



*Artesian*<sup>®</sup>  
SPAS  
*Experience the Ultimate*

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# Congratulations...

Congratulations on the purchase of your new Island spa by Artesian. We know you will enjoy your spa. Although spas are relaxing and fun, we believe they can be an indispensable part of a healthy lifestyle. The spa lifestyle is one that encourages health and well-being. You may experience any of a number of physical benefits, including decreased muscular aches and stress. As stress plays a role in many chronic illnesses, you may see some of your most familiar physical maladies disappear.

You have joined a long line of people who appreciate the relaxation and the therapeutic benefits offered by a spa. The word spa is derived from the Latin for “salus per aquam”, which means health from water. One of the first uses of a spa was via hot mineral springs discovered by conquering Roman soldiers. As they immersed their weary bodies in the springs, they found many of their aches and pains fade away. This knowledge was quickly translated to more convenient and more widespread use of spas in the form of the legendary Roman baths. These baths, which sometimes sprawled for several city blocks, were centers for physical wellness, hygiene, and socializing, much like today’s spa! Hot mineral springs reached widespread popularity again in 17th century Europe, and they were considered to be helpful in skin, joint, intestinal, and nervous maladies. Spas became the hottest destinations for any travelers who could afford them! Today, with the possibility of a personal spa, your most desirable destination need be no further than your own back yard.

Owning a spa brings some responsibility. With proper care, your spa will provide years of enjoyment and therapy for your family and friends. Please take time to read and understand all of the instructions provided before you install your Artesian spa. This owner’s manual is meant to be a supplement to the training you should receive from your dealer when you purchase and start up your spa for the first time.

Please remember your spa is a powerful piece of electrical equipment. It is extremely important that you have it properly installed to ensure safe use. This manual explains safety precautions, installation instructions, and operating and maintenance procedures. If you have any questions regarding this manual, please call your competent Artesian spa dealer, who will be happy to further assist you.

Enjoy your spa, and as the water soothes, cleanses, and relaxes you, remember that you are taking a step towards full-body wellness. Interested in learning more about wellness? Your Artesian dealer can familiarize you with the concepts of the spa’s cleansing properties, as well as aromatherapy products that can enhance your spa and after-spa ritual.

**Before you do anything else, make sure you visit our website at [www.artesianspas.com](http://www.artesianspas.com) and register your new Artesian spa.**

For your future reference and convenience, please record the Serial and Model number along with the installation date in the spaces provided below. STORE THIS MANUAL WHERE YOU CAN EASILY FIND IT WHEN NEEDED. The serial and model numbers are mounted on the base of the equipment enclosure area, as shown below.

Spa Serial Number \_\_\_\_\_

Spa Model Number \_\_\_\_\_

Spa Installation Date \_\_\_\_\_

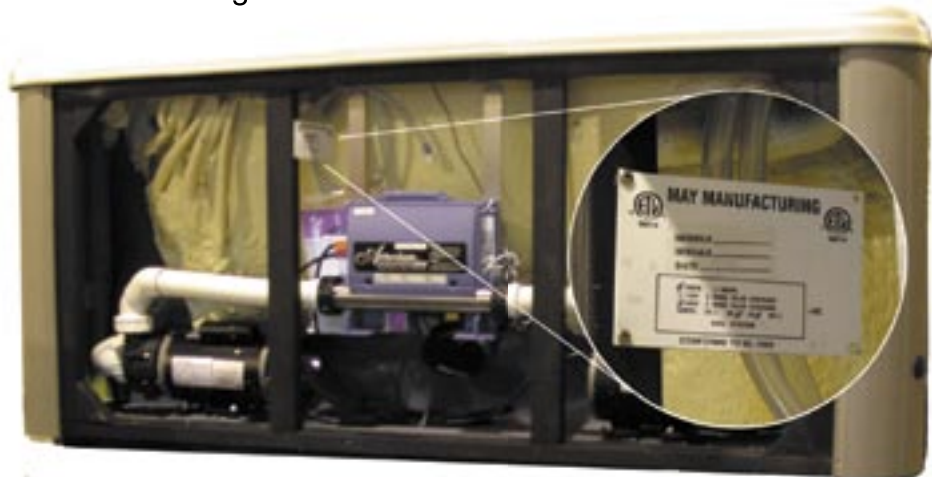
Dealer Name, Address, and Telephone Number

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Diagram of Where to Find Serial Number



## SAFETY WARNINGS

### PLEASE TAKE THE TIME TO READ ALL OF THESE WARNINGS AND CAUTIONS PRIOR TO USING YOUR SPA.

PLEASE, be a responsible spa owner. When installing and using this spa, always adhere to basic safety precautions. Be sure to list emergency telephone numbers at the telephone nearest the spa, including physician, hospital, ambulance, police, and the fire department. Be certain to explain safety precautions to all new or occasional users of your spa. Remember, they may not be aware of the possible risks associated with the spa water temperature.

Have at least one family member learn CPR (cardiopulmonary resuscitation). IT COULD SAVE A LIFE!

**WARNING:** People having a medical history of heart disease, high blood pressure, diabetes, obesity, or any other chronic disease should consult a physician prior to using a spa or hot tub.

**WARNING:** People using medication should consult a physician prior to using a spa, as some medications increase drowsiness and/or mix dangerously with spa use to affect the heart or blood pressure.

**WARNING:** People with infectious disease should not use a spa or hot tub.

**WARNING:** Women who are pregnant or possibly pregnant should consult a physician prior to using a spa or hot tub due to the potential for serious fetal damage.

**WARNING:** Do not use your spa alone. Long exposure may induce HYPERTHERMIA (elevated body temperature). Hyperthermia occurs when the internal temperature of the body reaches several degrees above normal (98.6 degrees F). Symptoms include dizziness, fainting, drowsiness, and lethargy. The effects of hyperthermia include:

- 1) Unawareness of impending hazard
- 2) Failure to perceive heat
- 3) Failure to recognize the need to exit the spa
- 4) Physical inability to exit the spa
- 5) Fetal damage in pregnant women
- 6) Unconsciousness, resulting in danger of drowning

## **SAFETY WARNINGS cont...**

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**WARNING:** Do not use drugs or alcohol before or during the use of a spa or hot tub to avoid unconsciousness and possible drowning.

**WARNING:** Drugs, alcohol, and some medications greatly increase the risk of fatal hyperthermia.

**WARNING:** Before entering the spa or hot tub, measure the water temperature with an accurate thermometer. Water temperatures above 100 degrees F (38 celsius) may be injurious to the health of some. Recommended water temperature for the average, healthy adult is between 100-104 degrees F. Decrease the temperature for children or if immersion for more than 10 minutes is anticipated. For exercise, keep the temperature less than 90 F (32 C). See section on "Adjusting spa temperature."

**WARNING:** The water in your spa must never exceed 104 degrees F (40 C). There is a risk of scalding.

**WARNING:** Do not use the spa or hot tub immediately following strenuous exercise.

**WARNING:** Prolonged immersion in a spa or hot tub may be injurious to your health.

**WARNING:** To avoid injury, exercise care when entering or exiting the spa or hot tub.

**WARNING:** NEVER allow unsupervised children around the spa. There is a risk of accidental drowning. Use straps and clip tie downs to secure the spa cover when not in use to prevent child access. However, even a secure cover must not replace proper adult supervision.

**WARNING:** There is a risk of hair or body entrapment. The suction fittings in this spa are sized to match the specific water flow created by the pumps. Should the need arise to replace the suction fittings of the pump, be sure that flow rates are compatible. NEVER use a suction fitting rated less than the flow rate of the original suction fitting.

**WARNING:** NEVER operate your spa if the suction fittings are broken or missing.

**WARNING:** Do not permit any electrical appliance, such as a light, telephone, radio, or television, (except those items that are supplied within this spa or hot tub) within 5 feet (1.5 meters) of a spa. Your spa must be wired by a licensed electrician. Improper wiring can cause injury and/or death by electrical shock. Improper wiring voids your warranty.

**WARNING:** This spa generates radio frequency energy and may interfere with radios or television reception if not installed correctly. If interference occurs, change the antenna, increase space between spa and appliance, or consult your Artesian dealer or a qualified radio/television technician.

**WARNING:** Do not remove the front panel of this spa or hot tub (unless instructed by your dealer). There is a danger of electrocution.

**WARNING:** Maintain water chemistry in accordance with the chemical manufacturer's instruction.

**WARNING:** Always keep your spa covered when not in use. Damage due to exposure is NOT covered under warranty. Keep spa full of water when in direct sunlight to decrease the risk of ultraviolet damage.

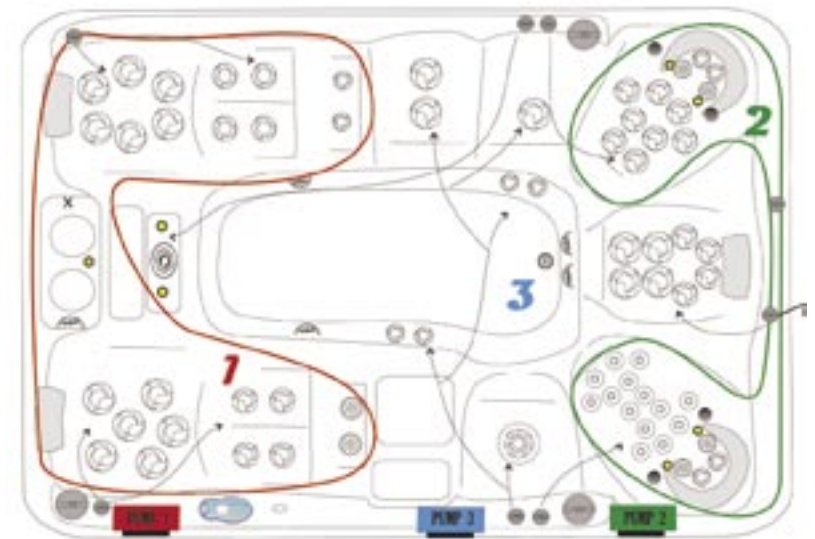
**KEEP THESE SAFETY INSTRUCTIONS IN A CONVENIENT AND READILY ACCESSIBLE LOCATION!!**

## LINE DRAWING KEY

Name of Component	Symbol for Component
Poly Roto-Wave (LG)	
Poly Roto-Wave	
Poly Directional-Wave	
Non-Adjustable Whirlpool / Adjustable Whirlpool	
Non-Adjustable Euro	
Mini Storm Directional-Wave	
Master Massage	
Mini Multi-Massage-Wave	
Ozone / Drain Jet	
Storm Direct Gray	
LED	
Air Control	
Diverter Controls	
Filter Well and Filters	
Speakers	

Line Drawings may not be exact models of your particular spa. There might be options shown not on your spa.

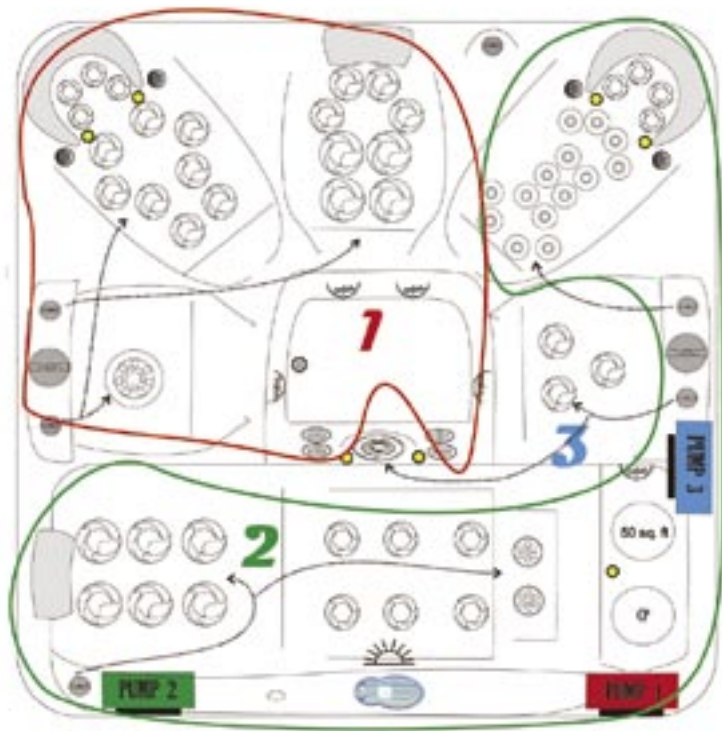
## SPA CONFIGURATION AND WATER CAPACITIES



### BIMINI 72 jet

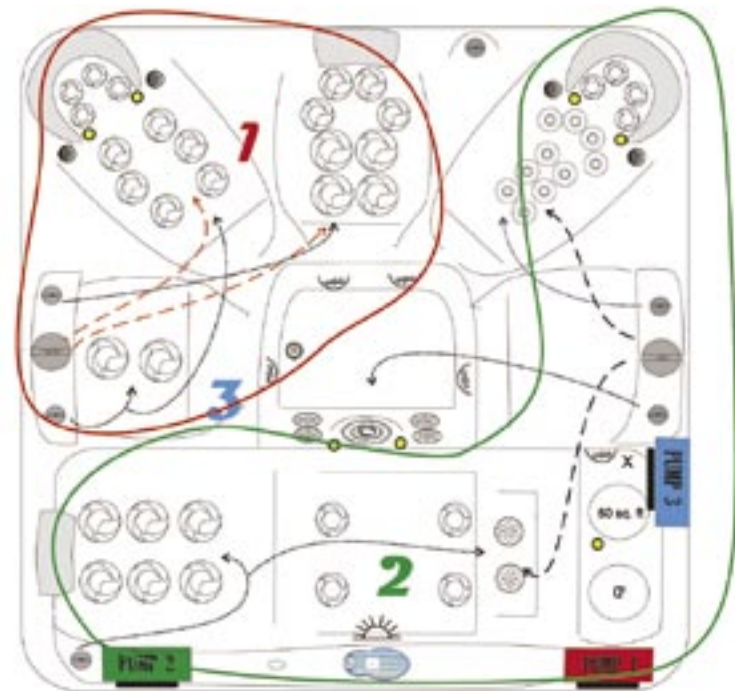
Volume	580 Gallons
Weight	dry / 1100 lbs filled / 6000 lbs
Dimensions	91"x132"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Pump 3	4.8 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

