



# Owner's Manual

REVISED 2018/12



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## Congratulations on Choosing a Quality PDC Hot Tub! America's Best Spas

You now own a high quality PDC Spa hot tub built for years of enjoyment and relaxation. It is of prime importance that you understand the operation of your hot tub and enjoy it with safety in mind. You must read this manual thoroughly and understand all of the safety precautions. Using your hot tub within these guidelines assures years of fun and relaxation gained from adding a PDC Spa Hot Tub to your lifestyle.

Please read the Owner's Manual completely before installing and using your new hot tub. The purpose of this manual is to provide you with safety, operational and installation information which will allow you the fullest enjoyment of this fine product.

At the time of printing, this manual was deemed as accurate as possible. PDC Spas reserves the right to change product in an effort to enhance and improve, without prior notice. To be aware of any of these possible changes, log on to [www.pdcspas.com](http://www.pdcspas.com), referring to the Customer Care section, or contact your retailer directly.

## Ownership Information

Name \_\_\_\_\_

Address \_\_\_\_\_

Installation Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Model Name \_\_\_\_\_ Serial # \_\_\_\_\_

Retailer Name \_\_\_\_\_ Retailer Phone Number \_\_\_\_\_

Service Technician Contact Info \_\_\_\_\_

## Register Your Hot Tub

Please be sure to register your new spa hot tub upon delivery. Log onto [www.pdcspas.com/customer-care](http://www.pdcspas.com/customer-care) and enter the required information. We have no record of ownership until this is completed. This will ensure warranty coverage and information regarding possible product updates.

## Locating Your Serial Number

Luxury & Premium Series: The metal serial number plate can be found on the inside of filter housing at spa lip. Simply remove the plastic filter cover revealing the silver serial number plate.

Lifestyle Series: The silver serial number plate is found on the backside of the shell behind the cabinet wall near the filter housing.

**SAVE THIS MANUAL FOR FUTURE REFERENCE !**



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## **WARNING**

This unit is a professional-grade product. A knowledge of construction techniques, plumbing and electrical installation according to codes are required for proper installation and user satisfaction. It is recommended that a licensed contractor perform the installation. Warranty is voided for improper installation related issues.



## **WARNING**

REPLACE ALL SAFETY SUCTION COVERS EVERY 7 YEARS.

Replace with similar VGB approved fittings at same or higher flow ratings.

Replacement applies to all hot tub spa models.



## **WARNING SIGNS**

**Cabinet Installed:** For your referral, safety and convenience, a weather resistant sign has been mounted on the end cabinet side of your hot tub spa. Become familiar with the precautions, exercise safety and care while enjoying your hot tub. Notify the factory or your retailer should you require additional signs or replacements.

**Warning Sign Must Be Posted:** An additional copy of this sign can be found packaged with your new hot tub. This sign must be posted permanently in a prominent area near the spa where it is clearly visible to all occupants. Post this sign immediately upon installation. Notify the factory or your retailer should you require additional signs or replacements.

**Important:** It is extremely important that this sign be posted permanently placed in clear view of persons using the hot tub. Occasional users may not be aware of some of the dangers hot water poses to pregnant women, small children, seniors, and people under the influence of alcohol. If you did not receive a warning sign or your sign has become damaged, please call your local retailer or the factory for a replacement.

**WARNING:** Read all instructions before using the hot tub. PDC Spas assumes no responsibility for personal injury or property damage sustained by or through the use of this product.

**SAVE THIS MANUAL, SIGNS AND INSTRUCTIONS FOR FUTURE REFERENCE.**

**READ AND FOLLOW ALL IMPORTANT SAFETY INSTRUCTIONS**

When installing and using this equipment, basic safety precautions should always be taken to reduce the risk of electrical shock, to ensure safe usage, and to safeguard the user's health.

**READ AND FOLLOW ALL INSTRUCTIONS!!**

This unit is a professional-grade product. A knowledge of construction techniques, plumbing and electrical installation according to codes are required for proper installation and user satisfaction. It is recommended that a licensed contractor perform the installation. Warranty is voided for improper Installation related issues.

It is the responsibility of the home owner to ensure all users of the hot tub are adequately informed of all precautions. Use the hot tub spa only as described in this manual. The spa is intended for home use only. Do not use the spa in a commercial or rental setting; all warranties will be voided.

**GROUND ALL METAL ELECTRICAL EQUIPMENT**

- A green colored terminal or a terminal marked G, GR, Ground, or Grounding, is located inside the supply terminal box or compartment. This terminal must be connected to the grounding means provided in the electric supply service panel, using a continuous copper wire equivalent in size to the circuit conductors supplying this equipment. \*according to, but not limited to: NEC, NFPA 70, Section 680.40, UL 1563.
- At least two lugs marked "Bonding Lugs" are provided on the external surface or on the inside of the supply terminal box or compartment. Connect the local common bonding grid (household ground) in the area of the spa to these terminals, using an insulated or bare copper conductor not smaller than No. 6 AWG.
- All field-installed metal components such as rails, ladders, drains or similar hardware located within 5 feet of the spa must be bonded to the equipment grounding bus with copper conductors not smaller than No. 6 AWG.
- All metal surfaces within 5 feet of the spa must be bonded to the home bonding grid.

**GROUND FAULT CIRCUIT INTERRUPTER PROTECTION (or equivalent; RCD, for export installs)**

- All PDC Spas hot tubs are permanently installed units. **GROUND FAULT CIRCUIT INTERRUPTER PROTECTION IS REQUIRED.** All spa equipment systems must be protected by a class A ground fault circuit interrupter (GFCI) or equivalent; RCD, for export installs. A ground fault circuit interrupter type circuit breaker (NOT SUPPLIED) must be installed in the home panel box by a licensed electrician when making wire connection to the spa support pack equipment.

**DANGER: RISK OF ELECTRICAL SHOCK:**

- Install the spa at least five feet (1.52 m) from all ungrounded (unbonded) metal surfaces.
- Ground fault circuit interrupter protection of the home power supply to the hot tub spa is necessary. Your electrician should explain how it operates. (See maintenance for function and testing)
- Do not permit any electric appliance, such as a light, telephone, radio or television, within five feet (1.52 m) of a hot tub spa. Keep electrical appliances and extension cords away from the spa; water is a conductor of electricity.

**DANGER: RISK OF ACCIDENTAL DROWNING.**

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

**DANGER: TO REDUCE THE RISK OF DROWNING:**

1. Never use the spa alone.
2. Children should not use the spa unless they are supervised by an adult.
3. Keep pets away from the spa at all times.
4. **ALWAYS REPLACE AND LOCK THE SPA COVER WHEN THE SPA IS NOT IN USE.**

**DANGER: TO REDUCE THE RISK OF DROWNING**

- Prolonged immersion in the spa may cause hyperthermia. The causes, symptoms and effects of hyperthermia may be described as follows: Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6 °F (37°C). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting. The effects of hyperthermia include:
  1. Failure to perceive heat
  2. Failure to recognize the need to exit the spa
  3. Unawareness of impending hazard
  4. Fetal damage in pregnant women
  5. Physical inability to exit the spa
  6. Unconsciousness resulting in the danger of drowning

**DANGER: RISK OF INJURY**

- Do not remove the suction fittings. The suction fitting in this hot tub spa is sized to match the specific water flow created by the pump. Should the need arise to replace the suction fitting or the pump, be sure that the flow rates are compatible. Never operate the spa if the suction fitting is broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.

**DANGER: RISK OF ACCIDENTAL DROWNING**

- Keep hair and body parts away from the suction guard. Do not allow long hair to float freely in the water; long hair should be restrained with a bathing cap. To reduce the risk of drowning from hair or body entrapment, install a suction fitting(s) with a marked flow rate in gallons per minute that equals or exceeds the flow rate marked on the equipment assembly, if replacement of suction fittings becomes necessary.

**WARNING**

- Ground fault circuit interrupter protection (GFCI) or equivalent; RCD, for the spa should be tested prior to each use by the homeowner. With the spa in operation, push the "test" button on the GFCI circuit breaker at the panel box. The spa should shut down immediately. Now reset the GFCI. The hot tub spa should return to normal operation. If the GFCI fails to operate in this manner, there exists a possibility of electrical shock. Approved testing applies for export protection devices, i.e. RCD.
- Discontinue spa operation by disconnecting the power source and notify a qualified electrician for identification and correction of the problem.

**WARNING**

- To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

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

- The water in a hot tub 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 to 15 minutes) and for young children.
- Excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy. Pregnant or possibly pregnant women should limit spa temperatures to 100° F (38° C).
- Before entering a hot tub spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature regulating devices may vary as much as 5° F (3°C).
- **THE USE OF ALCOHOL, DRUGS, OR MEDICATION BEFORE OR DURING SPA USE MAY LEAD TO UNCONSCIOUSNESS WITH THE POSSIBILITY OF DROWNING.**
- 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 a spa.

- Persons using medication should consult a physician before using a spa since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.
- Enter and leave spa slowly and with caution. Surfaces around spa will be wet and slippery.

## WARNING

1. Never use the hot tub spa alone.
2. Do not bring any object into the spa that could damage the spa shell.
3. Do not sit on hot tub spa cover or place objects on it; it is not designed to support weight.
4. Remove any water or debris that may collect on the spa cover.
5. Keep all chemicals away from children and pets.
6. The PH and chemical balance of the water must be maintained as explained in this manual. Failure to do so may cause injury to users or damage to the spa, and will void your warranty.

## WARNING: HEALTH CONSIDERATIONS

- The use of alcohol, drugs, medication can greatly increase risk of fatal hyperthermia.
- Individuals with infections and open sores or wounds should not use the spa. Bacteria thrive in warm and hot water. Always keep your hot tub spa disinfected and maintain the proper chemical balance.
- Shower before and after using the spa. This will remove any deodorant, perspiration, or body oils that could contaminate the water. Showering after will remove any residual chemicals and/or possible bacteria.
- Do not use the hot tub spa immediately after strenuous exercise.
- If you feel pain or dizziness at any time while using the spa, discontinue use and contact a physician.

## WARNING: TO REDUCE THE RISK OF INJURY

- It is especially important for persons over the age of 35 or persons with pre-existing health problems, such as obesity, heart disease, high blood pressure, circulatory problems, or diabetes to consult their physician before using the spa.
- The hot tub spa jets produce a stream of water with relatively high pressure. Prolonged exposure of a localized area of the body may cause bruises to the skin.
- Never insert any object into any opening.
- Do not use breakable containers in or near the hot tub spa.

## WARNING: ELECTRICAL CONSIDERATIONS

- **For controls other than underwater lighting circuits:** A Ground Fault Circuit Interrupter (or equivalent for export installs) must be provided if this device is used to control an underwater lighting fixture. The conductors on the load side on the Ground Fault Circuit Interrupter shall not occupy conduit, boxes, or enclosures containing other conductors unless the additional conductors are also protected by a Ground Fault Circuit Interrupter (or equivalent for export installs).
- The electrical supply for this product must include a suitably rated switch or circuit breaker to open all underground supply conductors to comply with Section 422-20 of the U.S. National Electric Code. The disconnecting means must be readily accessible to the spa occupant but installed at least 5 FT (1.5 M) from the spa water.

## WARNING: For hot tub spas with audio / video components

1. CAUTION - Risk of Electric Shock. Do not leave compartment door open.
2. CAUTION - Risk of Electric Shock. Replace components only with identical components.
3. Do not operate the audio/video controls while inside the spa.

4. **WARNING - Prevent Electrocution.** Do not connect any auxiliary components (for example cable, additional speakers, headphones, additional audio/video components, etc.) to the system.
5. These units are not provided with an outdoor antennae; when provided, it should be installed in accordance with Article 810 of the U.S. National Electrical Code, ANSI/NFPA 70.
6. Do not service this product yourself as opening or removing covers may expose you to dangerous voltage or other risk of injury. Refer all servicing to qualified service personnel.
7. When the power supply connection or power supply cord(s) are damaged; if water is entering the audio/video compartment or any electrical equipment compartment area; if the protective shields or barriers are showing signs of deterioration; or if there are signs of other potential damage to the unit, turn off the unit and refer servicing to qualified service personnel.
8. This unit should be subjected to periodic routine maintenance (for example, once every 3 months) to make sure the unit is operating properly.

#### **ADDITIONAL SAFETY CONSIDERATIONS**

- Install the hot tub spa to provide drainage for compartments of electrical components.
- For floor recessed spas: Install to permit access for servicing from above or below the floor. Hot tub spa equipment must be installed below water level.
- When planning your spa installation site, prepare for the unlikely event of rapid spa drainage.
- Do not place spa in direct sunlight while unit is empty or when sealed in shipping materials. Excessive heat build may cause damage to spa and void warranty.
- When installing hot tub spa, allow ample space for future servicing, noting location of all support equipment per the model specifications.

**SAVE THESE INSTRUCTIONS**



**Hydrotherapy Jets:**

Various sized fittings mix water with air to produce localized therapy, in a straight stream, circular motion, or in random patterns for massage. Positioned in massage seats from neck to feet, upper and lower back in contoured and straight seating arrangements. Jet nozzles are easily interchangeable with a simple turn allowing user to enjoy the type and power of massage best suited to them.



**Ultra Massage™ Selector: (Diverter Valve)** Located on hot tub lip, this fitting is much larger than the air control described below. Turn to adjust pump power to selected jets which enhances water action through those jets by decreasing water action through others. Be sure no sand or particles are brought into the hot tub spa as they will cause the diverter to seize up. It is best to turn the diverter valve only when the pump is turned off.



**Air Controls:** Fittings mounted on the lip of spa controlling amount of outside air mixed with incoming water of the hydrotherapy jet. Your spa has multiple air controls on the hot tub spa lip that control air/ water mix for a segment of the jets. You choose the strength that best suits you. When not in use, the air controls should be kept in the off position.



**Suction:** Circular fitting mounted on the vertical wall of the foot well and serves as an additional pump water inlet. These fittings must be replaced every 7 years with similar VGB approved fittings at same or higher flow ratings.



**PowerFlo™ Filter:** This pressure-side filtration is a powerful design built into Luxury and Premium Series models. The filter cartridge is easily accessible for maintenance and hidden from occupant's view.



**Pristine™ Filter:** This suction-side filtration is a proven effective filtration system positioned on the suction side of the jet pump in the Lifestyle Series models. The filter cartridge is easily accessible for maintenance and hidden from occupant's view.



**Ozone Jets:** All spas are equipped with ozone jets for sanitation. The filter cycle should circulate 8-10 hours daily for proper ozonation. Use the programmable electronic control center to automatically operate this function.



**Ozonator:** Your EverPure™ ozonator will operate in conjunction with your filtration system. Ozone is a gas, O<sup>3</sup>, that has been used for years as a sanitation treatment for drinking water, and now as a proven purifier for hot tubs.



**Slide Valves:** Valves are used to shut off the water flow to the heater, circulation pump, And jet pump(s) for specific service problems.



**Support Pack:** The control system operates all functions of the hot tub. Make sure your electrician connects the power supply accordingly to all National Electric Code, and shows you how to test the GFCI circuit breaker (not supplied). This pack is connected to a 50 amp GFCI breaker. Make note of this location along with other major components prior to installation for possible servicing access.



