

# AQUATERRA S P A S



## ***OWNER'S MANUAL*** ***110V / 230V 60Hz Models***



# AquaTerra OWNER'S MANUAL

## 110V / 230V Systems

### Owner's Record

#### Locating the Spa Serial Number:

The spa serial number label is located inside the equipment compartment. Equipment compartment access panel is below the spas 4-button topside control panel. You will need the spa model and serial number to properly register your spa and activate coverage. Write your spa information in the space provided.

DATE PURCHASED:

PURCHASED FROM:

SPA MODEL:

SERIAL NUMBER:

See Page 7

Please read this Owner's Manual carefully, as it is designed to provide you with the information you will need to ensure the safe, secure use of your spa.

**IMPORTANT:** Watkins Manufacturing Corporation reserves the right to change specifications and/or design without notification and without any obligation.

#### SPA SPECIFICATIONS

Model	Spa Seating	Length	Width	Height	Dry Weight	Gallons	Electrical Specs 60Hz
Montecito™	6 person	6'9"	6'9"	34"	476 LBS.	265	230V
Verona™	6 person	6'9"	6'9"	34"	450 LBS.	315	110 or 230V
Palisades®	5 person	7'3"	6'5"	34"	445 LBS.	290	110 or 230V
Aryana™	5 person	7'3"	6'5"	34"	445 LBS.	290	230 V
Transport® II	5 person	6'3"	6'3"	34"	424 LBS.	245	110 or 230V
Newporter™ 3.0	5 person	6'6"	6'6"	34"	359 LBS.	265	110 or 230V
Grayson™	4 person	5'2"	5'10"	32"	276 LBS.	205	110 or 230V
Adriana™	4 person	6'9"	5'3"	33"	382 LBS.	250	110 or 230V
Toscana™ II	3 person	6'	6'	31"	378 LBS.	185	110 or 230V

#### **CAUTION**

DO NOT OPERATE SPA BEFORE READING THIS MANUAL

Failure to read this manual and follow its instructions may result in unsafe operation and or permanent damage to your portable spa.

Most cities, counties, states, and countries require permits for exterior construction and electrical circuits. In addition, some communities have codes requiring residential barriers such as fencing and/or self-closing gates on the property to prevent unsupervised access to a pool or spa by children. Be sure to check with your local agencies for specific requirements.

If you need additional information and/or assistance, please contact Customer Service at 888-961-7727 Ext. 8440 or at [ahsservice@watkinsmfg.com](mailto:ahsservice@watkinsmfg.com).

**Thank you for choosing an AquaTerra Spa.** Visit our web site at [www.AquaTerraspas.com](http://www.AquaTerraspas.com).

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## **IMPORTANT SAFETY INSTRUCTIONS**

### **READ AND FOLLOW ALL INSTRUCTIONS**

#### **AVOIDING THE RISK TO CHILDREN**

##### **DANGER:**

- **RISK OF CHILD DROWNING.** Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a spa unless they are supervised at all times. Children should be supervised to not use the spa as a toy.

##### **WARNING:**

- To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
- To reduce the risk of injury, lower water temperatures are recommended for young children. Children are especially sensitive to hot water.

##### **DO:**

- Make sure you always lock the child resistant locks after using the spa for your children's safety. Every spa is equipped with a locking cover that meets the ASTM F1346-91 Standard for Safety Covers.
- Test the water temperature with your hand before allowing your child to enter the spa to be sure that it's comfortable. Children are especially sensitive to hot water.
- Remind children that wet surfaces can be very slippery. Make sure that the children are careful when entering or exiting the spa.

##### **DON'T:**

- Allow children to climb onto the spa cover.
- Allow children to have unsupervised access to the spa.

#### **AVOIDING THE RISK OF ELECTROCUTION**

##### **Risk of Electrocutation**

- Connect only to a grounded source.
- Do not bury the power cord. A buried power cord may result in death or serious personal injury due to electrocution if direct burial-type cable is not used, or if improper digging occurs.
- A ground terminal (pressure wire connector) is provided on the control box inside the unit to permit connection of a minimum No. 10 AWG solid copper bonding conductor between this point and any metal equipment, metal water pipe, metal enclosures of electrical equipment, or conduit within five feet (1.5 m) of the unit as needed to comply with local requirements.

##### **WARNING:**

- To reduce the risk of electrical shock, replace a damaged cord immediately. Failure to do so may result in death or serious personal injury due to electrocution.
- Your 110 volt spa is provided with a Ground Fault Circuit Interrupter for user and equipment protection. To ensure proper operation of this important safety device, test according to the following instructions per electrical configuration. If the power cord is damaged, it must be replaced by the manufacturer, its authorized service agent or a similarly qualified person in order to avoid hazard.

# SAFETY INFORMATION

## **110 VOLT, CORD-CONNECTED MODELS:**

- The GFCI is located at the end of the power cord. Before each use, with the unit operating, push the TEST button. The unit should stop operating and the GFCI power indicator will go out. Wait 30 seconds and then reset the GFCI by pushing the RESET button. The GFCI power indicator will turn on, restoring power to the spa. If the interrupter does not perform in this manner, there may be an electrical malfunction and with it, the possibility of an electric shock. Disconnect the power until the problem has been corrected.

**NOTE: This will reset the filter cycle.**

## **230 VOLT, CONVERTED MODELS:**

- A ground terminal is provided on the control box. To reduce the risk of electric shock, connect this terminal to the grounding terminal of your electrical service or subpanel with a continuous green, insulated copper wire. The wire must be equivalent in size to the circuit conductors supplying the equipment. In addition, a bonding terminal (pressure wire connector) is provided on the outside of the control box for bonding to local ground points. To reduce the risk of electric shock, this connector should be bonded with a No. 8 AWG (8.4 mm<sup>2</sup>) solid copper wire to any metal ladders, water pipes, or other metal within 5 feet (1.5 m) of the spa to comply with local requirements. The means of disconnection must be readily accessible, but must be installed at least 5 feet (1.5 m) from the spa.
- Your spa requires a suitably rated circuit breaker to open all ungrounded supply conductors.
- Your spa must have a ground fault circuit interrupter in an electrical subpanel. Before each use of the spa and with the unit operating, push the TEST button on the breaker. The switch should click over to the "Trip" position. Wait 30 seconds and reset the GFCI breaker by switching it completely off and then completely on. The switch should then stay on. If the interrupter does not perform in this manner, it is an indication of an electrical malfunction and the possibility of an electric shock. Disconnect the power until the fault has been identified and corrected.

**IMPORTANT:** Failure to wait 30 seconds before resetting the GFCI may cause the spa's Power Indicator (on the control panel) to blink. If this occurs, repeat the GFCI test procedure.

## **DANGER: RISK OF ELECTRICAL SHOCK**

- Install spa at least 5 feet (1.5 m) from all metal surfaces. A spa may be installed within 5 feet of a metal surface if each metal surface is permanently connected by a minimum No. 10 AWG solid copper conductor attached to the wire ground connector on the terminal box that is provided for this purpose if in accordance with National Electrical Code ANSI/NMFA70-1993.
- Do not permit any electrical appliances, such as a light, telephone, radio, or television within 5 feet (1.5 m) of a spa. Failure to maintain a safe distance may result in death or serious personal injury due to electrocution if the appliance should fall into the spa.
- Install your spa in such a way that drainage is away from the electrical compartment and from all electrical components.

## **DO:**

- Be sure your spa is connected to the power supply correctly - use a licensed electrical contractor.
- Disconnect the spa from the power supply before draining the spa or servicing the electrical components.
- Test the Ground Fault Circuit Interrupter(s) before each use.

# SAFETY INFORMATION

## **DON'T:**

- Use the spa with the equipment compartment door removed.
- Place electrical appliances within 5 feet (1.5m) of the spa.
- Use an extension cord to connect the spa to its power source. The cord may not be properly grounded and the connection is a shock hazard. An extension cord may cause a voltage drop, which will cause overheating of the jet pump motor and motor damage.
- Attempt to open the electrical control box. There are no user serviceable parts inside.

## **RISKS TO AVOID**

### **⚠ DANGER: RISK OF INJURY**

- DO NOT sit in the filter compartment area. Sitting in this area can cause:
    - a) Restriction of Filter Pump suction/vacuum
    - b) Damage to components
  - Both can result in bodily harm. Should damage occur to components in this area, replace immediately!
- To reduce the risk of injury to persons, DO NOT remove floating weir, basket, and filter located in the filter compartment while the spa is running.
- The suction fittings in the spa are sized to match the specific water flow created by the pump. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.
  - There is a danger of slipping and falling. Remember that wet surfaces can be very slippery. Take care when entering or exiting the spa.
  - Never operate spa if the suction fittings are broken or missing.
  - The device should not be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they receive supervision or training.
  - People with infectious diseases should not use the spa.
  - Keep any loose articles of clothing or hanging jewelry away from rotating jets or other moving components.

### **Increased side effects of medication**

- The use of drugs, alcohol or medication before or during spa use may lead to unconsciousness with the possibility of drowning.
- Persons using medications should consult a physician before using a spa; some medication may cause a user to become drowsy, while other medication may affect heart rate, blood pressure, and circulation.
- Persons taking medications which induce drowsiness, such as tranquilizers, antihistamines or anticoagulants should not use the spa.

### **Health problems affected by spa use**

- Pregnant women should consult a physician before using spa.
- Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using spa.

### **Unclean water**

- Keep the water clean and sanitized with correct chemical care. The recommended levels for your spa are:

Free Available Chlorine (FAC):	3.0-5.0 ppm	Total Alkalinity:	40 - 120 ppm
Water pH:	7.2 - 7.8	Calcium Hardness:	50- 150 ppm

**IMPORTANT:** Turn jet pump on for at least ten minutes after adding ANY spa water chemicals into the filter compartment.

- Clean the filter cartridge monthly to remove debris and mineral buildup which may affect the performance of the hydromassage jets, limit the flow, or trip the high-limit thermostat which will turn off the entire spa.

# SAFETY INFORMATION

## ***AVOIDING THE RISK OF HYPERTHERMIA***

Prolonged immersion in hot water can result in HYPERTHERMIA, a dangerous condition which occurs when the internal temperature of the body reaches a level above normal (98.6°F, 37°C). The symptoms of hyperthermia include unawareness of impending hazard, failure to perceive heat, failure to recognize the need to exit the spa, physical inability to exit the spa, fetal damage in pregnant women, and unconsciousness resulting in a danger of drowning.

### **WARNING:**

The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

### ***TO REDUCE THE RISK OF INJURY:***

- The water in the spa should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for extended use (exceeding 10 minutes) and for young children. Extended use can cause hyperthermia.
- Pregnant or possibly pregnant women should limit spa water temperatures to 100°F (38°C). Failure to do so may result in permanent injury to your baby.
- Do not use spa immediately following strenuous exercise.

## ***AVOIDING THE RISK OF SKIN BURNS:***

- To reduce the risk of injury, before entering a spa the user should measure the water temperature with an accurate thermometer.
- Test the water with your hand before entering the spa to be sure it's comfortable.

## ***SAFETY SIGN***

A SAFETY SIGN is included in the owner's package. The sign, which is required as a condition of Product Listing, should be permanently installed where it is visible to the users of the spa.

## ***IMPORTANT SPA INSTRUCTIONS***

The following contains important spa information, and we strongly encourage you to read and apply them.

### ***DO:***

- Use and lock the vinyl cover when the spa is not in use, whether it is empty or full.
- Follow the Spa Care and Maintenance recommendations stated in this manual.
- Use only approved accessories and recommended spa chemicals and cleaners.

### ***DON'T:***

- Leave the spa exposed to the sun without water or the vinyl cover in place. Exposure to direct sunlight can cause solar distress of the shell material.
- Roll or slide the spa on its side. This will damage the siding.
- Lift or drag the cover by using the cover lock straps; always lift or carry the cover by using the handles.
- Attempt to open the electrical control box. There are no user serviceable parts inside. Opening of the control box by the spa owner will void the warranty. If you have an operational problem, carefully go through the steps outlined in the Troubleshooting section. If you are not able to resolve the problem, contact your authorized dealer. Many problems can easily be diagnosed over the telephone by an Authorized Service Technician.

## ***PLANNING A LOCATION FOR YOUR SPA***

Consider these things when determining where to place your spa.

### ***SAFETY FIRST:***

Make sure your spa is positioned so access to the equipment compartment and side panels will not be blocked. Be certain your installation will meet all city and local safety codes and requirements.

### ***PLANNED USE OF SPA:***

How you intend to use your spa will help you determine where you should position the spa. For example, will you use it more for recreational or therapeutic purposes? If your spa is mainly for family recreation, leave plenty of room around it for activity and lawn furniture. If you will use it more for relaxation and therapy, you'll probably want to create privacy around the spa.

### ***PRIVACY:***

Think of your surroundings during all seasons to determine your best privacy options. Consider the view of your neighbors when you plan the location of your spa.

### ***VIEWS:***

Think about the direction you will be facing when sitting in your spa. Do you have a special landscape you will find enjoyable? Perhaps there is an area that has a soothing breeze during the day or a lovely sunset in the evening.

### ***ENVIRONMENT:***

If you live in a climate with a snowy winter and hot summer, a place to change clothes or a house entry near the spa is convenient. A warmer climate may require shade from the hot sun. Consider placement of trees, shrubs, patio cover or perhaps a gazebo structure to provide what you will need. Indoor installations require adequate ventilation. When the spa is in use, considerable amounts of moisture are produced. This moisture can damage walls and ceiling surfaces over time. Special paint is available to resist moisture damage. Remember that spas periodically require drainage, so plan your environment accordingly.

### ***KEEP CLEAN:***

Prevent dirt and foliage from being tracked into your spa by utilizing concrete for paths and access areas. Check the location of spill paths from gutters, trees, and shrubs.

### ***SERVICE ACCESS:***

Many people choose to install tile or custom wood around their spas. If you are installing your tub with custom decorative trimming, remember to allow for access to it for service. Should you need service, a technician may need to remove the tub's door panel, or access it from beneath. It is always best to design special installations so the spa can still be moved, or lifted from the ground.

### ***A GOOD FOUNDATION:***

Your new spa needs a good solid foundation. The area your spa sits on must be able to support the spa, the water in it and those who use it. If the foundation is inadequate, it may shift or settle after the spa is in place, causing stress to the shell or components. **NOTE:** Do not shim your spa in any manner, as this could cause the cabinet to warp, thereby voiding the warranty.



# INSTALLATION

## ***BE AWARE:***

Damage caused by inadequate or improper foundation support is not covered by the spa warranty. It is the sole responsibility of the spa owner to provide a proper foundation for the spa.

Make sure the foundation where the spa is placed drains water away from the spa. Proper drainage will keep components dry from rain and wet weather.

Your spa weight must always be considered when installing your spa. If you are installing it on an elevated wood deck or other structure, it is advisable to consult a structural engineer or contractor to ensure the structure will support the weight.

## **IT IS STRONGLY RECOMMENDED THAT A QUALIFIED, LICENSED CONTRACTOR PREPARE THE FOUNDATION FOR YOUR SPA.**

A reinforced concrete pad at least four inches thick is recommended for your spa. The reinforcing rod or mesh in the pad should be attached to a bond wire.

## ***INDOOR INSTALLATION:***

Be aware of some special requirements if you place your spa indoors. Water will accumulate around the spa, so flooring materials must provide a good grip when wet. NOTE: The Ice Bucket drain on the Monterey spa is designed to drain at the bottom exterior of the spa. Therefore, any water accumulated at the backside of the spa is probably water draining from the Ice Bucket, and not a spa leak. Proper drainage is essential to prevent a build-up of water around the spa. When building a new room for the spa, it is recommended that a floor drain be installed. The humidity will naturally increase with the spa installed. Water may get into woodwork and produce dryrot, mildew, or other problems. Check for airborne moisture's effects on exposed wood, paper, etc. in the room. To minimize these effects, it is best to provide plenty of ventilation to the spa area. An architect can help to determine if more ventilation must be installed.

## ***PLACING THE SPA***

### ***CHECK THE DIMENSIONS OF YOUR SPA:***

Compare the spa dimensions to the width of gates, sidewalks, and doorways along the delivery route used to bring the spa into your yard. It may be necessary for you to remove a gate or partially remove a fence in order to provide an unobstructed passageway to the installation location. Also, keep in mind—if you are using special equipment to place your spa into an area it will be necessary to include those measurements and weights.

### ***PLANNING A DELIVERY ROUTE:***

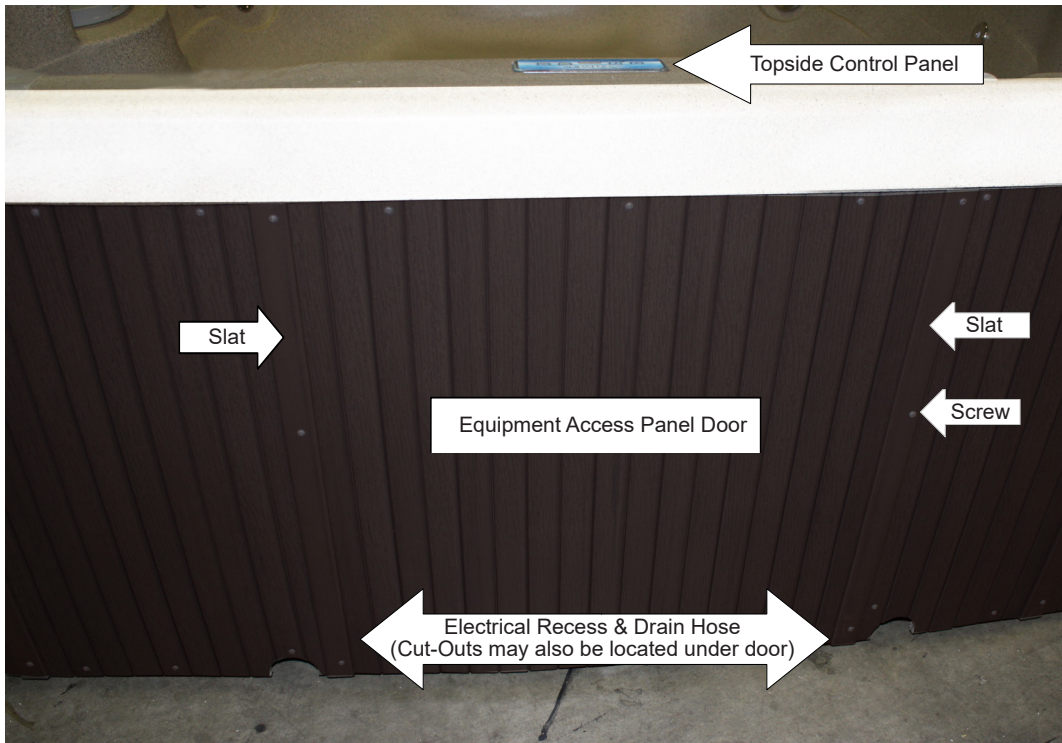
Check the width of gates, doors and sidewalks to make sure your spa will pass through unobstructed. You may have to remove a gate or part of a fence to allow for adequate width clearance. If the delivery route will require a 90-degree turn, check the measurements at the turn to ensure the spa will fit. Check for protruding gas meters, water meters, A/C units, etc., on your home which will cause obstructions along the delivery path to your yard. Check for low roof eaves, over hanging branches or rain gutters that could be an obstruction to overhead clearances.

### ***SPECIAL CIRCUMSTANCES:***

The use of a crane for delivery and installation is primarily to avoid injury to your spa, your property or to delivery personnel. Cranes are not considered “normal delivery”.

# EQUIPMENT ACCESS

## EQUIPMENT ACCESS PANEL

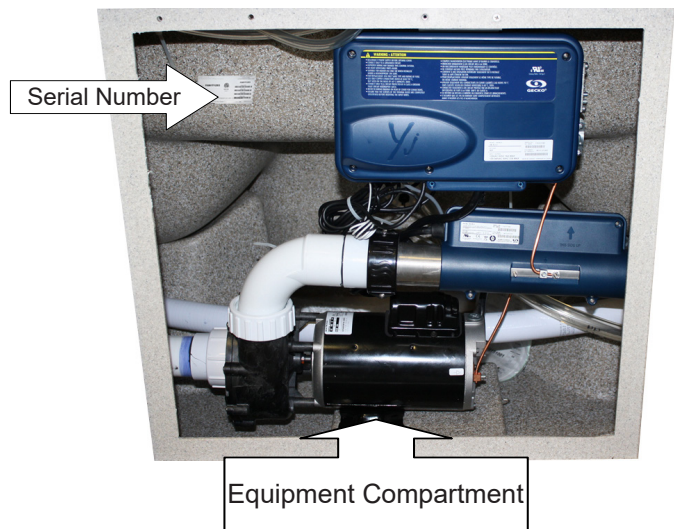
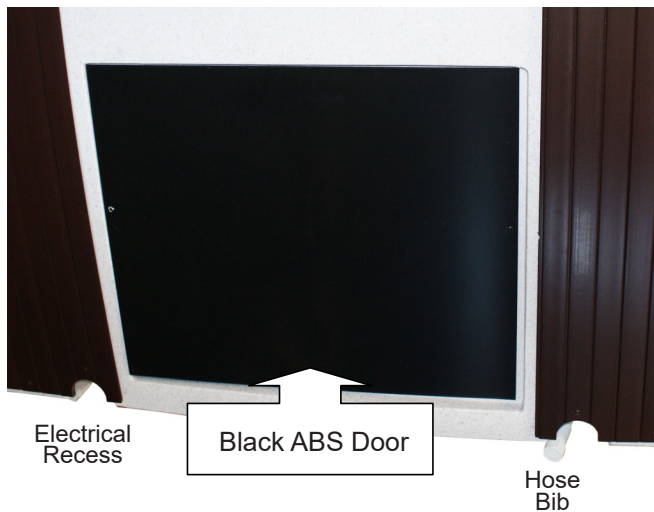


To access the equipment compartment (if your spa has vertical slats):

- Remove 1 vertical slat and 3 screws on each side of Equipment Access Panel Door.
- Remove screws from Equipment Access Panel Door then remove door.
- Remove screws from black ABS Door to access Equipment Compartment.