## SPA CONFIGURATION AND WATER CAPACITIES



### GRAND BAHAMA 62 jet

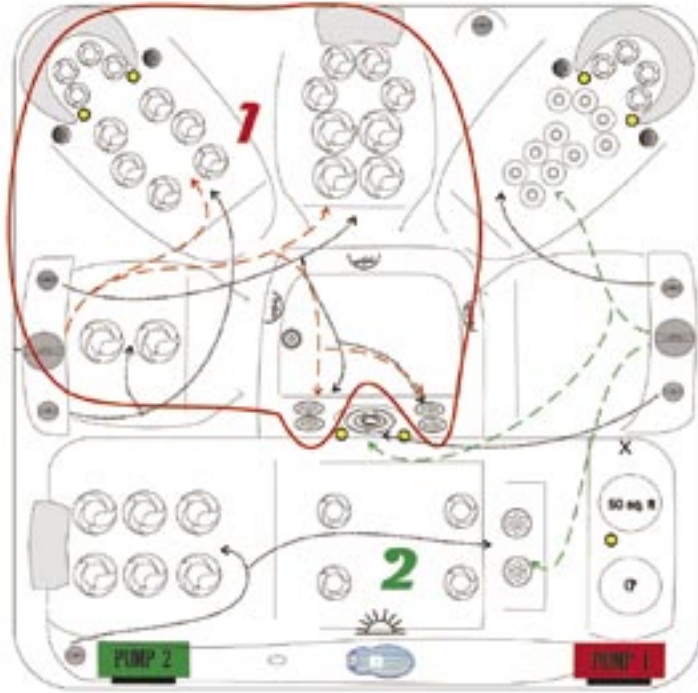
Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Pump 3	3.0 HP 1SPD 230V Power WOW
Heater	5.5 KW Flo Thru
Filter	Disposable Micro-Filter / 50 sq. ft.



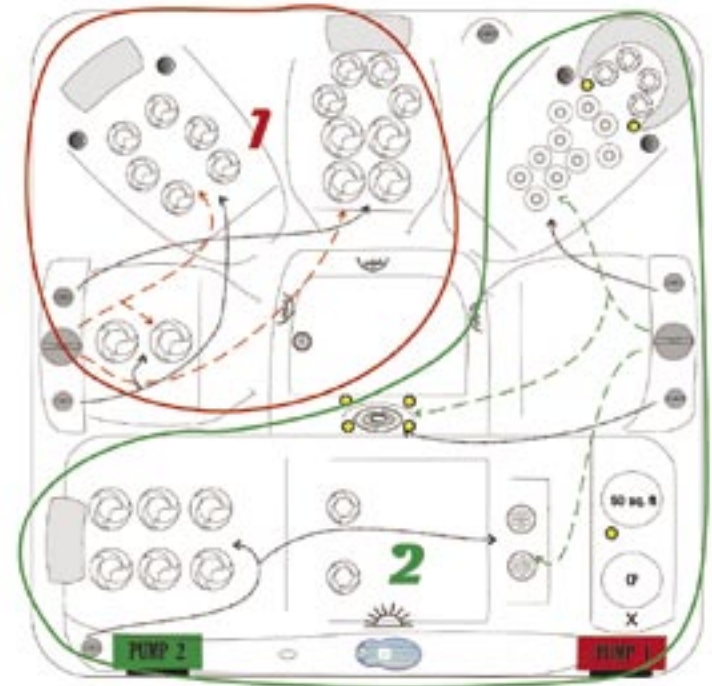
### GRAND BAHAMA 52 jet 3 pump

Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Pump 3	3.0 HP 1SPD 230V Power WOW
Heater	5.5 KW Flo Thru
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



## GRAND BAHAMA 52 jet



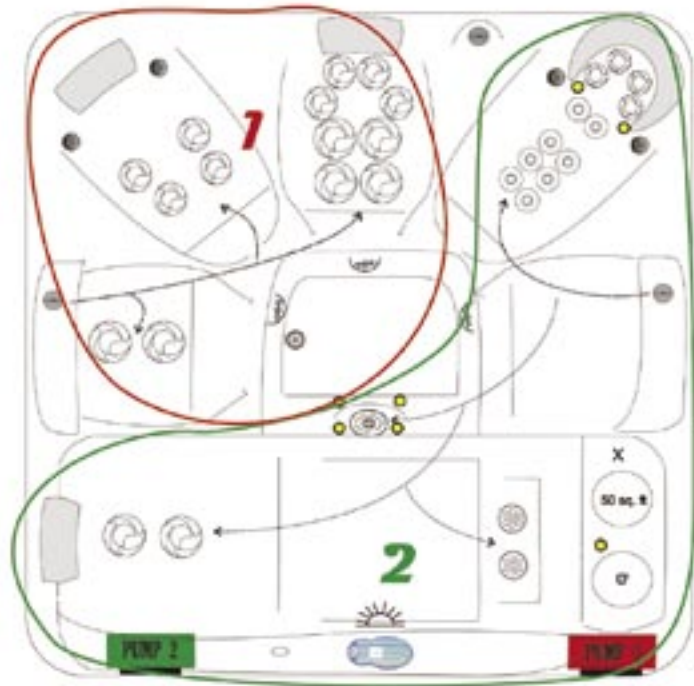
## GRAND BAHAMA 42 jet

Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Heater	5.5 KW Flo Thru
Filter	Disposable Micro-Filter / 50 sq.ft

Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	4.8 HP 2 SPD 230V 56F
Pump 2	4.8 HP 1 SPD 230V 56F
Heater	5.5 KW Flo Thru
Filter	Disposable Micro-Filter / 50 sq. ft.

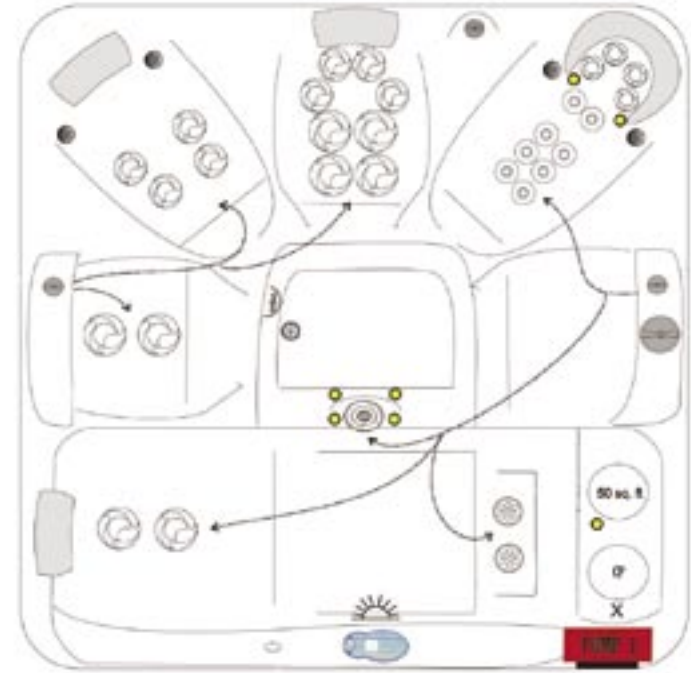


## SPA CONFIGURATION AND WATER CAPACITIES



### GRAND BAHAMA 32 jet 2 pump

Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	3.0 HP 1SPD 230V Power WOW
Pump 2	3.0 HP 1SPD 230V Power WOW
Circulation	24 hr. circ system
Heater	4.1 KW Laing
Filter	Disposable Micro-Filter / 50 sq. ft.



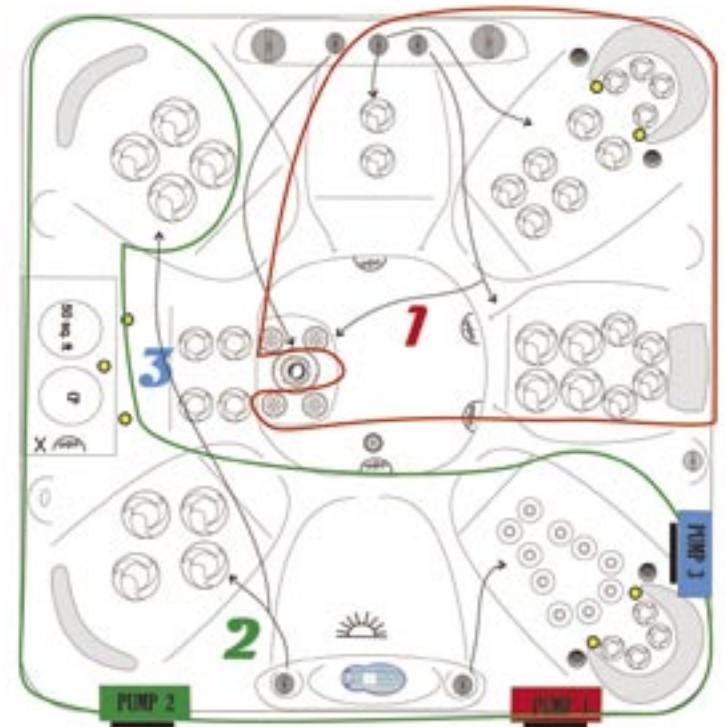
### GRAND BAHAMA 32 jet

Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2SPD 230V 56F
Heater	5.5 KW Flo Thru
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



## GRAND CAYMAN 62 jet

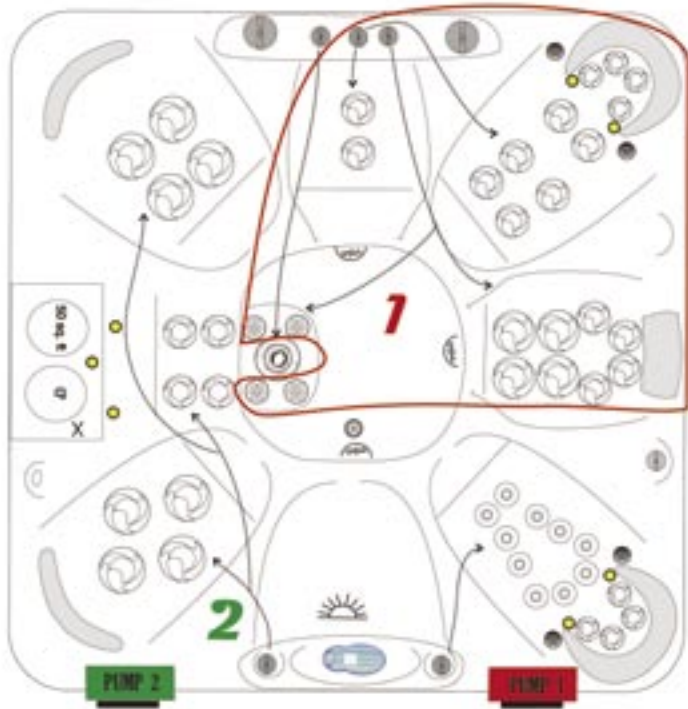


## GRAND CAYMAN 52 jet 3 pump

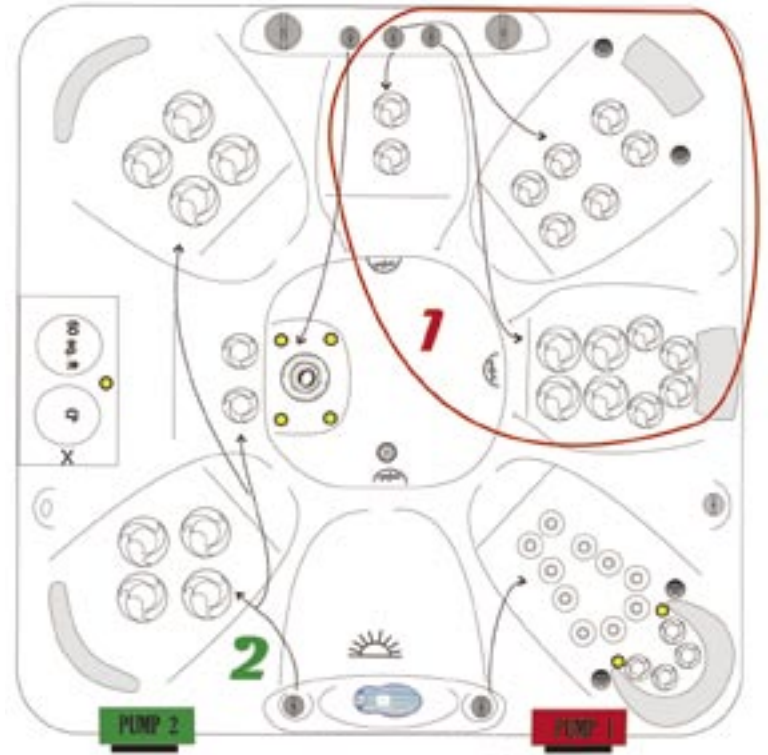
Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Pump 3	3.0 HP 1SPD 230V Power WOW
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Pump 3	3.0 HP 1SPD 230V Power WOW
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