**Heater:** Your hot tub is equipped with a thermostat control at the spa side (topside control). Set the water at the temperature you enjoy. Leave the thermostat at that setting, and the hot tub will automatically maintain the correct temperature; ready for your enjoyment anytime. Avoid constant resetting of the thermostat; it is more economical to maintain temperature than to let the temperature fall and raise. Never raise the temperature above 104 degrees.



**Motion Glow:** Low voltage underwater spa light, with varying shades of a color wash, controlled at the spa side control panel. Choose rotation of color or constant color of your choice.



**EverLite™:** Exclusive to all PDC hot tub spa models is the cabinet mounted indicator light which confirms the EverPure™ ozone purification system is properly operating.



**Water Spout Control Valve:** Most all hot tub models feature the cascading water spout feature. A control valve is mounted on the spa adjusting the pressure and height of the spout.



**Air'assage Air Channel:** All Luxury Series models have the benefit of an air massage delivering a soft Swedish massage through a series of stainless grommets in the seat areas. This massage is separate from the jets, driven by an air blower under separate control.

## GENERAL

rev. 2018/01

Seating Capacity	7
Shell Material	Acrylic
Dimensions (Domestic)	94" (7'10") sq. x 39" (3'3")
Dimensions (Export)	240 cm. sq. x 99 cm.
Water Capacity	650 Gallons ( 2,460 liters)
Dry Weight	908 lbs (412 kg.)
Skirt Material	Permawood™

## WATER SYSTEM\*\*

(photo ref.)

Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		6
MegaSwirl™ Jet	A	5
Euro Jet w/eyeball	E	33
Mega'assage™ Jet	G	15
Ozone Jet	O	2
Large Euro Jet	LE	17
Diverter Valves	V	2
Safety Suction	U	6
Mini Skimmer	K	1
Air Control	I	6
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows	4
Stainless Steel Jetting	Standard
Cascading Spouts/Control Valve	WS, C
Allure2™ LED Lighting	Optional
Halo LED lighting™	Standard
SoundStream™ Audio	Optional*

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	6.0 (3.0) HP	6.0 (3.0) HP
Pump #2 peak (continuous) HP	2	6.0 (3.0) HP	6.0 (3.0) HP
Air Bubbler	4	1.5 HP	1.5 HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 5 Series	in.kYE 5 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k1000 Series	in.k1000 Series



\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install.

All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

## GENERAL

rev. 2018/01

Seating Capacity	5
Shell Material	Acrylic
Dimensions (Domestic)	90" (7'6") x 79" (6'7") x 37" (3'1")
Dimensions (Export)	229 cm. x 201 cm. x 94 cm.
Water Capacity	325 Gallons (1,230 liters)
Dry Weight	800 lbs. (363 kg.)
Skirt Material	Permawood™

## WATER SYSTEM\*\*

(photo ref.)

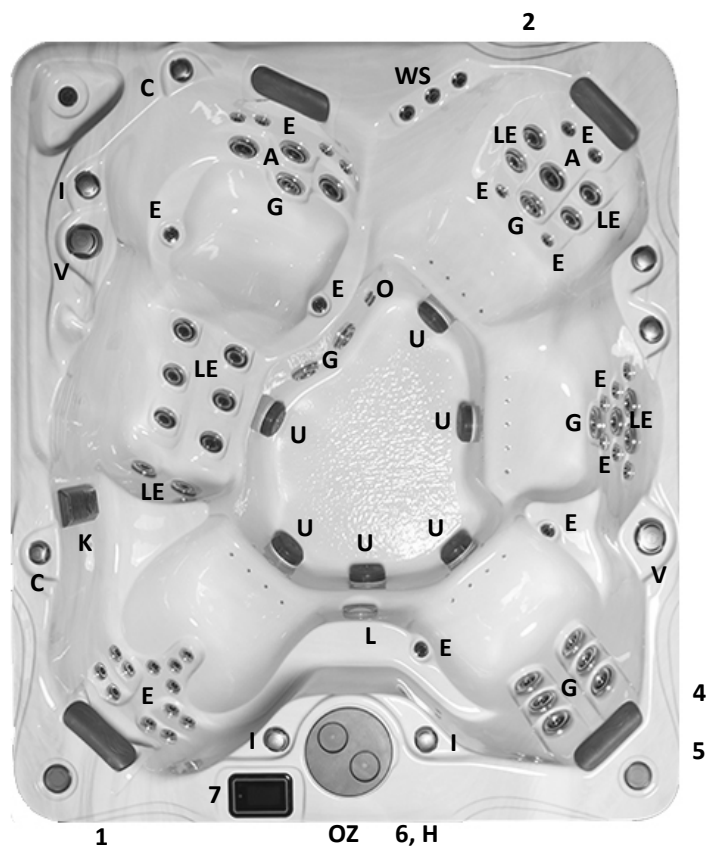
Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		6
MegaSwirl™ Jet	A	4
Euro Jet w/eyeball	E	36
Mega'assage™ Jet	G	11
Ozone Jet	O	2
Large Euro Jet	LE	15
Diverter Valves	V	2
Safety Suction	U	6
Mini Skimmer	K	1
Air Control	I	5
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows	4
Stainless Steel Jetting	Standard
Cascading Spouts/Control Valve	WS, C
Allure2™ LED Lighting	Optional
Halo LED lighting™	Standard
SoundStream™ Audio	Optional*

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	6.0 (3.0) HP	6.0 (3.0) HP
Pump #2 peak (continuous) HP	2	6.0 (3.0) HP	6.0 (3.0) HP
Air Bubbler	4	1.5 HP	1.5 HP
Electronics			
Electrical Can	6	in.kYE 5 Series	in.kYE 5 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
Operation System			
Main Spa Side Control	7	in.k1000 Series	in.k1000 Series



\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install.  
All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.



## GENERAL

rev. 2018/01

Seating Capacity	6
Shell Material	Acrylic
Dimensions (Domestic)	94" (7'10") sq. x 39" (3'3")
Dimensions (Export)	240 cm. sq. x 99 cm.
Water Capacity	525 Gallons (1,987 liters)
Dry Weight	865 lbs. (392 kg.)
Skirt Material	Permawood™

## WATER SYSTEM\*\*

(photo ref.)

Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		6
MegaSwirl™ Jet	A	5
Euro Jet w/eyeball	E	29
Mega'assage™ Jet	G	15
Ozone Jet	O	2
Large Euro Jet	LE	22
Diverter Valves	V	2
Safety Suction	U	6
Mini Skimmer	K	1
Air Control	I	5
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows	4
Stainless Steel Jetting	Standard
Cascading Spouts/Control Valve	WS, C
Allure2™ LED Lighting	Optional
Halo LED lighting™	Standard
SoundStream™ Audio	Optional*

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	6.0 (3.0) HP	6.0 (3.0) HP
Pump #2 peak (continuous) HP	2	6.0 (3.0) HP	6.0 (3.0) HP
Air Bubbler	4	1.5 HP	1.5 HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 5 Series	in.kYE 5 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k1000 Series	in.k1000 Series



\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install.  
All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

## GENERAL

rev. 2018/01

Seating Capacity	5
Shell Material	Acrylic
Dimensions (Domestic)	82" (6'10") sq. x 37" (3'1")
Dimensions (Export)	209 cm. sq. x 94 cm.
Water Capacity	400 Gallons (1,514 liters)
Dry Weight	635 lbs (288 kg)
Skirt Material	PermaWood™

## WATER SYSTEM\*\*

(photo ref.)

Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		4
MegaSwirl™ Jet	A	4
Euro Jet w/eyeball	E	24
MegaPassage™ Jet	G	11
Ozone Jet	O	2
Large Euro Jet	LE	18
Diverter Valves	V	2
Safety Suction	U	4
Mini Skimmer	K	1
Air Control	I	4
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows		3
Stainless Steel Jetting		Standard
Cascading Spouts/Control Valve	WS, C	Standard
Allure2™ LED Lighting		Optional
Halo LED lighting™		Standard
SoundStream™ Audio		Optional*

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	6.0 (3.0) HP	6.0 (3.0) HP
Pump #2 peak (continuous) HP	2	6.0 (3.0) HP	6.0 (3.0) HP
Air Bubbler	4	1.5 HP	1.5 HP
Electronics			
Electrical Can	6	in.kYE 5 Series	in.kYE 5 Series
Voltage		120/240	230/400
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
Operation System			
Main Spa Side Control	7	in.k1000 Series	in.k1000 Series



\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install.  
All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

**rev. 2018/01**

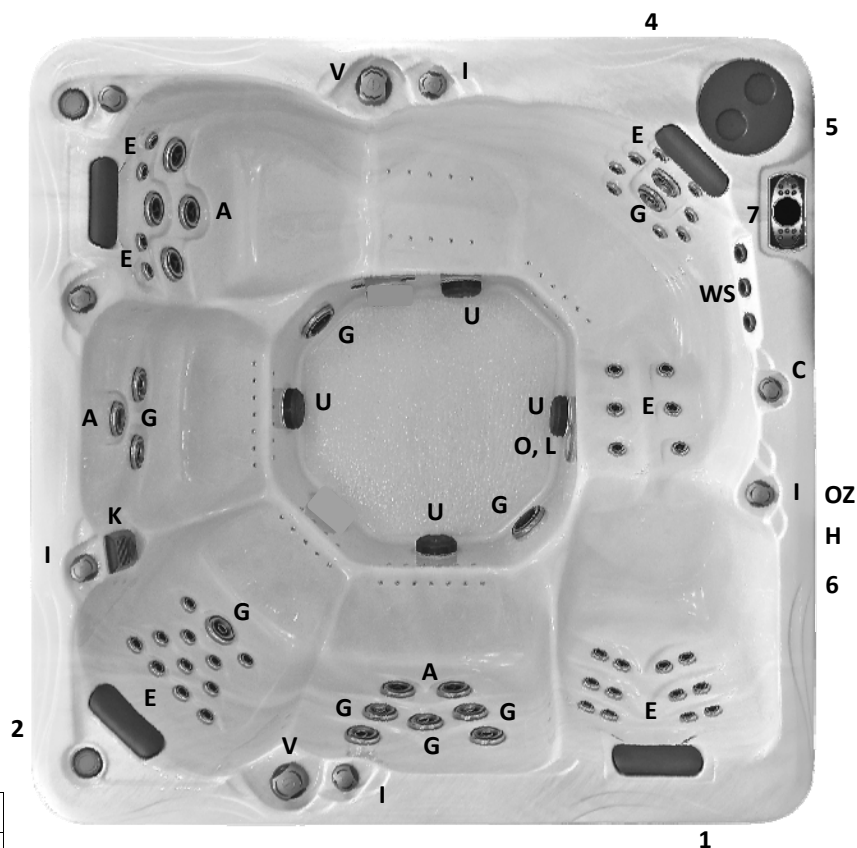
Seating Capacity	6
Shell Material	Acrylic
Dimensions (Domestic)	86" (7'2") sq. x 37" (3'1")
Dimensions (Export)	218 cm. sq. x 94 cm.
Water Capacity	375 Gallons (1,420 liters)
Dry Weight	705 lbs (320 kg)
Skirt Material	Permawood™

(photo ref.)

Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		6
MegaSwirl™ Jet	A	7
Euro Jet w/eyeball	E	47
Mega'assage™ Jet	G	12
Ozone Jet	O	2
Large Euro Jet	LE	0
Diverter Valves	V	2
Safety Suction	U	6
Mini Skimmer	K	1
Air Control	I	6
Spa Light	L	1
Drain Valve	5	1

Spa Pillows	4
Stainless Steel Jetting	Standard
Cascading Spouts/Control Valve	WS, C Standard
Allure2™ LED Lighting	Optional
Halo LED lighting™	Standard
SoundStream™ Audio	Optional*

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	6.0 (3.0) HP	6.0 (3.0) HP
Pump #2 peak (continuous) HP	2	6.0 (3.0) HP	6.0 (3.0) HP
Air Bubbler	4	1.5 HP	1.5 HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 5 Series	in.kYE 5 Series
Voltage		120/240	230/400
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k1000 Series	in.k1000 Series



\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

## GENERAL rev. 2018/01

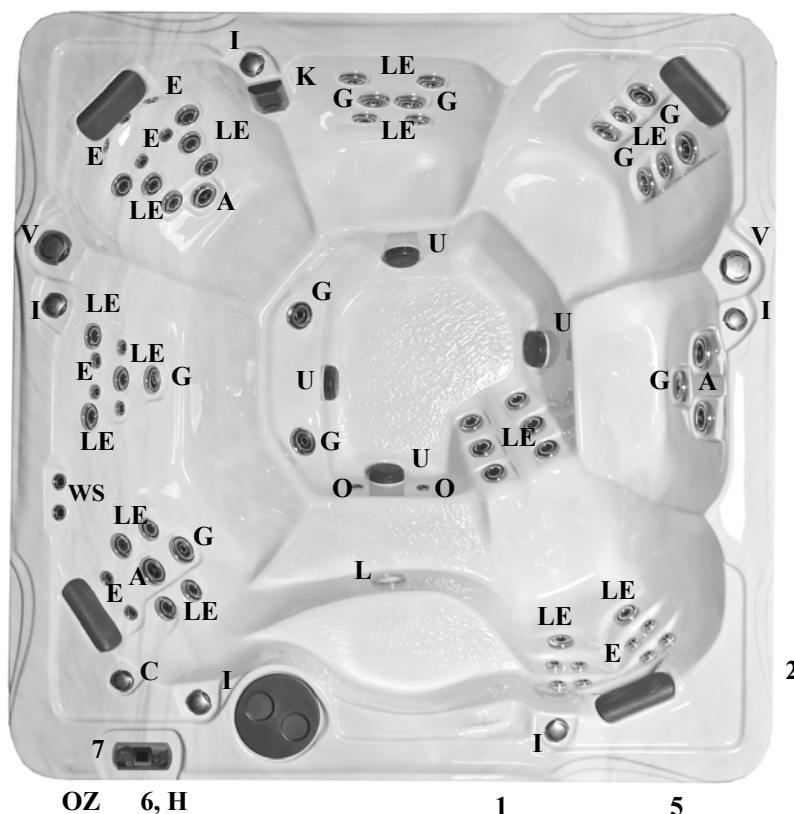
Seating Capacity	7
Shell Material	Acrylic
Dimensions (Domestic)	94" (7'10") sq. x 39" (3'3")
Dimensions (Export)	240 cm. sq. x 99 cm.
Water Capacity	650 Gallons (2,460 liters)
Dry Weight	775 lbs (352 kg)
Skirt Material	PermaWood™

## WATER SYSTEM\*\* (photo ref.)

Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		4
MegaSwirl™ Jet	A	4
Euro Jet w/eyeball	E	20
Mega'assage™ Jet	G	11
Ozone Jet	O	2
Large Euro Jet	LE	27
Diverter Valves	V	2
Safety Suction	U	4
Mini Skimmer	K	1
Air Control	I	5
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows	4
Prism LED™ Light	Standard
Stainless Steel Jetting	Standard
Cascading Spouts	WS Standard
Spout Control Valve	C Standard
SoundStream™ Audio	Optional*
Ozone Water Purification	Standard



## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
Pump #2 peak (continuous) HP	2	4.0 (2.0) HP	4.0 (2.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k500 Series	in.k500 Series

\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.



## GENERAL

rev. 2017/01

Seating Capacity	3
Shell Material	Acrylic
Dimensions (Domestic)	60"(5') x 84"(7') x 33"(2'9")
Dimensions (Export)	152 cm. x 213 cm. x 84 cm.
Water Capacity	220 Gallons (832 liters)
Dry Weight	575 lbs. (261 kg.)
Skirt Material	PermaWood™

## WATER SYSTEM\*\*

(photo ref.)