To access the equipment compartment (if your spa does not have slats):

- Remove 4 screws, one on each corner of door panel.



# ELECTRICAL REQUIREMENTS

## ***ELECTRICAL REQUIREMENT***

**⚠ DO NOT POWER THE SPA WITHOUT FIRST FILLING WITH WATER!**

**⚠ DANGER – RISK OF ELECTRIC SHOCK**

Installations that do not conform to the following procedures and requirements may expose users to electric shock. Non-conforming installations will not be covered under warranty.

If installed in the United States, the electrical wiring of this spa must meet the requirements of the National Electric Code (NEC) and any applicable state or local codes. The electrical circuit must be installed by an electrical contractor and approved by a local building electrical inspection authority.

1. Installations within 5 feet of any metal surfaces must ground the metal surfaces to the hot tub. Use an 8 AWG solid copper wire and attach it to the grounding lug on the control box, located in the equipment compartment.
2. Only a licensed electrician may install power to the spa.
3. Power supply installation must include a suitably rated ground fault circuit interrupter (GFCI) as required by NEC Article 680-42. The circuit breaker must be dedicated and should not be shared with any other appliances. It must be labeled and easily accessible to users.
4. The electrical supply for the spa must include a suitable rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electric Code, ANSI/NFPA 70. The disconnecting means must be readily accessible to the spa's occupant but installed at least 5 feet from the spa water.
5. 230V Power supply lines must be hard wired into the control box. DO NOT use extension or plug-type cords of any kind. The use of a shut-off box near the hot tub is also recommended. This box provides a quick and convenient method to shut off power to the hot tub for emergencies and maintenance.
6. Supply lines must be properly sized as per the NEC. A ground line must be provided that is as large as the largest current carrying conductor, but no less than 8 AWG. Use copper wiring only.
7. Please open the front cover of the control box, and follow the instructions and wiring diagram printed on the backside.
8. All 110 V powered models must use the provided 15 foot GFCI cord and be plugged directly into a dedicated grounded wall outlet.
9. CAUTION, 230V POWERED SPAS – These spas must be hard wired to your household electrical service box only. Do not use an extension cord or any other disconnect-able power cord. The use of an extension cord or a disconnect-able power cord is highly dangerous and will void all warranties!
  - Wire size must be appropriate per NEC and/or local codes.
  - Wire size is determined by length of run from breaker box to spa and maximum current draw.
  - THHN copper core wire is recommended.
  - All wiring must be copper to ensure adequate connections. Do not use aluminum wire.



Equipment access is below the topside control panel.

# ELECTRICAL REQUIREMENTS

## CONFIGURING SYSTEM

### SELECTING THE SUPPLY VOLTAGE FOR YOUR SPA

Your spa is designed to operate at either 110V 15 amp; 110V 30 amp, or 230V 40 amp circuit.

- When the spa is setup for 110V 15 amp, the heater will provide approximately 1000 watts of heat only when the pump is operating in LOW speed and the thermostat is calling for heat (NOTE: The heater does not operate when the pump is on high speed).
- When the spa is connected to 110V 30 amp, the heater will provide approximately 1000 watts of heat when the pump is operating in LOW or HIGH speed and the thermostat is calling for heat.
- When the spa is connected to 230 volts, the heater will provide approximately 4000 watts of heat when the pump is operating in LOW or HIGH speed and the thermostat is calling for heat.

All electrical connections must be made in accordance with the wiring information contained on the electrical control box cover and the National Electrical Code.

### 110 VOLT INSTALLATION (CORD CONNECTED)

Spas come with a factory-installed power supply GFCI cord and are to be plugged into a grounded type 110 volt, 15 ampere receptacle. No other electrical appliance or fixture can be used on this circuit.

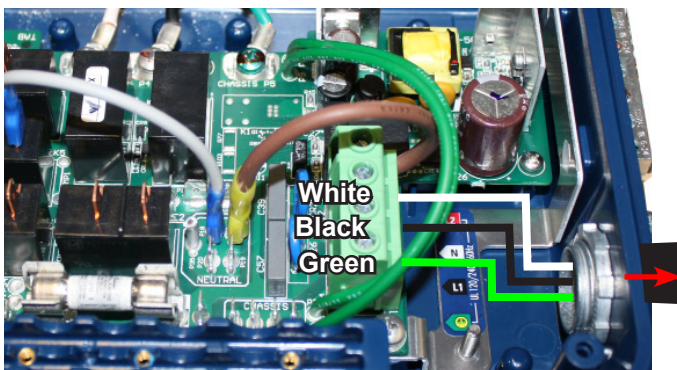
**IMPORTANT:** Under **NO** circumstances should an extension cord be used. Use of an extension cord will seriously degrade the performance of the equipment and can create an electrical hazard.

### 110 VOLT 30A OR 230 VOLT 40A (PERMANENTLY CONNECTED FIELD CONVERSION)

- A 110 volt, 30 ampere configuration requires a 30 ampere GFCI Subpanel box (not included).
- A 230 volt, 40 ampere configuration requires a 40 ampere GFCI Subpanel (not included)

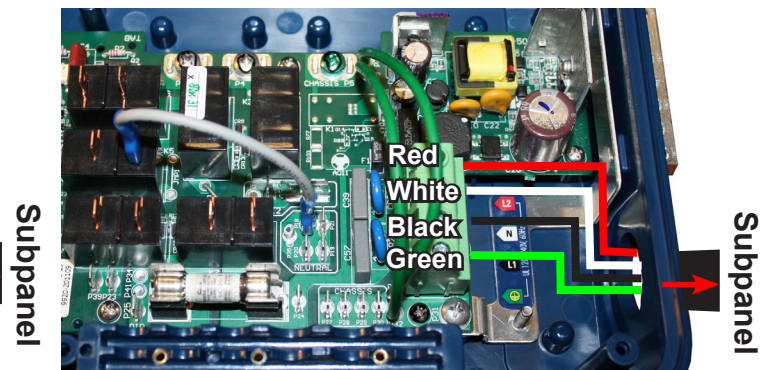
Either one of these installation requires a licensed electrician.

#### Field Converted 110V 30A Control Box



To convert, remove the cord from the terminal block and replace with White, Black and Green #10 wires and connect to 30 A GFCI Subpanel.

#### Field Converted 110/230V Control Box



To convert, remove the cord and brown jumper wire from the terminal block. Remove other end of brown wire from connector and remove from box. Place Red, White, Black and Green #8 wires onto terminal block and connect other end to 40 A GFCI Subpanel.

**IMPORTANT:** After powering up the spa on 110V 30A or 230V 40A field conversions, a **program configuration is required**. Press and Hold JETS button for 30 seconds to access the Low Level (LL) settings on the control panel. Use the +/- button to change the setting from LL1 Factory Default (non concurrent heat and high speed) to LL2 (concurrent Heater and High Speed pump) configuration. Press the LIGHT button within 25 seconds to save the new program setting.

# ELECTRICAL REQUIREMENTS

## ELECTRICAL WIRING DIAGRAM FOR 230V USE

It is recommended that a licensed electrician install the power to your spa in accordance with the National Electric Code and/or any local electrical codes in effect at the time of installation.

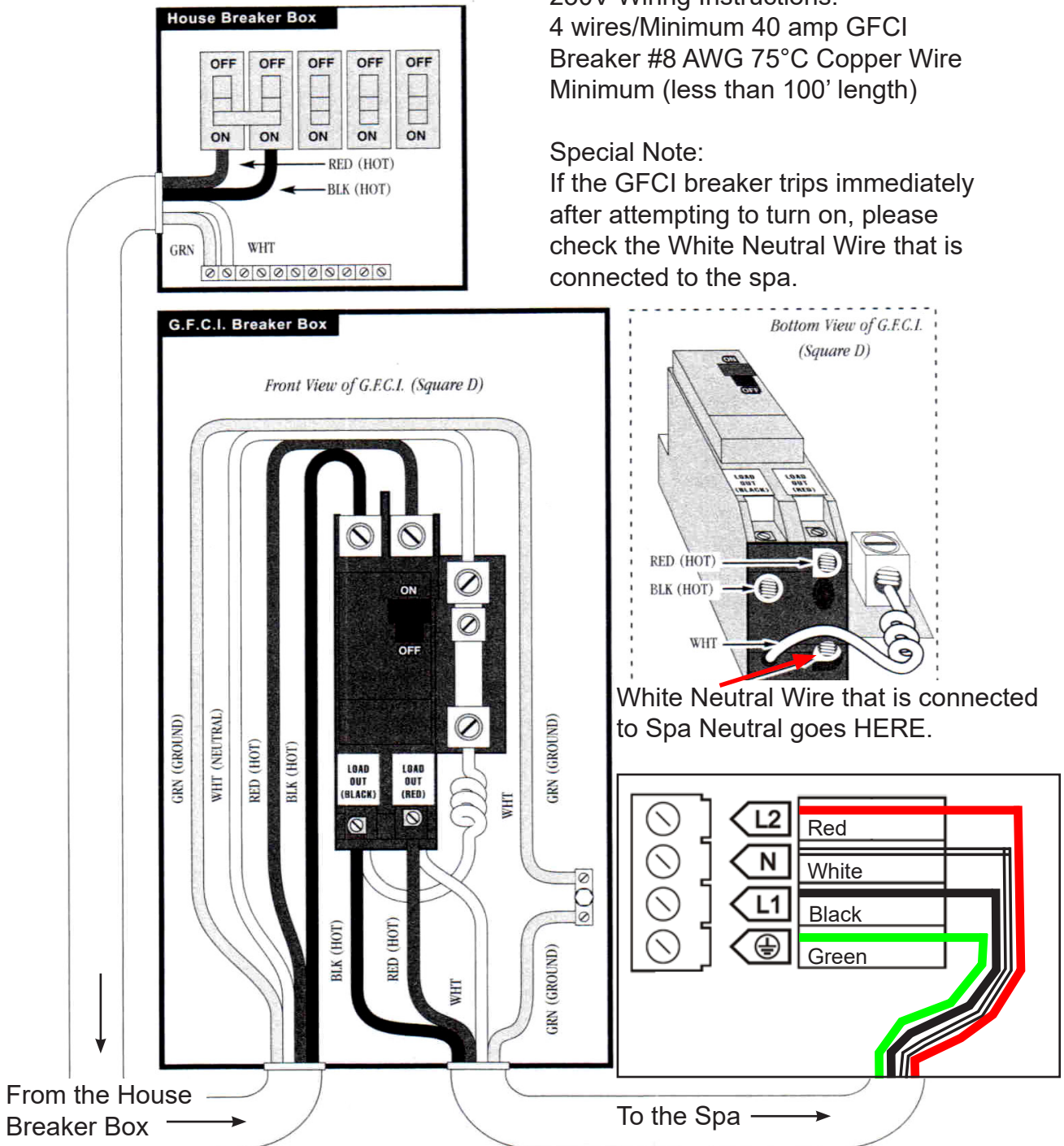
Power supply installation must include a properly rated GFCI circuit breaker. The circuit must be dedicated and should not be shared with any other appliances. The power supply must be hard wired into the power pack.

### 230V Wiring Instructions:

4 wires/Minimum 40 amp GFCI  
Breaker #8 AWG 75°C Copper Wire  
Minimum (less than 100' length)

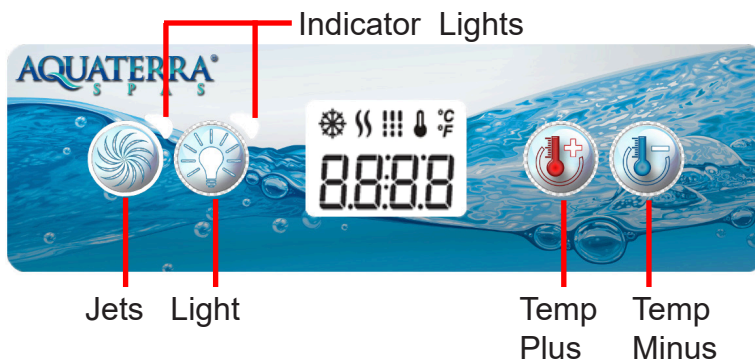
### Special Note:

If the GFCI breaker trips immediately after attempting to turn on, please check the White Neutral Wire that is connected to the spa.



## CONTROL PANEL OPERATION

**INITIAL START-UP** - When the spa is first powered up the control system begins a 2 minute Startup Mode. Different codes will display on the screen. Once Startup Mode completes, the actual temperature is displayed on the screen, and the spa will then begin to heat and maintain the water temperature and the first filter cycle will start. Your spa has been designed so that it will automatically heat the water to the factory set temperature of 100°F unless you set the spa to a different temperature. If power is disconnected from the spa, it will automatically revert back to the last saved set temperature when power is reapplied.



### **TEMPERATURE ADJUSTMENT (80°F-104°F/26.5°C-40°C) ⏸**

The temperature can only function between 80°F - 104°F / 26.5°C - 40°C. The last measured temperature will constantly display on LCD.

Press the *Plus* or *Minus* buttons to display the set temperature and indicator 🌡. Each time either button is pressed again, the set temperature will increase or decrease depending on which button is pressed. After five seconds, the LCD will automatically display the current spa temperature.

The “heater” indicator ⏸ lights up when the heater is on. It flashes when there is a request for more heat, but the heater is not on. Once set temperature is reached the indicator ⏸ shuts off and the low speed of the jet pump turns off after 30 seconds (if not in filter cycle).

### **JETS OPERATION**

Firmly press the *Jets* button once to activate the low speed of the pump and again for the high speed. Firmly press the *Jets* button again to turn off the pump. If left running the low or high speed pump will automatically turn off after 1 hour. The "Jets" indicator light next to the button will blink when jet pump is on low speed and is solid on high speed.

### **MULTI COLOR LED LIGHT**

Press the *Light* button once to turn on the light, the light indicator next to the button is lit when the light is on. Press the button again to turn the light off. Every time the light is quickly turned off and on a new light mode will appear. The sequence is as follows: White, Full color wheel, Amber, Blue, Red, Green, Purple, color wheel 1, color wheel 2 and abrupt color wheel. The last light mode used will come back on when the light is turned off for more than 2 seconds.

**NOTE:** If left on, the light will automatically turn off after 4 hours of operation.

### **FILTER CYCLES !!!**

There are two filter cycles: the first cycle (F1) starts right after power up and the second cycle (F2) will start 12 hours later. The default duration for the first filter cycle is 1 hour, and 30 minutes for the second cycle. Filter cycles only run at low speed. The “Filter” indicator !!! lights up when a filter cycle is on. The duration of each filter cycle can be modified.

# CONTROL PANEL OPERATION

## **ADJUSTING PRESET FILTER CYCLES**

Filter duration is programmable between 0.5 and 6 hours in 30 minute increments (0.5 hours) for both filter cycles. To program the cycle times:

1. Press and hold *Light* button for 5 seconds until F1 is displayed.
2. Press the *Plus* or *Minus* button to adjust the cycle time for F1.
3. Press the *Light* button to store the F1 cycle and move to the F2 cycle.
4. Press the *Plus* or *Minus* button to adjust the cycle time for F2.
5. Wait 15 seconds to allow the exit timer to expire and store the setting.

**IMPORTANT:** To reset the first filter cycle start time, skip step 5 and continue pressing the *Light* button until the actual temperature is displayed. Powering down of the spa will also reset the first filter start time.

**FILTER CYCLE SUSPENSION:** The filter cycle will be suspended every time a jet pump or light is activated manually during the filter cycle time. The suspension will end 10 minutes after the completion of the manual use.

## **OPERATIONAL MODES**

The Standard Mode is the default operational mode preset from the factory. In order to program the spa to operate in the Economy mode you must enter the programming mode to make the change.

**NOTE:** Freeze Protection (Smart Winter Mode) will assert as necessary during all modes.

**STANDARD MODE:** Is programmed to maintain the desired temperature with periodic water circulation (sampling) to sample and heat the water to the set temperature

**ECONOMY MODE:** This will reduce the set temperature of the spa by 20°F. Water sampling and heating of the water is only done during the filter cycles.

**SLEEP MODE:** Water sampling and heating is only done during the filter cycles while trying to bring the spa water up to the set temperature.

**QUIET MODE:** Maintains temperature with periodic sampling between the start of F1 and the end of F2 while not allowing any water sampling to happen between the end of F2 and the start of F1.

To enter the programming screen and toggle between Standard, Economy, Sleep and Quiet Modes the following is required:

1. Press and hold the *Light* button for 5 seconds
2. Press the *Light* button several times until St, Ec, SL, or nt is displayed.
3. Use the *Plus* or *Minus* button to choose between the Modes.  
St = Standard Mode, Ec = Economy Mode, SL Sleep = Mode and nt = Quiet Mode.
4. Wait 15 seconds to allow the exit timer to expire and store the setting.

**OFF MODE:** This mode allows you to stop all spa functions for 30 minutes to perform quick spa maintenance. To place the spa in OFF MODE, press and hold the Jets button for 5 seconds. The display will toggle between OFF and water temperature when in the OFF MODE. To stop the OFF MODE before the 30 minute cycle time is complete, simply tap (short press) the Jet button.

## **FAHRENHEIT/CELSIUS SETTING**

To change water temperature display to either Fahrenheit or Celsius, press and hold *Light* button for 5 seconds until F1... is displayed. Press the *Light* button several times until F or C  $\frac{\circ}{\text{F}}$  is displayed. Press the *Plus* or *Minus* button to change. Wait 15 seconds to allow the exit timer to expire and store the setting.

# CONTROL PANEL OPERATION

## SMART WINTER MODE

The Smart Winter Mode (SWM) is used to prevent water from freezing in the plumbing of the spa. As soon as there is a risk of freezing, this protection automatically kicks in. The SWM protection will turn back off only after 24 hours without a risk of freezing. During this 24 hour period, the Smart Winter Mode icon remains on; the icon blinks when the purge is active..

## DIAGNOSTIC LCD MESSAGE

Message	Meaning	Action Required
	No message on display. Power has been cut off to the spa.	The control panel will be disabled until power returns. Spa settings will be preserved until next power up.
HL	The system has shut the heater off because the temperature at the heater has reached 122°F (50°C). Do not enter the water!	DO NOT ENTER THE WATER. Remove the spa cover and allow the water to cool down, then shut power off and power your spa up again to reset the system. If spa does not reset, shut off the power to the spa and call Customer Service.
AOH	Temperature inside the equipment compartment is too high 194F (90°C), causing the internal temperature in the control system to increase above normal limits.	Open equipment compartment and wait until error clears.
PRR	A problem is detected with the temperature probe.	Call your Dealer or service supplier.
OH	The water temperature in the spa has reached 108°F (42°C). Do not enter the water!	Remove the spa cover and allow the water to cool down to a lower temperature. Call your Dealer or service supplier if problem persists.
UPL	No low level configuration software has been installed into the system.	Call your Dealer or service supplier.
FLO	No water flow is detected by the control system but flow is expected.	Make sure that the jet pump is running and water is flowing; check and clean filters; make sure water valves are open; make sure spa has a proper water level. If problem persists, call your Dealer or service supplier.

### **Warning! Shock Hazard! No User Serviceable Parts.**

Do not attempt service of the control box. Contact Customer Service for assistance. Follow all owner manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.

### **WARNING! DO NOT ENTER SPA IF WATER IS TOO HOT**

**Water is too hot.** Overheat protection heater is deactivated. Spa water temperature is above acceptable limits. When the actual water temperature is approximately 2° F (1° C) above the set temperature, the jet pump will stop operating to reduce (frictional) heating. If the spa water temperature continues to rise and gets above 108° F (42°C), the spa will go into an “OH” overheat condition.



## **SPA COMPONENT OPERATION**

### **AIR CONTROL VALVE**

The air control valve serves to regulate the amount of air mixed with the water when the jets are operational. Turn the air control valves in one direction to increased jet action. Rotating the air control in the opposite direction to turn air off and allow the jets to work with water only. Turn the air controls off when the spa is not in use, this will prevent cold air from entering the spa and will keep heating cost to a minimum. The ozone jet, will always produce air bubbles when pump is on.

### **DIVERTER VALVE (WHEN EQUIPPED)**

The diverter valve on your spa allows you to direct the flow of water to one of the jet flow combinations. The function of the diverter valve can best be learned by experimentation. Turn the large valve completely to one side to see which jets are on, then turn completely to the other to see which jets are affected (you can adjust the diverter value to any position between the two possible extremes to achieve the jet pressure that feels best to you).

**IMPORTANT:** Your spa is not designed to provide full power to all jets when the diverter valves are in the “mid” position. However with the diverter valve in this position, you may increase the power to selected jets by rotating the faces of the hydrotherapy jets to close the ones that are not in use.

### **HYDROTHERAPY JETS**

The hydrotherapy jets are recessed in the wall of the spa. Rotate the medium jet faces to turn the jets on or off. Turning a jet on or off will increase or decrease the effects of any jets not in the closed position.

### **OZONE GENERATOR (WHEN EQUIPPED)**

The ozone system enhances the quality of the spa water when used to supplement the spa owner’s regular water maintenance program. Contrary to some information circulated throughout the pool and spa industry regarding ozone systems, ozone **CAN'T** be used as a single-source sanitizer, water clarifier, anti-foamer, and mineral chelating agent. A secondary source sanitizer must be used to maintain 3.0 -5.0 ppm of Free Available Chlorine (FAC). Watkins Manufacturing Corporation recommends that a chemical maintenance program based on recognized and documented industry standards still be followed when using an ozone purification system to assure water sanitation and the highest quality purified water.

### **WATERFALL**

Your spa has a control valve to operate the amount of flow through the waterfall from no flow to a steady stream. This valve is located next to or on the waterfall. **Note:** The air control valve and the waterfall flow valve may look the same, however; they will be separate components.

### **WHIRLPOOL JET (WHEN EQUIPPED)**

The Whirlpool Jet is located below the water line at or near the control panel area, in the wall. This jet is a diverter valve and high capacity jet that has a larger diameter than the hydrotherapy jets. The whirlpool jet is turned on and off by rotating the jet face. Because, there is a substantial amount of water pressure when the jet is in operation, you must turn the pump off or to low speed before attempting to rotate the jet face. As the whirlpool jet open position is increased it will begin turning off most of the hydrotherapy jets. One of the two air control valves is dedicated to this jet.

