow the heater to cool off before stopping.

All functions will turn off, but P1 low speed can be activated (by pressing the P1 ❄ pad) to facilitate draining the hot tub and the display will show
drn (*Platinum series*)
DRAINING (*Titanium series*)

Press any pad other than the P1 ❄ pad to return the system to normal operation. See section DRAINING YOUR HOT TUB for detailed instructions.

LED MOOD LIGHTING

Press the ☼ pad on the topside control to start the selection of LED lighting modes. Pressing the ☼ pad on/off within 3 seconds cycles through the various 'light shows'. When the LED lighting is turned off for more than 5 seconds, then turned back on, the system will resume the last 'light show'. The system will automatically turn off the mood lighting after 4 hours.

BLOWER OPTIONAL – FACTORY INSTALLED

⁘ Press this pad to turn the blower on and off.

The system will automatically turn off the blower after 15 minutes.

OZONATOR OPTIONAL

The ozonator operates during FILTER CYCLES and CLEAN UP CYCLES only. The display will show the *03* icon while the ozonator is operating.
Pressing any pad on the topside control panel will suspend ozonator function for 1 hour.

FREEZE PROTECTION

If the temperature sensor detects a drop to 4˚C (39˚F) within the heater chamber, the system automatically activates the pumps to provide freeze protection. The pumps will operate until the temperature reaches 5˚C (41˚F) before returning to normal system mode.

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 (_____ ÷ 13.5) ÷ (_____) = (_____)

Volume of water in litres | 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 (shower, laundry tub, floor drain, lawn, etc.).
2. Put the hot tub control system into STANDBY/DRAIN ASSIST mode. **The system will automatically exit Standy 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 #10 rubber expansion 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 pump1 return gate valve next to the hose bib (this directs the water out the drain hose).
8. Activate the low speed 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.
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 low speed 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 pump 1 return gate valve.
17. Press any button on the topside control panel (other than the pump 1 button) to take the system out of STANDBY/DRAIN ASSIST mode. Pump 1 low speed and the heater will activate to circulate and heat the water while filling continues. This also reduces the possibility of an airlock occuring.
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 #10 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 nessesary 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 FILLING, CHECKING & STARTING YOUR HOT TUB

* It may be necessary to put system into **STANDBY/DRAIN ASSIST** mode in order to remove plug.

FIGURE 1

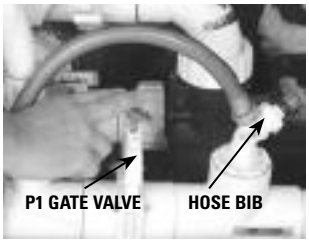


FIGURE 2

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.

SEE OWNER'S MANUAL ON CD FOR WINTERIZATION INSTRUCTIONS AND COMPLETE DETAILS

NOTES