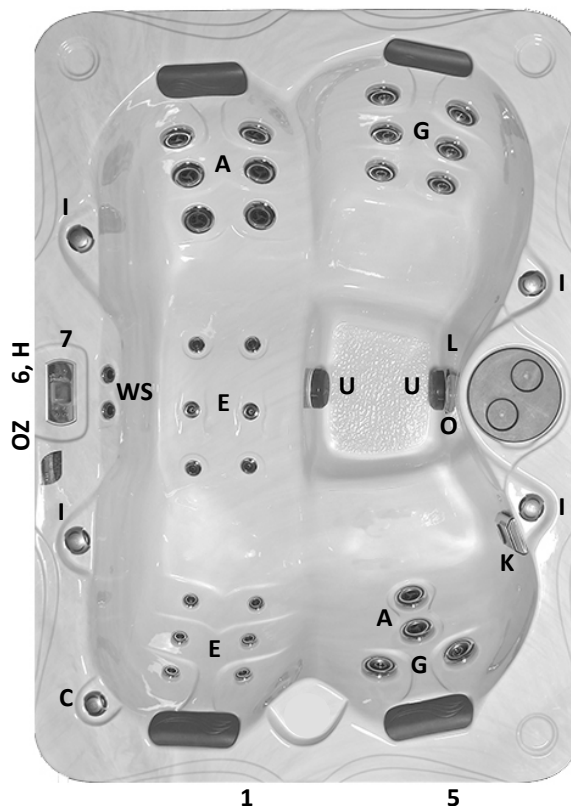
Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		2
MegaSwirl™ Jet	A	8
Euro Jet w/eyeball	E	12
Mega'assage™ Jet	G	8
Ozone Jet	O	2
Large Euro Jet	LE	0
Diverter Valves	V	0
Safety Suction	U	2
Mini Skimmer	K	1
Air Control	I	4
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows		4
Prism LED™ Light		Standard
Stainless Steel Jetting		Standard
Cascading Spouts	WS	Standard
Water Spout Control Valve	C	Standard
SoundStream™ Audio		Optional*
Ozone Water Purification		Standard

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k500 Series	in.k500 Series



\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install.

All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

## GENERAL

rev. 2018/01

Seating Capacity	5
Shell Material	Acrylic
Dimensions (Domestic)	90"(7'6") x 79"(6'7") x 37"(3'1")
Dimensions (Export)	229 cm. x 201 cm. x 94cm.
Water Capacity	325 Gallons (1,230 liters)
Dry Weight	695 lbs. (315 kg.)
Skirt Material	PermaWood™

## WATER SYSTEM\*\*

(photo ref.)

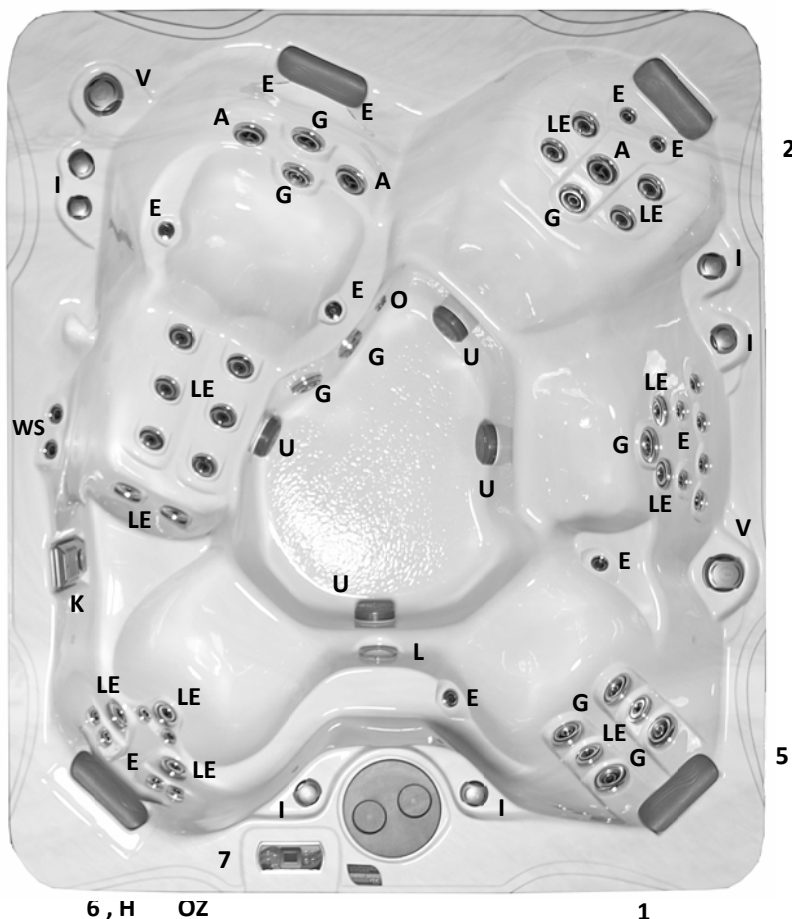
Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		4
MegaSwirl™ Jet	A	4
Euro Jet w/eyeball	E	20
Mega'assage™ Jet	G	9
Ozone Jet	O	2
Large Euro Jet	LE	21
Diverter Valves	V	2
Safety Suction	U	4
Mini Skimmer	K	1
Air Control	I	5
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

SPECIAL FEATURES		
Spa Pillows		4
Prism LED™ Light		Standard
Stainless Steel Jetting		Standard
Cascading Spouts	WS	Standard
Water Spout Control Valve	C	Standard
SoundStream™ Audio		Optional*
Ozone Water Purification		Standard

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
Pump #2 peak (continuous) HP	2	4.0 (2.0) HP	4.0 (2.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k500 Series	in.k500 Series



\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

## GENERAL

rev. 2018/01

Seating Capacity	7
Shell Material	Acrylic
Dimensions (Domestic)	82" (6'10") sq. x 39" (3'3")
Dimensions (Export)	209cm. sq. x 100 cm.
Water Capacity	425 Gallons (1,609 liters)
Dry Weight	645 lbs. (293 kg)
Skirt Material	PermaWood™
Water Flow	428 Gallons per Minute

## WATER SYSTEM\*\*

(photo ref.)

Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		4
MegaSwirl™ Jet	A	5
Euro Jet w/eyeball	E	41
Mega'assage™ Jet	G	12
Ozone Jet	O	2
Large Euro Jet	LE	3
Diverter Valves	V	2
Safety Suction	U	4
Mini Skimmer	K	1
Air Control	I	4
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

SPECIAL FEATURES		
Spa Pillows		2
Prism LED™ Light		Standard
Stainless Steel Jetting		Standard
Cascading Spouts	WS	Standard
Water Spout Control Valve	C	Standard
SoundStream™ Audio		Optional*
Ozone Water Purification		Standard



## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
Pump #2 peak (continuous) HP	2	4.0 (2.0) HP	4.0 (2.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k500 Series	in.k500 Series

\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install.  
All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

## GENERAL

rev. 2018/01

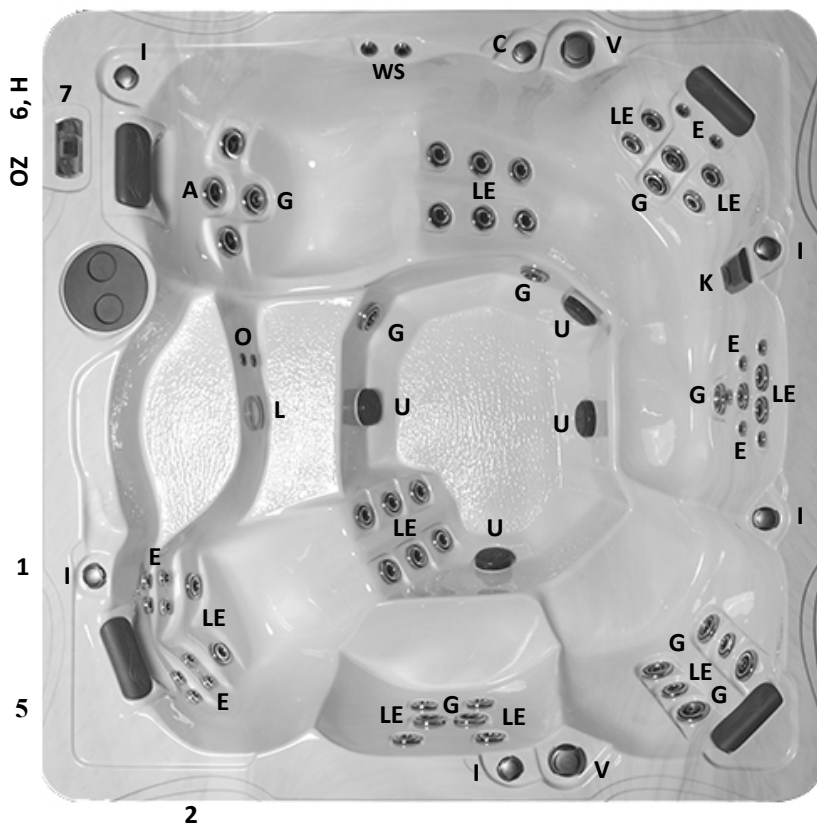
Seating Capacity	6
Shell Material	Acrylic
Dimensions (Domestic)	94" (7'10") sq. x 39" (3'3")
Dimensions (Export)	240 cm. sq. x 99 cm.
Water Capacity	520 Gallons (1,968 liters)
Dry Weight	750 lbs. (340 kg.)
Skirt Material	PermaWood™

## WATER SYSTEM\*\* (photo ref.)

Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		4
MegaSwirl™ Jet	A	3
Euro Jet w/eyeball	E	19
Mega'assage™ Jet	G	12
Ozone Jet	O	2
Large Euro Jet	LE	27
Diverter Valves	V	2
Safety Suction	U	4
Mini Skimmer	K	1
Air Control	I	5
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows	4
Prism LED™ Light	Standard
Stainless Steel Jetting	Standard
Cascading Spouts WS	Standard
Water Spout Control Valve C	Standard
SoundStream™ Audio	Optional*
Ozone Water Purification	Standard



## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
Pump #2 peak (continuous) HP	2	4.0 (2.0) HP	4.0 (2.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k500 Series	in.k500 Series

\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.



## GENERAL

rev. 2018/01

Seating Capacity	5
Shell Material	Acrylic
Dimensions (Domestic)	86" (7'2") sq. x 37" (3'1")
Dimensions (Export)	218 cm. sq. x 94 cm.
Water Capacity	375 Gallons (1,420 liters)
Dry Weight	625 lbs. (284 kg.)
Skirt Material	PermaWood™

## WATER SYSTEM\*\*

(photo ref.)

Water Treatment System	OZ	Ozonator
Filter, PowerFlo™ System		25 sq. ft.
Slide Valves		4
MegaSwirl™ Jet	A	3
Euro Jet w/eyeball	E	19
Megaassage™ Jet	G	12
Ozone Jet	O	2
Large Euro Jet	LE	27
Diverter Valves	V	2
Safety Suction	U	4
Mini Skimmer	K	1
Air Control	I	5
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows	3	
Prism LED™ Light	Standard	
Stainless Steel Jetting	Standard	
Cascading Spouts	WS	Standard
Water Spout Control Valve	C	Standard
SoundStream™ Audio		Optional*
Ozone Water Purification		Standard

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
Pump #2 peak (continuous) HP	2	4.0 (2.0) HP	4.0 (2.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230
Amperage		50	2x16 / 1x32 / 3x16
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k500 Series	in.k500 Series



\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install.

All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

## GENERAL

rev. 2018/01

Seating Capacity	3
Shell Material	Acrylic
Dimensions (Domestic)	60"(5') x 84"(7') x 33" (2'9")
Dimensions (Export)	152 cm. x 213cm x 84 cm.
Water Capacity	200 Gallons (757 liters)
Dry Weight	450 lbs (204 kg)
Skirt Material	PermaWood™

## WATER SYSTEM\*\* (photo ref)

Water Treatment System	OZ	Ozonator
Filter, Pristine™ System		25 sq. ft.
Slide Valves		2
MegaSwirl™ Jet	A	1
Euro Jet w/eyeball	E	23
Megaassage™ Jet	G	2
Ozone Jet	O	1
Large Euro Jet	LE	3
Diverter Valves	V	0
Safety Suction	U	2
Mini Skimmer	K	0
Air Control	I	1
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows	3
MotionGlow™ Light	Standard
Stainless Steel Jetting	Standard
Ozone Water Purification	OZ Standard

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
Electronics			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	3.6 KW
Operation System			
Main Spa Side Control	7	in.k300 Series	in.k300 Series



## GENERAL

rev. 2016/11

Seating Capacity	6
Shell Material	Acrylic
Dimensions (Domestic)	93" sq.(7'8") x 35" (2'11)
Dimensions (Export)	236 cm. sq. x 89 cm.
Water Capacity	520 Gallons (1,968 liters)
Dry Weight	856 lbs. (392 kg.)
Skirt Material	PermaWood™

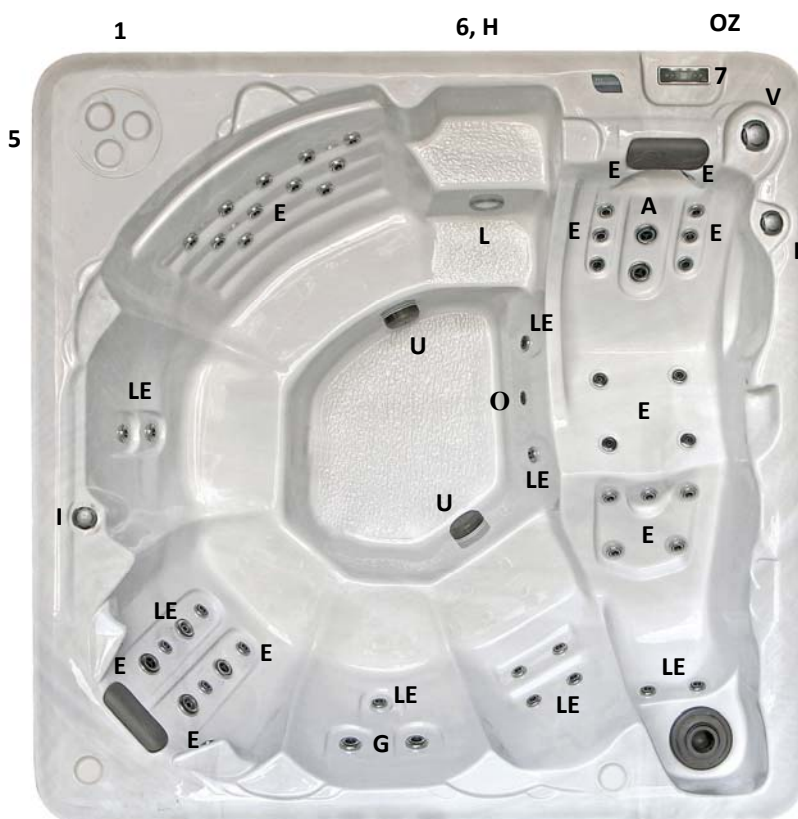
## WATER SYSTEM\*\*

(photo ref)

Water Treatment System	OZ	Ozonator
Filter, Pristine™ System		25 sq. ft.
Slide Valves		2
MegaSwirl™ Jet	A	2
Euro Jet w/eyeball	E	34
Mega'assage™ Jet	G	2
Ozone Jet	O	1
Large Euro Jet	LE	15
Diverter Valves	V	1
Safety Suction	U	2
Mini Skimmer	K	0
Air Control	I	2
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows	2
MotionGlow™ Lighting	Standard
Stainless Steel Jetting	Standard
Ozone Water Purification	OZ
	Standard



## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	6.0 (3.0) HP	6.0 (3.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k300 Series	in.k300 Series

\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

**GENERAL** rev. 2018/01

Seating Capacity	5
Shell Material	Acrylic
Dimensions (Domestic)	82" sq.(6'10") x 36" (3')
Dimensions (Export)	210 cm. sq. x 91 cm.
Water Capacity	375 Gallons (1,420 liters)
Dry Weight	665 lbs. (302 kg.)
Skirt Material	PermaWood™

**WATER SYSTEM\*\*** (photo ref)

Water Treatment System	OZ	Ozonator
Filter, Pristine™ System		25 sq. ft.
Slide Valves		2
MegaSwirl™ Jet	A	3
Euro Jet w/eyeball	E	23
Mega'assage™ Jet	G	6
Ozone Jet	O	1
Large Euro Jet	LE	11
Diverter Valves	V	1
Safety Suction	U	2
Mini Skimmer	K	0
Air Control	I	2
Spa Light	L	1
Drain Valve	5	1

**SPECIAL FEATURES**

Spa Pillows		3
MotionGlow™ Lighting		Standard
Stainless Steel Jetting		Standard
Ozone Water Purification	OZ	Standard



**ELECTRICAL SYSTEM**

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	6.0 (3.0) HP	6.0 (3.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k300 Series	in.k300 Series

\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.