# FILL-UP AND START-UP INSTRUCTIONS

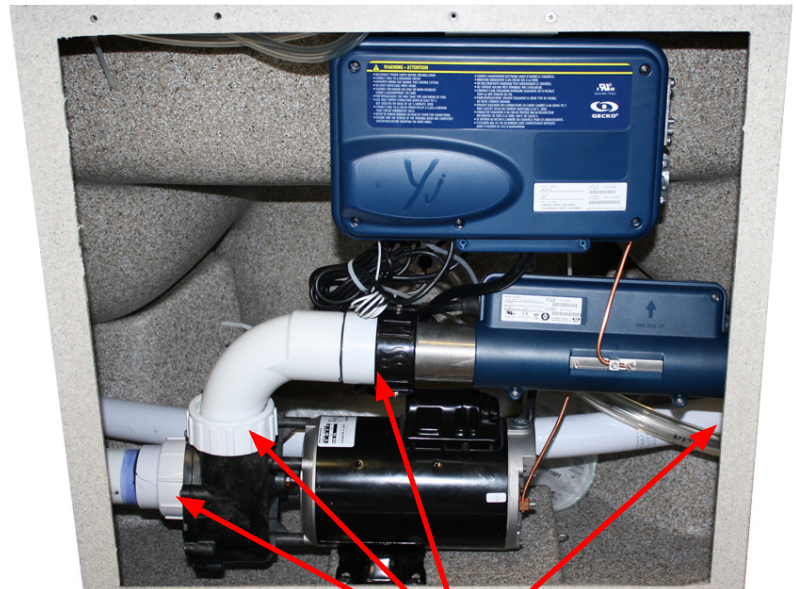
The following procedures should be followed on initial startup and whenever the spa is drained for routine maintenance.

## **FILLING THE SPA WITH WATER**

1. Clear all the debris from your spa.
2. Be sure to open all jets to allow as much air as possible to escape from the plumbing during the filling process.
3. Insert a garden hose into filter compartment to fill your spa.

**NOTE:** Do not use hot or softened water.

4. As the water level rises, check inside the equipment compartment for water leaks. It may be necessary to tighten unions and/or fittings that may have loosened during delivery. There is no need to call for service; this can easily be done. If assistance is required, contact a Customer Service representative at (888) 961-7727 Ext. 8440
5. Under normal circumstances keep the water level half way between the top of the spa and the top of the gray filter ring or just above the highest jets (whichever is higher).



**UNIONS**

Failure to keep enough water in your spa may result in damage to your system and invalidate your warranty. If your spa filter is sucking in air causing the pump to cavitate, you need to add water!

6. Check the filter installation and make sure the filter is not loose.

## **APPLYING POWER**

1. Turn power to spa "ON" (after filling spa) from the main panel at the house and the subpanel.
2. Press the *Jets* button on the topside control panel to activate the spa. Rotate all the air control valves counterclockwise and observe the increased jet action (air mixed with water).
3. While the pump is running check again for water leaks at the drain spigot, unions, or fittings in the equipment compartment (leaks may have occurred during transit). If water is leaking from one of these areas, there is no need to call for service. Simply tighten the fitting. If assistance is required, call a Customer Service representative at (888) 961-7727 Ext. 8440.
4. After checking your spa for leaks it is now time to adjust your spa settings. Press the *Plus* or *Minus* button on your topside control panel until the display indicates your desired temperature is set.

# ADDING START-UP CHEMICALS

## WATER CHEMISTRY GUIDELINES

The following step-by-step instructions are a recommended guideline for balancing water chemistry. If unsure about any step in the process, please contact a Customer Care Associate at (888) 961-7727 Ext. 8440 or by email at [ahsservice@watkinsmfg.com](mailto:ahsservice@watkinsmfg.com).

Initially, it is advisable to identify what minerals (e.g. iron) are present in the local source water. This will provide a better understanding of how to treat the water. Please follow the four steps below and be sure to achieve the correct levels in each area before moving onto the next step.

### STEP #1: ESTABLISH PROPER PH LEVEL:

The recommended range for pH is between 7.2 and 7.8. If the reading is too high, lower the pH by using a pH Down/Decreaser (sodium bisulfate). If the pH level needs to be increased, do so with a pH Up/Incraser (sodium hydrogen carbonate). Any pH Up or Down should be added one teaspoon at a time, waiting one-half hour between application and re-measuring.

### STEP #2: MEASURE TOTAL ALKALINITY:

The ideal range is between 40-120 parts per million (PPM). If the total alkalinity is too high, it should be reduced by using an Alkalinity Down/Decreaser (sodium bisulfate). If the total alkalinity is too low, it can be increased by adding an Alkalinity UP/Incraser (sodium bicarbonate or sodium hydrogen carbonate). These products should be added in small amounts – a teaspoon at a time. After adding one teaspoon, wait one half hour before re-measuring. Once the safe range of total alkalinity is established, proceed to the next step.

### STEP #3: DETERMINE CALCIUM HARDNESS:

It is important to bring the calcium reading to between 50-150 PPM. If the reading requires adjustment, it should now be corrected. If the water is too soft (a low reading) calcium hardness should be added to the water to increase the PPM reading. If the water is too hard (a high reading), it can be corrected by either: (A) a mixture of hard and soft water added to attain a reading in the safe range, or (B) addition of stain and scale control. If calcium hardness is a problem with the local source water (either too hard or too soft) a test kit, which measures calcium hardness, is essential.

### STEP #4: SANITIZING:

After steps 1-3 are complete, **the spa must be sanitized using Chlorine (sodium dichlor)**. Add 2 teaspoons of Chlorine, and increase as necessary to reach a level of 3-5 ppm. Check and maintain this level weekly, and before and after using the spa. **IMPORTANT NOTE:** *A granulated sodium dichlor is highly recommended for sanitizing spa water, granular bromine may also be used. Never use compressed sanitizers even with a floater. As with any other chemicals, the sanitizer should be introduced to the spa with the jets running for 10 minutes.*

### WEEKLY SHOCK:

Using a potassium monopersulfate (MPS) shock, add approximately 2 oz. spreading it over the water while the jets are running. Shocking is achieved by adding the MPS to turbulent water. Leave the cover up and jets on high for 10 minutes. Then shut jets off and return the cover to the closed position to maintain heat. Then return the cover to the closed position to maintain heat.

# SPA MAINTENANCE

## ***FILTER CARTRIDGE MAINTENANCE***

Every month, the filter cartridge should be cleaned to remove the objects and particles that have lodged in the cartridge pleats. Using household water pressure and a garden hose with a pressurized nozzle, push water from inside to outside of the pleats, forcing all the trapped particles out. **NOTE:** Never run your spa without a filter cartridge!!! This will invalidate your warranty.

**NOTE:** Filter cartridges should be replaced every six to eight months or earlier when needed. Dirty filters can cause your spa pump to burn out and will invalidate your warranty.

## ***FILTER CARTRIDGE REMOVAL AND CLEANING INSTRUCTIONS***

Spa uses a screw in filter cartridge that is easily removed.

- Turn off the power to the spa, (by turning OFF the subpanel breaker or unplug spa).
- Push down slightly and turn filter basket counter clockwise to unlock, then pull the basket and weir out.
- Unscrew the filter cartridge counter clockwise and bring it out of the spa (requires many turns).
- Rinse cartridge using a garden hose. Rotate and separate filter pleats while spraying water to remove all dirt and debris possible. Let filter dry and look for calcium deposits (scaling) or an oil film. If you find these, you will need to deep clean your filter cartridge with a “spa filter cleaner” solution to break down and remove unwanted deposits and oils. (For longer filter life you should soak filter in solution regularly).

**CAUTION!** Always use proper eye protection when using chemicals, or high-pressure water. Read instructions on cleaning products and follow applicable safety and warning instructions listed on label.

**CAUTION!** Never scrub the filter cartridge with a brush, as this will cause the filter to wear out and come apart. Never let the spa pump run without a filter cartridge in the skimmer compartment. Running the spa without a filter cartridge may permit debris to enter the spa plumbing and void the warranty!

- Replace filter cartridge, then reinstall basket and weir, (insert and rotate clockwise to lock into position). **DO NOT OVERTIGHTEN!**
- Turn spa’s power back on.



# SPA MAINTENANCE

## ***SURFACE CARE***

Do not use solvents or abrasive cleaners to clean the spa. Typically, a mild detergent and water will resolve cleaning issues.

## ***COVER CARE***

Please keep your cover free from dirt at all times. Use a cover cleaner or a warm, mild soapy water to clean the surface. Do not use any silicone-based products, as it will dry and may eventually crack the vinyl. **NOTE:** Do not stand on the cover at any time. Remove the cover when adding chemicals to your spa. This will extend the life of your cover. The gasses from burned off chemicals will be trapped under the cover, if not removed. These gasses may erode the protective lining of the foam inserts. This will not be covered under warranty.

## ***CABINET CARE***

Little maintenance is required to keep your spa cabinet looking good.

Spa cabinet product should be cleaned as needed to remove dirt and debris.

- NO abrasive or harsh chemicals should be used on the spa's cabinet.
- NO solvents or cleaners containing aromatic solvents should be used on the spas cabinet.
- Hot soapy water is the best choice for cleaning the spa's cabinet.

## ***SPA LED REPLACEMENT***

- Turn OFF the power to the spa.
- Remove the equipment compartment access door.
- Locate the rear of the spa light.
- To remove the LED board, turn outside housing counter clockwise ¼ turn, and pull out and remove LED board from socket.
- Replace by reversing the above steps.



## DRAINING OR WINTERIZING

Every three to six months, depending upon the water condition, you need to renew your water.

### **CAUTION: READ THIS BEFORE DRAINING YOUR SPA**

- To prevent damage to the spa's components, **UNPLUG GFCI CORD OR TURN OFF SUBPANEL BREAKER BEFORE DRAINING. Do not power back up until your spa has been refilled with water.**
- There are certain precautions to keep in mind when draining your spa. If it is extremely cold, and the spa is outdoors, freezing could occur in the plumbing or the equipment.
- Do not leave the spa's shell (inside surface) exposed to direct sunlight.

### **DRAINING YOUR SPA**

- If draining for the first time, pull the hose bib out a few inches from the spa (located in the recess under the spa, just right and below the equipment access door)
- Unscrew and remove the drain cap.
- Attach hose bib to a garden hose and direct to an appropriate draining area, keeping the hose below the water line.
- After your spa is empty, clean the shell and filter cartridge. See "Spa Maintenance" section.
- After cleaning, remove garden hose, replace drain cap and push the hose bib back into the recess.
- Follow the "Fill up and Start-up Instructions" on page 15.



### **WINTERIZING YOUR SPA**

If you plan to store your spa for the winter, you must also use a wet-vac to clean out the water lines to ensure they are free of any water. Water left in the lines might freeze and damage the lines and jets.

1. It will be necessary to remove all water from the interior plumbing.
2. Remove the floating weir, basket, and filter cartridge. Clean the filter cartridge and store in a dry place. Attach the vacuum hose to the **vacuum side** of the shop vac and thoroughly dry the filter compartment.
3. Using the shop vac, remove the water starting with the jets at the top and moving to the ones at the bottom of the spa. **NOTE:** When removing the water from jet openings, you may notice suction coming from another jet. With the help of a second person, block off any suction from the other jet using a large rag or cloth. This will help pull out the water that is trapped deep inside the main line.
4. Thoroughly dry the spa shell with a clean towel.
5. Using a funnel, pour Propylene glycol anti-freeze into the filter suction fittings and jet outlets. **CAUTION: Use only Propylene glycol as your anti-freeze. This is non-toxic. NEVER use automobile anti-freeze since it is toxic.**
6. Remove the pump drain plug located on the front of the pump housings. Allow all water to drain out. Place the drain plug in a reclosable plastic storage bag and store near the pump. Replace the drain plugs on start-up.
7. Unscrew the suction/discharge pump and heater unions and allow the water to drain. Leave union loose. **NOTE:** Tighten unions before filling spa.
8. Replace the equipment compartment door and secure with screws.

**Note:** Damage caused by improper winterizing will not be covered under warranty. You may want to contact Customer Service for proper winterizing.

## TROUBLESHOOTING PROCEDURES

In the event the spa is not working the way it should, please first review all the installation and operating instructions in this manual and check the message on the panel display. If you are still not satisfied it is working properly, please follow the appropriate troubleshooting instructions.

### **CAUTION! WARNING! SHOCK HAZARD! No User Serviceable Parts.**

Do not attempt service of the control box. Contact Customer Service for assistance. Follow all owner's manual power connection instructions.

## ***NO COMPONENT OPERATION***

Check the following:

1. Is there power to the spa?
2. Is the household circuit breaker tripped?
3. Is the subpanel (230V) or cord GFCI (110V) tripped?
4. If 1, 2 or 3 are yes contact Customer Service for assistance.

## ***PUMP DOES NOT OPERATE, BUT THE LIGHT DOES***

Press the *Jets* button:

The pump operates but no water flows to jets. Pump may not be properly primed. This can happen after the spa is drained and refilled. Press the *Jets* button several times, never leaving the motor on for more than 5-10 seconds at-a-time with no water coming out of jets.

## ***POOR JET ACTION***

1. Press the *Jets* button to make certain the pump is on.
2. Rotate all the air control valves counterclockwise and observe the increased jet action.
3. Make sure the water level is half way between top of spa and top of the gray filter ring.
4. Check for dirty filter. Clean, if necessary.
5. Make sure all jets are in the open position.

## ***WATER IS TOO HOT***

1. Check desired temperature on topside control.
2. Check for a Diagnostic Message (in Control Panel Operation section).

### **OH - Overheat (spa is deactivated) DO NOT ENTER THE WATER.**

If the spa has overheated you should remove the cover to promote heat reduction. The spa control system should reset itself when the water temperature reduces below 104°F or 40°C. When the spa falls below the reset temperature you can push any button on the topside control to reset the control system. Under extreme and/or prolonged weather conditions it is possible for the ambient temperature to exceed 106°F/41°C; effecting the water temperature of the spa and causing it to overheat. These conditions could cause the spa sensors to produce an OH message and prevent the usage of your spa during these conditions. The location of your spa should be reconsidered to reduce the outside temperature around the spa. For example, you may need to prevent direct sunlight on any surface of your spa. Regardless, do not enter your spa if the temperature is above 104°F.

Should checking the above steps fail to correct the problem, please contact Customer Service at (888) 961-7727 Ext. 8440.







## PROCEDIMIENTOS DE SOLUCIÓN DE PROBLEMAS

En el caso de que el spa no esté funcionando como debería, primero revise todas las instrucciones de instalación y funcionamiento en este manual y compruebe el mensaje en la pantalla del panel. Si aún no considera que esté funcionando correctamente, siga las instrucciones para solucionar problemas.

**!PRECAUCIÓN! ¡ADVERTENCIA! ¡PELIGRO DE DESCARGA ELÉCTRICA! No hay componentes que el usuario pueda reparar.**

No intente reparar la caja de control. Comuníquese con Servicio al Cliente para recibir asistencia. Siga todas las instrucciones del Manual del propietario para la conexión de alimentación.

### NO FUNCIONAN LOS COMPONENTES

Verifique los siguientes puntos:

1. ¿El spa recibe alimentación eléctrica?
2. ¿El disyuntor doméstico está desconectado?
3. ¿El subpanel (230 V) o el cable GFCI (115 V) están conectados?
4. Si las posibilidades 1, 2 o 3 son afirmativas, comuníquese con el Servicio al Cliente para recibir asistencia.

### LA BOMBA NO FUNCIONA, PERO LA LUZ SI

Pulse el botón *Jets*:

La bomba funciona, pero los surtidores no reciben caudal de agua. Es posible que la bomba no se haya puesto a punto en la forma debida. Esto puede suceder cuando el spa se ha vaciado y vuelto a llenar. Pulse el botón *Jets* varias veces, nunca deje el motor encendido durante más de 5-10 segundos por vez sin que salga agua de los surtidores.

### MAL FUNCIONAMIENTO DE LOS SURTIDORES

1. Pulse el botón *Jets* para asegurarse de que la bomba está encendida.
2. Gire todas las válvulas de control de aire en sentido antihorario y observe el aumento de la acción de los surtidores.
3. Asegúrese de que el nivel del agua está a medio camino entre la parte superior del spa y la parte superior del anillo del filtro gris.
4. Verifique que el filtro no esté sucio. Limpíelo, de ser necesario.
5. Asegúrese de que todos los surtidores estén en la posición abierta.

### EL AGUA ESTÁ DEMASIADO CALIENTE

1. Verifique la temperatura deseada en el control superior.
2. Verifique el Mensaje diagnóstico (en la sección Funcionamiento del panel de control).

### SC- Sobrecalentamiento (el spa se desactiva) NO ENTRE EN EL AGUA DEL SPA

Si el spa se ha sobrecalentado, debe retirar la cubierta para facilitar la pérdida de calor. El sistema de control del spa se reajusta por sí mismo cuando la temperatura se reduce por debajo de 104 °F o 40 °C. Cuando el spa alcanza una temperatura inferior a la del reajuste, puede pulsar cualquier botón del control superior para reajustar el sistema de control. En condiciones climáticas extremas y/o prolongadas, es posible que la temperatura ambiente supere los 106 °F/41 °C, que afecta la temperatura del agua del spa y hace que se sobrecaliente. Estas condiciones pueden hacer que los sensores del spa produzcan el mensaje SC

y eviten el uso del spa durante estas condiciones. Debe considerar la ubicación del spa para reducir la temperatura exterior alrededor del mismo. Por ejemplo, es posible que necesite evitar la luz solar directa en las superficies del spa. Independientemente de esto, no entre al spa si la temperatura supera los 104 °F.

Si luego de realizar los pasos anteriores, el problema sigue sin resolverse, comuníquese con el Servicio al Cliente al 001 855 671 3997.

# VACIADO O ACONDICIONAMIENTO PARA EL INVIERNO

Se necesita renovar el agua cada tres - seis meses, dependiendo del estado del agua.

**PRECAUCIÓN:** LEA ESTO ANTES DE VACIAR EL SPA

- Para evitar que los componentes del spa se dañen, **DESCONECTE EL CABLE GFCI O APAQUE EL DISYUNTOR DEL SUBPANEL** antes de vaciar el spa. **No vuelva a encender el spa hasta haberlo llenado de agua.**

Existen ciertas precauciones que debe tener en cuenta cuando vacíe su spa. Si está extremadamente frío y el spa está en el exterior, es posible que las tuberías o el equipo estén congelados.

- No deje el casco del spa (superficie interior) expuesto a la luz solar directa.

## VACIADO DEL SPA

- Si es la primera vez que desagua el spa, tire algunas pulgadas del grifo de la manguera desde el spa (que se encuentra en el hueco debajo del spa, justo a la derecha y por debajo de la puerta de entrada al equipo)

- Desenrosque y quite el tapón de drenaje.

- Conecte el grifo de la manguera a una manguera de jardín y directo a un área de desagüe adecuada, manteniendo la manguera por debajo de la línea del agua.

- Después de haber vaciado el spa, limpie el casco y el cartucho del filtro.

- Consulte la sección "Mantenimiento del spa".

- Luego de la limpieza, retire la manguera de jardín, vuelva a colocar el tapón de drenaje y empuje el grifo de la manguera de vuelta al hueco.

- Siga las "Instrucciones de llenado y puesta en marcha" en la página 15.

## ACONDICIONE SU SPA PARA EL INVIERNO

Si planea guardar el spa en el invierno, también debe utilizar una aspiradora para líquidos para limpiar las tuberías y asegurarse de que estén sin agua. El agua que quede en las tuberías se puede congelar y dañar las tuberías y surtidores.

1. Es necesario retirar toda el agua del interior de las tuberías.

2. Retire el vertedero flotante, la canastilla y el cartucho del filtro. Limpie el cartucho del filtro y guárdelo en un lugar seco. Fije la manguera de aspiración al **lateral de aspiración** del equipo de aspiración y seque completamente el compartimiento del filtro.

3. Usando el equipo de aspiración, elimine el agua comenzando con los surtidores de la parte superior y acabando con los de la parte inferior del spa. **NOTA:** Al extraer el agua de las aberturas de los surtidores, puede que advierta la succión proveniente de otro surtidor. Con la ayuda de una segunda persona, proceda a bloquear cualquier succión del resto de los surtidores mediante un paño. Esto ayudará a extraer el agua que haya quedado dentro de la línea principal.

4. Seque cuidadosamente el casco del spa con una toalla limpia.

5. Con un embudo, vierta propilenglicolanticongelante en los accesorios de succión del filtro y en las salidas de los surtidores. **PRECAUCIÓN: Use únicamente propilenglicol como anticongelante. El propilenglicol no es tóxico. NUNCA use anticongelante para automóviles, ya que es tóxico.**

6. Retire el tapón de desagüe de la bomba situado en el frente de las cajas de la bomba. Permita un desagüe completo. Coloque el tapón de desagüe en una bolsa de plástico que se pueda cerrar y guárdelo cerca de la bomba. Vuelva a colocar los tapones de desagüe antes de encender el spa.

7. Destornille la bomba de succión y descarga y las uniones del calentador para permitir que el agua se desagote. Deje las uniones flojas. **NOTA:** ajuste las uniones antes de llenar el spa.

8. Vuelva a colocar la puerta del compartimiento del equipo y asegúrela con tornillos.

**Nota:** El daño provocado por el acondicionamiento inapropiado para el invierno no estará cubierto por la garantía. Puede comunicarse con el Servicio al Cliente para obtener información sobre el acondicionamiento adecuado para el invierno.



## CUIDADO DE LA SUPERFICIE

No utilice solventes ni limpiadores abrasivos para limpiar el spa. Por lo general, un detergente suave y agua resuelven los temas de limpieza.

## CUIDADO DE LA CUBIERTA

Mantenga la cubierta limpia en todo momento. Use un limpiador para cubiertas o agua tibia y jabón suave para limpiar la superficie. No use productos en base a síliconas ya que secarán y eventualmente producirán grietas en el vinilo. **NOTA:** No se pare sobre la cubierta en ningún momento. Quite la cubierta cuando agregue productos químicos al spa. Esto prolongará la vida de la cubierta. Los gases de los productos químicos quedarán atrapados debajo de la cubierta si no se los elimina. Estos gases pueden erosionar el revestimiento protector de los interiores de espuma. Esto no está cubierto por la garantía.