**GRAND CAYMAN 52 jet**

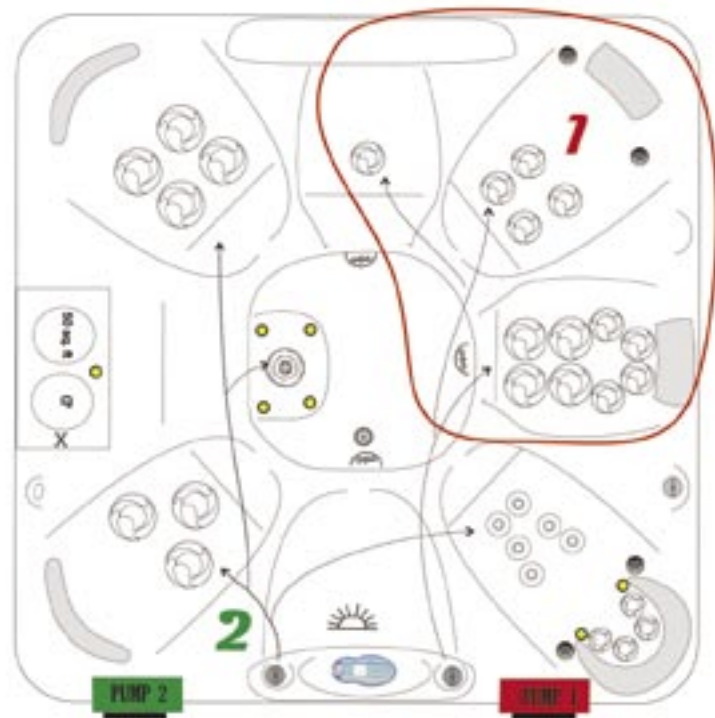


**GRAND CAYMAN 42 jet**

Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

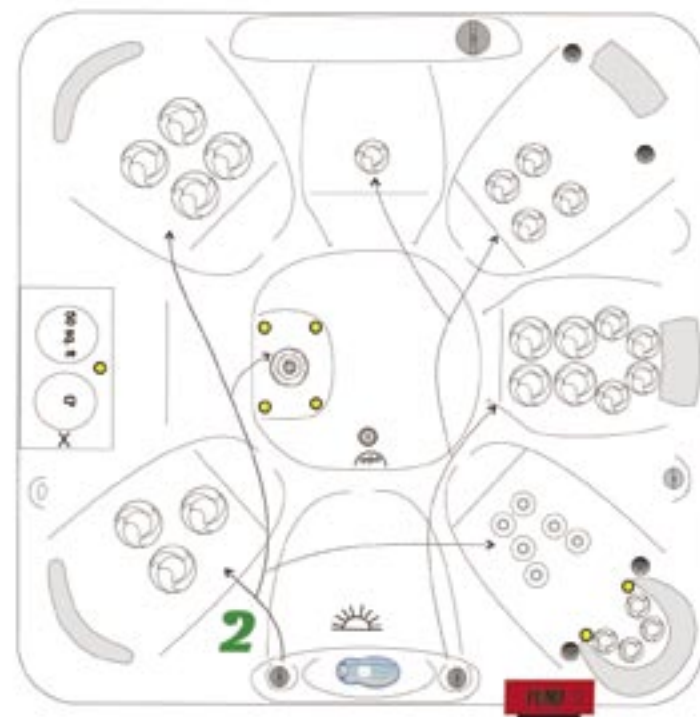
Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	4.8 HP 2 SPD 230V 56F
Pump 2	4.8 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



## GRAND CAYMAN 32 jet 2 pump

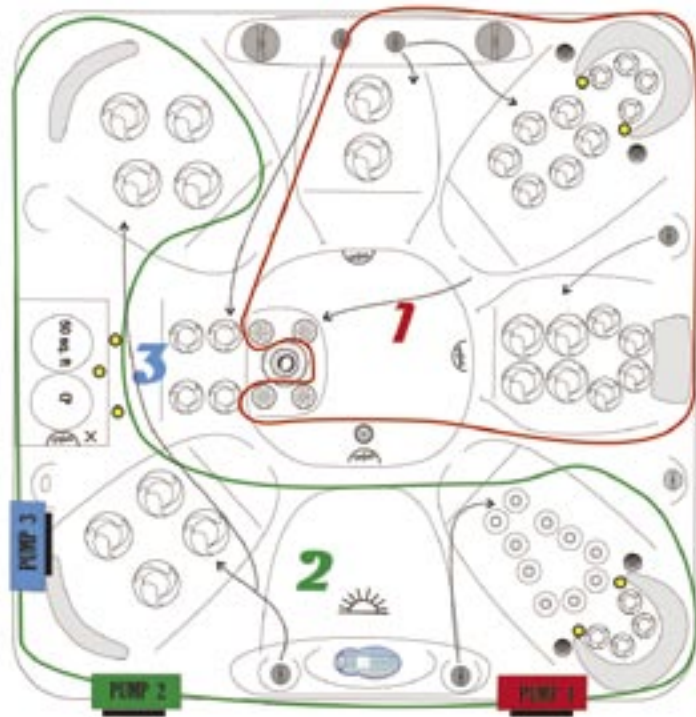
Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	3.0 HP 1 SPD 230V 56F
Pump 2	3.0 HP 1 SPD 230V 56F
Circulation	24 hr. circ system
Heater	4.1 KW Laing
Filter	Disposable Micro-Filter / 50 sq. ft.



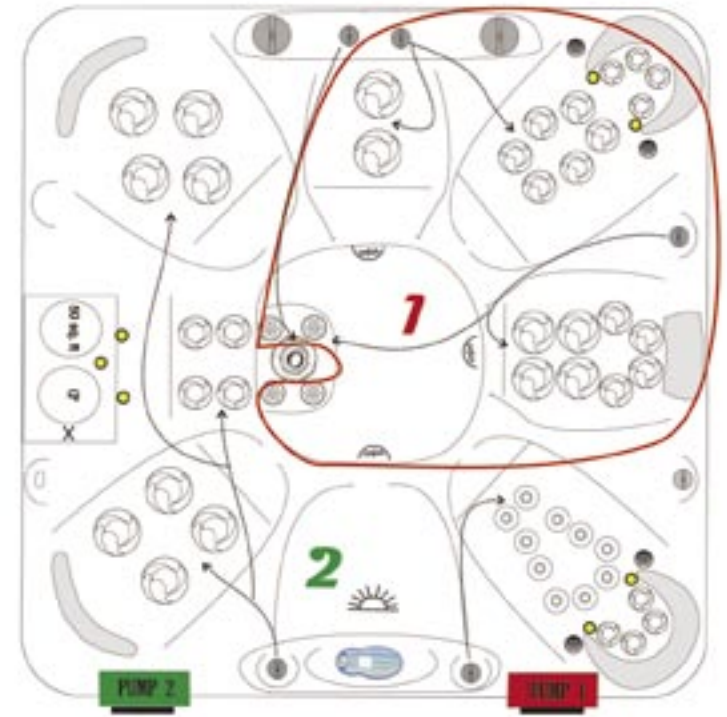
## GRAND CAYMAN 32 jet

Volume	330 Gallons
Weight	dry / 783 lbs filled / 4121 lbs
Dimensions	91"x91"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



**CAPTIVA 52 jet 3 pump**

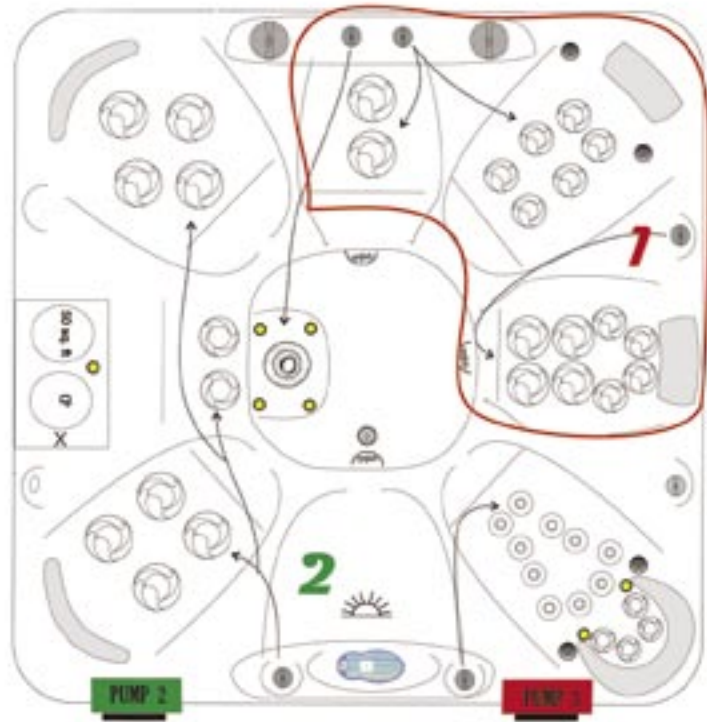


**CAPTIVA 52 jet**

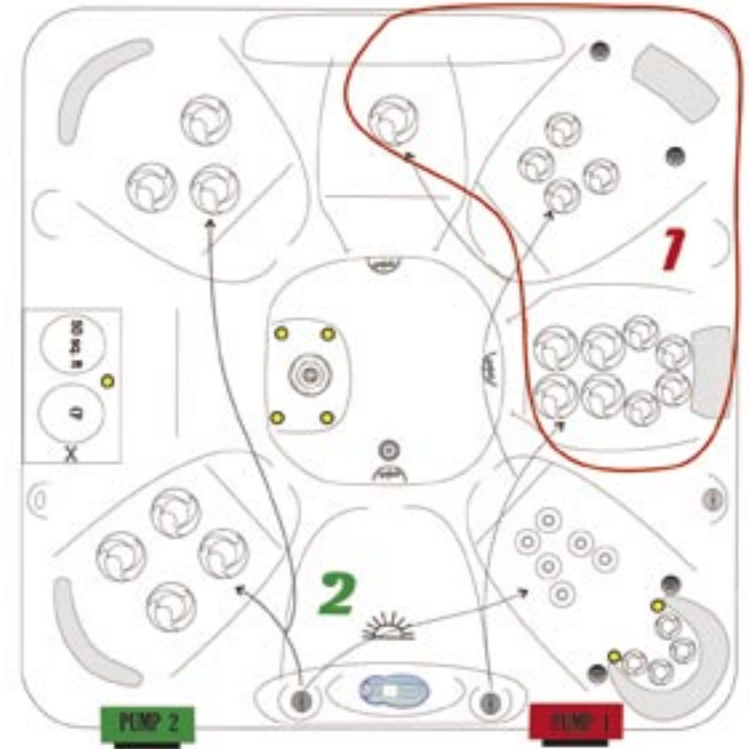
Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Pump 3	3.0 HP 1SPD 230V Power WOW
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



**CAPTIVA 42 jet**

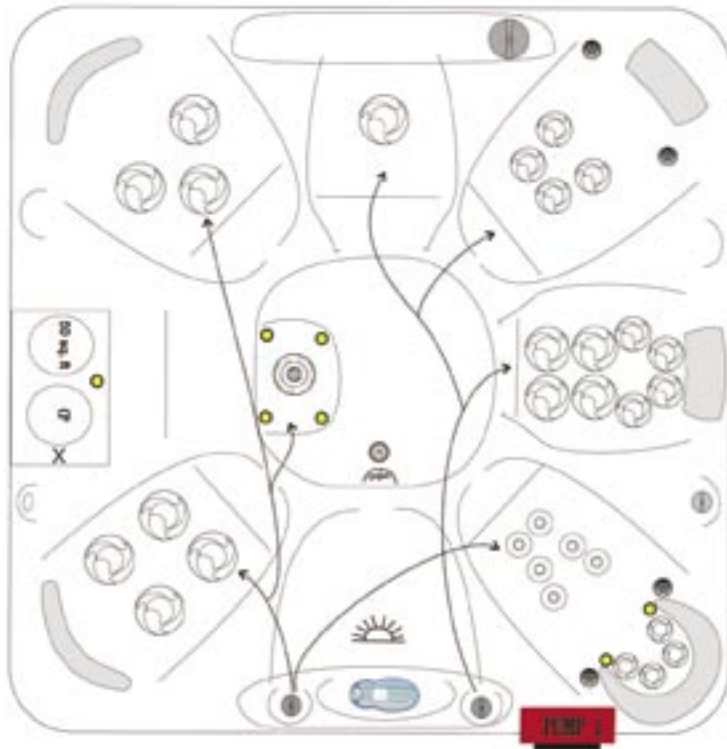


**CAPTIVA 32 jet 2 pump**

Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	4.8 HP 2 SPD 230V 56F
Pump 2	4.8 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	3.0 HP 1SPD 230V Power WOW
Pump 2	3.0 HP 1SPD 230V Power WOW
Circulation	24 hr. circ system
Heater	4.1 KW Laing
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