## GENERAL

rev. 2018/01

Seating Capacity	7
Shell Material	Acrylic
Dimensions (Domestic)	82" sq.(6'8") x 39" (3'4")
Dimensions (Export)	209 cm. sq. x 100 cm.
Water Capacity	425 Gallons (1,609 liters)
Dry Weight	645lbs. (293 kg.)
Skirt Material	PermaWood™

## WATER SYSTEM\*\*

(photo ref)

Water Treatment System	OZ	Ozonator
Filter, Pristine™ System		25 sq. ft.
Slide Valves		2
MegaSwirl™ Jet	A	3
Euro Jet w/eyeball	E	26
Mega'assage™ Jet	G	5
Ozone Jet	O	1
Large Euro Jet	LE	8
Diverter Valves	V	1
Safety Suction	U	4
Mini Skimmer	K	0
Air Control	I	2
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows		2
MotionGlow™ Lighting		Standard
Stainless Steel Jetting		Standard
Ozone Water Purification	OZ	Standard



## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	6.0 (3.0) HP	6.0 (3.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k300 Series	in.k300 Series

\*\* Not every jet is referenced. Each type of jet is noted for ease of identification. \*Note location of audio components prior to install. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

## GENERAL

rev. 2018/01

Seating Capacity	5
Shell Material	Acrylic
Dimensions (Domestic)	76" (6'4")sq. x 31" (2'7")
Dimensions (Export)	193 cm. sq. x 79 cm.
Water Capacity	275 Gallons (1,041 liters)
Dry Weight	530 lbs. (240 kg)
Skirt Material	PermaWood™

## WATER SYSTEM\*\* (photo ref.)

Water Treatment System	OZ	Ozonator
Filter, Pristine™ System		25 sq. ft.
Slide Valves		2
MegaSwirl™ Jet	A	1
Euro Jet w/eyeball	E	19
Mega'assage™ Jet	G	2
Ozone Jet	O	1
Large Euro Jet	LE	5
Diverter Valves	V	0
Safety Suction	U	2
Mini Skimmer	K	0
Air Control	I	2
Spa Light	L	1
Drain Valve	5	1

## SPECIAL FEATURES

Spa Pillows		3
MotionGlow™ Light		Standard
Stainless Steel Jetting		Standard
Ozone Water Purification	OZ	Standard

## ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak(Continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
<b>Electronics</b>			
Electrical Can	6	in.kYE 3 Series	in.kYE 3 Series
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	3.6 KW
<b>Operation System</b>			
Main Spa Side Control	7	in.k300 Series	in.k300 Series



Hot tub installation can be quick and simple if these general guidelines are considered in planning the site. Please read the following information carefully. Proper planning will make the delivery and install more economical and efficient while proper site selection will increase your year-round enjoyment.

**Access from delivery point to final site:** Consider the route from where the unit is delivered to the installation site. The steepness of grade, trees, shrubs, gates, roof overhangs, cables and overhead wires need consideration. Outside dimensions of your model choice can be used to determine clearance required for the move. Review outdoor and indoor installation suggestions prior to choosing your hot tub spa location.

**Surface Requirements:** Your spa should be placed on a level concrete pad designed to support 6,000 lbs.( 2,722 kg.). Do not place the hot tub on a dirt surface or directly on the ground. Once you have a location selected, there are several issues you should consider in preparing the site for the hot tub spa installation.

A flat, level surface strong enough to support your unit is mandatory. Once your hot tub spa is filled, it has considerable weight. Make certain the location you choose can support a minimum of 100 lbs (46 kg) per square foot load, per recommended guidelines. Most units are installed outside, on ground level, on either a concrete pad or a wooden deck. If the spa is not on ground level, have a builder determine if the support is adequate. If the unit is placed directly on the ground, you will want to remove the grassy level, and place a layer of gravel on the soil. The best way to level the gravel may be with the straight edge of a piece of solid lumber to achieve a level surface. Pavers placed in a sand base is also a rather quick and convenient way to prepare the location site. Note that pavers, stepping stones, etc. still have a tendency to settle and may become uneven at some point. To check the level of any surface, including a concrete pad, spray a hose on the surface and check for puddles or run-off. Make the necessary corrections assuring levelness prior to placement of your hot tub spa. Structural damage to the unit resulting from the incorrect installation of placement on inadequate foundation is not covered in the limited warranty.

#### **General Considerations:**

Make sure your dimensions are correct as you prepare the site for your new spa. Click onto the web site ([www.pdcspas.com](http://www.pdcspas.com)) or call your retailer for dimensions of the model you have chosen. Allow a perimeter of the chosen ground surface to extend beyond the hot tub itself to provide a clean area for users to get in and out of the unit.

The hot tub location and the hot tub itself must be level before filling with water.

Allow adequate space to access the equipment behind the four access panels on the hot tub cabinet. Review the pages in this manual referencing the model specifications for the support equipment location for the model you have chosen. A cabinet side drain has been installed on the bottom portion of a cabinet sidewall for easy draining. Locate this drain and leave appropriate access.

Leave ample access to the GFCI circuit breaker for testing and frequent access.

A quick disconnect (manual disconnect) or GFCI is to be installed between 5 - 15 ft. (1.5-4.6 m) of the spa and within the line of sight from the unit. Consider where this can be located when selecting and preparing the spa site. All wiring must comply with the U.S. National Electric Code. **ALL EQUIPMENT MUST BE GROUND FAULT CIRCUIT PROTECTED (NOT SUPPLIED) AT THE POWER SOURCE. ALL ELECTRICAL WIRING OF THE SPA SUPPORT EQUIPMENT MUST COMPLY WITH THE NATIONAL ELECTRIC CODE.**

Note location of electric source into the unit prior to positioning on surface.

Spa equipment must always be below water level, never above, and sheltered from weather elements.

**THIS IS A PROFESSIONAL GRADE PRODUCT. A KNOWLEDGE OF CONSTRUCTION TECHNIQUES, PLUMBING AND ELECTRICAL INSTALLATION ACCORDING TO CODES ARE REQUIRED FOR PROPER INSTALLATION AND USER SATISFACTION. WE RECOMMEND THAT A LICENSED CONTRACTOR PERFORM THE INSTALLATION. OUR WARRANTY DOES NOT COVER IMPROPER INSTALLATION-RELATED PROBLEMS.**

**Important:** All hot tub sides must be accessible for regular maintenance or in the event that service is required. General maintenance will require entry to equipment behind cabinet panels. It is recommended to allow 3 feet of access to all sides of the hot tub for routine and service maintenance. Your warranty does not include any cost associated with gaining access to equipment for servicing.

## Indoor Installation Considerations

1. Local electrical and plumbing codes.
2. Ventilation fans and/or dehumidifiers should be provided to handle the high humidity developed by your hot tub. Walls, ceiling and wood trim resistance to moisture and water should be of consideration.
3. Chemicals will vaporize from the water and may cause an odor and possibly corrosion to certain home hardware. Never store chemicals inside the hot tub cabinet or where they may come into contact with water.
4. During the normal use of the hot tub, water will escape from the vessel. Never place the hot tub on or over any material which may be damaged by this water or the chemicals within the water. Keep damageable materials far enough away from the hot tub to avoid water damage, even if the spa should lose all its water.
5. Consider and prepare for the unlikely event of rapid hot tub drainage. If placement of the hot tub is permanent, you may wish to provide floor drains to accommodate draining, etc. Always leave space around the hot tub for easy access in case of repairs and maintenance, 3 ft. is suggested.
6. Consider and prepare for the unlikely event of hot tub removal.
7. Read 7-13 in the Outdoor Installation Considerations.
8. Do not set hot tub on finished floor without a waterproof barrier protection underneath.
9. The hot tub should have access to a power source capable of supplying 240 volts AC power. It must be wired directly into a grounded circuit with a Ground Fault Circuit Interrupter (G.F.C.I.) or equivalent RCD (not supplied), for export installs. No other appliances should be on the same circuit.
10. The hot tub should be close to a source of water. The unit is filled with a garden hose.
11. Be sure the location you choose is stable. It must be able to support the weight of the hot tub when it is filled with water, plus the weight of the occupants. The unit may weigh up to 6,000 lbs ( 2,722 kg.) when it is filled with water. Contact a contractor or structural engineer to determine adequate support.
12. Do not use the hot tub above a finished living area, due to the risk of water damage.
13. The hot tub is not designed for in-floor installation. However, it is compatible with a deck system that is built flush with the top of the unit, provided adequate space for service is considered.
14. Be sure to note any other considerations, such as aesthetics or privacy concerns, that may affect the safety or enjoyment of using the hot tub.

## Outdoor Installation Considerations:

1. Local electrical and plumbing codes.
2. Consider local codes pertaining to fencing, enclosures, walls, electrical and plumbing. You will need to ensure that your hot tub is an adequate distance from power lines, both aboveground and underground. Your hot tub will also need to be childproofed.
3. View from house for aesthetics and supervisory needs.
4. Distance from house for wintertime use.
5. Nighttime lighting.

## Outdoor Installation Considerations (cont'd):

6. Locate the hot tub with an awareness to sunlight exposure, views, access, property lines, lighting, wind direction, shielding, septic tanks, plants, trees. (Chemicals in the water splashed from your hot tub may damage nearby plant life.)
7. Consider the location of the nearest bathroom or dressing room.
8. If your hot tub is to be located on a second story, be positive support is adequate. Call your builder and a structural engineer.
9. Positioning with adequate space for access to components for maintenance and general servicing. It is suggested 3 ft. on all cabinet sides.
10. Be sure to note any other considerations, such as aesthetics or privacy concerns, that may affect the safety or enjoyment of using the hot tub.
11. Provide adequate drainage away from the equipment and adequate elevation to allow draining by siphon, should it be required.
12. Location of electrical supply. 120/240 volt systems require hard wire installed from the electrical source to the spa support pack terminal. ALL EQUIPMENT MUST BE GROUND FAULT CIRCUIT PROTECTED (NOT SUPPLIED) AT THE POWER SOURCE. ALL ELECTRICAL WIRING OF THE SPA SUPPORT EQUIPMENT MUST COMPLY WITH THE NATIONAL ELECTRIC CODE.
13. Locations at least 5 ft (1.52 m) from all metal surfaces. (A spa may be installed within 5 feet of metals surfaces providing each metal surface is permanently connected by a No. 6AWG (8.4 mm<sup>2</sup>) copper conductor attached to the wire connector on the terminal box provided for this purpose.) ALL INSTALLATIONS MUST COMPLY WITH ARTICLE 680 OF THE U.S. NATIONAL ELECTRIC CODE AND ANSI/NFPA 70-1984.

## Partially or Fully Recessed Installations:

PDC Spas does not recommend this type of installation, although if this is what you have chosen for your new hot tub, please review the following considerations.

1. A system for preventing collection and pooling of water must be designed in accordance to local authorities.
2. If installed in designated floodways, additional attention to maximum water load entering that floodway must be addressed to prevent water from accumulating below grade. The hot tub is not designed to be submerged in water and will void all warranties.
3. Unit must be level and self-supporting and NEVER backfilled with sand, gravel or dirt. This will void all warranties.
4. Plan for complete drainage.
5. Must have proper ventilation so equipment does not overheat.
6. Must provide at least 3 feet of access around all sides of the hot tub. Warranty does not cover costs associated with gaining access for service and maintenance.
7. Below grade drainage needs to be evaluated based upon specific region rainfalls. This analysis must be done by a qualified local engineer to ensure proper drainage.

Once the hot tub is in its final location perform the following steps to begin the start-up procedure.

1. Consult the specification sheet for your specific hot tub model to locate the electrical spa pack. Remove the cabinet panel exposing pack for electric connection completion.

2. Consult the specification sheet to locate all the pumps for your specific model, then remove appropriate cabinet panels. Be sure all pump and heater unions are secure. Each pump has 2 unions, the heater has 2 unions. The unions of a newly delivered hot tub may have loosened during transportation. While checking the unions also check the slide valves are in the up position and the lock is installed. Photo right.

3. Inspect the hot tub for any dirt or particles that may have fallen onto the surface after the plastic was removed from the unit. Wipe the hot tub with a soft damp sponge.

4. Ensure your water source is safe for hot tub use. Water may contain minerals that could cause stains or deposits. Water with high mineral count may discolor the water once a sanitizer is added.

5. Let the water run out of your garden hose for several minutes before filling the hot tub spa. This will flush out stagnant water possibly harboring bacteria.

6. Begin filling the hot tub. We recommend filling the hot tub to approximately the pillow bottom. During the filling process periodically check the unions to ensure they are tight and no water is leaking out.

7. Once the hot tub is filled, turn the circuit breaker on. The spa will turn on and start the circulation pump.

8. It may be necessary to bleed air from the pump or pumps on your spa, if after start up your spa pumps do not operate. Due to the nature of water flow and hydrotherapy pumps, please be advised that air locking of pumps may occur. PDC Spas has taken measures to reduce the possibility of this, but it still may occur, especially after refilling a hot tub. This is not a service covered under warranty. To relieve an airlock situation, loosen the Ultra Massage Selector™ (diverter) by removing the handle, loosen top by turning counter-clockwise. You may possibly hear air come out when it is loosened, after a few seconds tighten. Turn the pump on to see if proper jet flow has been achieved. If proper jet flow has not been achieved, repeat process.

9. Open air regulators allowing maximum flow through jets assuring pump operation.

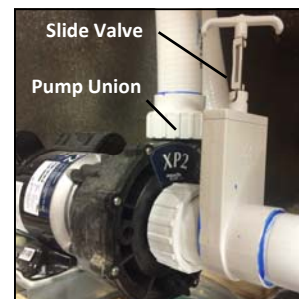
10. Refer to Control section for heating, filtration cycles and function for the model / series of your hot tub.