## CUIDADO DE LA CABINA

Se necesita poco mantenimiento para que la cabina del spa luzca bien.  
La cabina del spa se debe limpiar en tanto sea necesario para eliminar la suciedad y los residuos.  
• NO debe usar productos químicos abrasivos o fuertes en la cabina del spa.  
• NO utilizar solventes ni productos que contengan disolventes aromáticos en la cabina del spa.  
• La mejor elección para limpiar la cabina del spa es agua jabonosa caliente.

## REEMPLAZO DEL LED DEL SPA

- Desconecte la alimentación eléctrica del spa.
- Retire la puerta de acceso del compartimiento del equipo.
- Localice la parte posterior de la luz del spa.
- Para quitar el tablero LED, gire el contador de la caja externa en sentido horario  $\frac{1}{4}$  de giro, tire y retire el tablero LED del enchufe.
- Reemplace invirtiendo los pasos anteriores.



## MANTENIMIENTO DEL CARTUCHO DEL FILTRO

El cartucho del filtro debe limpiarse cada dos semanas para eliminar los objetos y partículas que se han acumulado en los pliegues del filtro. Use la presión del agua doméstica y una manguera de jardín con una boquilla a presión para empujar el agua desde el interior al exterior de los pliegues, y forzar la salida de todas las partículas atrapadas. **NOTA:** Nunca haga funcionar el spa sin el cartucho del filtro! Esto invalidará la garantía.

**NOTA:** Los cartuchos de los filtros deben reemplazarse entre cada seis a ocho meses, o antes, de ser necesario. Los filtros sucios pueden hacer que la bomba del spa se quemé e invalide la garantía.

## INSTRUCCIONES PARA RETIRAR Y LIMPIAR EL CARTUCHO DEL FILTRO

El spa tiene un tornillo en el cartucho del filtro que se puede quitar fácilmente.

- Desconecte la alimentación eléctrica del spa (apagando el disyuntor del subpanel o desconectado el spa).
- Empuje ligeramente hacia abajo y gire el contador de la canastilla del filtro en sentido horario para desbloquearlo, luego tire de la canastilla y del vertedero.
- Desenrosque el contador del cartucho del filtro y retírelo del spa (da varios giros).
- Enjuague el cartucho con una manguera de jardín. Gire y separe los pliegues del filtro mientras los rocía con agua para eliminar toda la suciedad y los residuos posibles. Permita que el filtro se seque y busque depósitos de calcio (oxidación) o una película de aceite. Si tal es el caso, tendrá que limpiar el cartucho a fondo con una solución "limpiadora de filtros" para descomponer y eliminar los depósitos y aceites no deseados. (Para una mayor duración del filtro, debe remojarlo regularmente).

**PRECAUCIÓN!** Siempre use protección para los ojos cuando utilice productos químicos o agua a alta presión. Lea las instrucciones de los productos de limpieza y siga las instrucciones pertinentes de precaución y seguridad que aparecen en la etiqueta.

**PRECAUCIÓN!** Nunca frote el cartucho de filtro con un cepillo, ya que hará que el filtro se desgaste y se rompa. Nunca deje que la bomba del spa funcione sin un cartucho de filtro en el compartimiento del vertedero. ¡Hacer funcionar la bomba del spa sin un cartucho de filtro permite que los residuos entren en las tuberías del spa y se anule la garantía!

- Reemplace el cartucho del filtro, luego vuelva a colocar la canastilla y el vertedero (inserte y gire en el sentido horario hasta la posición de bloqueo). **¡NO AJUSTE DEMASIADO!**
- Vuelva a encender el spa.



## GUÍA SOBRE PRODUCTOS QUÍMICOS DEL AGUA

Las siguientes instrucciones paso a paso son una guía recomendada para equilibrar la química del agua. Si tiene dudas sobre algún paso del procedimiento, comuníquese con un empleado del Servicio al Cliente al 001 855 671 3997 o por correo electrónico a [ahsservice@watskinsmfg.com](mailto:ahsservice@watskinsmfg.com).

En un primer lugar, se aconseja identificar los minerales (por ej., hierro) que están presentes en la fuente de agua local. Esto le hará comprender mejor cómo tratar el agua. Siga los cuatro pasos siguientes y asegúrese de lograr los niveles adecuados en cada área antes de pasar al próximo paso.

### PASO 1: ESTABLEZCA EL NIVEL DE PH ADECUADO:

El rango recomendado de pH del agua del spa está entre 7.2 y 7.8. Si la lectura es demasiado alta, baje el pH usando un reductor de pH (bisulfato sódico). Si necesita aumentar el nivel de pH, utilice un incrementador de pH (hidrocarbonato sódico). Los productos para aumentar o reducir el pH deben agregarse de a una cucharadita a la vez, espere media hora entre las aplicaciones y volver a medir.

### PASO 2: DETERMINAR LA ALCALINIDAD TOTAL:

El rango ideal está entre 40-120 partes por millón (PPM). Si la alcalinidad total es demasiado alta, debe reducirla usando un reductor de alcalinidad (bisulfato sódico). Si la alcalinidad total es demasiado baja, debe aumentarla usando un incrementador de alcalinidad (bisulfato sódico o hidrocarbonato sódico). Estos productos deben agregarse en pequeñas cantidades: una cucharadita por vez. Luego de agregar una cucharadita, espere media hora antes de volver a medir. Una vez que establezca el rango seguro de alcalinidad total, siga con el siguiente paso.

### PASO 3: DETERMINAR LA DUREZA DEL AGUA:

Es importante que la lectura de la cal esté entre 50-150 PPM. Si fuera necesario ajustar la lectura, debe corregirse ahora. Si el agua es demasiado blanda (una lectura baja), se debe agregar dureza al agua para aumentar la lectura de PPM. Si el agua es demasiado dura (una lectura alta), puede ser corregida por medio de: (A) una mezcla de agua dura y blanda añadida para alcanzar una lectura en el rango seguro, o (B) el agregado de control de manchas y óxido. Si la dureza del agua es un problema de la fuente de agua local (ya sea, demasiado dura o demasiado blanda) es esencial contar con un kit de prueba, que determina la dureza del agua.

### PASO 4: DESINFECCIÓN

Luego de completar los pasos 1-3, **se debe desinfectar el spa utilizando cloro (dicloro sódico)**.

Agregar 2 cucharaditas de cloro, aumentar en tanto sea necesario a fin de alcanzar el nivel de 3-5 ppm. Controle y mantenga este nivel semanalmente, y antes y después de utilizar el spa. **NOTA**

**IMPORTANTE:** se recomienda el uso de dicloro sódico granulado para desinfectar el agua del spa, también se podrá utilizar el bromo granulado. **No utilice nunca desinfectantes comprimidos ni aunque tengan un flotador.** Al igual que otros productos químicos, el desinfectante debe colocarse en el spa con los surtidores conectados durante un mínimo de 10 minutos.

### CHOQUE SEMANAL:

Usar un choque de potasio monopersulfato (MPS), diseminar aproximadamente 2 oz. sobre el agua, mientras que los surtidores están funcionando. El tratamiento de choque se logra agregando el MPS al agua turbulenta. Deje la cubierta abierta y los surtidores a gran potencia durante 10 minutos. Luego cierre los surtidores y vuelva a colocar la cubierta a la posición cerrada para mantener el calor. Luego vuelva a colocar la cubierta a la posición cerrada para mantener el calor.

Se deben seguir los siguientes procedimientos en el encendido inicial y cada vez que el spa se vacíe para el mantenimiento de rutina.

## CÓMO LLENAR CON AGUA EL SPA

1. Retire todos los desechos de su spa.
2. Asegúrese de abrir todos los surtidores para permitir que escape todo el aire posible de las tuberías durante el proceso de llenado.
3. Introduzca una manguera de jardín dentro del compartimiento del filtro para llenar el spa.

**NOTA:** No use agua caliente ni blanda.

4. En tanto el nivel de agua aumenta, verifique que no haya pérdidas en el compartimiento del equipo. Puede ser necesario ajustar las uniones y/o los accesorios que pueden haberse alojado durante el transporte. No hay necesidad de llamar al Servicio al Cliente, esto es muy fácil de hacer. Si necesita asistencia, comuníquese con un representante de Servicio al Cliente llamando al 001 855 671 3997.

5. En circunstancias normales, mantenga el nivel de agua entre la parte superior del spa y la parte superior del anillo gris del filtro o justo por encima de los surtidores más altos (el que sea mayor).

No mantener suficiente agua en el spa puede provocar daños en el sistema e invalidar su garantía. Si el filtro del spa está aspirando aire, esto hace que la bomba cavite, ¡debe agregar agua!

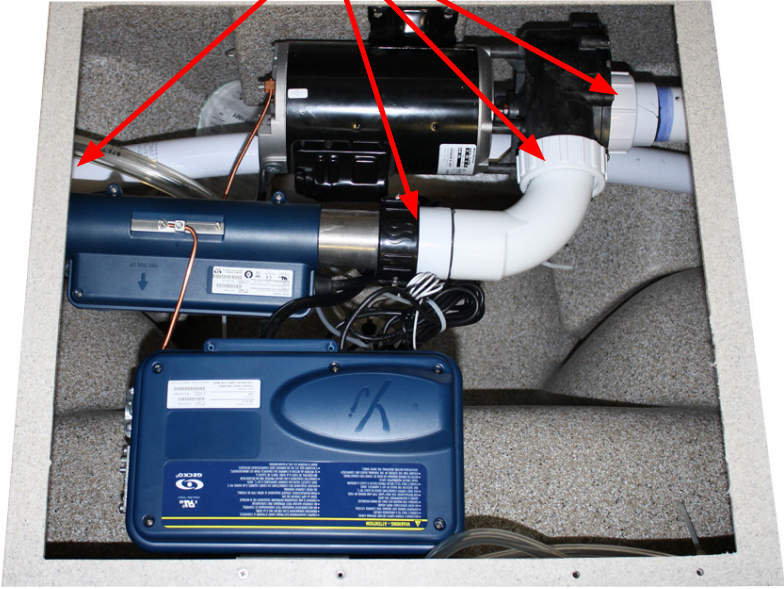
6. Verifique la instalación del filtro y asegúrese de que el filtro no esté flojo.

## CÓMO SUMINISTRAR ENERGÍA

1. Active el suministro eléctrico del spa (una vez relleno) desde el panel principal de la casa y en el subpanel.

2. Pulse el botón *Jets* en el panel de control superior para activar el spa. Gire todas las válvulas de control de aire en sentido antihorario y observe el aumento de la acción de los surtidores (aire mezclado con agua).
3. Mientras la bomba está funcionando, verifique nuevamente si hay fugas de agua en el grifo de drenaje, uniones o accesorios en el compartimiento del equipo (se pueden haber producido fugas durante el transporte). Si el agua se fuga por una de estas áreas, no hay necesidad de llamar al servicio técnico. Simplemente ajuste el conector. Si necesita asistencia, comuníquese con un representante de Servicio al Cliente llamando al 001 855 671 3997.

4. Después de verificar si existen fugas en el spa, es momento de ajustar las configuraciones del spa. Pulse el botón *más* o *menos* en el panel de control superior hasta que la pantalla indique que se estableció la temperatura deseada.



## **FUNCIONAMIENTO DE LOS COMPONENTES DEL SPA**

### **VÁLVULA DE CONTROL DE AIRE**

La válvula de control de aire sirve para regular la cantidad de aire mezclado con el agua cuando los surtidores están funcionando. Gire las válvulas de control del aire en una dirección y aumentará la acción del surtidor. Gire el control del aire en la dirección opuesta para apagar el aire y permitir que los surtidores trabajen sólo con agua. Apague los controles de aire cuando el spa no está en uso; esto evitará que el aire frío entre al spa y mantendrá los costos de calefacción al mínimo. El surtidor de ozono siempre producirá burbujas de aire cuando la bomba esté encendida.

### **VÁLVULA DESVIADORA (CUANDO ESTÁ EQUIPADA)**

La válvula de desvío del spa le permite dirigir el caudal del agua desde la bomba a una de las combinaciones de surtidores. La función de la válvula desviadora se puede aprender mejor con la experimentación. Gire completamente la válvula a un lado para ver dónde están los surtidores y luego gírela hacia el otro totalmente para ver que surtidores está afectados. (Para obtener la presión de surtidor que más le agrada, puede ajustar la válvula de desvío a cualquier posición entre sus dos extremos). **IMPORTANTE:** su spa no está diseñado para proporcionar una potencia total a todos los surtidores cuando las válvulas de desvío están en posición "media". No obstante, con la válvula de desvío en dicha posición, puede aumentar la potencia de los surtidores seleccionados mediante la rotación de los surtidores de hidrotterapia y cerrando los que no se estén utilizando.

### **SURTIDORES DE HIDROTHERAPIA**

Los surtidores de hidrotterapia están empotrados en la pared del spa. Rote los frontales medios del surtidor para conectar o desconectar los surtidores. Encender o apagar un surtidor hará que aumenten o disminuyan los efectos de los surtidores que no están cerrados.

### **GENERADOR DE OZONO (CUANDO ESTÁ EQUIPADA)**

El sistema de ozono de alto rendimiento mejora la calidad del agua cuando se utiliza como complemento del programa habitual de mantenimiento del spa. Contrariamente a algunas informaciones que circulan en el sector respecto de los sistemas de ozono, el ozono **NO PUEDE** utilizarse como el único desinfectante, aclarador del agua, inhibidor de espuma ni agente quelante de minerales. Debe utilizarse un segundo desinfectante para mantener un nivel de 3.0 - 5.0 ppm de cloro liberado disponible (FAC). Watkins Manufacturing Corporation recomienda que se siga un programa de mantenimiento químico basado en los estándares reconocidos y documentados de la industria, aunque también se utilice un sistema de purificación de ozono para asegurar la desinfección del agua y una purificación de alta calidad.

### **CASCADA**

El spa tiene una válvula de control para regular el caudal de la cascada que varía desde cero caudal a caudal constante. Esta válvula se ubica al lado de o en la cascada. **Nota:** La válvula de control de aire y la válvula de caudal de la cascada pueden tener el mismo aspecto; sin embargo, son componentes distintos.

### **SURTIDOR WHIRLPOOL (CUANDO ESTÁ EQUIPADO)**

El surtidor whirlpool se ubica debajo de la línea de agua en o cerca del área del panel de control en la pared. Este surtidor es una válvula desviadora y surtidor de alta capacidad que tiene un diámetro mayor que los surtidores de hidrotterapia. El surtidor remolino se enciende y se apaga rotando el dispositivo de ajuste del surtidor. Debido a que existe una cantidad sustancial de presión del agua cuando el surtidor está en funcionamiento, debe apagar la bomba o bajar la velocidad antes de intentar girar el dispositivo de ajuste del surtidor. Al aumentar la apertura del surtidor remolino, comenzará a apagar la mayoría de los surtidores de hidrotterapia. Una de las dos válvulas de control de aire es propia de este surtidor.





## MODO INVERNAL INTELIGENTE

El modo invernal inteligente (SWM) se utiliza para evitar que el agua se congele en las tuberías del spa. En el momento en que aparezca riesgo de congelación, se activa la protección. La protección invernal inteligente (SWM) solo se desconectará pasadas 24 horas sin riesgo de congelación. Durante estas 24 horas, el indicador del modo invernal inteligente permanecerá encendido, y parpadeará cuando la purga esté activa.

## MENSAGE DE DIAGNÓSTICO EN LCD

Mensaje	Significado	Acción requerida
	Ningún mensaje en la pantalla. Se ha cortado la conexión eléctrica del spa.	El panel de control se desactivará hasta que vuelva la energía. Los ajustes del spa se mantendrán hasta que vuelva a encenderse.
HL	El sistema ha desconectado el calentador porque ya alcanzado los 122°F (50°C). ¡No entre en el agua!	NO ENTRE EN EL AGUA. Quite la cubierta del spa para que el agua se enfríe y luego desconecte la corriente y vuelva a conectarla para restablecer el sistema. Si el spa no se reajusta, cierre la alimentación eléctrica del spa y llame al Servicio al Cliente.
AOH	La temperatura dentro del compartimiento del equipo es demasiado alta 194° F (90°C), lo que ocasiona que la temperatura interna del sistema de control aumente por encima de los límites normales.	Abra el compartimiento del equipo y espere a que se solucione el fallo.
PRR	Se ha detectado un problema con la prueba de temperatura.	Llame a su vendedor o proveedor de servicios.
SC	La temperatura del agua del spa ha alcanzado los 108°F (42°C). ¡No entre en el agua!	Quite la cubierta del spa para que el agua pueda bajar de temperatura. Avise a su fabricante o al proveedor de servicios si el problema persiste.
UPL	El sistema no cuenta con un software de configuración de bajo nivel.	Llame a su vendedor o proveedor de servicios.
FLO	El sistema de control no detecta flujo de agua cuando se espera que se produzca uno.	Asegúrese de que la bomba de surtidor está funcionando y que el agua fluye; compruebe y limpie los filtros y que el spa tenga el nivel de agua apropiado. Si el problema persiste, llame a su vendedor o proveedor de servicios.

**⚠️ Advertencia! Peligro de descarga eléctrica! No hay componentes que el usuario pueda reparar.** No intente reparar la caja de control. Comuníquese con el Servicio al Cliente para recibir asistencia. Siga todas las instrucciones del Manual del propietario para la conexión de alimentación. La instalación la debe realizar un electricista autorizado y todas las conexiones a tierra deben estar correctamente instaladas.

**⚠️ Advertencia! NO ENTRE AL SPA SI EL AGUA ESTÁ DEMIADAMENTE CALIENTE**

**El agua está demasiado caliente.** La protección contra el sobrecalentamiento del calentador está desactivada. La temperatura del agua del spa supera los límites aceptables. Cuando la temperatura real del agua es de aproximadamente 2°F (1°C) por encima de la temperatura establecida, la bomba de los surtidores dejará de funcionar para reducir la calefacción (fricción). Si la temperatura del agua del spa sigue aumentando y sube por encima de 108°F (42°C), el spa entrará en un estado de sobrecalentamiento "SC".

## AJUSTAR LOS CICLOS PREESTABLECIDOS DE FILTRADO

Puede programar la duración del filtrado entre 0.5 y 6 horas incrementándolo 30 minutos (media hora) en ambos ciclos de filtrado. Para programar los tiempos del ciclo:

1. Pulse y mantenga el botón *Light* durante 5 segundos hasta que se muestre F1.

2. Pulse el botón *más* o *menos* para ajustar el tiempo del ciclo para F1.

3. Pulse el botón *Light* para guardar el ciclo F1 y pasar al ciclo F2.

4. Pulse el botón *más* o *menos* para ajustar el tiempo del ciclo para F2.

5. Espere 15 segundos para que el temporizador de salida finalice y almacene el ajuste.

**IMPORTANTE:** para restablecer el primer ciclo de filtrado a tiempo de inicio, omita el paso 5 y siga pulsando el botón *Light* hasta que se muestre la temperatura actual. Si baja la potencia del spa, también se restablecerá el tiempo de inicio del primer filtrado.

**SUSPENSIÓN DEL CICLO DE FILTRADO:** el ciclo de filtrado se suspenderá cada vez que una bomba de surtidor o una luz se active manualmente durante dicho tiempo de filtrado. La suspensión finalizará 10 minutos después de finalizar el manejo manual.

## MODOS DE FUNCIONAMIENTO

El modo estándar es el modo de funcionamiento predefinido por defecto de fábrica. Para poder poner a funcionar el programa del spa en modo económico, debe introducir el modo de programación que implementa el cambio.

**MODO ESTÁNDAR:** está programado para mantener la temperatura deseada con circulación de agua periódica (muestreo) para probar y ajustar la temperatura

**MODO ECONÓMICO:** reducirá la temperatura del agua del spa a 20 °F. El muestreo y el calentamiento del agua solo se producen durante los ciclos de filtrado.

**MODO REPOSO:** el muestreo y calentamiento del agua solo se producen durante los ciclos de filtrado al tiempo que intenta que el agua alcance la temperatura ajustada.

**MODO PARADO:** mantiene la temperatura en los periodos de muestreo entre el inicio de F1 y el final de F2 pero no permite que se produzca ningún muestreo del agua entre el final de F2 y el inicio de F1. Para entrar en la pantalla de programación y cambiar entre los modos estándar económico, reposo y parado, deberá realizar lo siguiente:

1. Pulse y mantenga el botón *Light* durante 5 segundos

2. Pulse el botón *Light* varias veces hasta que se muestre St, Ec, SL, o nt.

3. Utilice el botón *más* o *menos* para seleccionar los modos.

St = modo estándar, Ec = modo económico, SL = modo reposo nt = modo parado

4. Espere 15 segundos para que el temporizador de salida finalice y almacene el ajuste.

**MODO OFF:** este modo le permite parar todas las funciones del spa durante 30 minutos si necesita realizar un mantenimiento rápido del spa. Para poner el spa en MODO OFF, pulse y mantenga el botón *Jets* durante 5 segundos. La pantalla alternará entre OFF y temperatura del agua cuando esté en MODO OFF. Para parar el MODO OFF antes de completar el ciclo de 30 minutos, solo necesita pulsar brevemente el botón *Jet*.

## AJUSTE FAHRENHEIT/CELSIUS

Para cambiar la visualización de la temperatura a grados Fahrenheit o Celsius, pulse y mantenga el botón *C* <sup>°F</sup>. Pulse el botón *Light* varias veces hasta que se muestre F1. Pulse el botón *Light* varias veces hasta que vea F o <sup>°C</sup>. Pulse el botón *más* o *menos* para cambiar. Espere 15 segundos para que el temporizador de salida finalice y almacene el ajuste.

# OPERACIÓN DEL PANEL DE CONTROL

## MARCHA INICIAL - una vez que el spa se conecta por primera vez, el sistema de control comienza

el modo inicio a los dos minutos. La pantalla mostrará códigos diferentes. Una vez que el modo inicio se ha

completado, verá en la pantalla la

temperatura actual, el spa empezará a

calentar y mantener la temperatura del

agua e iniciará el ciclo del primer filtrado.