## CAPTIVA 32 jet

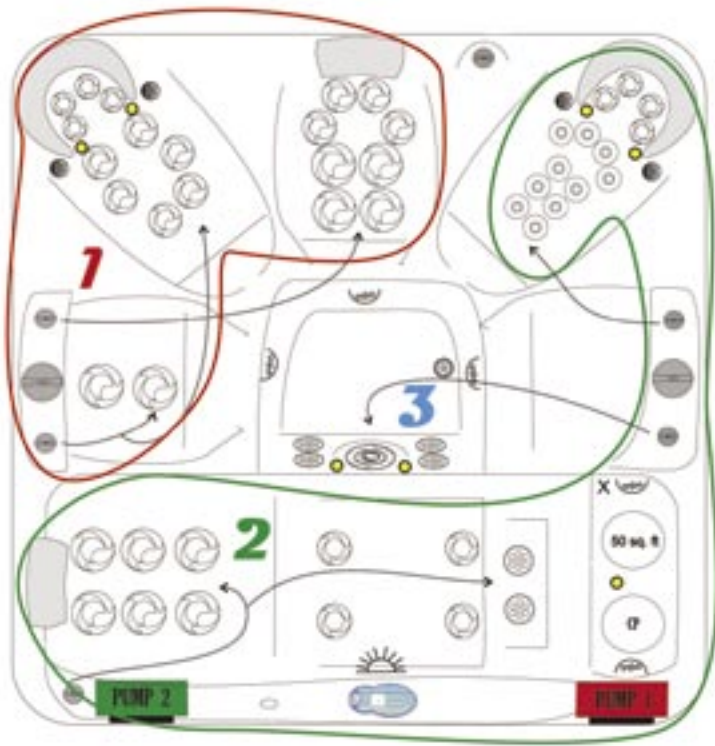


## CAPTIVA 22 jet

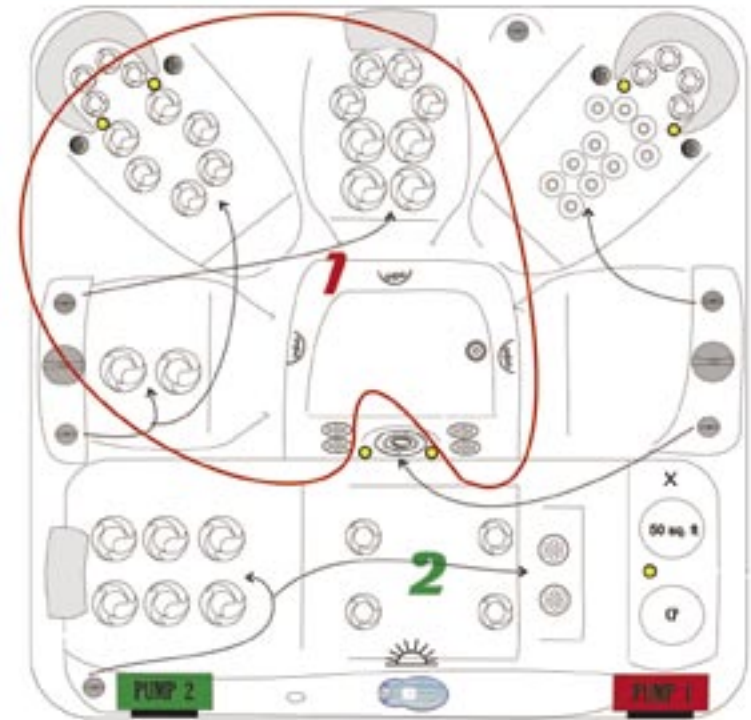
Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2SPD 230V 56F
Heater	5.5 KW FLO THRU
Cartridge Filter	Disposable Micro-Filter

Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	4.8 HP 2SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



**ANTIGUA 52 jet 3 pump**



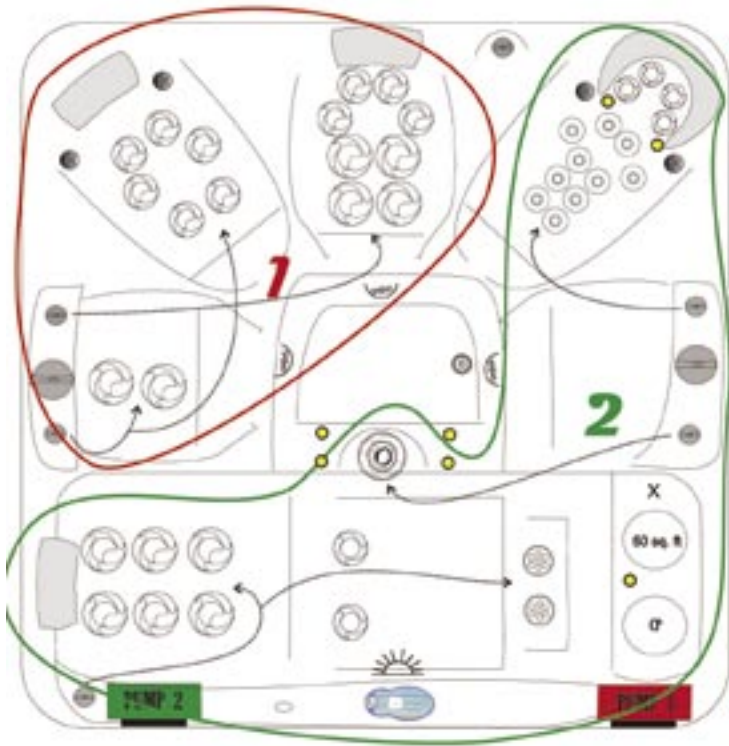
**ANTIGUA 52 jet**

Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Pump 3	3.0 HP 1SPD 230V Power WOW
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

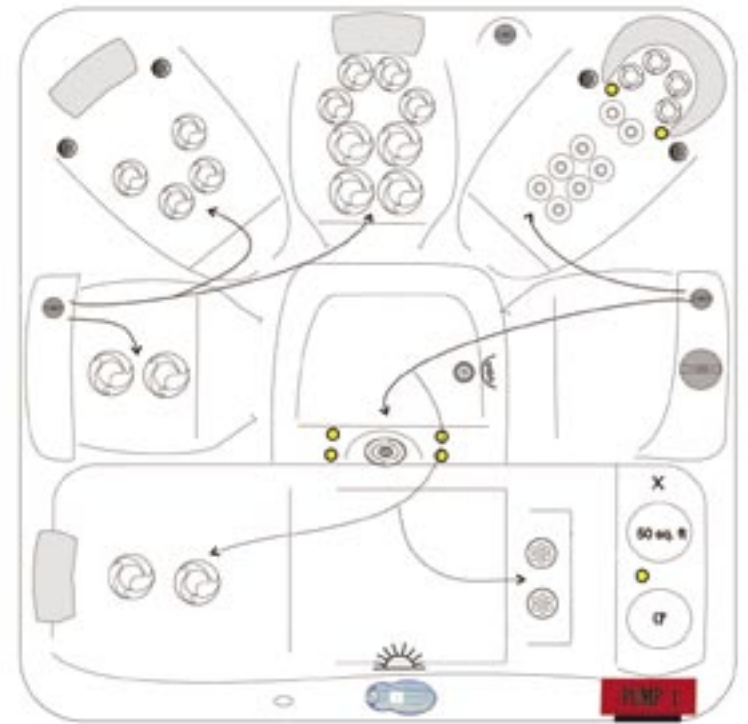
Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.



# SPA CONFIGURATION AND WATER CAPACITIES



**ANTIGUA 42 jet**

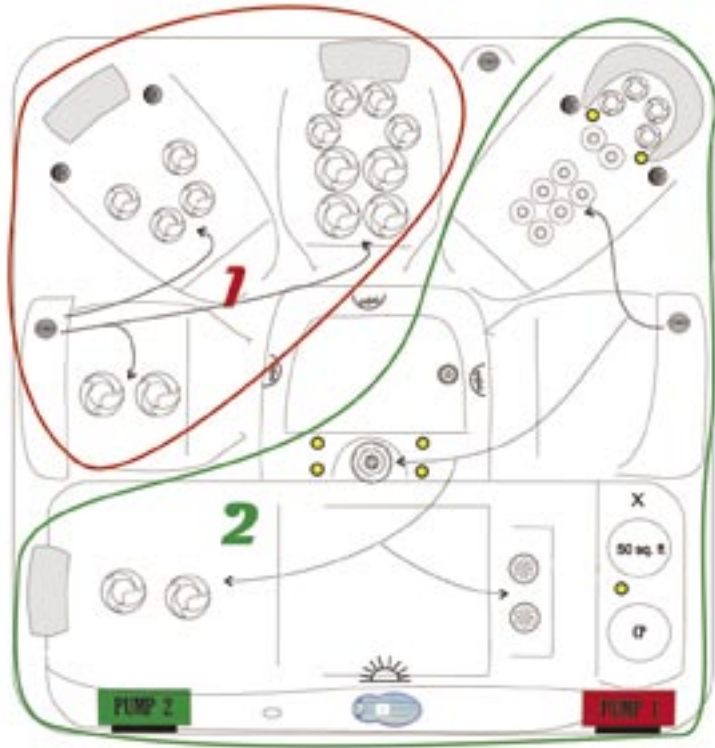


**ANTIGUA 32 jet**

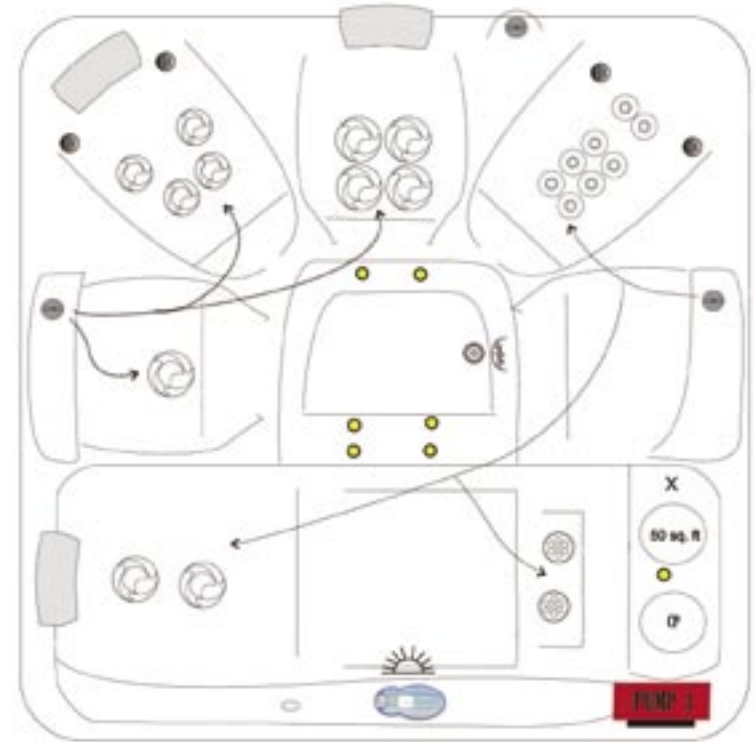
Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	4.8 HP 2 SPD 230V 56F
Pump 2	4.8 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



**ANTIGUA 32 jet 2 pump**

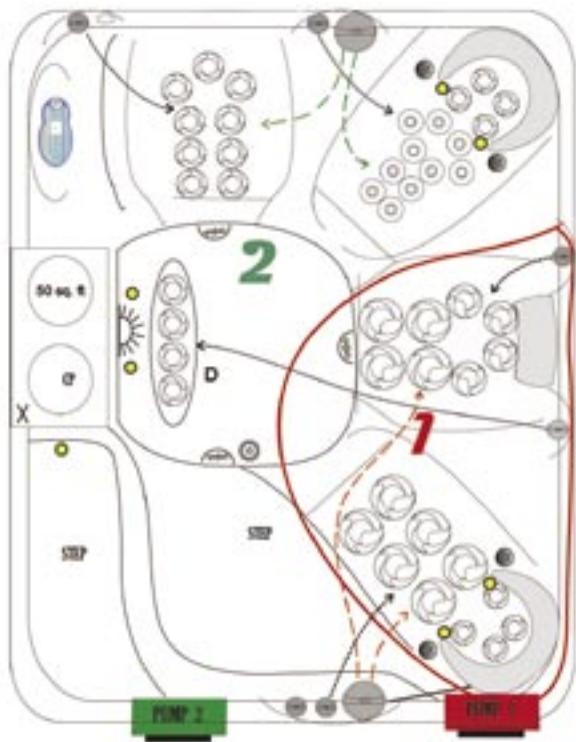


**ANTIGUA 22 jet**

Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	3.0 HP 230V POWER WOW 1 SPD
Pump 2	3.0 HP 230V POWER WOW 1 SPD
Circulation	24 hr. circ system
Heater	4.1 KW Laing
Filter	Disposable Micro-Filter / 50 sq. ft.