11. Adjust water chemistry according to the instructions provided in water chemistry guidelines section.

12. View current water temp on the control panel and set to desired level. Water will heat approximately 4-5 degrees an hour. Times may vary.

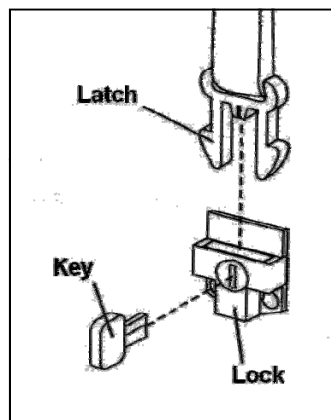
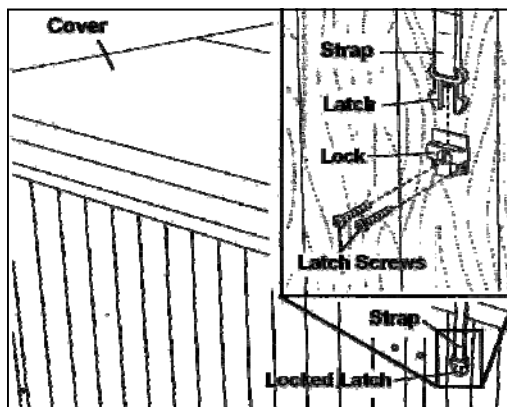
13. Adjust water chemistry according to the instructions provided in water chemistry guidelines section.

14. Remove the hot tub cover from the box and place it on the unit. Pull down one of the straps on the hot tub cover.





and hold latch against the cabinet side panel. To position the lock correctly, have a second person hold the strap tight on the opposite side of the hot tub cover. The cover must be tight. Do not place the latch over the grooves of the cabinet finish. Remove the latch from the lock, attach the lock to the cabinet side panel with three #4 screws provided. Attach the other locks to the cabinet in the same manner. To lock the cover in place, insert the key and turn it clockwise 1/4 turn. To unlock the latches, insert the key and turn it counterclockwise 1/4 turn. Always keep locked when not in use. Keep the keys in a safe place, out of the reach of children.



Should you be installing a cover lifting device, refer to the manufacturer's instructions for proper installation. Those devices that are to be screwed into the cabinet must have consideration of the hot tub framework for proper support and function. Those devices should never be screwed into only the cabinet sidewall as there is not adequate support from the panel alone. The framework of the hot tub must be accessed.

## ELECTRICAL REQUIREMENTS

### ELECTRICIAN MUST READ THE FOLLOWING INFORMATION PRIOR TO INSTALLATION.

Electrical connections made improperly, or the use of wire gauge sizes for incurring power which are too small, may continually blow fuses in the electrical equipment support box, may damage the internal electrical controls and components, may be unsafe and in any case will void the spa warranty.

It is the responsibility of the hot tub spa owner to ensure that electrical connections are made by a qualified electrician in accordance with the National Electrical Code and any local and state electrical codes in force at the time of installation.

## IMPORTANT !!

### ALL EQUIPMENT MODELS ARE 120/240 VOLT, 60 CYCLE FOR STATE-SIDE, U.S. INSTALLATIONS, AND 50 HZ FOR EXPORT, CE, INSTALLATIONS.

All hot tubs must be permanently connected.

All hot tub support systems are multiple supply circuits.

All hot tub systems require the installation of a ground fault circuit interrupter (GFCI) protector or equivalent; (RCD, for export installs), at the power source (NOT SUPPLIED BY PDC SPAS) by a qualified electrician in accordance with all codes and regulations. Refer to typical GFCI installation photos and illustrations on the following pages.

Prior to each use, testing of the GFCI (or equivalent RCD) is required! Refer to the maintenance section of this manual for instructions

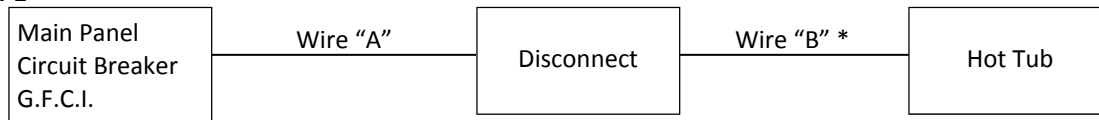
**All hot tub support equipment must be bonded (grounded) to the pressure connector located within the control support box as well as the outside of the control support box. (see wiring schematic below and references on following pages)**

Disconnect all electrical supplies and contact a qualified technician before servicing.

All hot tub installations are to be performed by a licensed electrician and in accordance with all local and national codes.

### Hot Tub Wiring Schematic for Certified Electricians' Reference Only

#### OPTION 1



#### Option 2



\* National U.S. code recommends distance not to exceed 15 ft.

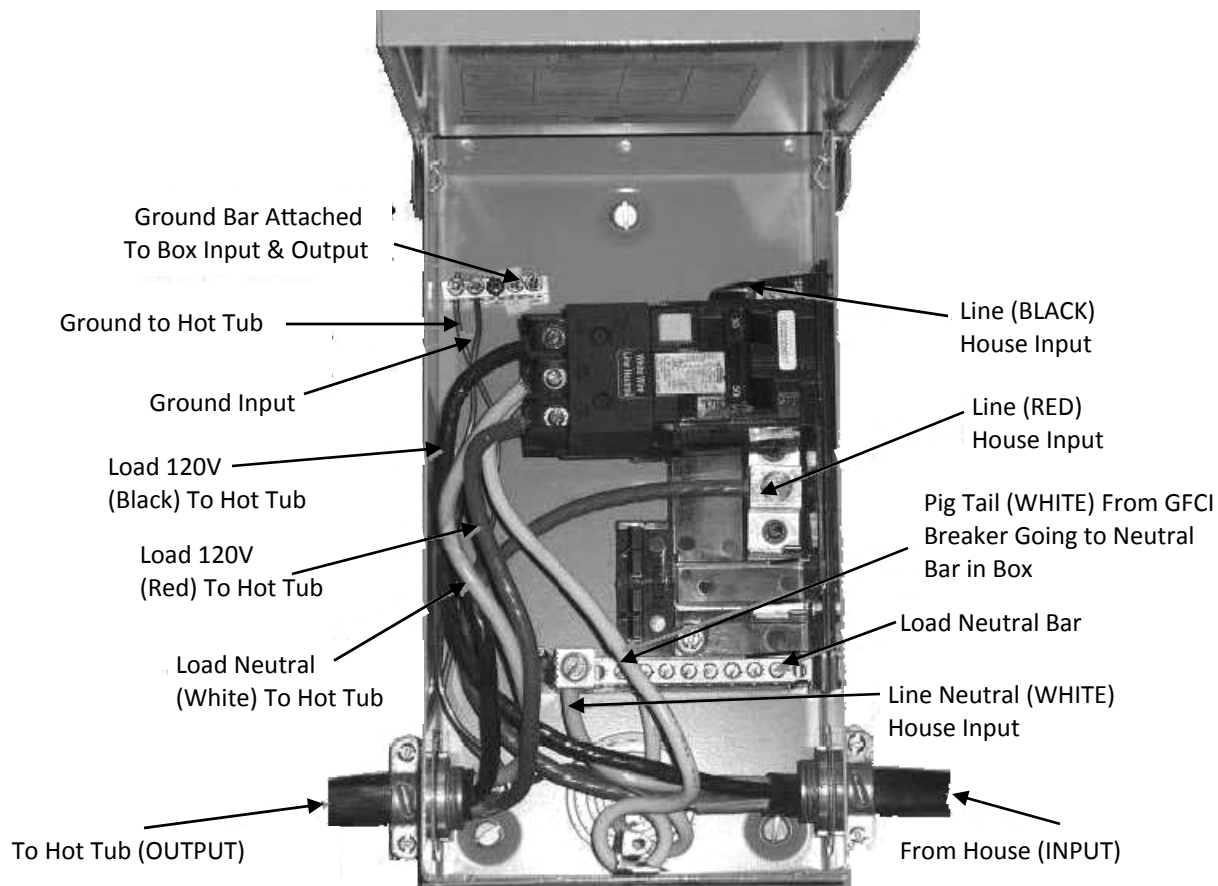


**ATTENTION ELECTRICIAN:**

All PDC Hot Tub Units must be installed with an approved G.F.C.I. in accordance with all applicable codes. Installation of G.F.C.I. varies among those manufacturers. Follow each manufacturer's guidelines to ensure proper operation and protection of hot tub occupants. This diagram is a "Typical" installation to be used only as a reference for the installing electrician.

**IMPORTANT:** 6 Gauge Copper Wire MUST Be Used.  
Never Use Aluminum Wire.  
Test GFCI Monthly and Prior to Each Use.

Typical Installation Breaker Box  
Class A 50 amp, 120/240 volt, GFCI



**TO BE NOTED:** Installation of this GFCI Circuit Breaker, including ampere sizing and choice of wire must be made by a qualified electrician, in accordance with the National Electrical Code, and all applicable federal, state and local codes and regulations in effect at the time of installation.

**TO BE NOTED:** The white neutral wire from the back of the GFCI Circuit Breaker MUST be connected to an incoming Line Neutral. The internal mechanism of the GFCI requires this Neutral connection for proper GFCI function.

**FOR QUALIFIED ELECTRICIAN REFERENCE ONLY!**

All installations and connections are to be performed by a qualified, licensed electrician only and in accordance with the National electric code and all applicable local regulations.

Ensure power is turned off prior to making any electrical connections.

**WARNING!****ATTENTION ELECTRICIAN:**

All hot tub units must be installed with a Class A 50 Amp Ground Fault Circuit Interrupter (not supplied) in accordance with the National Electric Code and all applicable local codes. Installation of GFCI varies among those manufacturers. Follow each manufacturer's guidelines to ensure proper operation and protection of spa occupants.

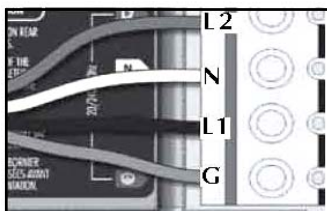
**IMPORTANT: 6 Gauge Copper Wire MUST Be Used.**  
**Never use Aluminum Wire!!**  
**Test GFCI Monthly and Prior to Each Use.**

Correct wiring of the electrical service box, GFCI and pack terminal block is essential.

Contacting a qualified electrician may be necessary.

\*If connected to a 3 wire system, no 240V component will operate.

**240V (4 wires)**



- To install the wiring for the spa equipment controller, a Phillips screwdriver and a flat screwdriver will be needed.
- Loosen the 4 screws of the spa pack lid and open it. Remove 70 mm (3") of cable insulation. Strip away 25 mm (1/2") of each wire insulation.
- Pull the cable through the cutout of the box and use an IEC certified plastic bushing that will maintain the IPX5 rating.
- The power cord must be in accordance with the national electrical code of the country in which it's to be installed and must maintain IPX5 rating. Make sure that only the uncut sheathing is clamped at this opening.
- Push the color-coded wires into the terminals as indicated on the sticker, use the flat screwdriver to tighten the bolts on the terminals.
- After making sure wire connections are secure, push them back into the box and close the lid.
- Tighten the 4 screws of the spa pack lid.

**FOR QUALIFIED ELECTRICIAN REFERENCE ONLY!**

All installations and connections are to be performed by a qualified, licensed electrician only and in accordance with all applicable local regulations. Identify the correct CE platform on the spa unit, in accordance with the home's electrical output and follow the guidelines below.

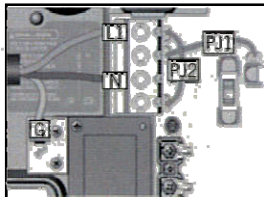
**ENSURE POWER IS TURNED OFF PRIOR TO MAKING ANY ELECTRICAL CONNECTIONS.**

**WARNING!****ATTENTION ELECTRICIAN:**

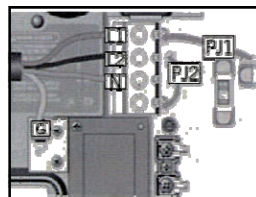
All hot tub units must be connected to a circuit protected by a residual current device (RCD) having a rated operating residual-current not exceeding 30 mA (not supplied).

Proper wiring of the electrical service box, RCD and the terminal block is essential! Check your electrical code for all regulations that apply.

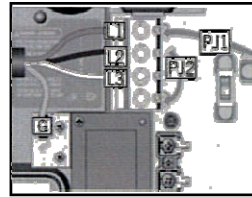
**IMPORTANT: Only Copper Wire MUST Be Used**  
**Never use Aluminum Wire!!**  
**Test RCD Monthly and Prior to Each Use.**

**1-Phase**

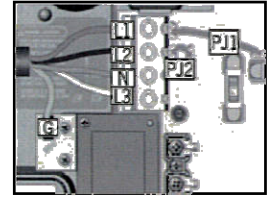
Connect PJ1 between P7 and P13.  
Connect PJ2 between P10 and P74.

**2-Phases with single neutral**

Connect PJ1 between P7 and P10.  
Connect PJ2 between P13 and P74.

**3-Phases Delta**

Connect PJ1 between P7 and P10.  
Connect PJ2 between P13 and P74.

**3-Phases with single neutral**

Connect PJ1 between P7 and P10.  
Connect PJ2 between P11 and P13.

- Disconnect power before starting electrical work!
- To complete the electrical connections, you will need a Phillips screwdriver and flat-head screwdriver.
- Remove the screws from the system control lid and remove it.
- Strip away 5 1/2" (142 mm) of cable insulation. Strip away 1" (25 mm) of insulation from each wire.
- Pull the cable through the cutout of the box and secure it with a NPT strain relief (hole diameter 1.335" - 34.42 mm). For CE use an IEC certified plastic bushing that will maintain the IPX5 rating. Ensure the NPT strain relief clamps around the outer sheath of the cable.
- Insert each wire into the appropriate socket of the main entry terminal block according to the color code indicated on the sticker. Use a flat-head screwdriver to tighten the screws on the terminal.
- After making sure wires are securely connected, push them back into the box and replace the cover. Do not over-tighten cover screws (torque to 8 in. lb max (0.9 N.m)).
- Connect the bonding conductor to the bonding lug on the front of the spa pack (a grounded electrode conductor should be used to connect the equipment grounding conductors).

Electrical connections should be made only by qualified personnel and in accordance with local regulations.

**WARNING:** READ ALL INSTRUCTIONS BEFORE USING THE SPA. PDC Spas, PDC International assumes no responsibility for personal injury or property damage sustained by or through the use of this product. When installing and using this equipment basic safety precautions should always be taken to reduce risk of electrical shock, ensure safe usage, and safeguard the user's health.

## in.K1000 Series Control



## Main Screen

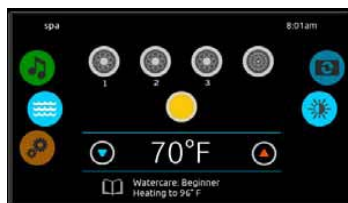
The main screen gives you access to your accessories and water temperature. At the bottom of the screen you will see any error or maintenance messages that are present.