El spa está diseñado para calentar el

agua automáticamente a la temperatura

establecida de fábrica de 100 °F a

menos que usted establezca una

temperatura diferente. Si se desconecta

el spa del suministro eléctrico, cuando

se vuelva a conectar, volverá automáticamente a la última temperatura establecida antes de la desconexión.

## REGULACIÓN DE LA TEMPERATURA (80°F-104°F/26,5°C -40°C) ⏏

La temperatura puede funcionar únicamente entre 80 °F - 104 °F / 26,5 °C - 40 °C. La última temperatura

medida se mostrará constantemente en el LCD.


Pulse los botones *de más* para ver la temperatura ajustada y el indicador . Cada vez que vuelva

a pulsar alguno de los dos botones, la temperatura ajustada aumentará o disminuirá dependiendo de que

botón pulse. Pasados cuatro segundos, el LCD mostrará automáticamente la temperatura actual del spa.

El indicador "calentar"  se iluminará cuando el calentador esté activado. Si parpadea, indicará que

necesita más calor y que el calentador no está activado. El indicador se para en cuanto se alcanza la

temperatura ajustada  y la velocidad baja de la bomba del surtidor se apaga pasados 30 segundos (si no

está en el ciclo de filtrado).

## FUNCIONAMIENTO DE LOS SURTIDORES

Pulse firmemente el botón *jets* una vez para activar la baja velocidad de la bomba y una vez más para la

velocidad alta. Pulse firmemente el botón *jets* nuevamente para apagar la bomba. Si deja la bomba funcionando

a baja o alta velocidad, se detendrá automáticamente después de 1 hora. La luz del indicador "jets" al lado del

botón comenzará a parpadear cuando la bomba del surtidor esté a baja velocidad. En alta velocidad la luz del

indicador de "jets" queda prendida.

## LUZ LED MULTICOLOR

Pulse el botón *Light* una vez para volver a iluminarlo. El indicador luminoso al lado de los botones estará

encendido mientras la luz lo esté. Pulse el botón nuevamente para apagar la luz. La luz se apagará cada

vez rápidamente y aparecerá un nuevo modo de luz. La secuencia es la siguiente: blanco, rueda de color


total, rueda de colores *ámbar*, azul, rojo, verde, *púrpura*; rueda de color 1 y rueda de color 2 y abrupto rueda

de color. Volverá a mostrarse el último modo de color utilizado si la luz se ha desconectado durante más de

dos segundos.

**NOTA:** si la deja encendida, la luz se apagará automáticamente después de cuatro horas de funcionamiento.

## CICLOS DE FILTRADO

Hay dos ciclos de filtrado: el primero (F1) se inicia tras la conexión y el segundo (F2) 12 horas después. La duración por defecto del primer ciclo es de una hora y de 30 minutos para el segundo. Los ciclos de filtrado solo funcionan a baja velocidad. El indicador "Filtro"  se iluminará cuando el ciclo de filtrado esté activado. Puede modificarse la duración de cada ciclo de filtrado.

# REQUISITOS ELÉCTRICOS

## DIAGRAMA DE CABLEADO ELÉCTRICO PARA EL USO DE

### 230 V

Se recomienda que un electricista autorizado haga la conexión eléctrica del spa de acuerdo al Código Nacional de Electricidad y/o los códigos locales sobre electricidad vigentes al momento de la instalación.

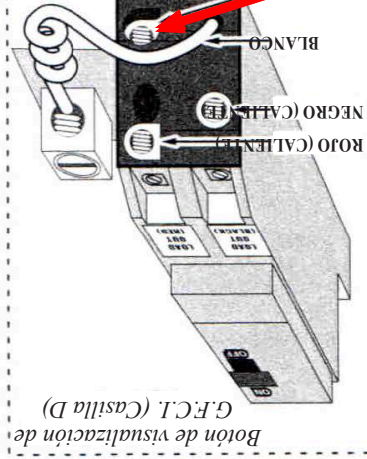
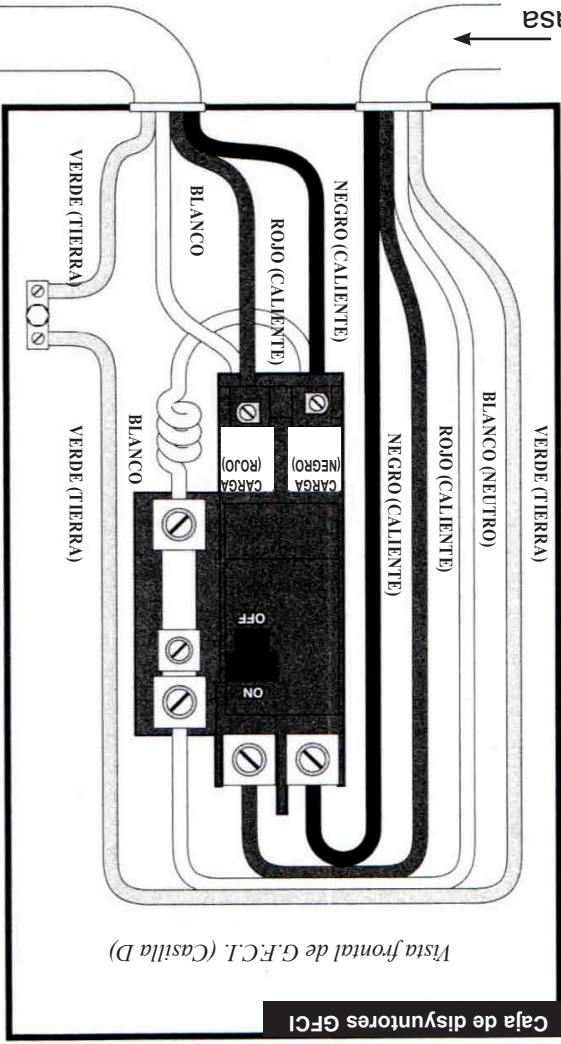
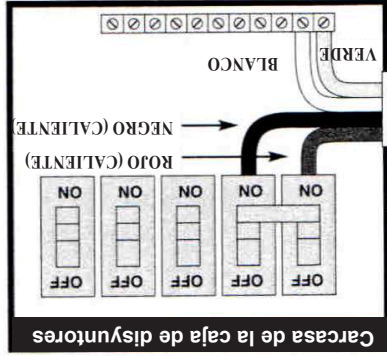
La instalación de la fuente de alimentación debe incluir un disyuntor GFCI nominal adecuado. El circuito debe ser propio y no debe compartirse con otros aparatos eléctricos. La red eléctrica debe tener un cableado directo a la fuente de energía.

Instrucciones de cableado de 230 V:

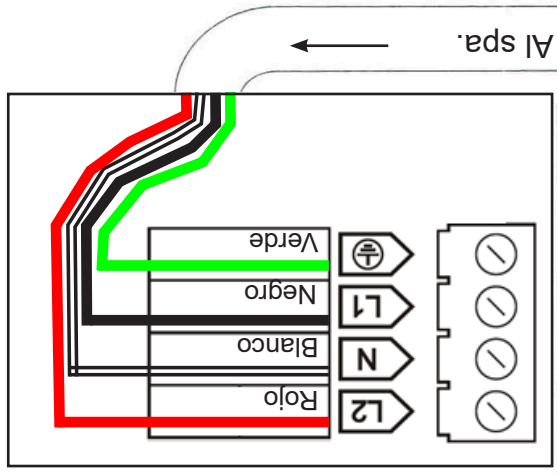
4 cables/mínimo 40 amperios para el interruptor GFCI, cable de cobre mínimo n° 8 AWG 75 °C (menos de 100 pies de largo)

Nota especial:

Si el interruptor GFCI se desconecta inmediatamente después de intentar encenderlo, compruebe si el cable neutro blanco está conectado al spa.



El cable blanco neutro conectado al neutro del spa va AQUÍ.



Desde la caja de disyuntores de la casa

## CÓMO CONFIGURAR EL SISTEMA

### SELECCIONE EL SUMINISTRO DE VOLTAJE PARA EL SPA

- Su spa está diseñado para funcionar a un circuito de 110 V 15 amp; 110 V 30 amp, o 230 V 40 amp.
- Cuando el spa está configurado para 110 V 15 amp, el calentador proporciona aproximadamente 1000 vatios de calor solo cuando la bomba está funcionando en velocidad BAJA y el termostato indica que se requiere calor (NOTA: el calentador no funciona cuando la bomba está en alta velocidad).
- Cuando el spa está conectado a 110 voltios 30 amperios, el calentador proporcionará aproximadamente 1000 vatios de calor cuando la bomba está funcionando en BAJA o ALTA velocidad y el termostato indica que se requiere calor.
- Cuando el spa está conectado a 230 voltios, el calentador proporcionará aproximadamente 4000 vatios de calor cuando la bomba está funcionando en BAJA o ALTA velocidad y el termostato indica que se requiere calor. Todas las conexiones eléctricas deben realizarse de acuerdo con la información de cableado que figura en la tapa de la caja del control eléctrico.

### INSTALACIÓN DE 110 VOLTIOS (CONECTADA AL CABLE)

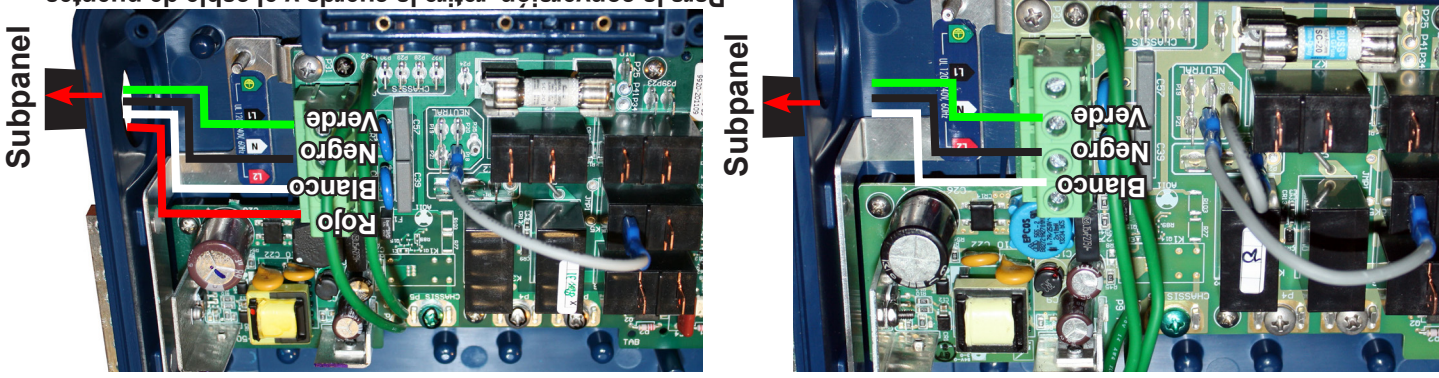
Los spas vienen con un cable de alimentación para el GFCI instalado de fábrica y debe enchufarse en una conexión a tierra en un receptáculo de 115 voltios, 15 amperios. Ningún otro aparato eléctrico o dispositivo se puede utilizar en este circuito.

**IMPORTANTE:** Bajo NINGUNA circunstancia use un cable alargador. El uso de un cable alargador reducirá seriamente el rendimiento del equipo y puede crear un peligro eléctrico.

### 110 VOLTIOS 30 A O 230 VOLTIOS 40 A (CONEXIÓN PERMANENTEMENTE AL CAMPO DE CONVERSION)

- Una configuración de 110 voltios 30 amperios necesita una caja de subpanel GFCI de 30 amperios GFCI (no incluida).
  - Una configuración de 230 voltios, 40 amperios necesitará una caja de subpanel GFCI de 40 amperios (no incluida).
- Cualquiera de este tipo de instalación debe realizarla un electricista titulado.

### Caja de control de campo de conversión 110 V 30 A Caja de conversión 110/230 V



Para la conversión, retire la cuerda y el cable de puentes marrón del bloque de terminales. Quite el conector el otro extremo del cable marrón y saquele de la caja. Coloque los cables rojos, blancos, negros y marones de #8 dentro del bloque de terminales y conecte el otro extremo al subpanel 40 A GFCI.

Para la conversión, quite el cable del bloque de terminales y reemplácelo por cables blancos, negros y verdes de 10#y conectéelos al subpanel GFCI de 30 A.

**IMPORTANTE:** después de conectar el spa a una conversión de campo de 110 V y 30 A o 230 V y 40 A necesitará una configuración de programa. Pulse y mantenga el botón JETS durante 30 segundos para acceder a los ajustes de nivel bajo (LL) en el panel de control. Utilice los botones +/- para cambiar el ajuste del nivel ajustado de fábrica LL1 (sin calor concurrente ni bomba de alta velocidad) a la configuración LL2 (calor concurrente y bomba de lata velocidad). Pulse el botón LIGHT durante 25 segundos para guardar el nuevo programa configurado.

## REQUISITOS ELÉCTRICOS

**⚠️! NO ENCIENDA EL SPA SIN ANTES HABERLO LLENADO DE AGUA!**

**⚠️ PELIGRO: RIESGO DE DESCARGA ELÉCTRICA**

Las instalaciones que no cumplan con los siguientes procedimientos y requisitos pueden exponer a los usuarios a una descarga eléctrica. Las instalaciones que no cumplan con los procedimientos y requisitos no estarán cubiertas por la garantía.

Si se instala en los Estados Unidos, el cableado eléctrico de este spa debe cumplir con los requisitos del Código Eléctrico Nacional (NEC) y los códigos estatales y locales aplicables. El circuito eléctrico debe ser instalado por un electricista y estar aprobado por la autoridad de inspección eléctrica de construcción local.

- Las instalaciones a menos de 5 pies de las superficies metálicas deben conectar a tierra las superficies metálicas de la bañera. Utilice un cable de cobre sólido n° 8 AWG y conéctelo a la terminal de puesta a tierra en la caja de control, ubicada en el compartimiento del equipo.
- Únicamente un electricista autorizado puede instalar la conexión eléctrica del spa.
- La instalación de la fuente de alimentación debe incluir un interruptor adecuado de circuito de fallo a tierra (GFCI) tal como lo requiere el Artículo 680-42 del NEC. El interruptor debe ser propio y no debe compartirse con otros aparatos eléctricos. Debe estar etiquetado y tener fácil acceso para los usuarios.
- La corriente eléctrica para el spa debe incluir un interruptor adecuado o disyuntor para abrir todos los conductores de corriente eléctrica sin conexión a tierra a fin de cumplir con la Sección 422-20 del Código Nacional de Electricidad, ANSI / NFPA 70. El medio de desconexión debe ser de fácil acceso para los ocupantes del spa, pero estar instalado por lo menos a 5 pies del agua del spa.

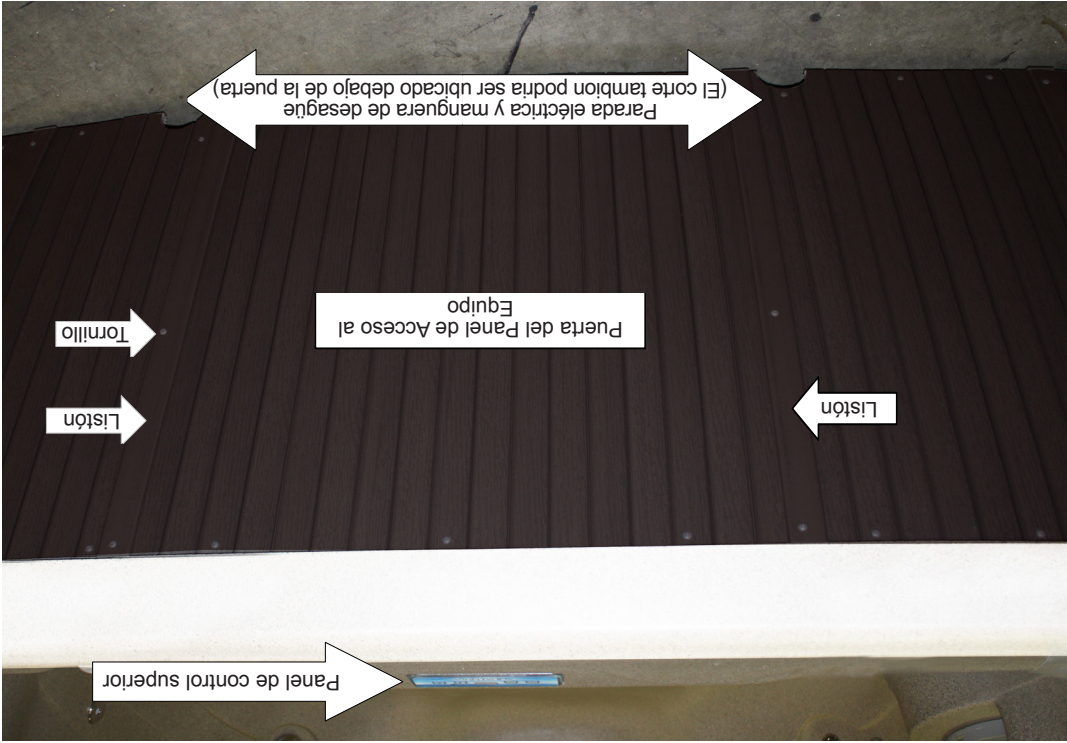
- La red eléctrica de 230 V debe tener un cableado directo en la caja de control. NO USE cables alargadores o de enchufes de ningún tipo. También se recomienda el uso de una caja de corte de energía cerca de la bañera. Esta caja proporciona un método rápido y conveniente para apagar la bañera en situaciones de emergencia y de mantenimiento.
- Las líneas de suministro eléctrico deben ser de tamaño adecuado según el NEC. Se debe proporcionar una línea a tierra que sea tan grande como la mayor corriente que transporte el conductor, pero no inferior a 8 AWG. Use únicamente cableado de cobre.
- Abra la cubierta frontal de la caja de control y siga las instrucciones y el diagrama de circuito impreso en la parte trasera.

- Todos los modelos con alimentación 110 V deben utilizar el cable de 15 pies provisto para el GFCI y enchufarlo directamente a un tomacorriente de pared exclusivo con conexión a tierra.
- PRECAUCIÓN, SPAS ALIMENTADOS CON 230 V: Estos spas deben tener un cableado directo únicamente a la caja de servicio eléctrico de su casa. No use un cable alargador ni ningún otro cable de alimentación desconectable. ¡El uso de un cable alargador o cualquier otro cable de alimentación desconectable es sumamente peligroso y anulará todas las garantías!
- El tamaño del cable debe ser apropiado según el NEC y/o los códigos locales.
- El tamaño del cable se determina por la longitud del trayecto desde la caja del interruptor al spa y la máxima generación de corriente.
- Se recomienda utilizar cables con núcleo de cobre THHN.
- Los cableados deben ser de cobre para garantizar las conexiones adecuadas.
- No utilice cables de aluminio.

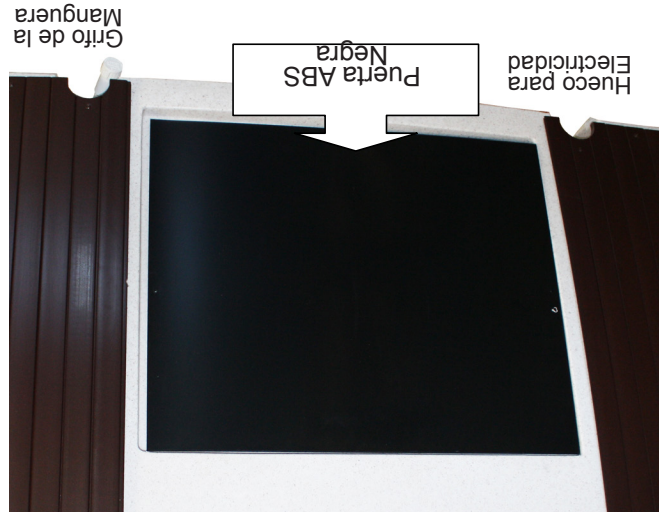
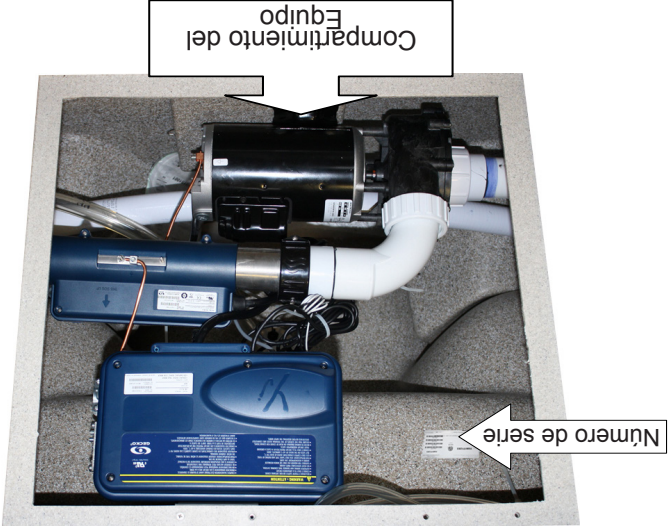
El acceso al equipo está debajo del panel de control superior.



**PANEL DE ACCESO AL EQUIPO**



- Retire 1 listón vertical y 3 tornillos a cada lado de la puerta de acceso al equipo.
- Retire los tornillos de la puerta de acceso al equipo y luego quite la puerta.
- Retire los tornillos de la puerta ABS negra (si el spa tiene listones verticales) para acceder al compartimiento del equipo.
- Para acceder al compartimiento del equipo (si su spa tiene listones verticales):



El uso de una grúa para la entrega y la instalación es principalmente para evitar que el spa, su propiedad o el personal de entrega sufran lesiones o daños. El uso de grúas no se considera "entrega normal".

## **CIRCUNSTANCIAS ESPECIALES:**

Verifique el ancho de portones, puertas y veredas para asegurarse de que el spa pase sin obstrucciones. Es posible que tenga que quitar un portón o una parte de una cerca para permitir el espacio suficiente. Si la vía de entrega requiere un giro de 90 grados, compruebe las medidas en el lugar de giro para garantizar que el spa quepa. Compruebe que no sobresalgan los medidores de gas, medidores de agua, A/C, etc., en su casa que causarán obstrucciones a lo largo de la vía de entrega hacia su patio. Tenga en cuenta los aleros del techo, las ramas que cuelgan o las canaléatas, que podrían ser un obstáculo para la distancia en la parte superior.