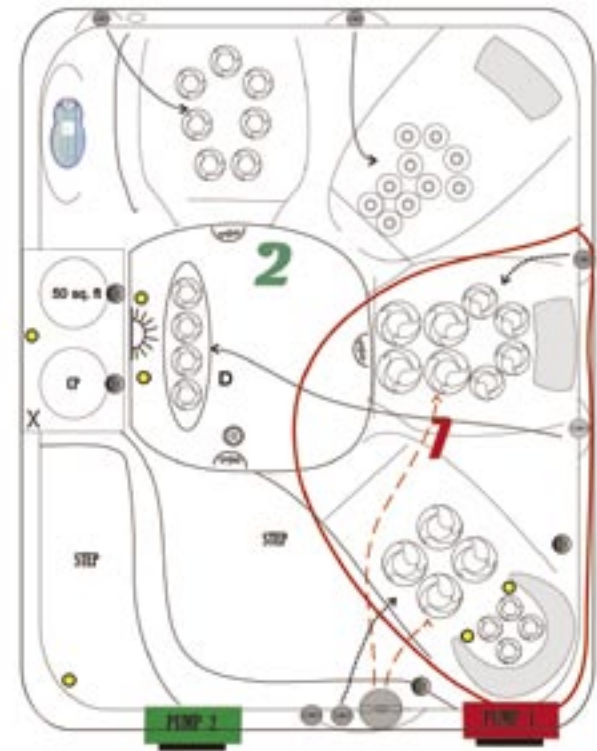
Volume	330 Gallons
Weight	dry / 551 lbs filled / 3263 lbs
Dimensions	82"x82"x36"
Control	LCD S-CLASS
Pump 1	4.8 HP 2SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



**SABA 46 jet**

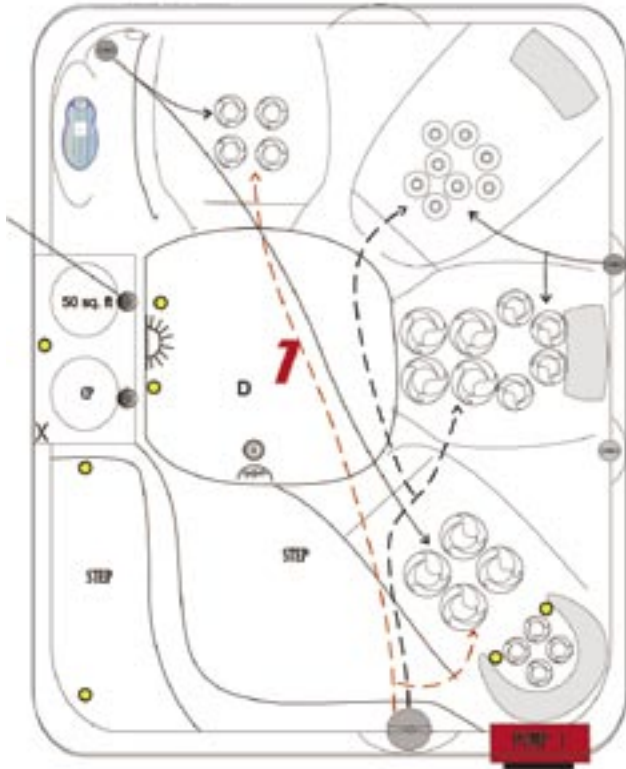
Volume	330 Gallons
Weight	dry / 501 lbs filled / 2586 lbs
Dimensions	72"x82"x35"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Pump 2	6.0 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.



**SABA 38 jet**

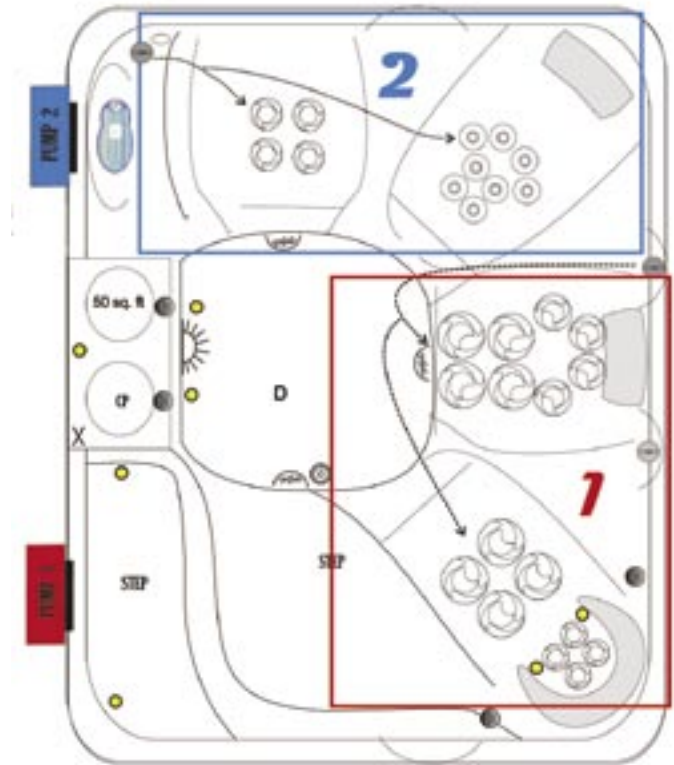
Volume	330 Gallons
Weight	dry / 501 lbs filled / 2586 lbs
Dimensions	72"x82"x35"
Control	LCD S-CLASS
Pump 1	4.8 HP 2 SPD 230V 56F
Pump 2	4.8 HP 1 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



**SABA 29 jet**

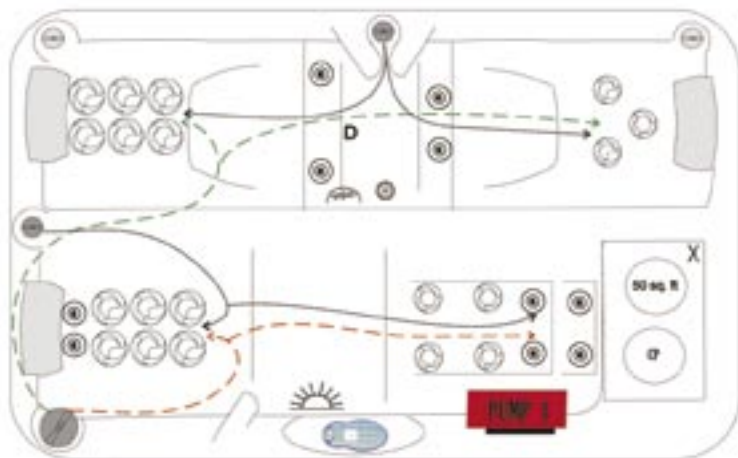
Volume	330 Gallons
Weight	dry / 501 lbs filled / 2586 lbs
Dimensions	72"x82"x35"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq ft



**SABA 29 jet 2 pump**

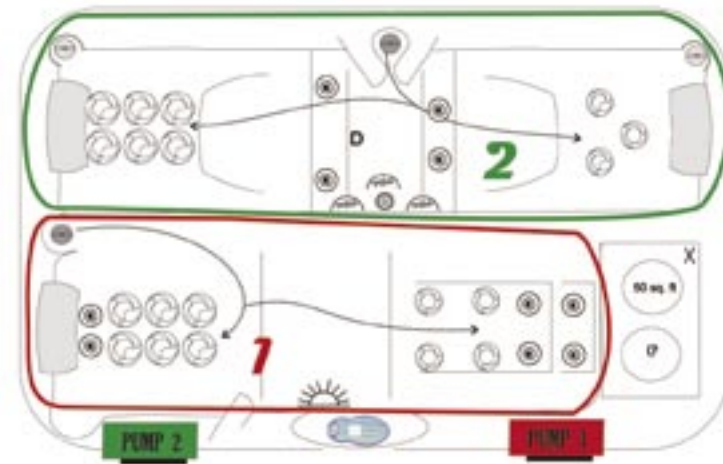
Volume	330 Gallons
Weight	dry / 501 lbs filled / 2586 lbs
Dimensions	72"x82"x35"
Control	LCD S-CLASS
Pump 1	4.8 HP 1 SPD 230V 56F
Pump 2	3.0 HP 1 SPD 230V POWER WOW
Circulation	24 hr. circ system
Heater	4.1 KW Laing
Filter	Disposable Micro-Filter / 50 sq ft.

# SPA CONFIGURATION AND WATER CAPACITIES



## SANTA CRUZ 30 jet

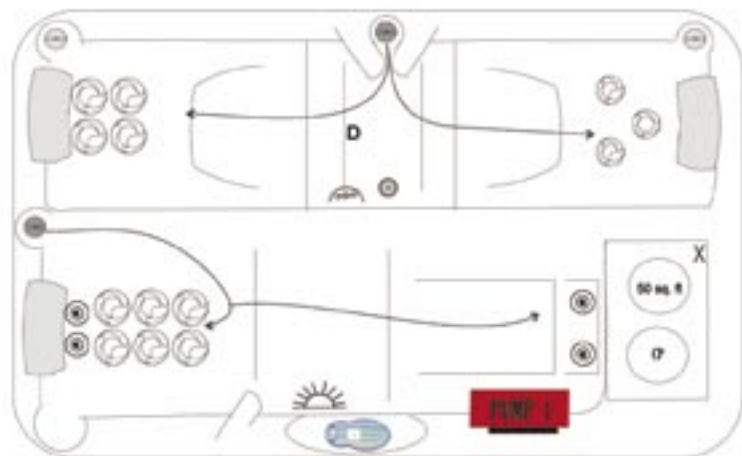
Volume	330 Gallons
Weight	dry / 441 lbs filled / 1943 lbs
Dimensions	82"x60"x32"
Control	LCD S-CLASS
Pump 1	6.0 HP 2 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.



## SANTA CRUZ 30 jet 2 pump

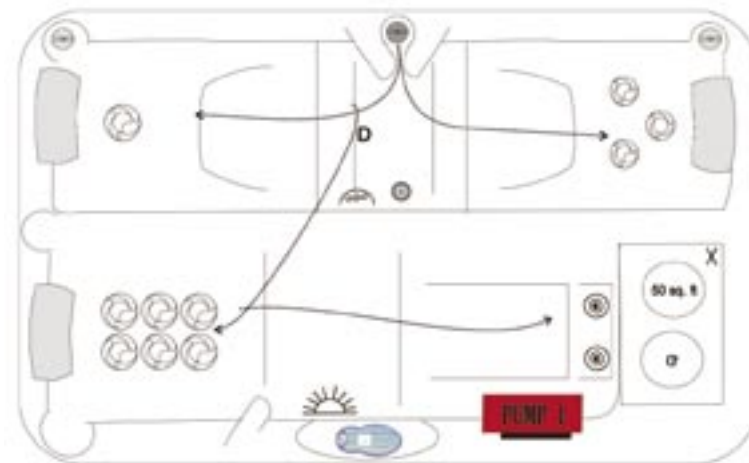
Volume	330 Gallons
Weight	dry / 441 lbs filled / 1943 lbs
Dimensions	82"x60"x32"
Control	LCD S-CLASS
Pump 1	3.0 HP 1 SPD 230V POWER WOW
Pump 2	3.0 HP 1 SPD 230V POWER WOW
Circulation	24 hr circ. system
Heater	4.1 KW Laing
Filter	Disposable Micro-Filter / 50 sq. ft.

# SPA CONFIGURATION AND WATER CAPACITIES



## SANTA CRUZ 18 jet

Volume	330 Gallons
Weight	dry / 441 lbs filled / 1943 lbs
Dimensions	82"x60"x32"
Control	LCD S-CLASS
Pump 1	4.8 HP 2 SPD 230V 56F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.



## SANTA CRUZ 13 jet

Volume	330 Gallons
Weight	dry / 441 lbs filled / 1943 lbs
Dimensions	82"x60"x32"
Control	K-19 S-CLASS
Pump 1	3.0 HP 2 SPD 110V 48F
Heater	5.5 KW FLO THRU
Filter	Disposable Micro-Filter / 50 sq. ft.

# ELECTRICAL REQUIREMENTS AND INSTALLATION

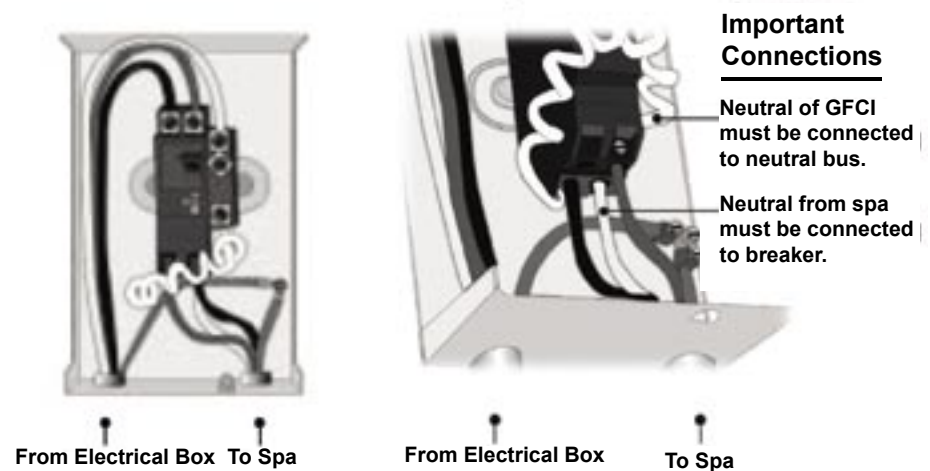
The following information is provided for hooking up electrical supply to your new spa. A qualified, licensed, electrician must perform this work. Failure to follow these instructions will terminate all warranty coverage and can cause serious injury or death.