## Power

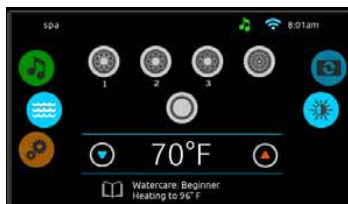
Touch the screen to turn on the keypad. After 30 minutes without activity it will shut off. Then follow the instructions on the screen to access the main screen.

## Keypad Functions



## Start or stop accessories

To start or stop an accessory, touch the associated icon. Icons will become animated when their accessory is turned on, and animation will stop when turned off. Icons on the screen will reflect the speed or state of the devices running on your spa. When an accessory has more than two speeds press the button until it reaches desired speed.



## Notifications

A notification area at the top right-hand side of the screen shows the state of certain accessories installed in the spa.

## Notification icons

### in.touch: (optional)

- Indicates that the in.touch module is detected and connected to a Wi-Fi network.
- A red cross indicates that the in.touch module is detected but isn't connected to a Wi-Fi network. For more information about the in.touch, refer to the Wi-Fi section.

### in.stream 2: (optional)

- Indicates that the in.stream 2 module is detected and connected.
- A grey icon indicates the in.stream 2 module is detected but is off.

## Keypad Functions



### Water Temperature

The temperature shown at the bottom of the screen gives the actual water temperature. Use the Up and Down icon to set the desired temperature. The set point will appear in blue. After 3 seconds without any change to the set temperature value, the current water temperature will reappear.

When the set value is lower than the current temperature Cooling to xx.x will appear in the message center below. When the set value is higher than the current temp, Heating to xx.x will be indicated instead. Normally there is a short delay before the heating starts, during which Heating Suspended is indicated.



### Home Page

From the home page you will find the following options:

- *in.stream 2 (optional)*
- *settings*

To select an option, slide the left wheel until the desired icon menu is shown in the middle of the screen.

### Settings

From the home page you will find the following options:

- *Water Care*
- *Maintenance*
- *Date & Time*
- *Keypad*
- *Electrical Config*
- *Wi-Fi*

*About*



To select an option, slide the right wheel until the desired icon menu is shown in the middle screen or press on the menu name.

### Water care

The Water Care section will help you set up your ideal filtration and heating settings. Choose between Away from Home, Beginner, Energy Savings, Super Energy and Weekender, depending on your need. Touch the Water care name to choose your setting. A green checkmark will appear on the selected icon to confirm your choice.

In Economy mode, the set point will be reduced by 20°F\*, which means that the heating system will not be engaged unless the temperature falls to 20°F below the spa's set temperature.

The filtration schedule shown on the screen will apply to the main filtration pump; pump 1.

### Water care modes



#### Away:

In this mode the spa will always be in economy; the set point will be reduced by 20° F\*.



#### Beginner:

The spa will never be in economy mode and will be filtering according to the pack's low level configuration.



#### Energy Savings:

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



#### Super Energy Savings:

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



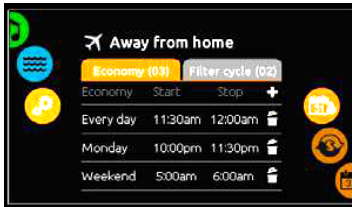
#### Weekender:

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

*\*Filtration will be reduced when the economy mode is active.*

## Keypad Functions

### Modifying Schedules

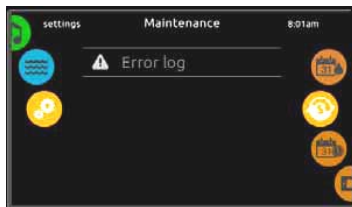


To modify a Water Care category, touch the pen at the right end of the desired watercare to open the selected Water Care menu.

You can add schedules by touching the « + » symbol. To delete a schedule, touch the garbage can icon at the right end of the desired line.

Touch the Economy tab to change the economy setting and filter cycle tab for the filtration settings (or schedules).

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

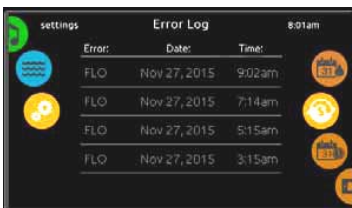


### Maintenance

From the Maintenance you can access the following options:

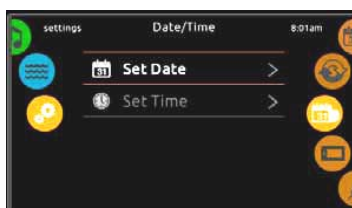
- Error log

To access the desired option simply touch the desired name.



### Error Log

In this section you can see errors that have been archived by the system. Drag the list Up and Down to move through the list. Errors are archived chronologically, from the most recent to the oldest (top to bottom). The Error log page shows the error code, the date of the error, and the time. A screen will appear with more information on the selected error.



### Date and time

Here you can adjust the time or the date.

Simply touch the option you want to change



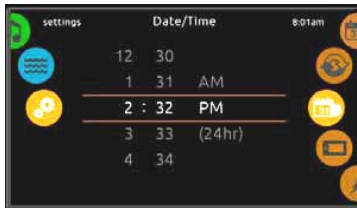
### Set date

Here you can adjust the year, month and date.

Simply scroll up and down the column you want to change, and select the desired value. When done, touch the calendar icon at the right of the screen.

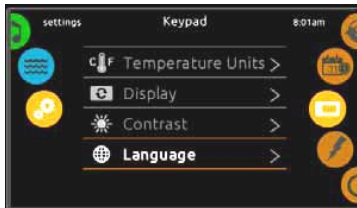


## Keypad Functions



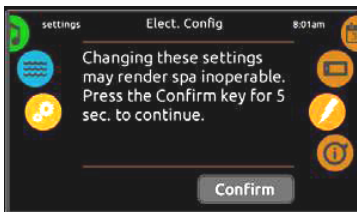
### Set Time

Here you can change the hour, minute and time format. Simply scroll up and down the column you want to change, and select the desired value. When done, touch the calendar icon at the right of the screen.



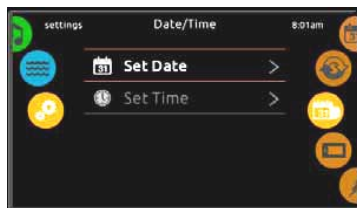
### Keypad Settings

Here you can adjust the Temperature Units, Day/Night contrast, and Display orientation and language. Simply touch the option you want to change.



### Electrical Configuration

Please do not make changes in this section unless you are a qualified electrician. In this section you can change the low-level configuration, as well as modify the number of phases and the input current.



### About

This section shows information about the in.k1000 software number, and the revision numbers of the different components of your system.



### Set date

Here you can adjust the year, month and date.

Simply scroll up and down the column you want to change, and select the desired value. When done, touch the calendar icon at the right of the screen.



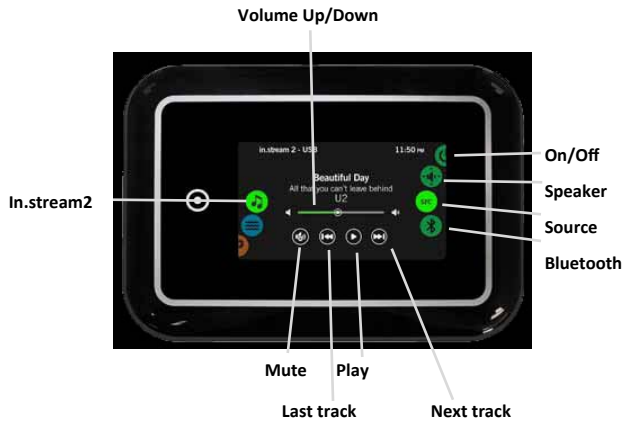
### WiFi (optional)

This menu allows you to connect your in.touch module to a Wi-Fi network or to change its network. To connect your in.touch module to a wireless network, slide the left wheel until the desired icon menu is show in the middle screen or press on the menu name. After a few seconds the available networks will appear on the screen, as well as their signal strength. Slide Up or Down the list to select your network. If the Wi-Fi network is password protected enter it when prompted. Use Enter to validate the password. If no password is required the in.touch will connect automatically. Once the in.touch module is connected to a Wi-Fi network a green check mark will appear in the Wi-Fi menu, and the network name will appear in the Settings menu.

## Keypad Functions

### in.stream 2 functions (optional)

This menu is available only if the in.stream was selected in the audio configuration menu.



### Press the Mode key to access your in.stream.

If you are using a device with Bluetooth, it must be connected for functions to work. Please note that the Play/Pause and Change Track functions apply to devices using Bluetooth technology only, and will not work when AUX is selected as the source.

### Turning power On/Off

Go to ON/OFF Sub Menu to turn the in.stream on or off.

### Selecting the source

In the Source Sub menu, the following sources are available: Bluetooth, FM, USB, AUX. Simply select the desired one.

### Play/Pause audio

Press the Play/Pause button to start or pause the audio.

### Adjusting the volume

Slide the volume icon or touch the mute button to mute or unmute.

### Changing tracks

Use the Last Track and Next Track keys to change tracks.

### Disconnect or Unpair Bluetooth

These options can be found under the Bluetooth Sub menu.

### Speaker

In the Speaker Sub menu; adjust the Balance, Fade and Sub Woofer by sliding the appropriate slider.

## Error Messages

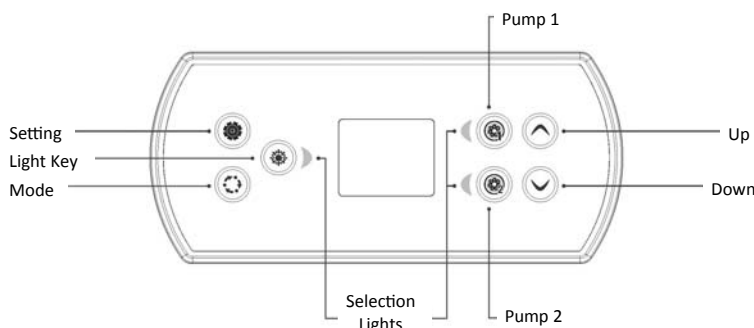
The list below shows the different error messages that can appear on the home screen.

CODE	MESSAGE
HL	High Limit circuit has tripped!
FLO	No Flow condition for more than 2 hours
HR	A hardware error was detected (Relay stuck)
OH	Spa temperature is too high
Pr	Temp probes or detection circuit are defective
AOH	Elevated internal temperature
FLC	The pressure switch is closed
SP in	Input voltage issue
RH NC	Comm. error between in.xm2 - in.therm
RH ID	in.xm2 and in.therm incompatible
SC ER	Error detected during the learning mode
F1	in.xm2 Fuse # 1 is blown
F2	in.xm2 Fuse # 2 is blown
F3	in.xm2 Fuse # 3 is blown
ER1	slave unit is missing
Hr	Hardware error was detected (Thermal fuse)
UPL	The spa pack does not have valid software. Please insert valid in.stick to reprogram spa pack.
CFLO	No Flow condition
HIBr	Add fresh water to the spa
HiBr	Add fresh water to the spa
LoBr	Add BromiCharge to spa water
NoBr	Add BromiCharge to spa water
Comm	Verify cable connections
Supp	Connect power cord to 240 V source



**WARNING:** READ ALL INSTRUCTIONS BEFORE USING THE SPA. PDC Spas, PDC International assumes no responsibility for personal injury or property damage sustained by or through the use of this product. When installing and using this equipment basic safety precautions should always be taken to reduce risk of electrical shock, ensure safe usage, and safeguard the user's health.

## in.K500 Series Control



### Power

Press any button to turn the keypad on. After 30 minutes without activity it will automatically shut off.

### Main Screen

The main screen gives you access to your accessories and water temperature. At the bottom of the screen you will see any error or maintenance messages that are present.

### Start or Stop Accessories

To start or stop an accessory, press the associated button. Icons will become animated when their accessory is turned on, and inanimate when turned off. Icons on the screen will reflect the speed or state of the devices running on your spa. When an accessory has more than two states, press the button until it reaches the desired state.

### Pump 1 key

Press **Pump 1** key to turn Pump 1 on at low speed. Press a second time to turn pump to high speed (with a dual speed pump). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

### Pump 2 key

Press **Pump 2** key to turn Pump 2 on at low speed. Press a second time to turn pump to high speed (with a dual speed pump). Pressing a third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.



### Light key

Press **Light** key to turn light on / light off. A built-in timer automatically turns light off after 2 hours, unless it has been manually deactivated first.

### Water Temperature

The temperature shown at the top of the screen gives the actual water temperature. Use the up/down button to set the desired temperature. The set point will appear in blue at the bottom. After 3 seconds without any change to the set temperature value, the keypad will resume normal display.

### Settings

In this section you will find: Water Care, Audio (if installed), Maintenance, Date and Time, Keypad, Wi-Fi Config\*, Restore\*, About.

\*Reserved for qualified electricians and installers. Use the arrow keys to move up and down, the light key to select. Press the settings key to go to home page.

### Modifying Schedules

Use the **Arrow** keys to scroll through the selections. To see or modify a category use the lit button on the right (key 1) to open the selected menu. Use the arrow keys to choose a schedule to modify, the Light key to move between parameters. Once you have set the schedule use Key 1 to go back. In the water care option you will see the setting.



### Water Care

To set up your desired filtration and heating settings press the **Light key**. A checkmark will appear on the selected icon to confirm.

In energy saving mode the set point will be reduced by 20 degrees F, which means that the heating system will not be engaged unless the temperature falls to 20 degrees below the spa's set temperature.



### Water Care Modes

**Away:** In this mode the spa will always be in economy; set point reduced by 20°F and filtration reduced.

**Beginner:** Never in economy mode and will run normal 8 hrs filtration daily.

**Energy Savings:** Economy mode during peak hrs of day and resume normal mode on weekend.

**Super Energy Savings:** Always in economy mode during peak hrs

**Weekender:** Economy mode Mon—Fri. Runs normal on weekend.



### Audio

The audio selection in the settings menu gives you the option to disconnect or unpair your Bluetooth enabled device. It is also possible to select Source to use a device connected by auxiliary cable

or Bluetooth wireless connection.

The in.stream Settings menu gives you a Bluetooth disconnect option, an Off/On switch and an audio control on fader, balance and subwoofer.

The Audio option will only appear in the menu for keypads that are set up for an in.stream connection. The in.stream2 is automatically detected at power-up.

Press the Mode key to access your in.stream2.

Turn Power Off/On, and Disconnect, and Fader, Balance and Subwoofer can be found under the Audio section in the Settings menu.

Adjust volume with Up/Down keys.

Use the Last Track and Next Track keys to change the tracks or FM stations.



### Maintenance

From the settings page you can access the following options: Maintenance reminders Standby

Use the Up and Down keys to make a selection, press the Light key to confirm selection.



### Maintenance Reminders

This will remind you of things like rinsing your spa or cleaning the filter. Each task has its own duration. The maintenance reminder menu allows you to verify the time left before requirement and reset once complete. Use the Up and Down key to move through the list. To reset a task select it by pressing the Light key.



### Standby

This allows you to service your spa, the pumps will stop automatically for 30 minutes and automatically start back up after that duration. The screen will alert you when standby mode is enabled. Press the Pump 1 key to leave standby mode and restart the spa.



### Date and Time

Use the arrows to choose the setting that you would like to adjust and select it by pressing the Light key. Use the Arrow buttons to change the parameters and the Light key to move between parameters. Pressing Key 1 will take you back to the main settings menu.



### Keypad Settings

Use the Arrow keys to move to the setting that you wish to change. Use the Light key to modify the selection.