## **CÓMO PLANIFICAR LA VÍA DE ENTREGA:**

Compare las dimensiones de spa con el ancho de portones, veredas y puertas a lo largo del recorrido que haría para llevar el spa en su patio. Es probable que necesite quitar alguna puerta o parte de una cerca con el fin de mover el spa hasta el lugar de instalación. Además, tenga en cuenta que si usted está utilizando un equipo especial para colocar el spa en un área, será necesario incluir esas medidas y pesos.

## **VERIFIQUE LAS DIMENSIONES DEL SPA:**

## **CÓMO COLOCAR EL SPA**

Asegúrese de cumplir con los siguientes requisitos especiales si desea instalar el spa en el interior de su hogar. El agua se acumulará alrededor del spa, por lo que el piso debe ser de un material que ofrezca un buen agarre aunque esté mojado. NOTA: El desagüe del balde de hielo en el spa Monterey está diseñado para desagotar en la parte inferior exterior del spa. Por lo tanto, el agua acumulada en la parte trasera del spa probablemente sea agua que dreña del balde de hielo, y no una fuga del spa. Es esencial un desagüe adecuado para evitar la acumulación de agua alrededor del spa. Si construye una habitación nueva para el spa, es recomendable que coloque un desagüe en el suelo. El nivel de humedad aumentará con la instalación del spa. El agua podría filtrarse en la madera y provocar su putrefacción, la presencia de moho y otros problemas. Compruebe los efectos que causa la humedad del aire sobre la madera, el papel, etc., en la habitación. Para minimizar estos efectos, la mejor solución es disponer de la máxima ventilación en la zona donde se instale el spa. Un arquitecto puede ayudar a determinar si es necesaria una ventilación suplementaria.

## **INSTALACIÓN EN INTERIORES:**

Se recomienda una plataforma de concreto de un mínimo de cuatro pulgadas de espesor para su spa. Las varillas y mallas de refuerzo de la plataforma deben conectarse a un cable de unión.

## **QUIEN PREPARE LOS CIMIENTOS DE SU SPA.**

## **SE RECOMIENDA ENCARECIDAMENTE QUE SEA UN CONTRATISTA CUALIFICADO Y LICENCIADO**

Siempre se debe tener en cuenta el peso del spa al instalarlo. Si lo va a instalar sobre una plataforma de madera elevada u otra estructura, es aconsejable consultar a un ingeniero o contratista para garantizar que la estructura puede soportar el peso.

Asegúrese de que la base donde se coloca el spa drene el agua del spa. El drenaje adecuado mantendrá a los componentes aislados de la lluvia y el tiempo húmedo. Los daños causados por el apoyo inadecuado o incorrecto de la base no están cubiertos por la garantía. Es responsabilidad exclusiva del propietario del spa proporcionarle una base adecuada.

## **TENGA EN CUENTA:**



## **DÓNDE COLOCAR EL SPA**

Tenga en cuenta estas cosas al determinar dónde colocar su spa.

### **LA SEGURIDAD ES PRIMORDIAL:**

Asegúrese de que el spa está situado de modo tal que el acceso al compartimiento del equipo y a los paneles laterales no se bloquee. Asegúrese de que la instalación cumpla con todas las normas y requisitos de seguridad local y de la ciudad.

### **USO PREVISTO DEL SPA:**

Determinar cómo planea utilizar el spa le ayudará a decidir dónde debe colocarlo. Por ejemplo, ¿lo utilizará más con fines recreativos o terapéuticos? Si el spa es principalmente para disfrutar familiar, deje espacio suficiente a su alrededor para actividades y muebles de jardín. Si lo va a usar más para relajación y terapia, es probable que quiera crear cierta privacidad alrededor del spa.

### **PRIVACIDAD:**

Piense en su entorno durante las cuatro estaciones del año para determinar las mejores opciones de privacidad. Tenga en cuenta a sus vecinos cuando planifique la ubicación de su spa.

### **VISTAS:**

Piense en la dirección en la que mirará al sentarse en su spa. ¿Hay algún paisaje especial que le resulta agradable? Tal vez haya una zona que tenga una suave brisa durante el día o una hermosa puesta de sol a la tarde.

### **MEDIO AMBIENTE:**

Si usted vive en un clima con nieve en el invierno y veranos calurosos, es conveniente contar con un lugar para cambiarse de ropa o una entrada a la casa cerca del spa. Un clima más cálido puede requerir sombra para protegerse del sol. Considere colocar árboles, arbustos, una cubierta de patio o tal vez un cenador para proporcionar lo que necesita. Las instalaciones interiores requieren una ventilación adecuada. Cuando el spa está en uso, se produce una cantidad considerable de humedad. Esta humedad puede dañar las paredes y el cielo raso con el tiempo. Existe una pintura especial para resistir los daños causados por la humedad. Recuerde que los spas requieren periódicamente de desagüe, por lo tanto, planifique el entorno en consecuencia.

### **MANTENER LIMPIO:**

Evite entrar al spa con los pies sucios o con césped utilizando senderos y áreas de acceso de cemento. Compruebe la ubicación de los derrames de alcantarillas, árboles y arbustos.

### **ACCESO AL SERVICIO:**

Muchas personas optan por instalar azulejos o madera a medida alrededor del spa. Si instala el spa con un borde decorativo a medida, recuerde que debe permitir el acceso al spa para su reparación. Si necesita servicio técnico, es posible que el técnico deba quitar el panel de la puerta del spa, o acceder a este desde abajo. Siempre es mejor diseñar instalaciones especiales para que el spa se pueda mover o levantar del suelo.

### **UNA BUENA BASE:**

Su nuevo spa necesita una buena base sólida. El área donde se colque el spa debe ser capaz de soportar el spa, el agua y los que lo utilizan. Si la base no es adecuada, se puede mover o asentarse después de que el spa esté colocado causando presión en el casco o componentes. **NOTA:** no se recomienda colocar cuñas en el spa ya que podrían deformar la cabina, anulando de esta manera la garantía.

que pueden afectar el rendimiento de los surtidores de hidromasaje, limitar el caudal, o desconectar el termostato de límite máximo, lo que apagará el spa.

## **CÓMO EVITAR EL RIESGO DE HIPERTERMIA**

La inmersión prolongada en agua caliente podría producir HIPERTERMIA, que es un trastorno peligroso que se da cuando la temperatura interna del cuerpo alcanza un nivel por encima de lo normal (98,6 °F, 37 °C). Los síntomas de la hipotermia incluyen la falta de conciencia del peligro inminente, incapacidad de percibir el calor, incapacidad de reconocer la necesidad de salir del spa, incapacidad física para salir del spa, daños fetales en mujeres embarazadas y pérdida del conocimiento que podría llevar al ahogamiento.

## **⚠️ ADVERTENCIA:**

El consumo de alcohol, drogas o medicamentos puede aumentar en gran medida el riesgo de hipotermia mortal en bañeras de hidromasaje y spas.

## **CÓMO REDUCIR EL RIESGO DE LESIONES PERSONALES:**

- El agua del spa nunca debe superar los 104 °F (40 °C). La temperatura del agua entre 100 °F (38 °C) y 104 °F (40 °C) se considera segura para un adulto sano. Se recomiendan temperaturas más bajas para un uso prolongado (más de 10 minutos) y para los niños pequeños. El uso prolongado puede provocar hipotermia.
- Las mujeres embarazadas, o que sospechen que pueden estarlo, deben limitar la temperatura del agua del spa a 100 °F (38 °C). No hacerlo podría suponer daños graves permanentes para el bebé.
- No utilice el spa inmediatamente después de realizar ejercicio extenuante.

## **PARA EVITAR EL RIESGO DE QUEMADURAS EN LA PIEL:**

- Para reducir el riesgo de lesiones, antes de entrar al spa, el usuario debe medir la temperatura del agua con un termómetro que funcione con precisión.
- Toque el agua antes de entrar en el spa para asegurarse que esté agradable.

## **SEÑAL DE SEGURIDAD**

LETTERO DE SEGURIDAD incluido dentro del paquete del propietario. El lettero se requiere como condición para el LISTADO DE PRODUCTOS y debe instalarse permanentemente en un lugar visible a los usuarios del spa.

## **INSTRUCCIONES IMPORTANTES DEL SPA**

El siguiente apartado contiene información importante sobre el spa; insistimos en la importancia de que la lea y la ponga en práctica.

## **QUE HACER:**

- Use y cierre (bloquee) la cubierta de vinilo cuando no utilice el spa, tanto si está vacío, como si está lleno.
- Siga las recomendaciones de cuidado y mantenimiento del spa que se ofrecen en este manual.
- Utilice solamente accesorios autorizados y productos químicos y de limpieza recomendados para su spa.

## **QUE SE DEBE EVITAR:**

- Dejar el spa expuesto a la luz solar sin agua en su interior o sin la cubierta vinílica colocada. La exposición directa a la luz del sol puede provocar daños en los materiales del casco.
- No ruede ni deslice el spa sobre los costados. Esto dañaría el revestimiento exterior.
- Elevar o arrastrar la cubierta tirando de las correas de cierre de la cubierta. Suba o arrastre siempre la cubierta utilizando sus tiradores.
- No intente abrir la caja de control eléctrica. En su interior no hay componentes reparables. Si el propietario abre la caja de control, la garantía queda anulada. Si detecta algún problema de operación, siga detenidamente los pasos descritos en la sección Solución de problemas. Si no es capaz de resolver el problema, consulte a su distribuidor autorizado. Muchos problemas pueden ser fácilmente diagnosticados mediante una llamada al técnico de servicio autorizado.

## QUE SE DEBE EVITAR:

- No utilice el spa sin la puerta del compartimiento del equipo.
- No coloque los aparatos eléctricos a 5 pies (1,5 m) del spa.
- No utilice una extensión para conectar el spa a la fuente de corriente. La extensión podría no estar conectada a tierra debidamente, lo que representaría un peligro de descarga eléctrica. Un cable alargador podría provocar una caída del voltaje, causando un posible sobrecalentamiento de la bomba de surtidores y daños en el motor.
- No intente abrir la caja de control eléctrica. En su interior no hay componentes reparables.

## RIESGOS A EVITAR

### PELIGRO: RIESGO DE LESIÓN

- NO se siente en el área del compartimiento del filtro. Sentarse en esta área puede causar:
  - a) Merma de función de la bomba de succión/vacío
  - b) Daño en los componentes
- Ambos podrían causar lesiones al cuerpo. En caso de que se produzcan daños en los componentes de dicha área, reemplácelos de inmediato!

Para reducir el riesgo de daños físicos, NO retire el vertedero flotante, la canastilla ni el filtro

situados en el compartimiento del filtro mientras el spa esté en funcionamiento.

- Los accesorios de succión del spa están diseñados para ajustarse al caudal de agua específico creado por la bomba. Nunca reemplace los accesorios de succión con accesorios que tengan una capacidad menor de velocidad de flujo de la marcada en el accesorio de succión original.

- Existe el riesgo de resbalar y caer. Recuerde que las superficies mojadas son resbaladizas. Tenga cuidado al entrar y salir del spa.

- Nunca haga funcionar el spa si faltan o están rotos los accesorios de succión.

- El producto no debe ser utilizado por personas (incluidos niños) con capacidades físicas, sensoriales o mentales mergadas, personas sin experiencia ni conocimientos, a no ser que reciban instrucción sobre su uso o sean supervisadas.

- El spa no debe ser utilizado por personas con enfermedades contagiosas.

- Mantenga las prendas de vestir sueltas y los artículos de joyería colgantes alejados de los surtidores rotatorios o de cualquier otro componente móvil.

## Aumento de los efectos secundarios de las medicinas

- La ingestión de drogas, alcohol o medicación antes o durante la utilización del spa puede llevar a la inconsciencia, con la posibilidad de ahogamiento.

- Aquellas personas que tomen medicamentos deben consultar con un médico antes de utilizar cualquier spa; algunos medicamentos pueden provocar somnolencia al usuario, mientras que otros pueden afectar el ritmo cardíaco, la presión y la circulación sanguínea.

- Aquellas personas que toman medicamentos que puedan producir somnolencia, como los tranquilizantes, antihistamínicos o anticoagulantes, no deben utilizar el spa.

## Estados de salud que pueden verse afectados por el uso del spa

- Las mujeres embarazadas deben consultar a un médico antes de utilizar el spa.
- Aquellas personas que sufran de obesidad o que tengan un historial médico de enfermedades coronarias, presión sanguínea alta o baja, problemas del sistema circulatorio o diabetes, deben consultar a un médico antes de utilizar el spa.

## Agua sucia

- Mantenga el agua limpia y desinfectada con los productos químicos adecuados. Los niveles recomendados para su spa son:

Virje chlor: 3,0-5,0 ppm      Alcalinidad total: 40 - 120 ppm

Nivel de pH del agua: 7,2 - 7,8

Dureza del agua: 50- 150 ppm

- **IMPORTANTE:** conecte la bomba de surtidores durante un mínimo de diez minutos después de ANADIR cualquier producto químico al agua del spa en el interior de compartimiento del filtro. Limpie el cartucho de filtrado mensualmente para eliminar la suciedad y la acumulación de minerales

## 110 VOLTIOS, MODELOS CONECTADOS POR CABLE:

- El GFCI se ubica en el extremo del cable de la corriente. Antes de usar, y con la unidad en funcionamiento, pulse el botón PRUEBA (TEST) de cada disyuntor. La unidad debe dejar de funcionar y el indicador de encendido GFCI se apagará. Espere 30 segundos y luego reinicie el GFCI pulsando el botón REINICIAR (RESET). El indicador de encendido GFCI se encenderá para restablecer la energía al spa. Si el interruptor no funciona de esta manera, puede haber un problema eléctrico y la posibilidad de una descarga eléctrica. Desconecte la corriente hasta que el problema se haya solucionado.

**NOTA: esto reiniciará el ciclo de filtrado.**

## 230 VOLTIOS, MODELOS CONVERTIDOS:

- Se proporciona una terminal a tierra en la caja de control. A fin de reducir el riesgo de una descarga eléctrica, conecte esta terminal a la terminal a tierra del suministro de electricidad o al subpanel con un cable continuo verde de cobre con aislamiento. La medida del cable debe ser equivalente a los conductores de circuito que alimenten al equipo. Además, se proporciona una terminal de unión (conector de cable de presión) en el exterior de la caja de control para unirse con los puntos de tierra locales. A fin de reducir el riesgo de una descarga eléctrica, este conector debe unirse con un cable de cobre sólido n° 8 AWG (8,4 mm<sup>2</sup>) a cualquier escalera de metal, tubería de agua u otro metal que se encuentre dentro de una distancia de 5 pies (1,5 metros) del spa con el fin de cumplir los requisitos locales. Los medios de desconexión deben quedar accesibles, pero deben instalarse por lo menos a 5 pies (1,5 m) del spa. El spa necesita un disyuntor de capacidad adecuada para abrir todos los conductores de suministro sin conexión a tierra.

- El spa cuenta con un interruptor de circuito de fallo a tierra en un subpanel eléctrico. Antes de usar el spa cada vez, y con la unidad en funcionamiento, pulse el botón PRUEBA (TEST) en el disyuntor. El interruptor debe volver a la posición "Desconexión" ("Trip"). Espere 30 segundos y vuelva a ajustar el interruptor GFCI. Para ello, apáguelo y enciéndalo completamente. El interruptor debe quedar en la posición de encendido. Si el interruptor no funciona de la manera explicada quiere decir que hay un fallo eléctrico y que existe la posibilidad de que se produzca una descarga eléctrica. Desconecte la corriente y no la vuelva a conectar hasta que se identifique y corrija la anomalía.

**IMPORTANTE:** si no espera 30 segundos antes de reiniciar el GFCI, el indicador de encendido del spa (en el panel de control) parpadeará. Si esto sucede, repita la comprobación del GFCI.

## PELIGRO: RIESGO DE DESCARGA ELÉCTRICA



- Instale el spa a un mínimo de 5 pies (1,5 m) de distancia de cualquier superficie metálica. El spa puede instalarse dentro de una distancia de 5 pies (1,5 m) de una superficie metálica si esta se encuentra permanentemente conectada a un conductor de cobre sólido n° 10 AWG, conectado a un conector de toma a tierra en la caja de terminales que se proporciona para dicho fin, de conformidad con el Código Nacional de Electricidad ANSI/NMFA70-1993.
- No deje ningún aparato eléctrico, como luces, teléfonos, radios o televisores a 5 pies (1,5 m) o menos del spa. No mantener la distancia de seguridad podría causar la muerte o graves daños personales, debido a una electrocución, en el caso de que el aparato eléctrico caiga dentro del spa.
- Instale el spa de forma que el desagüe esté alejado de cualquier compartimiento o componente eléctrico.

## QUE HACER:

- Asegúrese de que su spa esté conectado a la red eléctrica correctamente. Contrate los servicios de un electricista autorizado.
- Contrate los servicios de un electricista autorizado. Desconecte el spa antes de vaciarlo o de reparar cualquier componente eléctrico.
- Compruebe que el/los GFCI funcione(n) antes de cada uso.

# INSTRUCCIONES IMPORTANTES SOBRE SEGURIDAD

## LEA Y SIGA TODAS LAS INSTRUCCIONES

## EVITE CUALQUIER TIPO DE RIESGO PARA LOS NIÑOS

### PELIGRO:

- **RIESGO DE QUE LOS NIÑOS SE AHOGUEN.** Extremar las precauciones para evitar el acceso no autorizado de los niños. Para evitar accidentes, asegúrese de que los niños no puedan utilizar el spa a menos que estén bajo total vigilancia. Vigile que los niños no utilicen el spa como un juguete.

### ADVERTENCIA:

- Para reducir el riesgo de lesiones personales, no permita que los niños utilicen el spa a menos que estén bajo total vigilancia.
- Para reducir el riesgo de lesiones, se recomienda disminuir la temperatura del agua para los niños pequeños. Los niños son particularmente sensibles al agua caliente.

### **QUE SE DEBE HACER:**

- Para mayor seguridad, asegúrese siempre de bloquearlos cierres a prueba de niños después de utilizar el spa. Todos los spas están equipados con una cubierta de cierre que cumple con la normativa para cubiertas de seguridad ASTM F1346-91.
- Toque el agua con la mano para asegurarse de que esté a una temperatura adecuada antes de permitir que los niños entren en el spa. Los niños son particularmente sensibles al agua caliente.
- Recuerde a los niños que las superficies mojadas son muy resbaladizas. Asegúrese de que tengan cuidado al entrar y al salir del spa.

### **QUE NO HACER:**

- No permita que los niños se suban a la cubierta del spa.
- No deje que los niños tengan acceso al spa sin vigilancia alguna.

## **CÓMO EVITAR EL RIESGO DE ELECTROCUCIÓN**

### *Riesgo de electrocución*

- Conecte solo a una fuente de electricidad con toma a tierra.
- No entierre el cable de suministro eléctrico. Un cable de suministro eléctrico enterrado puede provocar la muerte o graves daños personales debido a una electrocución, en el caso de que no se utilice un cable especial o se excave inadecuadamente.
- Se incluye una terminal de tierra (conector de cable de presión) en la caja de control que se encuentra dentro de la unidad para que se pueda conectar a un conductor de enlace de cobre sólido, mínimo del n° 10 AWG entre ese punto y cualquier otro equipo de metal, así como una tubería de agua de metal, cajas de metal para equipo eléctrico y un conductor que deberá colocarse a una distancia de cinco pies (1,5 m) o menos de la unidad, según sea necesario para cumplir las normas de la localidad.

### ADVERTENCIA:

- Para disminuir el riesgo de descarga eléctrica, sustituya cualquier cable dañado inmediatamente. No hacerlo podría causar la muerte o graves daños personales debido a una electrocución.
- El spa de 11 voltios cuenta con un interruptor de circuito de fallo a tierra para proteger al usuario y al equipo. Para garantizar el funcionamiento apropiado de este importante dispositivo de seguridad, realice una prueba de acuerdo con las siguientes instrucciones según la configuración eléctrica. Si el cable de alimentación está dañado, avise al fabricante, un servicio autorizado o una persona

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# MANUAL DEL PROPIETARIO PARA Aquaterra

Sistemas de 115 V / 230 V

## Registro del propietario

### Como localizar el número de serie del spa:

La etiqueta del número de serie del spa se encuentra en el interior del compartimiento del equipo. El panel de acceso del compartimiento del equipo está debajo del panel de control superior de los cuatro botones del spa. Necesitará el modelo de spa y el número de serie para registrar correctamente el spa y activar la garantía. Escriba la información del spa en el espacio proporcionado.

FECHA DE COMPRA:

COMPRA DO A:

MODELO DE SPA:

NÚMERO DE SERIE:

Lea el "Manual del usuario" atentamente, ya que está diseñado para proporcionarle la información que necesita para garantizar el uso seguro del spa.

**IMPORTANTE:** Watkins Manufacturing Corporation se reserva el derecho de cambiar sin previo aviso cualquier especificación o diseño, sin que por ello contraiga obligación alguna.

### ESPECIFICACIONES DEL SPA

**Modelo**      **Colocación**      **Longitud**      **Ancho**      **Altura**      **Peso**      **Galones**      **Especificaciones eléctricas 60 Hz**

del spa

seco

eléctricas 60 Hz

Montecito™	6 personas	205 cm	205 cm	86 cm	216 kg	1003	230 V
Verona™	6 personas	205 cm	205 cm	86 cm	205 kg	1192	110/230 V
Palisades®	5 personas	221 cm	196 cm	86 cm	211 kg	1098	110/230 V
Aryana™	5 personas	221 cm	196 cm	86 cm	211 kg	1098	230 V
Transport® II	5 personas	190 cm	190 cm	86 cm	192 kg	927	110/230 V
Newporter™ 3.0	5 personas	198 cm	198 cm	86 cm	163 kg	1003	110/230 V
Grayson™	4 personas	147 cm	178 cm	81 cm	125 kg	776	110/230 V
Adriana™	4 personas	205 cm	160 cm	84 cm	173 kg	946	110/230 V
Toscana™ II	3 personas	183 cm	183 cm	79 cm	92 kg	700	110/230 V

### NO UTILICE EL SPA ANTES DE LEER ESTE MANUAL

No leer este manual y no seguir las instrucciones puede hacer que el funcionamiento sea poco seguro y causar daños permanentes al spa portátil.