## ELECTRICAL WIRING

**WARNING: Your spa must be wired according to these instructions. Failure to do so will terminate all warranties and all listings from the independent listing facility.**

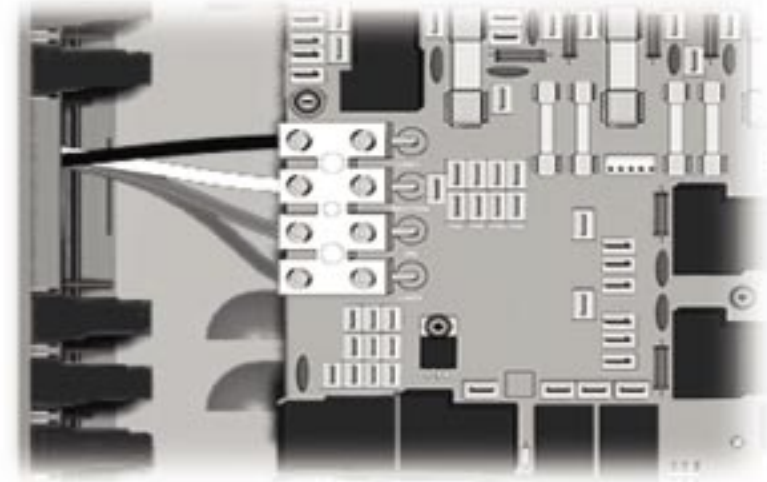
- 1) The Island Spa requires a 240 VAC, dedicated system. The spa must be hardwired to the power supply, with no plug-in connections, extension cords, or sharing of service.
- 2) The spa requires that you run 6 AWG copper wire. Do Not Use Aluminum Wire.
- 3) The power supply must have a suitable Ground Fault Circuit Interrupter (GFCI), according to Section 422-20 of the National Electrical Code, ANSI/NFPA 70-7987. This could be used as the shut-off switch, which must be installed in plain view of the spa. This electrical service must be readily accessible to the spa occupants, but must not be within 5 feet of the spa.
- 4) Use only non-metallic conduit and fittings when installing power to the spa.
- 5) After your spa has been positioned, route lines through the knockout on the left or right front corner of the spa.
- 6) Connect the power to the spa.

## MUST BE DONE BY A CERTIFIED ELECTRICIAN



- The black and red wires from the electrical box must be connected to the input of the GFCI.
- The white wire from the electrical box must be connected to the neutral bus.
- The green or copper wire must be connected to the ground log of the GFCI.
- The black, red and white wires going to the spa must be connected directly to the output of the GFCI.
- The neutral of the GFCI must be connected to the neutral bus.
- The green or copper wire going to the spa must be connected to the ground log.

## Pack Terminal Block from GFCI MUST BE DONE BY A CERTIFIED ELECTRICIAN



- The black wire must be installed 1st from the top.
- The white/neutral wire must be installed 2nd from the top.
- The green or copper wire must be installed 3rd from the top.
- The red wire must be installed 4th from the top.

# SPA START-UP

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Please read each step of the start up section prior to doing the step.

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## SELECTING A LOCATION

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In preparation for installing your new Artesian spa, you should ensure that your chosen location meets these minimum guidelines:

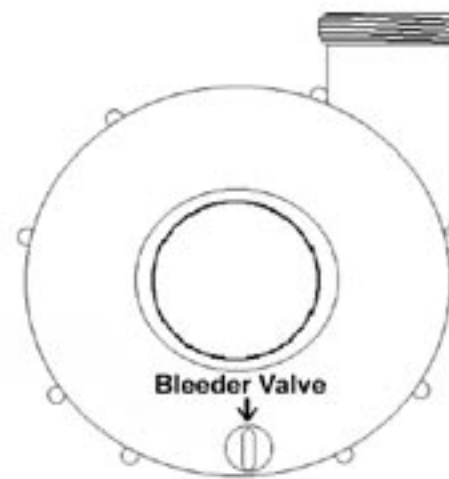
- 1) Place your spa on a surface that is large enough for the entire spa to fit. Consider the space needed to easily access equipment compartments and circuit breakers. Remember, all electronics must be kept dry.
- 2) The spa must be on a solid, level foundation. Recommended: 4-inch cement slab that has cured for at least 72 hours. Your warranty will be voided if the spa is not properly installed. Structural damage due to an improper foundation is not covered under warranty.
- 3) To avoid potential water damage to the skirt and frame, your spa should be placed on a site where it will not be in the way of water sprinklers.
- 4) **OUTDOOR SPAS:** Consider building codes, electrical and plumbing codes, desired proximity to house, wind and sun exposure, location of trees (falling leaves, shade), dressing area, landscaping and lighting when selecting a location.
- 5) **INDOOR SPAS:** Floor surface must have traction to prevent slipping when wet. A floor drain is optimum. As room humidity will increase because of the spa, provide ample ventilation to prevent dry rot, mildew and mold. Use materials that will withstand humidity. There may be a need for cross-ventilation fans and/or dehumidifiers. The spa chemicals may corrode some household metals. Provide ample room if servicing should be needed. Strong foundational support is vital, particularly if a second-story site is selected.
- 6) Ensure the equipment compartment is in a location where it will not be damaged by water drainage. Cover the equipment compartment with a heavy screen if rodents are a problem. Damage due to rodents is not under warranty.

- 7) Have the spa deck installed by a knowledgeable contractor to ensure proper support.
- 8) If the spa is placed on the ground, even for a short period of time, it must be supported by stones that are at least 2 inches thick and 12 inches square. A solid foundation is recommended as soon as possible.

## INSPECTION

---

You will want to inspect your spa, prior to filling it up with water. Look for and remove any debris in the spa tub or in the filter area. Verify that pump plugs are installed on the pumps and that the pump unions are tight.



## FILLING THE SPA WITH WATER

---

**NOTE: DO NOT fill your spa with hot water straight out of your water heater or tap. This water may be as hot as 180 degrees F and will cause damage to the surface and plumbing of the spa. This will void your warranty. Level the spa before filling.**

- 1) Prepare to fill the tub by removing all debris.
- 2) Remove the filters from your spa (see Removing, Installing and Cleaning Filters, page 33)
- 3) Place your garden hose in the circulation pump line.



## SPA START-UP cont...

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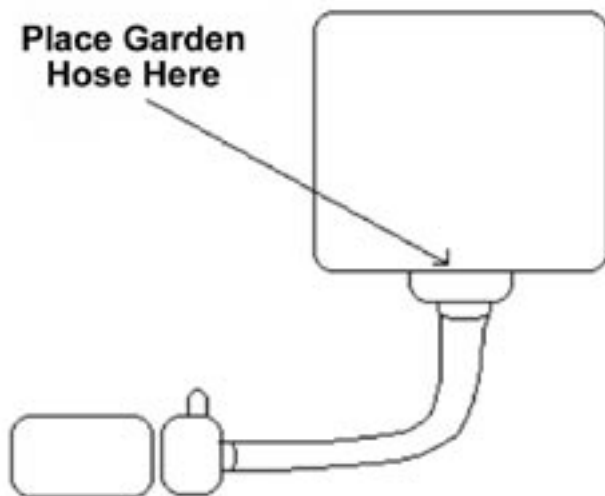
### FILLING THE SPA WITH WATER cont...

---

- 4) Fill the tub from the circulation pump line until water level is above the foot-well.

**Note: This will purge all the air out of your circulation pump. An air lock can cause damage to your circulation pump and is not covered under warranty.**

- 5) Once the water level is filled over the foot-well, you can pull the hose out of the circulation line and continue filling the spa from the filter well.
- 6) Fill the spa to the bottom of the pillows. **Note: DO NOT OVER-FILL YOUR TUB!**
- 7) With the front panel off, verify there are no leaks at the pump unions. **Note: Pump unions can become loose during shipping. Verify that there are no leaks during filling of the spa.**
- 8) Reinstall the circulation pump and all filters.



## TURNING THE POWER ON

---

Turn the power to the spa on at the main circuit breaker. Verify that your spa has no error codes. (See page 47) Verify you have good circulation in your spa. Your pumps will come on in cycles, for 1 minute each cycle.

### VERIFYING WATER CIRCULATION

---

- 1) Open all the jets.
- 2) Press and hold the Pump 2 key for 5 seconds.
- 3) Make sure each seat has water flow. Note: On certain spas there is a diverter valve. Verify where the diverter valve is located.
- 4) Press and hold pump 2 key again to shut off all jets.

### TESTING THE GFCI BREAKER

---

**NOTE: The electrical service panel for your spa should be equipped with a GFCI breaker. To avoid the risk of electrical shock, perform the following safety test before each use of your spa.**

- 1) Make sure the power is turned on at the electrical service panel.
- 2) Turn on the GFCI breaker. If the breaker stays on, it is functioning properly.

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

If the GFCI breaker fails to operate as described, there is a possibility of an electric shock if the spa is used. Shut off the power at the main electrical service panel until the source of the problem has been identified and corrected by a licensed electrician or qualified spa technician.

## SPA START-UP cont...

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### TESTING THE GFCI BREAKER cont...

---

**NOTE:** When power is turned on, your spa is automatically programmed to start circulating water through the circulation pump. Each pump and/or blower will come on consecutively for approximately 1 minute to automatically purge the system. Adjust your temperature by pressing the up button on your touchpad until the desired temperature is displayed. This setting will allow your spa to heat to the set temperature.

**CAUTION:** *If water is not noticeably coming from your spa jets during the automatic purge, turn on the high speed pump. If water is still not coming from the jets, the pump needs to be manually primed, following the steps below.*

### PRIMING THE PUMP

---

- 1) Turn off power at electrical service panel.
- 2) Locate and loosen one of the pump compression fittings on each pump by turning it counterclockwise one half of one turn.
- 3) Allow air to escape from fittings. When a steady stream of water flows from the compression fitting, close it by turning it clockwise until tight.
- 4) Turn on power at electrical service panel.
- 5) Check once more to make sure that water is flowing from the jets during auto purge. If so, continue. If no water is coming from your spa jets, please call your Artesian dealer for further assistance.

### WATER PREPARATION

---

**NOTE:** Before putting your new spa into operation, understand that preparing your new water is an important part of maintenance. Failure to properly prepare your water can result in substantially decreasing the life of the components and may void your warranty in severe cases. Your Artesian dealer should have a start-up and maintenance kit available for you when you receive your spa.

# KEYS AND FUNCTION

## PUMP KEYS

1) To activate Pump 1 press the Pump 1 key. When Pump 1 is running in low speed, you will see the Pump 1 icon blinking in the display. The second push on Pump 1 will turn Pump 1 to high speed. When the pump is in high speed the pump 1 icon will remain solid. A third push of the Pump 1 key will turn Pump 1 off.

**NOTES:** If there is a heat demand, a Cooldown period (30 seconds after heaters turn off), or when pump is running because of a filter cycle, the controller will turn the pump in Low speed. Then, if the user presses the Pump key, Pump will go directly into High Speed. This has been added to give the user feedback.

When the pump is already running due to an automatic function and the key is pressed, the cycle will be cancelled and the pump will switch to next speed. Another press will start the built-in timer.

At power-up, Pump 1 will run for 1 minute in high speed.

If a Circulation Pump is installed Pump 1 is single speed.

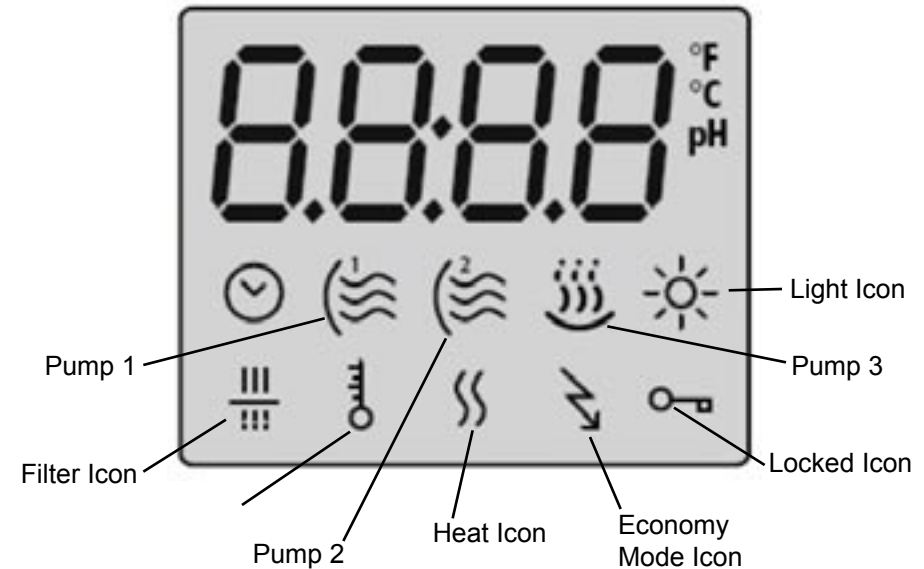
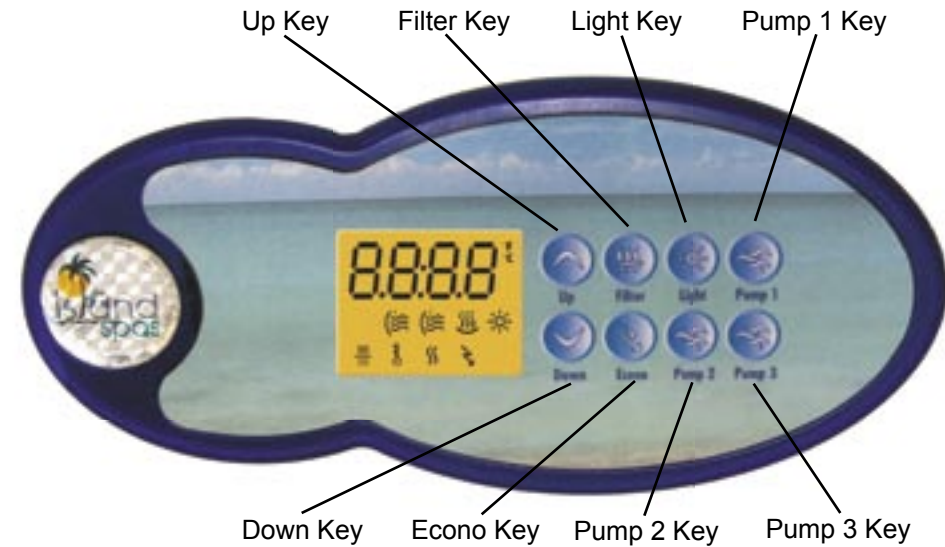
2) To activate Pump 2 press the Pump 2 key. When Pump 2 is running, you will see the Pump 2 icon lit in the display. The second push on Pump 2 will turn Pump 2 off.