The display orientation can be changed by selecting the contextual options using the Arrow keys to adjust the orientation.



### Control Panel Rim Light

Selecting this will turn on or off the topside rim light.



### About

This selection shows information such as the software number and the revision numbers on the different components of your system.

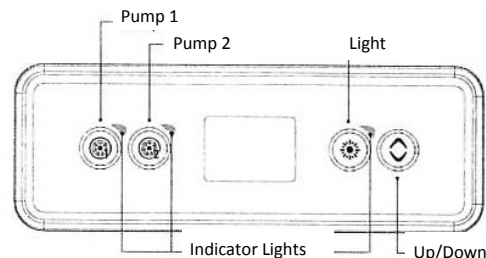
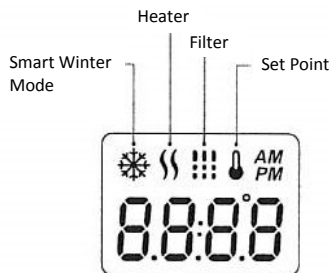


### WiFi

To connect in.touch module to a wireless network, use Up/Down keys to the WiFi option in the Settings menu and Light key to select. Available networks will appear with color coded connection icons.

**WARNING:** READ ALL INSTRUCTIONS BEFORE USING THE SPA. PDC Spas, PDC International assumes no responsibility for personal injury or property damage sustained by or through the use of this product. When installing and using this equipment, basic safety precautions should always be taken to reduce risk of electrical shock, ensure safe usage, and safeguard the user's health.

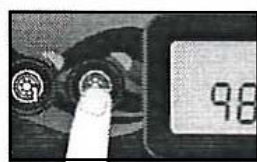
## in.K300 Series Control



Off Mode



Pump1



Pump2 key



Light key



Up/Down keys

Press Pump1 for 5 seconds will enable the Off mode. This mode allows you to stop all outputs including auto functions such as filter cycle, heat request and smart winter mode for 30 minutes to perform quick spa maintenance. When Off mode is active, the display will toggle between the "Off" message, the clock and the water temp. The spa light will flash for a few seconds before the 30 minutes is up to warn you that the system is about to resume its normal operation. Press Pump1 or Pump2 to restart the system before the 30 minute delay expires. When the system resumes its normal operations, display shows "On" for 3 sec.

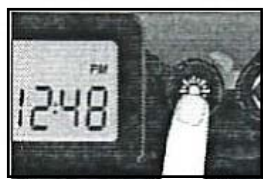
\*Press Pump1 key to turn Pump1 on at low speed. Press a second time to turn pump to high speed (with a dual speed pump). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been deactivated manually first. The "Pump1" indicator lights up when pump2 is on. With a dual-speed pump, the indicator will flash when pump 1 is on low speed.

Not available on all models. Press Pump2 key to turn Pump2 on at low speed. Press a second time to turn pump to high speed (with a dual speed pump). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been deactivated manually first. The "Pump2" indicator lights up when pump2 is on. With a dual-speed pump, the indicator will flash when pump 2 is on low speed.

Press Light key to turn light on. A second press turns light off. A built-in timer automatically turns light off after 2 hours, unless it has been manually deactivated first. The "Light" indicator lights up when light is on.

Use the Up or Down key to set desired water temperature. The temperature setting will be displayed for 2 seconds to confirm your new selection. 2 pump spas have a combined Up/Down key. Hold the button to increase the parameter and release the button to stop. Hold the button again to decrease the parameter. Set Point icon indicates the display shows the desired temp, NOT current temp.

\* If single speed pump, press Pump key to turn pump on. Press Pump key again to turn pump off.



Program menu

The program menu is accessible by holding down the Light key for 5 seconds. In the program menu the following parameters can be set: clock, filter or purge cycles, economy mode and temperature units. While you are in the program menus, use the Up or Down key to adjust the parameters and use the Light key to jump to the next parameter.

The changes will be saved after the confirmation of the last parameter only. If there is no action taken for 10 seconds, the system will exit the program menu without saving any changes.



Setting the clock

Enter the program menu by holding down the Light key for 5 seconds. The display will show the current clock setting with the our flashing. Depending on factory settings your system may be set to 24 hour or 12 hour time. Setting the hour: Use the Up or Down key to adjust the hours. Press the Light key to jump to the next parameter, the minutes.

Setting the minutes: Use the Up or Down keys to adjust the minutes. Press the Light key to jump to the next parameter, the filter or purge start time (FS).

## Programming the filter/purge cycles

Depending on system configuration your spa will perform either a filter or a purge cycle. The filter cycle menu consists of the parameters: start time (FS), duration (Fd), frequency (FF). Purge cycle menu consists of: start time (FS), frequency (FF). A filter cycle consists of starting all pumps in high speed for 1 minute (purge step) then, pump associated with filter will run on low speed for remaining duration of filter cycle, clean step. A purge cycle is used when the spa is equipped with a 24 hr. circulation pump which provides a continuous clean step. It consists of starting all pumps on high speed for 1 minute.





#### Setting filter or purge cycle start time

The display will show FSxx, "xx" representing the starting hour of the cycle. Use the Up or Down key to adjust the hours. Use the Light key to jump to the next parameter, filter duration (Fd).



#### Setting filter cycle duration

(not available on purge systems)

The display will show Fdxx, "xx" representing the duration in hours of the filter cycle. Use the Up or Down key to adjust the duration. Use the Light key to jump to the next parameter, filter or purge frequency (FF)

0=no filtration  
24=continuous filtration (0 not recommended)



#### Setting filter or purge cycle frequency

The display will show FSxx, "xx" representing the number of cycles per day. Use the Up or Down key to adjust the frequency. Use the Light key to jump to the next parameter, economy mode (EP)

The "Filter Cycle" indicator lights when filter is on and flashes when suspended.



#### Setting economy mode

The mode allows you to lower the temperature set point of the spa by 20°F (11°C) during a certain period of the day.

The display will show EPx, the "x" representing the state of the programmed economy (0=disabled, 1=enabled). Use the arrow keys to enable or disable economy mode. Use the Light key to jump to the next parameter, economy start time (ES).



#### Setting economy start time

The display will show ESxx, "xx" representing the hour at which the economy mode becomes active. Use the Up or Down key to adjust the hour. Use the Light key to jump to the next parameter, economy duration (Ed).

When the Economy mode is ON, the display will toggle between the "Eco" message, the time, and the water temperature.



#### Setting economy duration

The display will show ESxx, "xx" representing the duration in hour of the economy mode. Use the Up or Down key to adjust the hour. Use the Light key to jump to the next parameter, temperature unit. 24=continuous economy



#### Setting filter or purge cycle start time

The display will show FSxx, "xx" representing the starting hour of the cycle. Use the Up or Down key to adjust the hours. Use the Light key to jump to the next parameter, filter duration (Fd).



#### Setting filter or purge cycle start time

The display will show FSxx, "xx" representing the starting hour of the cycle. Use the Up or Down key to adjust the hours. Use the Light key to jump to the next parameter, filter duration (Fd).

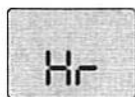
#### Cooldown

The display will show FSxx, "xx" representing the starting hour of the cycle. Use the Up or Down key to adjust the hours. Use the Light key to jump to the next parameter, filter duration (Fd).

#### Water Temperature Regulation

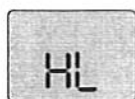
The display will show FSxx, "xx" representing the starting hour of the cycle. Use the Up or Down key to adjust the hours. Use the Light key to jump to the next parameter, filter duration (Fd).

## Troubleshooting Reference



#### Hr

An internal hardware error has been detected. Contact dealer or service provider.



#### HL

The system has shut down the heater because the temperature at the heater has reached 119°F (48°C). 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.



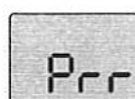
#### AOH

Temperature inside the spa cabinet is too high, causing the internal temperature in the power unit to increase above normal limits. Open cabinet sidewall and wait until error clears.



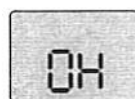
#### FLO

The system does not detect any water flow while the primary pump is operating. Check and open water valves. Check for water level. Clean filter. If the problem persists, call your service supplier.



#### Prr

A problem is detected with the temperature probe. Call your 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 service supplier.

## The Importance of Proper Water Chemistry

**Evaporation:** Only pure water evaporates leaving a higher concentration of salts, metals, minerals and unused chemicals in the remaining hot tub water. Over time, the water can become saturated with these impurities causing stand and scales to build up on the spa walls and equipment components. Discoloration and possible corrosion may occur on fittings, pillows and cover.

**Hot Tub Users:** Occupants introduce contaminants to the water. That level of contamination is dependent on the number of users, time used and frequency of use. Skin lotions and detergent residue in bathing suits may cause excessive foaming and cloudy water.

**Temperature:** Spa hot tubs are normally kept in the range of 87°F to 102°F. These warm temperatures increase evaporation, increasing the solidification of minerals, metals and scale formation. The heat level also increases the need for proper sanitation to inhibit bacteria growth.

**Surrounding Elements:** Most hot tubs are installed in the backyard where occupants introduce grass, leaves, insects, dust, etc. from the environment. Both indoor and outdoor installations are exposed to pollen, dust, etc. in the surrounding air.

Adhere to the routine maintenance suggested in this manual for proper water chemistry and maximum enjoyment of your new hot tub.

## Basic Understanding of Water Care

**Filtration:** Cartridge filters in the pressure-side PowerFlo system remove dust, debris, algae that are continuously entering the spa. The frequency of filtration is programmed at the spa side control and dependent upon your individual use patterns. The cartridge is recommended to be changed at least once a month and cleaned per the instructions under maintenance. A spare cartridge is recommended to avoid shut-down during the cleaning process.

**Shocking the Water:** This is the term used when super chlorinating the water by adding extra chlorine raising the chlorine level above 8 ppm (part per million) or by adding a non-chlorine (oxidizer) to eliminate chloramines or bromamines. The non-chlorine additive releases oxygen into the water acting as a chlorinator. Do not enter the water until the chlorine level is below 5 ppm. The non-chlorine additive will not treat bacteria.

**Total Alkalinity:** This is a measurement of the water's ability to maintain a proper pH level. Total alkalinity is measured in ppm from 0 - 400+ with the optimum reading 100-120 ppm. With low alkalinity, the pH level will flip easily. With a high alkalinity reading, it becomes difficult to regulate.

**pH levels:** This is a measurement of acidity (active hydrogen) in the water. pH is not measured in ppm but on a scale of 0-14 with 7.4—7.6 being the neutral desired level. Anything below 7 is considered acidic and will cause eye and skin irritation and corrode metals with excessive chlorine loss. Anything above the neutral range may cause cloudy water, eye and skin irritation and scale formation. This level should never be below 7.2 or above 7.6.

**Ozone Sanitation:** Ozone is a natural sanitizer, a byproduct of oxygen;  $O^3$ . It has been used successfully for many years as a purifier of drinking water. Ozone kills bacteria and has an "after rain" smell as it leaves the spa water. There is no test for ozone levels in the spa water. It is introduced into the spa water by an ozonator component located behind the cabinet wall. It is operating during the filtration cycle of the pump and is easily programmed at the spa side control. This is a virtually maintenance-free treatment for sanitizing the spa water keeping the water clear and odor free. It is necessary to adjust pH levels, alkalinity and shock as needed. The EverLite indicator located on the upper corner of your hot tub is lit when ozone is being introduced into the hot tub water.

**Chlorine / Bromine as Sanitizers:** Only sodium dichlor, granular, is approved for spa use. This is a fast dissolving, pH neutral chlorine. Chlorine immediately sanitizes and levels should be kept between 2-4 ppm. Bromine is a slow dissolve chemical which takes up to a few days to build a reserve and test levels. Bromine levels should also read between 2-4 ppm.

**Calcium Hardness:** Water that is considered too hard (over 250 ppm) may cause scale formation in electrical components and water too low (less than 150 ppm) may also have a negative effect on components.

**Foaming:** Body oils, lotions, cosmetics, cleaners, high pH levels, algaecides and detergents often cause foaming. Foam can also be a result of low calcium and sanitizer levels.

**PLEASE BE AWARE THE USE OF BAQUA SPA WILL CAUSE DAMAGE TO HOT TUB COMPONENTS AND VOID WARRANTY.**

## Water Care Initial Start-Up

Improper use of hot tub chemicals may be dangerous and could damage your hot tub spa and cover. Since this damage is not covered by the warranty, it is extremely important to take precautions when using these products. Only use chemicals and cleaning agents designed for hot tubs. Damage resulting from the use of non-recommended chemicals and/or cleaning agents is not covered under the warranty. Following the procedures in this guide will make the maintenance and care of your hot tub simple and reliable.

### Proper Handling of Chemicals

Keep all chemicals out of the reach of children.

Always keep lids on chemicals when not in use and store in a cool, dry location away from direct sunlight.

Do not store chemicals within the interior of the hot tub cabinet.

Do not interchange caps or measuring scoops for different types of chemicals.

Do not smoke around chemicals. Some may emit highly flammable fumes.

In case of contact or if a doctor is required, bring the chemical container to medical authorities for proper treatment.

Never use swimming pool chemicals in your hot tub. This may void the warranty.

Never mix chemicals or chemical solutions directly with each other.

Always add chemicals to water when mixing them. Never add water to chemicals.

### **Important:**

Before using chemicals, read the labels and follow directions carefully.

Always add the chemicals directly to the hot tub water, either in a suitable feeder, distributed over the water surface, or poured into the water, preferable with the pump on.

Never add chemicals to the water while persons are using it.

Leave the cover off and circulate the water for at least 15 minutes after adding chemicals to effectively distribute the chemicals and allow odors to escape.

### Initial Start-Up

1. Never use more than 50% softened water when filling the hot tub. It is suggested to use an in-line filter on the hose when filling to prevent many minerals from entering the water making balancing and adjusting the water easier.
2. Add a sequestering agent to treat suspended minerals in the water during this initial fill. Allow water to circulate and filter for at least half an hour before adding additional chemicals.
3. Test water for pH, total alkalinity and calcium hardness. Acceptable levels for pH are 7.4-7.6, for total alkalinity 100-120 ppm and calcium hardness between 150-250 ppm.
4. Adjust pH and total alkalinity per the instructions on the chemical bottle. Allow the chemicals to circulate and wait at least 24 hours to retest.
5. Adjust and retest as necessary.
6. Add concentrated chlorinating granules (sodium dichlor) until a level of 5-8 ppm is reached to effectively treat initial fill water. Add this chlorine by broadcasting over the water surface while the pumps are operating. Do not use the hot tub until that level drops to below 5 ppm. DO NOT add the chlorine granules until after the pH, alkalinity and calcium hardness levels are appropriately met.

Hot tubs may be treated with AquaFinesse. This is a proprietary system that sanitizes the water with a clean lavender scent, soft feel, and gentle on your skin. The water will require pH, alkalinity, and calcium hardness management and chlorine shock as needed. Contact the factory or your retailer for further info.



## Water Care Schedule

**Before Use:** Each time before the unit is used, check the water with a test strip for proper sanitation levels and adjust accordingly achieving the optimum 2-4 ppm level. The unit should not be used if the level is 5 ppm or higher.

**Every Other Day:** Using test strips, monitor the pH, alkalinity and sanitizer levels. The pH should read between 7.4-7.6, alkalinity between 100-120 ppm.