La mayoría de las ciudades, condados y países requieren permisos para la construcción externa y circuitos eléctricos. Además, algunas comunidades han adoptado normas que requieren barreras residenciales, tales como vallas y / o puertas de cierre automático en la propiedad para evitar el acceso sin vigilancia de los niños a una piscina o spa. Asegúrese de consultar a sus agencias locales con respecto a los requerimientos específicos.

Si necesita información adicional y/o asistencia, comuníquese con el Servicio al Cliente al 888-961-7727, extensión 8440 o a [ahsservice@watkinsmfg.com](mailto:ahsservice@watkinsmfg.com).

Gracias por elegir un spa Aquaterra. Visite nuestro sitio Web en [www.AquaTerraspas.com](http://www.AquaTerraspas.com).

# MANUAL DEL PROPIETARIO

## Modelos de 110 V / 230 V





# AQUATERRA S P A S



## **AVONDALE™ OWNER'S MANUAL 110V 60Hz Model**

# AQUATERRA OWNER'S MANUAL

## Owner's Record

### Locating the Spa Serial Number:

The spa serial number label is located inside the equipment compartment. Equipment compartment access panel is below the spas 4-button topside control panel. You will need the spa model and serial number to properly register your spa and activate coverage. Write your spa information in the space provided.

DATE PURCHASED:

PURCHASED FROM:

SPA MODEL:

SERIAL NUMBER:

See page 7

Please read this "Owner's Manual" carefully, as it is designed to provide you with the information you will need to ensure the safe, secure use of your spa.

**IMPORTANT:** Watkins Manufacturing Corporation reserves the right to change specifications and/or design without notification and without any obligation.

### SPA SPECIFICATIONS

Model	Spa Seating	Length	Width	Height	Dry Weight	Gallons	Electrical 60Hz
Avondale™	5 person	6'0"	6'9"	34"	422 LBS.	315	110V, 9A

### CAUTION

#### DO NOT OPERATE SPA BEFORE READING THIS MANUAL

Failure to read this manual & follow its instructions may result in unsafe operation and or permanent damage to your portable spa.

Most cities, counties, states, and countries require permits for exterior construction and electrical circuits. In addition, some communities have codes requiring residential barriers such as fencing and/or self-closing gates on the property to prevent unsupervised access to a pool or spa by children. Be sure to check with your local agencies for specific requirements.

If you need additional information and/or assistance, please contact Customer Service at (888) 961-7727 Ext. 8440 or at [ahsservice@watkinsmfg.com](mailto:ahsservice@watkinsmfg.com)

Thank you for choosing an AquaTerra Spa. Visit our web site at [www.AquaTerraspas.com](http://www.AquaTerraspas.com).

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# SAFETY INFORMATION

## **IMPORTANT SAFETY INSTRUCTIONS**

### **READ AND FOLLOW ALL INSTRUCTIONS**

#### **AVOIDING THE RISK TO CHILDREN**

##### **DANGER:**

- **RISK OF CHILD DROWNING.** Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a spa unless they are supervised at all times.

##### **WARNING:**

- To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
- To reduce the risk of injury, lower water temperatures are recommended for young children. Children are especially sensitive to hot water.

##### **DO:**

- Make sure you always lock the child resistant locks after using the spa for your children's safety. Every spa is equipped with a locking cover that meets the ASTM F1346-91 Standard for Safety Covers.
- Test the water temperature with your hand before allowing your child to enter the spa to be sure that it's comfortable. Children are especially sensitive to hot water.
- Remind children that wet surfaces can be very slippery. Make sure that the children are careful when entering or exiting the spa.

##### **DON'T:**

- Allow children to climb onto the spa cover.
- Allow children to have unsupervised access to the spa.

#### **AVOIDING THE RISK OF ELECTROCUTION**

##### **Risk of electrocution**

- Connect only to a grounded source.
- Do not bury the power cord. A buried power cord may result in death or serious personal injury due to electrocution if direct burial-type cable is not used, or if improper digging occurs.
- A ground terminal (pressure wire connector) is provided on the control box inside the unit to permit connection of a minimum No. 10 AWG solid copper bonding conductor between this point and any metal equipment, metal water pipe, metal enclosures of electrical equipment, or conduit within five feet (1.5 m) of the unit as needed to comply with local requirements.

##### **WARNING:**

- To reduce the risk of electrical shock, replace a damaged cord immediately. Failure to do so may result in death or serious personal injury due to electrocution.
- Your spa is provided with a Ground Fault Circuit Interrupter for user and equipment protection. To ensure proper operation of this important safety device, test according to the following instructions per electrical configuration.

# SAFETY INFORMATION

## 110 VOLT CORD-CONNECTED 15 AMP MODELS:

- The GFCI is located at the end of the power cord. Before each use, with the unit operating, push the TEST button. The unit should stop operating and the GFCI power indicator will go out. Wait 30 seconds and then reset the GFCI by pushing the RESET button. The GFCI power indicator will turn on, restoring power to the spa. If the interrupter does not perform in this manner, there may be an electrical malfunction and with it, the possibility of an electric shock. Disconnect the power until the problem has been corrected. **NOTE: This will reset the filter cycle.**

### **DANGER: RISK OF ELECTRICAL SHOCK**

- Install spa at least 5 feet (1.5 m) from all metal surfaces. A spa may be installed within 5 feet of a metal surface if each metal surface is permanently connected by a minimum No. 10 AWG solid copper conductor attached to the wire ground connector on the terminal box that is provided for this purpose if in accordance with National Electrical Code ANSI/NMFA70-1993.
- Do not permit any electrical appliances, such as a light, telephone, radio, or television within 5 feet (1.5 m) of a spa. Failure to maintain a safe distance may result in death or serious personal injury due to electrocution if the appliance should fall into the spa.
- Install your spa in such a way that drainage is away from the electrical compartment and from all electrical components.

### **DO:**

- Be sure your spa is connected to the power supply correctly - use a licensed electrical contractor.
- Disconnect the spa from the power supply before draining the spa or servicing the electrical components.
- Test the Ground Fault Circuit Interrupter(s) before each use.

### **DON'T:**

- Use the spa with the equipment compartment door removed.
- Place electrical appliances within 5 feet (1.5m) of the spa.
- Use an extension cord to connect the spa to its power source. The cord may not be properly grounded and the connection is a shock hazard. An extension cord may cause a voltage drop, which will cause overheating of the jet pump motor and motor damage.
- Attempt to open the electrical control box. There are no user serviceable parts inside.

## **RISKS TO AVOID**

### **DANGER: RISK OF INJURY**

- DO NOT sit in the filter compartment area. Sitting in this area can cause:  
a) Restriction of Filter Pump suction/vacuum      b) Damage to components
- Both can result in bodily harm. Should damage occur to components in this area, replace immediately!

To reduce the risk of injury to persons, DO NOT remove floating weir, basket, and filter located in the filter compartment while the spa is running.

- The suction fittings in the spa are sized to match the specific water flow created by the pump. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.
- There is a danger of slipping and falling. Remember that wet surfaces can be very slippery. Take care when entering or exiting the spa.

## SAFETY INFORMATION

- Never operate spa if the suction fittings are broken or missing.
- People with infectious diseases should not use the spa.
- Keep any loose articles of clothing or hanging jewelry away from rotating jets or other moving components.

### ***Increased side effects of medication***

- The use of drugs, alcohol or medication before or during spa use may lead to unconsciousness with the possibility of drowning.
- Persons using medications should consult a physician before using a spa; some medication may cause a user to become drowsy, while other medication may affect heart rate, blood pressure, and circulation.
- Persons taking medications which induce drowsiness, such as tranquilizers, antihistamines or anticoagulants should not use the spa.

### ***Health problems affected by spa use***

- Pregnant women should consult a physician before using spa.
- Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using spa.

### ***Unclean water***

- Keep the water clean and sanitized with correct chemical care. The recommended levels for your spa are: Free Available Chlorine (FAC): 3.0-5.0 ppm    Total Alkalinity: 40 - 120 ppm  
Water pH: 7.2 - 7.8    Calcium Hardness: 50- 150 ppm

**IMPORTANT:** Turn jet pump on for at least ten minutes after adding ANY spa water chemicals into the filter compartment.

- Clean the filter cartridge monthly to remove debris and mineral buildup which may affect the performance of the hydromassage jets, limit the flow, or trip the high-limit thermostat which will turn off the entire spa.

## ***AVOIDING THE RISK OF HYPERTHERMIA***

Prolonged immersion in hot water can result in HYPERTHERMIA, a dangerous condition which occurs when the internal temperature of the body reaches a level above normal (98.6°F, 37°C). The symptoms of hyperthermia include unawareness of impending hazard, failure to perceive heat, failure to recognize the need to exit the spa, physical inability to exit the spa, fetal damage in pregnant women, and unconsciousness resulting in a danger of drowning.

### **WARNING:**

The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

### ***TO REDUCE THE RISK OF INJURY:***

- The water in the spa should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for extended use (exceeding 10 minutes) and for young children. Extended use can cause hyperthermia.
- Pregnant or possibly pregnant women should limit spa water temperatures to 100°F (38°C). Failure to do so may result in permanent injury to your baby.
- Do not use spa immediately following strenuous exercise.

## SAFETY INFORMATION

### **AVOIDING THE RISK OF SKIN BURNS:**

- To reduce the risk of injury, before entering a spa the user should measure the water temperature with an accurate thermometer.
- Test the water with your hand before entering the spa to be sure it's comfortable.

### **SAFETY SIGN**

A SAFETY SIGN in the owner's package. The sign, which is required as a condition of Product Listing, should be permanently installed where it is visible to the users of the spa.

### **IMPORTANT SPA INSTRUCTIONS**

The following contains important spa information, and we strongly encourage you to read and apply them.

#### **DO:**

- Use and lock the vinyl cover when the spa is not in use, whether it is empty or full.
- Follow the Spa Care and Maintenance recommendations stated in this manual.
- Use only approved accessories and recommended spa chemicals and cleaners.

#### **DON'T:**

- Leave the spa exposed to the sun without water or the vinyl cover in place. Exposure to direct sunlight can cause solar distress of the shell material.
- Roll or slide the spa on its side. This will damage the siding.
- Lift or drag the cover by using the cover lock straps; always lift or carry the cover by using the handles.
- Attempt to open the electrical control box. There are no user serviceable parts inside. Opening of the control box by the spa owner will void the warranty. If you have an operational problem, carefully go through the steps outlined in the Troubleshooting section. If you are not able to resolve the problem, contact your authorized dealer. Many problems can easily be diagnosed over the telephone by an Authorized Service Technician.

## INSTALLATION

### ***PLANNING A LOCATION FOR YOUR SPA***

Consider these things when determining where to place your spa.

#### ***SAFETY FIRST:***

Make sure your spa is positioned so access to the equipment compartment and side panels will not be blocked. Be certain your installation will meet all city and local safety codes and requirements.

#### ***PLANNED USE OF SPA:***

How you intend to use your spa will help you determine where you should position the spa. For example, will you use it more for recreational or therapeutic purposes? If your spa is mainly for family recreation, leave plenty of room around it for activity and lawn furniture. If you will use it more for relaxation and therapy, you'll probably want to create privacy mood around the spa.

#### ***PRIVACY:***

Think of your surroundings during all seasons to determine your best privacy options. Consider the view of your neighbors when you plan the location of your spa.

#### ***VIEWS:***

Think about the direction you will be facing when sitting in your spa. Do you have a special landscape you will find enjoyable? Perhaps there is an area that has a soothing breeze during the day or a lovely sunset in the evening.

#### ***ENVIRONMENT:***

If you live in a climate with a snowy winter and hot summer, a place to change clothes or a house entry near the spa is convenient. A warmer climate may require shade from the hot sun. Consider placement of trees, shrubs, patio cover or perhaps a gazebo structure to provide what you will need. Indoor installations require adequate ventilation. When the spa is in use, considerable amounts of moisture are produced. This moisture can damage walls and ceiling surfaces over time. Special paint is available to resist moisture damage. Remember that spas periodically require drainage, so plan your environment accordingly.

#### ***KEEP CLEAN:***

Prevent dirt and foliage from being tracked into your spa by utilizing concrete for paths and access areas. Check the location of spill paths from gutters, trees, and shrubs.

#### ***SERVICE ACCESS:***

Many people choose to install tile or custom wood around their spas. If you are installing your tub with custom decorative trimming, remember to allow for access to it for service. Should you need service, a technician may need to remove the tub's door panel, or access it from beneath. It is always best to design special installations so the spa can still be moved, or lifted from the ground.

### ***A GOOD FOUNDATION***

Your new spa needs a good solid foundation. The area your spa sits on must be able to support the spa, the water in it and those who use it. If the foundation is inadequate, it may shift or settle after the spa is in place, causing stress to the shell or components.



# INSTALLATION

## ***BE AWARE:***

Damage caused by inadequate or improper foundation support is not covered by the spa warranty. It is the sole responsibility of the spa owner to provide a proper foundation for the spa.

Make sure the foundation where the spa is placed drains water away from the spa. Proper drainage will keep components dry from rain and wet weather.

Your spa weight must always be considered when installing your spa. If you are installing it on an elevated wood deck or other structure, it is advisable to consult a structural engineer or contractor to ensure the structure will support the weight.

## **IT IS STRONGLY RECOMMENDED THAT A QUALIFIED, LICENSED CONTRACTOR PREPARE THE FOUNDATION FOR YOUR SPA.**

A reinforced concrete pad at least four inches thick is recommended for your spa. The reinforcing rod or mesh in the pad should be attached to a bond wire.

## ***INDOOR INSTALLATION:***

Be aware of some special requirements if you place your spa indoors. Water will accumulate around the spa, so flooring materials must provide a good grip when wet. Proper drainage is essential to prevent a build-up of water around the spa. When building a new room for the spa, it is recommended that a floor drain be installed. The humidity will naturally increase with the spa installed. Water may get into woodwork and produce dryrot, mildew, or other problems. Check for airborne moisture's effects on exposed wood, paper, etc. in the room. To minimize these effects, it is best to provide plenty of ventilation to the spa area. An architect can help to determine if more ventilation must be installed.

## ***PLACING THE SPA***

### ***CHECK THE DIMENSIONS OF YOUR SPA:***

Compare the spa dimensions to the width of gates, sidewalks, and doorways along the delivery route used to bring the spa into your yard. It may be necessary for you to remove a gate or partially remove a fence in order to provide an unobstructed passageway to the installation location. Also, keep in mind—if you are using special equipment to place your spa into an area it will be necessary to include those measurements and weights.

### ***PLANNING A DELIVERY ROUTE:***

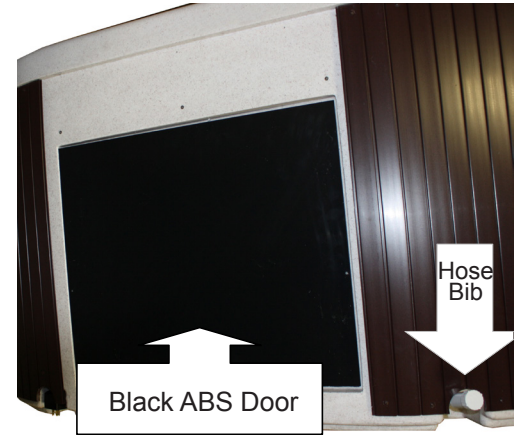
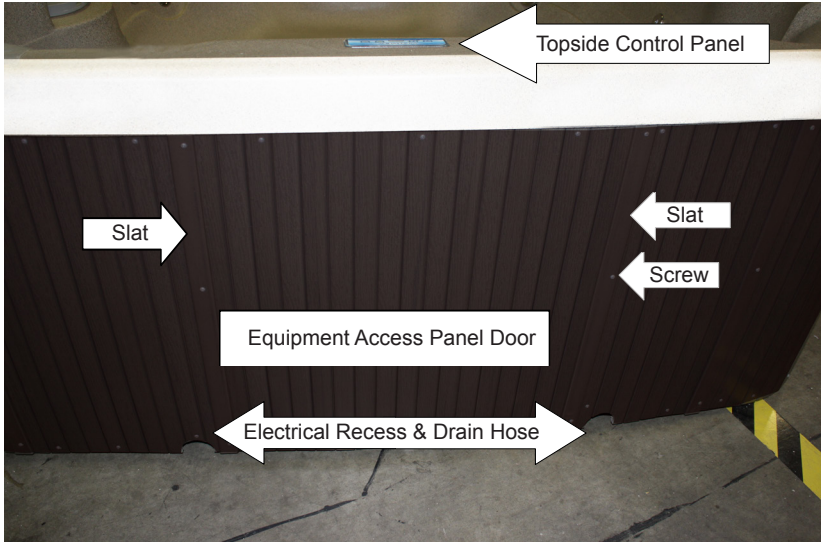
Check the width of gates, doors and sidewalks to make sure your spa will pass through unobstructed. You may have to remove a gate or part of a fence to allow for adequate width clearance. If the delivery route will require a 90-degree turn, check the measurements at the turn to ensure the spa will fit. Check for protruding gas meters, water meters, A/C units, etc., on your home which will cause obstructions along the delivery path to your yard. Check for low roof eaves, over hanging branches or rain gutters that could be an obstruction to overhead clearances.

### ***SPECIAL CIRCUMSTANCES:***

The use of a crane for delivery and installation is primarily to avoid injury to your spa, your property or to delivery personnel. Our customer service may be able to assist you with the arrangements. Cranes are not considered "normal delivery".

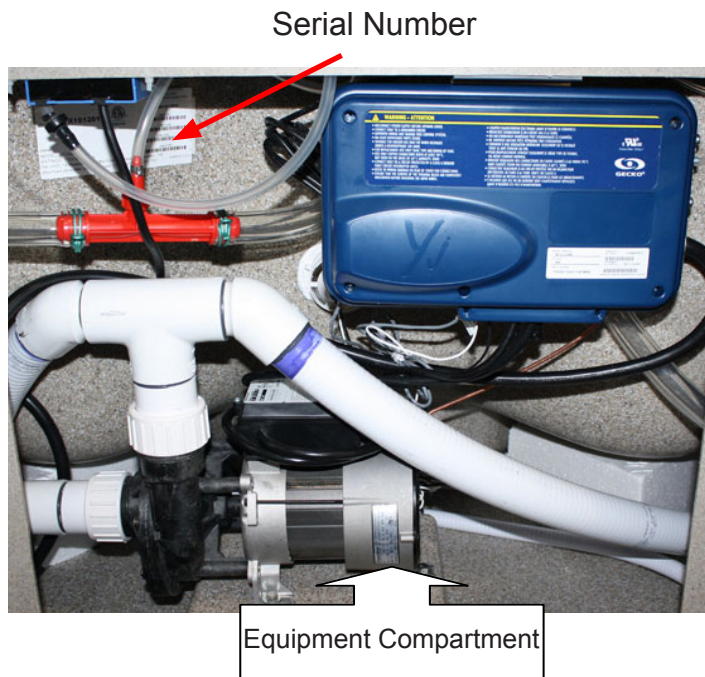
# EQUIPMENT ACCESS

## EQUIPMENT ACCESS PANEL



To access the equipment compartment:

- Remove 1 vertical slat and 3 screws on each side of Equipment Access Panel Door.
- Remove screws from Equipment Access Panel Door to remove door.
- Remove screws from Black ABS Door (if your spa has vertical slats) to access Equipment Compartment.



# ELECTRICAL REQUIREMENTS

## ***ELECTRICAL***

**⚠ DO NOT PLUG IN YOUR SPA WITHOUT FIRST FILLING WITH WATER!**

**⚠ DANGER – RISK OF ELECTRIC SHOCK**

Installations that do not conform to the following procedures and requirements may expose users to electric shock. Non-conforming installations will not be covered under warranty.

**Your electrical outlet must have been installed by an electrical contractor and been approved by a local building electrical inspection authority.**

### **110V ELECTRICAL**

1. Power supply installation must include a 15 amp dedicated, grounded wall outlet.
2. The outlet should not be shared with any other appliance. It must be labeled and easily accessible to users.
3. DO NOT use extension cords of any kind this will invalidate your warranty.
4. For your safety, if you are having an electrician install an electrical outlet for the spa it should be no closer than 5 feet (152.4cm) and no further than 10 feet (304.8cm) from the spa. [Reference National Electrical Code 680 - 6a(1) and 680 - 41a.]

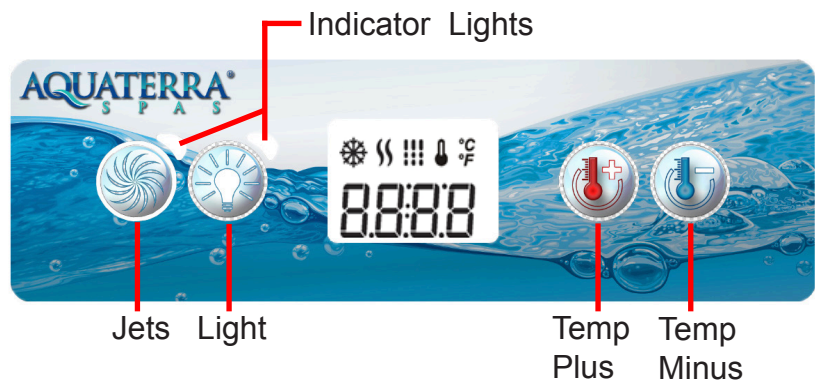
**Note: If the manufacturer installed GFI Cord is damaged, the GFI Cord must be replaced by an authorized service personnel.**

**⚠ CAUTION! WARNING! SHOCK HAZARD! No User Serviceable Parts.**

**Do not attempt to service any electronic component. Contact Customer Service or a reputable spa service company for assistance. Service must be performed by a licensed electrician and all grounding connections must be properly installed.**

## CONTROL PANEL OPERATION

**Initial start-up** - When the spa is first powered up the control system begins a 2 minute Startup Mode. Different codes will display on the screen. Once Startup Mode completes, the actual temperature is displayed on the screen, and the spa will then begin to heat and maintain the water temperature and the first filter cycle will start. Your spa has been designed so that it will automatically heat the water to the factory set temperature of 100°F unless you set the spa to a different temperature. If power is disconnected from the spa, it will automatically revert back to the last saved set temperature when power is reapplied.