**NOTE:** When the pump is already running due to an automatic function and the key is pressed the pump will shut OFF. Another press will start the built-in timer.

3) To activate Pump 3 press the Pump 3 key. When Pump 3 is running, you will see the Pump 3 icon lit in the display. The second push on Pump 3 will turn Pump 3 off.

**NOTE:** When the pump is already running due to an automatic function and the key is pressed the pump will shut OFF. Another press will start the built-in timer.

## Display Icon Diagram



## KEYS AND FUNCTION cont...

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### LIGHT KEY

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Pressing the LIGHT Key once will turn the light on full intensity. The Light Icon is displayed. Pressing the LIGHT Key a second time will turn the light off.

**NOTE: A built in timer automatically turns the light off after 2 hours unless light has been manually deactivated.**

### UP KEY

---

The UP Key displays and increases the spa temperature set point. The first push of the UP Key will display the current temperature set point in the display. Each additional push of the UP Key will increase the spa temperature set point by 1 degree Fahrenheit. Holding the key increases the set point automatically by 1 degree Fahrenheit. The temperature limit is 104 degrees Fahrenheit (40 degrees Celcius).

The default temperature is 95 degrees Fahrenheit ( 35 degrees Celcius).

The set point icon is on when UP key is pressed and for 5 seconds after key has been released.

### DOWN KEY

---

The DOWN Key displays and decreases the spa temperature set point. The first push of the DOWN Key will display the current temperature set point in the display. Each additional push of the DOWN Key will decrease the spa temperature set point by 1 degree Fahrenheit. Holding the key decreases the set point automatically by 1 degree Fahrenheit. The temperature limit is 59 degrees Fahrenheit (15 degrees Celcius).

The default temperature is 95 degrees Fahrenheit ( 35 degrees Celcius).

The set point icon is on when DOWN key is pressed and for 5 seconds after key has been released.

## ECONOMY KEY

---

Press the ECONOMY key to turn economy mode on. Press the ECONOMY key a second time to turn economy mode off. When the spa is set to economy mode the icon is on solid.

When economy mode is set, the pack regulates the water temperature 20 degrees below the actual set point.

### FILTER KEY

---

The first push of the FILTER key will show 'Fdx' in the display with 'xx' being the filter duration time in hours. You can then use the UP and DOWN keys to set the duration time from 0 to 12 hours.

A second press of the FILTER key will save and exit. The filter cycle will start right away. If the FILTER key is not pressed a second time within 5 seconds the new ( if it was changed) duration is saved, but the cycle will start only at the next scheduled filter cycle.

The default duration is 2 hours without the circulation pump and 12 hours with the circulation pump.

The filter icon is lit only when the filter cycle is on.

### FILTER CYCLE

---

**Functionality Without Circulation Pump** - The filter cycle occurs twice a day (every 12 hours), it is adjustable from 0 to 12 hours and consists of starting Pump 2 and Blower/Pump 3 for 1 minute to purge the plumbing and then start Pump 1 low speed and the ozonator for the duration of the cycle.

**Functionality With Circulation Pump** - The filter cycle occurs twice a day (every 12 hours), it is adjustable from 0 to 12 hours and consists of starting Pump 2 and Blower/Pump 3 for 1 minute to purge the plumbing and then start the ozonator and the circulation pump for the duration of the cycle.

**Overtemp Protection** - If the water temperature exceeds the set point by more than 2 degrees F when the temperature of the water is 98 Degrees F or above, the system will suspend the filter cycle. This -

## **KEYS AND FUNCTION cont...**

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### **FILTER CYCLE cont...**

---

prevents excessive water temperatures due to a long filtration during warm temperatures. The filter logo will blink for the remainder of the filter cycle. If the water temperature cools to 1 degree F above the set point before the end of the cycle, the filter cycle will resume for the remainder of the time.

**Manual Protection** - If during a filter cycle, Pump 1, Pump 2, Blower/ Pump 3 or Light Key are pressed, the filter cycle is suspended and will resume 40 minutes after the last pump has turned OFF. In systems with a circulation pump, the circulation pump will continue to run, but the ozonation will be suspended.

### **OZONE OUTPUT**

---

The ozone output is active during the filter cycle, adjustable from 0 to 12 hours. If set without the Circ. Pump the ozone follows Pump 1 low speed. If set with the Circ. Pump, the ozone follows the Circulation Pump. The ozonator does not work during the filter cycle if there is a filter cycle overtemp or if it is in manual protection.

### **CIRCULATION PUMP**

---

The Circulation Pump is adjustable from 0-12 hours twice a day (with filter cycle). It will turn OFF when the temperature of the water is 2 degrees above the set point or when the temperature of the water is 98 degrees F or above.

### **SMART WINTER MODE**

---

When the spa is in Winter Mode, the pumps turn on when the ambient temperature falls below 68 degrees F (20 degrees C). The pumps activate for 1 minute every two hours or less, for at least 24 hours.

## **POWER-UP DETECTION**

---

After a power-up, the display will blink until a key on the control panel is pressed. This feature is to let the user know that a power failure has occurred.

### **TEMPERATURE SENSOR FAILURE**

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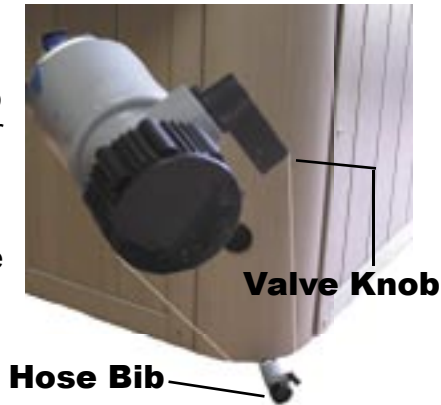
After a power-up, the display will blink until a key on the control panel is pressed. This feature is to let the user know that a power failure has occurred.

# MAINTAINING YOUR SPA

## DRAINING YOUR SPA

Your spa needs to be drained, cleaned, waxed, and refilled about every six months. More frequent water changes may be necessary if bather load is heavy. A hose bib has been provided below the left side of your front access panel, to assist you in draining your spa.

- 1) Turn off the power to your spa. If you fail to turn the power off, vital components could be damaged. Do not leave an empty spa exposed for long periods of time in hot, sunny weather.
- 2) Attach your garden hose to the hose bib.
- 3) Place the other end of the hose in an area that will accept the water capacity of your spa.
- 4) Open the hose bib by turning the valve knob counterclockwise to the full stop position.
- 5) Check the garden hose end to see if water is flowing. If water is not flowing, check the hose for kinks. Also check to see if valve is in the full open position.



**CAUTION: The chemical content and temperature of the water will cause damage to certain vegetation. We do not recommend that you drain your spa onto plants or lawns. If you choose to do this, please remove your spa cover and allow spa to cool for a minimum of 24 hours with the spa turned off.**

## PILLOW CARE

Remove and clean the pillows with soapy water and a soft cloth when needed. Use a vinyl conditioner once a month. Remove pillows when doing chemical shock treatment.

## JET CARE

We recommended that you clean your jets when you drain your spa. However, if you do need to clean your jets in between this can be accomplished with a full spa.

- 1) To remove the jet inserts turn the jet counterclockwise to the off position until it stops. Continue to turn the jet past the stop point to loosen it from the spa. The insert will now pull out.
- 2) Soak jet inserts in a mixture of 1 part vinegar to two parts warm water for 2-3 hours. Periodically rotate the spinner nozzle to break up residue in the jets.
- 4) Rinse the jet inserts under warm water.
- 5) To reinstall the jets insert jet into jet body and turn clockwise until fully seated then tug to make sure it is seated properly. You can then continue to turn clockwise until it stops.



**NOTE: A jet with stainless steel escutcheons can be slippery. You can use a soft cloth or jar-opening pad to assist in removing and installing the jet.**

## MAINTAINING YOUR SPA cont...

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### REMOVING, INSTALLING AND CLEANING FILTERS

---

You should replace your disposable spa filters every four months. These are the steps needed to successfully replace your filters.

- 1) Turn off all power to your spa and remove the filter lid by lifting it out towards you.
- 2) Turn the filter counterclockwise and remove it from the filter well.
- 3) Dispose of the used filter.
- 5) To replace, set screen back into its place and turn clockwise to fasten. DO NOT over-tighten.
- 6) Place the new filter into its place and turn clockwise to fasten. DO NOT over-tighten.



**WARNING:** Power to your spa must be turned off prior to removing your filters. The suction at the filter is extremely strong and can cause injury if there is no filter. NEVER run your spa without the filters properly installed. Injury to person and damage to the equipment can occur. Any damage to equipment due to this circumstance will not be covered under warranty.

## WINTERIZING YOUR SPA

---

It is not recommended that you drain your spa completely during freezing conditions. We recommend that you leave your spa full of water with the power on to keep the tub from freezing. If you decide to drain your spa during freezing conditions, contact your dealer for help. Contact your Artesian dealer before refilling a drained spa in freezing temperature.

**WARNING:** Damage to your spa caused by freezing is NOT covered under warranty. Please contact your local Artesian dealer to assist you in winterizing your spa.

### REPLACING THE LIGHT BULB

---

- 1) Turn off the power at the main electrical service panel.
- 2) Remove front access panel.
- 3) Locate and remove the reflector by turning it counterclockwise until free from wall fitting.
- 4) Remove the bulb from the holder.
- 5) Replace with new bulb. Your Artesian dealer has these bulbs in stock.
- 6) Replace the reflector by screwing it clockwise back onto the wall fitting.
- 7) Replace the front panel.
- 8) Turn power on at the main electrical service panel.

**NOTE:** The spa light bulb is not covered under warranty.

## MAINTAINING YOUR SPA cont...

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### SPA CABINET CARE

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The wood cabinet of your spa is stained and sealed with an oil-based acrylic stain. The stain is formulated especially for spa cabinet and deck applications and is resistant to ultraviolet light damage caused by sun rays. It is also resistant to fungus and insect damage. Your Artesian dealer carries this type of stain for your convenience, so call your dealer when you're ready to re-stain your cabinet. You should re-stain your wood cabinet at least once a year, or more frequently depending on your environmental conditions.

- 1) Gently wash the cabinet with mild soap and water and allow to dry completely.
- 2) Moisten a rag with the stain you have purchased from your Artesian dealer.
- 3) Apply the stain on the entire cabinet surface, wiping off any excess stain as you are applying.
- 4) Allow stain to dry for a minimum of 24 hours before getting the cabinet wet.

**NOTE: Do not apply any solid type finish such as shellac or varnish. After weathering, these types of finishes will crack and or turn yellow. To refinish the wood, you will need to completely strip the finish before applying the new one. Use only the stain recommended by your Artesian dealer for refinishing your spa.**

### CLEANING YOUR SPA INTERIOR

---

It is important to clean the interior of your spa every time it is drained to help preserve the sheen of your spa's surface. However, it is important that you do not use any abrasive cleaners or strong chemicals. Your Artesian Spas authorized dealer will be able to supply you with the proper cleaning solution for your spa. After cleaning, -

make sure all residues are removed prior to filling the spa. This will help prevent sudsing and improper chemical balance.

### COVER CARE

---

Cleaning of your spa cover is an important part of routine maintenance. Dirt acts as an abrasive to the vinyl topcoat, and can also cause wear to folds, seams, and stitching. Mildew growing on damp, dirty vinyl will begin to actually root in the fabric, accelerating failure.

Follow this simple routine for cleaning, prior to application of vinyl protectant:

- 1) Rinse with cool water using a garden hose.
- 2) Spray with a gentle, non-foaming cleaner and wipe clean. Never use laundry detergent, abrasives, alcohols, dish soaps or harsh cleaners. These can actually remove some of the topcoat and cause premature vinyl failure.
- 3) For stubborn dirt, use a non-abrasive sponge.
- 4) Rinse again thoroughly with water and allow to dry.
- 5) Repeat monthly, or as needed.

Your vinyl cover is affected by the UV in sunlight. Periodic protectant with a liquid protectant will extend the life of your spa. The wrong kind of protectant can be more harmful than no protectant at all. Keep any product away from your spa that is labeled "flammable," that contains any type of oil, or that leaves a waxy coating on your cover.

Never stand or sit on the cover and never drag it over abrasive surfaces. Lift cover only by the handles provided.