**Weekly:** Add non-chlorine shock as needed to maintain correct level dependent upon amount of users, frequency and length of use during that week.

**Monthly:** Change the cartridge filter. Soak overnight in a non-sudsing cleanser, preferably Filter Clean available at your retailer. Rinse well and replace. Be sure to turn off all circulation for removal and replacement. Review in Maintenance section.

**Every 6 Months:** Drain and refill your unit. Wipe down the acrylic surface, install a clean filter. Refer to the Maintenance section.

<u>Troubleshooting Reference</u>		
<u>Symptom</u>	<u>Probable Cause</u>	<u>Suggested Correction</u>
Cloudy Water	High total alkalinity levels, High pH levels, High calcium hardness. Algae growth, low sanitizer levels, high user load, pets, rain. Overuse of defoamer.	Test levels and make correcting adjustments.
Colored Water	Red-Brown; overall imbalance Blue-Green; high pH level.	Brown-Red; Test pH, alkalinity and calcium hardness. Drain and refill if necessary. Blue-Green; Test pH and make adjustments.
Foaming	Low calcium hardness. Build up of soaps, lotions, organic matter, etc.	Raise calcium hardness level. Use defoaming agent. Replace filter. Drain if necessary.
Skin/Eye Irritation	pH level imbalance. Low sanitizer level.	Test pH, alkalinity and sanitizer levels. Make adjustments. Shock if necessary.
Stains at Waterline, Pillows, etc.	Low alkalinity, pH levels.	Adjust pH and alkalinity. Drain, clean off stained areas, change filter and refill.
pH Fluctuation	Low alkalinity levels.	Test alkalinity level and make adjustments.
pH Resistance	High alkalinity levels.	Test alkalinity level and make adjustments.
Sanitizer Inefficiency	High pH and/or alkalinity level.	Test both levels and make adjustments.
Scale Formation	High pH, calcium hardness and/or alkalinity levels.	Test all levels and make adjustments. Drain and refill if necessary.
Algae Formation	Low sanitizer level.	Clean spa walls, add algaecide*, add shock.
Corrosion in Fittings and Components	Low pH and/or alkalinity levels. High chlorine level.	Test all levels and make adjustments. (This build-up may cause operation failure and void warranty.)

\* Avoid using any biguanide or copper based algaecide in the unit. Use of these products is not recommended and may void the warranty.

## **Regular Hot Tub Maintenance Procedures**

There is some basic maintenance that will need to be performed on your hot tub. By following these basic maintenance suggested procedures, you will insure that your spa provides years of service. These basic maintenance procedures are not covered under warranty.

### **Testing the G.F.C.I. (equivalent RCD for export installations)**

Ground Fault Circuit Interrupter (G.F.C.I.) protection for the hot tub should be tested prior to each use by the homeowner. With the hot tub in operation, push the “test” button on the G.F.C.I. breaker at the panel box. The spa should shut down immediately. Now reset the G.F.C.I. The hot tub should return to normal operation. If the G.F.C.I. fails to operate in this manner, there exists a possibility of electrical shock. Discontinue hot tub operation by turning off power and disconnecting the power source and notify a qualified electrician for identification and correction of the problem.

### **Cleaning Jets**

Most of the jets in your hot tub are able to be turned on or off. Over time they may become difficult to turn. When this happens it will be necessary to remove the jet and clean any grit or debris from the jet body. To remove the jet you will need to turn the face of it counter clockwise until it stops. Next continue to turn the jet counter clockwise as you pull on the face. The jet will then pull away from the jet body. Clean jet body with cloth to remove all debris.

To clean the jet barrels you can soak them overnight in white vinegar. Once the jet has soaked overnight rinse thoroughly with water. To reinsert the jet barrel into the jet body simply put the barrel back into the body and push while turning clockwise.

### **Cleaning Diverter Valves**

Due to mineral deposits, grit, and sand that may get into the internal parts of the diverter valve, it may become hard to turn or lock up completely. In the event this happens it will become necessary to remove the handle, cap, and puck to clean out the diverter valve. Follow the steps below to clean out the diverter valve.

1. Turn off power to spa.
2. Remove handle and loosen diverter valve cap. If that cap can not be removed by hand you may need to use a wrench. Before you place a wrench on the cap cover it first with a clean rag.
3. Pull the cap off of the diverter valve. The puck may or may not come out with the lid. You may need to pull the puck out of the body with a pair of pliers.
4. Wipe down the puck as well as the diverter body to remove all grit and debris. Soak in white vinegar if needed.
5. Place the puck back into the diverter body. Check the large o-ring to make sure it is seated correctly on top of the diverter housing.
6. Check the two stem o-rings to make sure they are both in the center of the lid before reinstalling and tightening the lid.
7. Reinstall the handle and turn the power back on.

### **Perma-Wood™ Cabinet Care**

Your hot tub cabinet is constructed from a wood alternative, polymer material designed to be durable, tough, and virtually maintenance-free. It may require periodic cleaning with a non-abrasive cleaner and/or rinsed with a hose.

### **Pillow Care**

Your hot tub pillows should periodically be rinsed to clear them of any chemical residue. If the unit is not intended to be used for a period of time, it is recommended to remove them for extended life.

### **Stainless Jet Finish Care**

The stainless trim on your jets can keep it's luster for many years with proper care. Frequent wiping with clean water and a good car cleaning wax at time of drain and refill will protect against possible rusting. Never clean with bleach, corrosive materials or abrasive material such as steel wool. Failure to properly care for stainless steel components could result in rust formation which is not covered under the warranty.

### **Thermal Cover Care**

Always use the locking thermal cover when not in use to reduce heat-up time, operating costs and keep unwanted out. To prolong the life of the cover, handle it with care and clean it regularly using mild soap and water. Periodic treatments with a vinyl conditioner will help protect against deterioration caused by UV rays from the sun. Never allow anyone to stand or sit on the cover, and avoid dragging it across rough surfaces. Be sure to lock all straps when not in use for safety and to prevent wind damage. Keep cover open at least 15 minutes after adding chemicals.

### **EverPure™ Ozone Care**

The ozone hose and check valve connection between the ozone generator and ozone injector should be inspected or replaced, if necessary, annually. The air quality pulled into the generator may cause rapid wear on the hose and check valve. The EverLite™ will light green when the ozone generator is operating (during the filtration cycle) indicating the EverPure™ system is indeed sanitizing the water.

### **Plumbing Care**

Hot tubs are plumbed with plastic jets, pipes and fittings which are glued together. These plastic parts and their many glue joints are subjected to harsh treatment with years of operation, subjected to many hot-cold cycles and the high pressure generated by the powerful jet pump stressing pipes and joints. Although the factory has a rigorous testing procedure, even transportation from the factory to you can cause vibration and possible loosening of the joints.

Should a leak occur, remove that appropriate section of cabinet wall exposing the leaking area. Drain the hot tub to below the leak and contact a qualified technician for repair.

### **Filter Cartridge Care**

Hot tub water filtration begins as soon as the flow is steady through the pump. As the filter cartridge removes dirt from the water, the accumulated debris will cause a resistance to flow. When this is noticed, along with cloudy water, clean or replace the filter element as noted below. This generally occurs monthly depending upon use and water care.

#### **PowerFlo™ System: (Luxury and Premium Series)**

1. Shut off power at the main or sub panel.
2. Open the small, black bleeder valve on top of the filter cover slightly to release pressure. (Be sure to re-close the valve snugly before reactivating the spa. Do not overtighten, there is a risk of cracking.)
3. Remove the black lock ring. Lift the dome lid and remove the filter element. Clean any debris from the filter housing. Soak the filter element in a non-sudsing filter cleansing solution.
4. Rinse the filter element with a garden hose or pressure hose, and replace in the filter housing. (It is recommended to have an extra filter cartridge on hand so that a clean element will always be available while the soiled element is being cleaned. This will minimize downtime of the spa during the cleaning procedure.) When replacing the element into the housing, be sure that the o-ring is in place and clear to assure a snug fit of the filter dome lid to prevent leakage. Hand tighten the lock ring until snug and locking tab engages. Do not overtighten, there is a risk of cracking. Re-check bleeder valve to be sure it is closed.

#### **Pristine™ System: (Lifestyle Series)**

1. Shut off power at the main or sub panel.
2. Remove the filter housing top by using the raised portions of the filter top and turning it counter clockwise. After top stops turning, lift up to remove top from filter.
3. Lift the skimmer basket out of the filter canister.
4. Remove the filter from the canister.
5. Replace with clean filter ( Review above for cleaning recommendations.)
6. Place skimmer basket back in filter canister.
7. Place filter top onto filter canister and turn clockwise until top stops.

### **Hot Tub Acrylic Surface Care**

To preserve the sheen of the acrylic surface, clean and sanitize with clean water to remove any particles and use rubbing alcohol or a non-abrasive, non-sudsing cleaner to wipe clean. Use a soft, lint free cloth and never use an aggressive solvent such as a lacquer thinner or acetone which will cause damage to the acrylic.

### **Periodic Water Draining and Refilling**

After a certain time, you may find the addition of chemicals will not clarify or eliminate odors in the spa. This is an indication the water needs to be drained and replaced. Generally, depending upon bather load and water chemistry maintenance, this may need done every 3 months. With the use of ozone, this may need done less frequently.

1. Reduce set temperature to 59°F (15°C).
2. Turn off all power.
3. Connect a garden hose to the recessed drain valve found on the side of your hot tub cabinet, by slowly pulling the cap out all the way (approximately 2") and turn cap counterclockwise to remove. Attach the hose and push valve 1", this will start the draining process. After draining the spa, replace the cap and push the valve all the way in. (See photo.) Note: Unscrew the large nut around the drain valve to remove the cabinet panel from the spa for servicing, if necessary.
4. Clean cartridge filter as noted previously in this section regarding maintenance recommendations.
5. Clean acrylic shell surface with non-sudsing cleanser per maintenance recommendations.
6. Begin filling the hot tub. We recommend filling the hot tub to approx. the pillow bottom. During the filling process periodically check the unions to ensure they are tight and no water is leaking out.
7. Once the hot tub is filled, turn the circuit breaker on. The spa will turn on and start the circulation pump.
8. It may be necessary to bleed air from the pump or pumps on your hot tub, if after start up your spa pumps do not operate. Due to the nature of water flow and hydrotherapy pumps, please be advised that air locking of pumps may occur. PDC Spas has taken measures to reduce the possibility of this, but it still may occur, especially after refilling a hot tub. This is not a service covered under warranty. To relieve an airlock situation, loosen the pump union on the discharge side of the pump. You may possibly hear air come out when union is loosened, after a few seconds tighten the union. Turn the pump on to see if proper jet flow has been achieved. If proper jet flow has not been achieved repeat process.
9. Open air regulators allowing maximum flow through jets assuring pump operation.
10. Refer to Control section for heating, filtration cycles and function.
11. Adjust water chemistry according to the instructions provided in water chemistry guidelines section.
12. View current water temp on the control panel and set to desired level. Water will heat approximately 1– 2 degrees an hour. Times may vary.
13. Close cover to expedite heating and assure safety. Always keep the cover locked when not in use. Keep the keys in a safe place, out of the reach of children.



### **Winterizing the Hot Tub**

Your hot tub has been designed to be used year-round and it is certainly suggested that you enjoy the many benefits of enjoying your purchase in any season. If you should decide to not use your hot tub during the winter months, it must be cared for properly to avoid damage. During those months of shut-down, we recommend the unit being checked periodically to assure no water is entering the unit causing potential freezing resulting in damage. Your warranty does not cover this type of damage, both structural and operational.

1. Turn off at circuit breaker, open air controls and jets, drain completely using drain valve and sump pump if needed.
2. Remove filter cartridges and all cabinet panels to access equipment.
3. Loosen pump unions and winterizing plug from face of pump. Replace plugs after all water has been cleared from the unit.
4. Use a shop vac in blowing mode to remove all water from return and suction lines.
5. To remove water from the air channel; the LX Series spas equipped with the Air'assage design, turn power back on. Turn "Bubbler" on for several minutes to spray out water.
6. Use the wet vacuum to pull all water from jets. You may choose to use a non-toxic RV type anti-freeze to assure freeze prevention and remove ALL prior to next use.
7. Replace all cabinet panels.
8. Cover the unit with hot tub thermal cover, lock in place.

### **Storing the Hot Tub**

The hot tub shell is to never be unprotected and uninsulated during storage. Never use a clear plastic wrap or it's like to cover it. Never leave unprotected in direct sunlight as it can damage the acrylic and fittings, not covered under warranty. Always use the thermal cover. Do not allow, even if winterized, the unit in cold temperatures 0°F or below. If it will be exposed to these temperatures, keep the unit filled and set to the lowest operating temperature setting.

A good general rule is to visually inspect your spa and equipment area frequently. If anything looks broken, worn, or incorrect, contact your electrician or spa retailer. A simple repair may prevent an injury or more serious problems requiring expensive repairs. If your spa is not operating, check the following:

**1. Nothing on the hot tub operates**

- Check power source G.F.C.I. breaker. (or equivalent)
- Check to assure spa has dedicated circuit.
- Check the “test” and “reset” buttons on G.F.C.I. (or equivalent)
- Check internal fuses.
- Review control panel for any error code. Refer to that section of this manual.

**2. Pump does not work**

- Check all items above.
- Check filter; clean or replace cartridge.
- Check for blockages (restrictions) at suctions, skimmer and pump.
- Push “pump” button(s) to check if high speed is functioning, on a dual-speed pump.

**3. Inadequate jet action**

- Make sure jets are turned on.
- Make sure air controls are open.
- Check for restrictions (blockages) in jets and/or main skimmer and pump.
- Check water level.
- Push “pump” button(s) to check if high speed is functioning on a dual-speed pump.
- Check to be sure the diverter valve is in center position.
- Check for dirty filters and change if necessary.

**4. No heat**

- Check all steps under part “1”.
- Check temperature settings.
- Check for clogged filter element and other restrictions.
- Check water level.
- Check if pump is running.

**5. No light**

- Check “light” button.
- Check G.F.C.I. (or equivalent) “test” and “reset” buttons.

**6. Water is cloudy**

- Increase circulation cycle.
- Test water chemistry.
- Clean/replace filter cartridge.

**7. GFCI or equivalent is tripping**

- A ground fault circuit interrupter (GFCI) is required by the National Electric Code for your protection. The tripping of the GFCI may be caused by a component on the spa or by an electrical problem. Electrical problems include although are not limited to, a faulty GFCI breaker, spa component, power fluctuations, or improper wiring. If this new electrical service and GFCI installation, an instantly tripping GFCI may likely be caused by improper wiring of the neutral from the GFCI to the spa. Contact a qualified technician to rectify the problem.

**If above checks do not solve the problem, contact a qualified service technician.**



	Date	Date	Date	Date	Date	Date	Date
Test GFCI							
Test GFCI							
Test GFCI							
Test GFCI							
Change All Suction Fittings (every 7 years)							
Clean and Drain Spa							
Change / Clean Filter							
Clean / Condition Cover							
Miscellaneous							
Miscellaneous							



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The manufacturer reserves the right to change product as deemed necessary without notification. As a manufacturer we stand behind our products in accordance to our written limited warranty. Your retailer is an independent business operator not employed by the manufacturer. PDC Spas, Plastic Development Co, Inc., cannot accept responsibility for any representations, statements, or contracts made by any retailer beyond the parameters of our warranty.