### **TEMPERATURE ADJUSTMENT (80°F-104°F/26.5°C-40°C)**

The temperature can only function between 80°F - 104°F / 26.5°C - 40°C. The last measured temperature will constantly display on LCD.

Press the *Plus* or *Minus* buttons to display the set temperature and indicator 🌡️. Each time either button is pressed again, the set temperature will increase or decrease depending on which button is pressed. After five seconds, the LCD will automatically display the current spa temperature.

The "Heat" indicator 🔥 lights up when heating. It flashes when there is a request for more heat. Once set temperature is reached the indicator 🔥 shuts off.

### **JETS OPERATION**

Firmly press the Jets button once to activate the pump. Firmly press the Jets button again to turn off the pump. If left running the pump will automatically turn off after 1 hour. The "Jets" indicator light next to the button is solid when pump is on.

### **MULTI COLOR LED LIGHT**

Press the *Light* button once to turn on the light, the light indicator next to the button is lit when the light is on. Press the button again to turn the light off. Every time the light is quickly turned off and on a new light mode will appear. The sequence is as follows: White, Slow Full color wheel, Amber, Blue, Red, Green, Purple, Blue/Green color wheel, Red/Green color wheel and Fast Full color wheel. The last light mode used will come back on when the light is turned off for more than 2 seconds.

**NOTE:** If left on, the light will automatically turn off after 4 hours of operation.

### **FILTER CYCLES 🌀**

There are two filter cycles: the first cycle (F1) starts right after power up and the second cycle (F2) will start 12 hours later. The default duration for the first filter cycle is 1 hour, and 30 minutes for the second cycle. The "Filter" indicator 🌀 lights up when a filter cycle is on. The duration of each filter cycle can be modified.

## CONTROL PANEL OPERATION

### **ADJUSTING PRESET FILTER CYCLES**

Filter duration is programmable between 0 and 6 hours in 30 minute increments (0.5 hours) for both filter cycles. To program the cycle times:

1. Press and hold *Light* button for 5 seconds until F1 is displayed.
2. Press the *Plus* or *Minus* button to adjust the cycle time for F1.
3. Press the *Light* button to store the F1 cycle and move to the F2 cycle.
4. Press the *Plus* or *Minus* button to adjust the cycle time for F2.
5. Wait 15 seconds to allow the exit timer to expire and store the setting.

**IMPORTANT:** To reset the first filter cycle start time, skip step 5 and continue pressing the *Light* button until the actual temperature is displayed. Powering down of the spa will also reset the first filter start time.

**FILTER CYCLE SUSPENSION:** The filter cycle will be suspended every time a jet pump or light is activated manually during the filter cycle time. The suspension will end 10 minutes after the completion of the manual use.

### **OPERATIONAL MODES**

The Standard Mode is the default operational mode preset from the factory.

**STANDARD MODE:** Is programmed to maintain the desired temperature.

**OFF MODE:** This mode allows you to stop all spa functions for 30 minutes to perform quick spa maintenance. To place the spa in OFF MODE, press and hold the Jets button for 5 seconds. The display will toggle between OFF and water temperature when in the OFF MODE. To stop the OFF MODE before the 30 minute cycle time is complete, simply tap (short press) the Jet button.

### **FAHRENHEIT/CELSIUS SETTING**

To change water temperature display to either Fahrenheit or Celsius, press and hold *Light* button for 5 seconds until F1 is displayed. Press the *Light* button several times until F or C  $^{\circ}$  is displayed. Press the *Plus* or *Minus* button to change. Wait 15 seconds to allow the exit timer to expire and store the setting.

# CONTROL PANEL OPERATION

## ***DIAGNOSTIC LCD MESSAGE***

Message	Meaning	Action Required
	No message on display. Power has been cut off to the spa.	The control panel will be disabled until power returns. Spa settings will be preserved until next power up.
HL	The system has shut the heater off because the temperature at the heater has reached 122°F (50°C). Do not enter the water!	<b>DO NOT ENTER THE WATER.</b> Remove the spa cover and allow the water to cool down, then shut power off and power your spa up again to reset the system. If spa does not reset, shut off the power to the spa and call your dealer or service supplier.
AOH	Temperature inside the equipment compartment is too high 194°F (90°C), causing the internal temperature in the control system to increase above normal limits.	Open equipment compartment and wait until error clears.
PRR	A problem is detected with the temperature probe.	Call your dealer or service supplier.
OH	The water temperature in the spa has reached 108°F (42°C). Do not enter the water!	Remove the spa cover and allow the water to cool down to a lower temperature. Call your dealer or service supplier if problem persists.
UPL	No low level configuration software has been installed into the system.	Call your dealer or service supplier.
FLO	No water flow is detected by the control system but flow is expected.	Make sure that the jet pump is running and water is flowing; check and clean filters; make sure water valves are open; make sure spa has a proper water level. If problem persists, call your dealer or service supplier.

** Warning! Shock Hazard! No User Serviceable Parts.**

Do not attempt service of the control box. Contact Customer Service for assistance. Follow all owner manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.

** WARNING! Do Not Enter Spa If Water Is Too Hot**

**Water is too hot.** Overheat protection heater is deactivated. Spa water temperature is above acceptable limits. When the actual water temperature is approximately 2° F (1° C) above the set temperature, the jet pump will stop operating to reduce (frictional) heating. If the spa water temperature continues to rise and gets above 108° F (42°C), the spa will go into an “OH” overheat condition.

## COMPONENT OPERATION

### **SPA COMPONENT OPERATION**

#### **AIR CONTROL VALVE**

The air control valve serves to regulate the amount of air mixed with the water when the jets are operational. Rotate the air control in one direction to achieve the maximum jet pressure and therapeutic action. Rotating the air control in the opposite direction to turn air off and allow the jets to work with water only. Turn the air controls off when the spa is not in use, this will prevent cold air from entering the spa and will keep heating cost to a minimum. The ozone generator infusion jet, will always produce air bubbles.

#### **OZONE GENERATOR**

The ozone system greatly enhances the quality of the spa water when used to supplement the spa owner's regular water maintenance program. Contrary to some information circulated throughout the pool and spa industry regarding ozone systems, ozone **CAN NOT** be used as a single-source sanitizer, water clarifier, anti-foamer, and mineral chelating agent. A secondary source sanitizer must be used to maintain 2.0 ppm (2.0 mg/L) of Free Available Chlorine (FAC). Watkins Manufacturing Corporation recommends that a chemical maintenance program based on recognized and documented industry standards still be followed when using an ozone purification system to assure water sanitation and the highest quality purified water.

#### **HYDROTHERAPY JETS**

The hydrotherapy jets are recessed in the wall of the spa. Rotate the jet face counterclockwise to turn the jets on, clockwise to turn the jets off. Not all jets have a rotational face to turn off and on the jets. Turning a jet on or off will increase or decrease the effects of any jets "not" in the closed position.

# FILL-UP AND START-UP INSTRUCTIONS

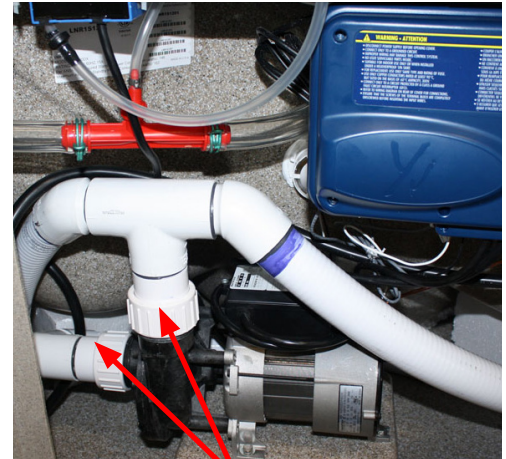
The following procedures should be followed on initial startup and whenever the spa is drained for routine maintenance.

## **FILLING THE SPA WITH WATER**

1. Clear all the debris from your spa.
2. Be sure to open all jets to allow as much air as possible to escape from the plumbing during the filling process.
3. Use a garden hose to fill your spa with water.

**NOTE:** Do not use hot or softened water.

4. As the water level rises, check inside the equipment compartment for water leaks. It may be necessary to tighten unions and/or fittings that may have loosened during delivery. There is no need to call for service; this can easily be done by you. If assistance is required, contact a customer service representative at (888) 961-7727 Ext. 8440.
5. Under normal circumstances keep the water level half way between the top of the spa and grey filter ring or just above the highest jets (whichever is higher). Keep in mind that every person who enters the spa will create a certain amount of water displacement, depending on their size and weight; as a result you may need to reduce the amount of water you normally have in the spa. To prevent the water from hitting your topside control or flowing over the top edge of the spa. Additionally, failure to keep enough water in your spa may result in damage to your system & invalidate your warranty. If your spa filter is sucking in air causing the pump to cavitate, you need to add water!
6. Check the filter installation and make sure the filter is not loose.



**UNIONS**

## **APPLYING POWER**

1. Plug the spa into the 15 amp dedicated, grounded wall outlet.
2. Press the Jets button on the topside control panel to activate the spa. Rotate all the air control valves counterclockwise and observe the increased jet action.
3. While the pump is running, leaks may have occurred during transit. Check again for water leaks at the drain spigot, unions, or fittings in the equipment compartment. If water is leaking from one of these areas, there is no need to call for service. Simply tighten the fitting. If assistance is required, call a customer service representative at (888) 961-7727 Ext. 8440.
4. After checking your spa for leaks it is now time to adjust your spa settings. Press the "Up" or "Down" button on your topside control panel until the display indicates your desired temperature is set.



# ADDING START-UP CHEMICALS

## WATER CHEMISTRY GUIDELINES

The following step-by-step instructions are a recommended guideline for balancing water chemistry. If unsure about any step in the process, please contact a Customer Care Associate at (888) 961-7727 Ext. 8440 or by email at [ahsservice@watkinsmfg.com](mailto:ahsservice@watkinsmfg.com).

Initially, it is advisable to identify what minerals (e.g. iron) are present in the local source water. This will provide a better understanding of how to treat the water. Please follow the four steps below and be sure to achieve the correct levels in each area before moving onto the next step.

### **STEP #1: ESTABLISH PROPER PH LEVEL:**

The recommended range for pH is between 7.2 and 7.8. If the reading is too high, lower the pH by using a pH Down/Decreaser (sodium bisulfate). If the pH level needs to be increased, do so with a pH Up/Incraser (sodium hydrogen carbonate). Any pH Up or Down should be added one teaspoon at a time, waiting one-half hour between application and re-measuring.

### **STEP #2: MEASURE TOTAL ALKALINITY:**

The ideal range is between 40-120 parts per million (PPM). If the total alkalinity is too high, it should be reduced by using an Alkalinity Down/Decreaser (sodium bisulfate). If the total alkalinity is too low, it can be increased by adding an Alkalinity UP/Incraser (sodium bicarbonate or sodium hydrogen carbonate). These products should be added in small amounts – a teaspoon at a time. After adding one teaspoon, wait one half hour before re-measuring. Once the safe range of total alkalinity is established, proceed to the next step.

### **STEP #3: DETERMINE CALCIUM HARDNESS:**

It is important to bring the calcium reading between 50-150 PPM. If the reading requires adjustment, it should now be corrected. If the water is too soft (a low reading) calcium hardness should be added to the water to increase the PPM reading. If the water is too hard (a high reading), it can be corrected by either: (A) a mixture of hard and soft water added to attain a reading in the safe range, or (B) addition of stain and scale control. If calcium hardness is a problem with the local source water (either too hard or too soft) a test kit, which measures calcium hardness, is essential.

### **STEP #4: SANITIZING:**

After steps 1-3 are complete, **the spa must be sanitized using Chlorine (sodium dichlor)**. Add 2 teaspoons of Chlorine, and increase as necessary to reach a level of 3-5 ppm. Check and maintain this level weekly, and before and after using the spa. **IMPORTANT NOTE:** *A granulated sodium dichlor is highly recommended for sanitizing spa water, granular bromine may also be used. Never use compressed sanitizers even with a floater. As with any other chemicals, the sanitizer should be introduced to the spa with the jets running a minimum of 10 minutes.*

### **WEEKLY SHOCK:**

Using a potassium monopersulfate (MPS) shock, add approximately 2 oz. spreading it over the water while the jets are running. Shocking is achieved by adding the MPS to turbulent water. Leave the cover off and jets on for 10 minutes. Then shut jets off and return the cover to the closed position to maintain heat.

**IMPORTANT:** Damage caused by dirty, clogged, or calcified filters; damage to the spa surface caused by improper use of chemicals to lie on the surface; damage caused by improper pH balance, improper calcium hardness level or other improper water chemistry is not covered under the spa warranty.

# SPA MAINTENANCE

## ***FILTER CARTRIDGE MAINTENANCE***

Every month, the filter cartridge should be cleaned to remove the objects and particles that have lodged in the cartridge pleats. Using household water pressure and a garden hose with a pressurized nozzle, push water from inside to outside of the pleats, forcing all the trapped particles out.

**NOTE:** Never run your spa without a filter cartridge!!! This will invalidate your warranty.

**NOTE:** Filter cartridges should be replaced every six to eight months or earlier when needed. Dirty filters can cause your spa pump to burn out and will invalidate your warranty.

## ***FILTER CARTRIDGE REMOVAL AND CLEANING INSTRUCTIONS***

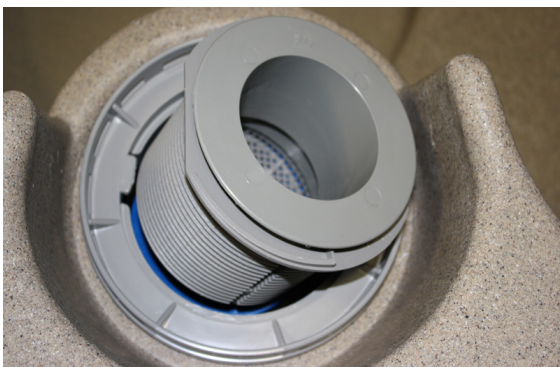
Spa uses a screw in filter cartridge that is easily removed.

- Turn off the power to the spa.
- Push down slightly and turn filter basket counter clockwise to unlock, then pull the basket and weir out.
- Unscrew the filter cartridge counter clockwise and bring it out of the spa (requires many turns).
- Rinse cartridge using a garden hose. Rotate and separate filter pleats while spraying water to remove all dirt and debris possible. Let filter dry and look for calcium deposits (scaling) or an oil film. If you find these, you will need to deep clean your filter cartridge with a “spa filter cleaner” solution to break down and remove unwanted deposits and oils. (For longer filter life you should soak filter in solution regularly).

**CAUTION!** Always use proper eye protection when using chemicals, or high-pressure water. Read instructions on cleaning products and follow applicable safety and warning instructions listed on label.

**CAUTION!** Never scrub the filter cartridge with a brush, as this will cause the filter to wear out and come apart. Never let the spa pump run without a filter cartridge in the skimmer compartment. Running the spa without a filter cartridge may permit debris to enter the spa plumbing and void the warranty!

- Replace filter cartridge, then return basket and weir, insert and rotate clockwise to lock into position. **DO NOT OVERTIGHTEN!**
- Turn spa’s power back on.



## SPA MAINTENANCE

### ***SURFACE CARE***

Do not use solvents or abrasive cleaners to clean the spa. Typically, a mild detergent and water will resolve cleaning issues.

### ***COVER CARE***

Please keep your cover free from dirt at all times. Use a cover cleaner or a warm mild soapy water to clean the surface. Do not use any silicone-based products, as it will dry and may eventually crack the vinyl.

NOTE: Do not stand on the cover at any time. Remove the cover when adding chemicals to your spa. This will extend the life of your cover. The gases from burned off chemicals will be trapped under the cover, if not removed. These gases will eat away at the protective lining of the foam inserts. This will not be covered under warranty.

### ***CABINET CARE***

Little maintenance is required to keep your spa cabinet looking good.

Spa cabinet product should be cleaned as needed to remove dirt and debris.

- NO abrasive or harsh chemicals should be used on your spa's cabinet.
- NO solvents or cleaners containing aromatic solvents should be used on your spas cabinet.
- Hot soapy water is the best choice for cleaning your spa's cabinet.

**AVOID PROLONGED EXPOSURE TO DIRECT SUNLIGHT OR EXCESSIVE TEMPERATURES (100 °F or 38 °C) to avoid your spa cabinet from buckling.**

### ***SPA LED LIGHT REPLACEMENT***

- Turn OFF the power to the spa.
- Remove the equipment compartment access door.
- Locate the rear of the spa light.
- To remove the LED, turn outside housing counter clockwise ¼ turn, and pull out and remove LED from socket.
- Replace the LED by reversing the above steps.



## DRAINING OR WINTERIZING

Every three to six months, depending upon the water condition, you need to renew your water.

### **CAUTION:** READ THIS BEFORE DRAINING YOUR SPA

- To prevent damage to the spa's components, unplug the spa from the outlet or turn off breaker (230V) before draining. **Do not power up your spa until your spa has been refilled with water.**
- There are certain precautions to keep in mind when draining your spa. If it is extremely cold, and the spa is outdoors, freezing could occur in the plumbing or the equipment.
- Do not leave the spa's shell (inside surface) exposed to direct sunlight.

### **DRAINING YOUR SPA**

DO NOT PUT SPA INTO STANDBY MODE. MODE DOES NOT APPLY WHEN DRAINING SPA.

- If draining for the first time. Pull the hose bib out a few inches from the spa (located in the recess under the spa, just below the equipment access door)
- Unscrew and remove the drain cap.
- Attach hose bib to a garden hose and direct to an appropriate draining area, keeping the hose below the water line.
- After your spa is empty, clean the shell and filter cartridge. See "Spa Maintenance"
- After cleaning, remove garden hose, replace drain cap and push the hose bib back into the recess.
- Follow the "Fill up and Start-up Instructions".



### **WINTERIZING YOUR SPA**

If you plan to store your spa for the winter, you must also use a wet-vac to clean out the water lines to ensure they are free of any water. Water left in the lines might freeze and damage the lines and jets.

1. It will be necessary to remove all water from the interior plumbing.
2. Remove the floating weir, basket, and filter cartridge. Clean the filter cartridge and store in a dry place. Attach the vacuum hose to the **vacuum side** of the shop vac and thoroughly dry the filter compartment.
3. Using the shop vac, remove the water starting with the jets at the top and moving downward. **NOTE:** When removing the water from jet openings, you may notice suction coming from another jet. With the help of a second person, block off any suction from the other jet using a large rag or cloth. This will help pull out the water that is trapped deep inside the main line.
4. Thoroughly dry the spa shell with a clean towel.
5. Using a funnel, pour Propylene glycol anti-freeze into the filter suction fittings and jet outlets. **CAUTION: Use only Propylene glycol as your anti-freeze. This is non-toxic. NEVER use automobile anti-freeze since it is toxic.**
6. Remove the pump drain plug located on the front of the pump housings. Allow all water to drain out. Place the drain plug in a reclosable plastic storage bag and store near the pump. Replace the drain plugs on start-up.
7. Unscrew the suction/discharge pump and heater unions and allow the water to drain. Leave union loose. **NOTE:** Tighten unions before filling spa.
8. Replace the equipment compartment door and secure with screws. **Note:** Damage caused by improper winterizing will not be covered under warranty. You may want to contact a professional for proper winterizing.

## TROUBLESHOOTING PROCEDURES

In the event your spa is not working the way it should, please first review all the installation and operating instructions in this manual and check the message on the panel display. If you are still not satisfied it is working properly, please follow the appropriate troubleshooting instructions.

### **CAUTION! WARNING! SHOCK HAZARD! No User Serviceable Parts.**

Do not attempt service of the control box. Contact customer service for assistance. Follow all owner's manual power connection instructions.

### ***NO COMPONENT OPERATION***

Check the following:

1. Is there power to the spa?
2. Is the household circuit breaker tripped?
3. Is the GFCI at the end of the spa's power cable tripped?
4. If 1, 2 or 3 are yes contact customer service for service.

### ***PUMP DOES NOT OPERATE, BUT THE LIGHT ICON DOES***

Press the JETS button:

The pump operates but no water flows to jets. Pump may not be properly primed. This can happen after the spa is drained and refilled. Press the JETS button several times, never leaving the motor on for more than 5-10 seconds at-a-time, if prime is still not achieved, loose unions (pg. 16) to allow trapped air to escape then tighten.

### ***POOR JET ACTION***

1. Press the JETS button to make certain the pump is on.
2. Rotate the air control to the "max" position.
3. Make sure the water level is at least 2" above the gray filter ring.
4. Check for dirty filter. Clean, if necessary.
5. Make sure all jets are in the open position (turn counterclockwise).

### ***WATER IS TOO HOT***

1. Check desired temperature on topside control
2. Check for a diagnostic Message (see Control System manual for details)

**OH** - Overheat (spa is deactivated) **DO NOT ENTER THE WATER.**

If the spa water has reached overheated you should remove the cover to promote heat reduction. The spa Control System should reset itself when the water temperature reduces below 107°F or 43°C. When the spa falls below the reset temperature you can push any button on the topside control to reset the Control System. If the spa will not reset, then shut off power to the spa and call customer service.

Under extreme and/or prolonged weather conditions it is possible for the ambient temperature to exceed 107°F/43°C, therefore; effecting the water temperature of the spa and causing it to overheat. These conditions could cause the spa sensors to produce an OH message and prevent the usage of your spa during these conditions. The location of your spa should be reconsidered to reduce the outside temperature around the spa. For example, you may need to prevent direct sunlight on any surface of your spa. Regardless, do not enter your spa if the temperature is above 104°F.

Should checking the above steps fail to correct the problem, please contact Customer Service at (888) 961-7727 Ext. 8440.