**NOTE: Your cover will hold up to 145 pounds. The covers are not intended to be walked on, but a child or pet stepping on the cover won't break it.**



## **MAINTAINING YOUR SPA cont...**

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### **CHEMICAL TREATMENT OF WATER**

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Water from your tap is fine for showers, bathing and drinking. However, in a contained recirculating system such as in a spa, water must be treated with chemicals. The main purpose of chemical treatment is to keep the water sanitary and to maintain a specific balance of the water. Proper balance ensures that the water will not cause irritation to the users or harm the spa's components. Chemical treatment does have its limitations. When water evaporates, chemical residues are left behind. As the levels of the residues combine with other types of residue, such as body oil and detergents, your water becomes increasingly difficult to maintain. Because of this residual effect, at some point it becomes easier and more cost-effective to drain, clean and refill your spa with new water. We recommend that the water be changed at least every six months. At this time you should also clean or replace your filters. If your spa has a frequent and/or heavy bather load, it may be necessary to drain and fill your spa more often. Refer to the section titled "Draining your spa" for instructions (page 31).

**WARNING: Spa damage due to improper chemicals is not covered under warranty.**

## **WATER CHEMISTRY**

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**CAUTION: The chemicals used to maintain the pH balance of the water and to sanitize the water can be dangerous. Always follow these basic guidelines when handling the chemicals:**

1. Always read and follow the directions on the label, unless directed otherwise.
2. Never mix different chemicals.
3. Do not exceed the recommended amounts of chemicals—follow the directions on the label.
4. Keep all chemicals out of the reach of children and pets.
5. Keep containers closed tightly when not in use.
6. Never add water to the chemicals—always add the chemicals to the water as directed.
7. Always store chemicals in a cool, dry place.

### **WATER TREATMENT GLOSSARY**

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**1 - Total Alkalinity:** Total Alkalinity measures the water's ability to resist fluxuations in the pH level. It is measured in ppm (parts per million) ranging from 0 - 400 or up. The optimum range for your spa water is between 80 and 140. This can easily be measured with 3- or 5-way test strips. With low alkalinity the pH level will be prone to dramatic fluxuations. With high alkalinity the pH becomes increasingly difficult to adjust.

**2 - pH (potential hydrogen):** The PH is used as a measurement of the active acidity, the concentration of active hydrogen molecules in the water. PH is measured on a scale from 1 to 14, the lower numbers indicating a greater concentration of active hydrogen. While 7, halfway between base and acid is neutral, the optimum level of acidity for a spa is between 7.2 and 7.8. The effects of low PH can -

# WATER CHEMISTRY cont...

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## WATER TREATMENT GLOSSARY cont...

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be rapid sanitizer loss, eye and skin irritation, expedited corrosion of metals, as well as staining throughout the spa. High PH can result in cloudy water, low sanitizer efficiency, as well as eye and skin irritation.

**3 - Parts per Million (PPM):** The term “parts per million” will be used frequently in the world of water care. The term simply means exactly what it says: the coexistence of any one unlike item with a larger number of “like” items.

**4 - Sanitizers:** Sanitizers are used to destroy bacteria and other germs in the water. Only 2 sanitizers are used in spas, chlorine (Sodium Dichlor) and Bromine (Hydrotech or Lonza). Without the use of a mineral system or an enzyme, the preferred level of sanitizer is between 2 and 3 ppm.

**5 - Total dissolved Solids (TDS):** TDS is simply the measure of the total amount of matter dissolved in the water. When this level becomes too high, action is advised.

**6 - Calcium Hardness:** The measure of the amount of calcium dissolved in the water as expressed in PPM. Hard water, or water with calcium levels over 250 PPM can cause scale formation on the surface of the spa or the components of the spa.

**7 - Total Chlorine:** Total Chlorine is the sum of the free and combined chlorines in the water. Often, water will contain a higher level of total chlorine than available chlorine. If this is the case in your water, you may use a non-chlorine shock (typically potassium monopersulfate) to free up the remainder of total chlorine.

**8 - Ozone:** Ozone is a gas molecule that can be generated by an Ozonator, which is composed of three atoms of oxygen and used to oxidize the water. Ozone is very useful for regenerating bromine from bromide ions. It also acts as a supplement when used in conjunction with a sanitizer and may reduce the level of sanitizer required. You may read more about ozone later in this section of your owner's manual.

**9 - Organic Matter:** These are carbon-derived substances typically generated by living organisms. In a spa, they are most frequently introduced into the water by bathers. Enzyme products such as Spa Perfect by Natural Chemistry are most effective at eliminating organic matter from your body of water.

**10 - Microorganisms:** This term refers to tiny, living organisms such as bacteria, protozoa, or algae.

**11 - Sequestering:** This term defines the action taken to remedy high levels of metals or calcium in the water. By forming a complex that envelops materials in the water, commonly hardness ions, a sequestering chemical prevents the ions from reacting to one another, thus forming complex structures or solids.

**12 - Shocking:** Shocking is the act of hyper-chlorinating or hyper-oxidizing the water. This can be accomplished with a myriad of shock treatments, but is most commonly accomplished with Sodium Dichlor or Potassium Monopersulfate. The former raises the sanitizer level to at least 8 PPM, and the latter burns off chloramines or bromines. The use of P.S., or non-chlorine shock is advantageous because you can bathe only 15 minutes after treatment; however, oxidizing the water will not kill the bacteria unless there is sufficient total chlorine to free up used chlorine to actively sanitize.

**13 - Bather Load:** You may be asked by your spa professional what the average bather load is, meaning, how many people enter the spa on a daily or weekly basis.

**14 - Alternative Sanitizers:** A group of products that sanitize pool, spa and hot tub water, by means other than the application of chemicals to the water. Includes such products as ultraviolet sanitizing systems, mineral purifiers, ionizers and ozonators.

**15 - Bactericide:** A chemical that kills bacteria. The most common bactericides are: chlorine, bromine, biguanide, ozone and silver. Most algaecides, other than copper, exhibit some bactericidal properties.

**16 - Balanced Water:** Pool or spa water that is within the accepted water analysis parameters for: pH, sanitizer, total alkalinity, calcium hardness, chlorine stabilizer (chlorine pools only) and minerals. The balancing of the pool or spa water helps to eliminate water chemistry problems.

## **WATER CHEMISTRY cont...**

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### **WATER TREATMENT GLOSSARY cont...**

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**17 - Chloramines:** Irritating, odorous forms of combined chlorine, formed by the reaction of chlorine with nitrogen containing waste products. Ineffective as a pool or spa sanitizer. High levels of chloramines can cause the problems of “Red Eyes” or “Stinging Eyes.” Usually requires a shock treatment to lower or destroy the combined chlorine level.

**18 - Corona Discharge:** A method for producing ozone, by utilizing high voltage arcing to convert oxygen (O<sub>2</sub>) into ozone (O<sub>3</sub>). Refer to the listing for Ozone for more information.

**19 - Enzymes:** Organic agents that hasten the natural breakdown (digestion) or decomposition of oily wastes and organic residues in pools and spas.

**20 - Hard Water:** The term used to describe water that is high in calcium or magnesium. High levels, usually over 400 PPM, can lead to clarity and scaling problems, if not treated. Source of the calcium can be natural or can be contributed by chemicals such as calcium hypochlorite.

**21 - Ions:** The electrically charged state that an element assumes in true solution. In the ionic state, ions are chemically reactive. Some ions, such as, copper, silver and zinc, are used as sanitizers in mineral purifiers and/or ionizers.

**22 - Ionizers:** Equipment that sanitizes pool and spa water by providing a low level source of copper and silver ions, as the water passes over charged electrodes. Copper ions can provide algaecidal control. Silver ions can provide bactericidal control. Other types of devices (mineral purifiers) work by an erosion principle and utilize copper, silver or zinc ions.

**23 - Mineral Purifier:** A type of device that releases copper, silver or zinc ions into the water at very low levels. In this ionic state, these minerals can function in the sanitizer role and help control algae and bacteria in pool and spa water. Mineral Purifiers work on the principle-

of erosion and do not require electrical components. Most include some type of replaceable cartridge, that contains the copper, silver or zinc materials.

**24 - Biguanide:** The generic name for a non-chlorine, non-bromine, sanitizer that utilizes the polymer PHMB (polyhexamethylene biguanide). It is used to totally eliminate the use of chlorine or bromine.

**25 - Biofilm:** A slippery coating of microorganisms that can develop in poorly sanitized pools and spas.

**26 - Brominator:** Feeding devices used to introduce bromine into pools or spas. Most automatic types can be plumbed inline. Others are simple floating varieties. All are intended to make the application of bromine easier and more consistent. Do not use chlorine in place of bromine, in any brominator.

**27 - Calcium Carbonate:** Crystalline deposits (scale) that can form on all under water surfaces, if the water is excessively high in calcium hardness. High pH and high total alkalinity can worsen the problem. Responsible for cloudy water conditions that may result due to pool or spa water being out of balance.

**28 - Oxidation:** The chemical reaction by which organic matter is “burned” or destroyed, by the action of chlorine, bromine, ozone, hydrogen peroxide or non-chlorine shock. Oxidation may cause minerals such as iron, manganese and copper to form discoloring stains and precipitates, if not treated properly.

**29 - Ozonator:** A device for producing Ozone (O<sub>3</sub>), by either a UV (ultraviolet) light source or by electrical arcing (corona discharge). Used for oxidizing and sanitizing purposes in both pools and spas. Click here for some ordering information about Ozone Test Kits.

**30 - Ozone (O<sub>3</sub>):** Typically produced by an Ozonator installed in a pool or spa. Ozone (O<sub>3</sub>) is a form of oxygen (O<sub>2</sub>) and is a powerful oxidizing agent. It is used to destroy organic waste and byproducts and help in the control of algae and bacteria. Not a stand-alone sanitizer: needs some supplementing with chlorine, bromine or ionization.

**31 - Soft Water:** Water that is low in calcium and magnesium hardness

## **WATER CHEMISTRY cont...**

### **WATER TREATMENT GLOSSARY cont...**

ness. Such water can prove to be corrosive to masonry surfaces and underwater metal parts. The calcium hardness level can be raised, to the optimum range of 150-200 PPM, by the addition of appropriate amounts of a calcium hardness increaser (calcium chloride).

### **SPA CHEMICALS GLOSSARY**

**1 - Alkalinity Up:** The total alkalinity of your spa water should be between 80-140 PPM. A proper alkalinity will help buffer your spa water against sudden changes in pH. Every 2.5 tablespoons of Alkalinity Up will raise your alkalinity by 10 PPM in a spa holding 500 gallons of water.

**2 - Bromine Tablets:** These slow-dissolving tablets work especially well in the hot water of your spa. Keep a base of tablets inside of an in-spa floater/feeder in order to maintain between 2 and 5 PPM. Add 2 tablets per 100 gallons of water and adjust the floater's opening to regulate the PPM level.

**3 - Foam Gone:** Foam in spas is typically caused by residue from soap, shampoo, and cleansers. A small amount of Foam Gone will dissipate the foam and will not affect the water balance. Most foam removers are compatible with all sanitation programs.

**4 - Liquid Filter Cleaner:** Regular use of Filter Cleaner will greatly increase the life and performance of your filters by cutting away grease, body oils, scale, and lotions. Clean filters also contribute to better water circulation and superior spa performance, because dirty filters can substantially impede water flow. Keeping your filters clean with filter cleaner will also help keep your water filtered and clear. This is accomplished by mixing one pint of filter cleaner with 2.5 gallons of water and submerging the filters in the mixture for at least 12 hours.

**5 - Dichlor Granular:** This concentrated, stabilized, and quick-dissolving chlorine granular is simple to use in your spa as a sanitizing shock treatment. The downside to Dichlor is that it will not sustain a

PPM base for long in hot water. However, as a rule of thumb, if you treat your water after bathing with half a capful of Dichlor, you will maintain clear and comfortable water, providing your pH is controlled and your filters cleaned. Dichlor dissolves quickly and leaves no residue.

**6 - pH Down:** If your pH level remains high, you can struggle with scaling, cloudy water, rapid sanitizer loss, and possible skin and eye irritation. pH Down can be purchased from your dealer in either liquid or solid granular form. Please see your dealer for recommended dosage.

**7 - pH Up:** The effects of low pH can be rapid sanitizer loss, eye and skin irritation, expedited corrosion of metals, as well as staining throughout the spa. pH up can be purchased from your dealer in either liquid or solid granular form. Please see your dealer for recommended dosage.

**8 - Metal Protect or Remover:** Also called stain and scale defense, metal protect inhibits staining and scaling in your spa. It will also prevent calcium build-up on the surfaces of your spa. Regular use will help protect your spa surface as well as your plumbing, your pumps, and even your heater.

**9 - Spa Shock:** Non-chlorine spa shock contains Potassium Monopersulfate and is an oxidizer that works well with mineral, chlorine and bromine systems. Regular use of spa shock can substantially reduce the need for sanitizing by up to 50% and will continually remove inorganics from the water. Best of all, you can bath in only 15 minutes after application.

**10 - Ascorbic Acid:** This is vitamin C and can be used as an acidic-reducing agent in the removal of difficult metallic stains from underwater surfaces. Oxalic acid can be used in a similar manner.

### MAINTAINING THE PROPER PH BALANCE

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The pH factor is a measure of the relative acidity or alkalinity in the water. It is measured on a scale of 1 to 14. Pure water has a value of 7, which is neutral. Any value above 7 is alkaline, and any value below 7 is acidic. You should maintain a slightly alkaline pH level, between 7.2 and 7.8, in the hydrotherapy spa. Severe problems can occur when the pH balance is not maintained within this range. If the pH level exceeds 7.8, dissolved minerals can build up and clog the plumbing in the spa jet unit. If the pH level falls below 7.2, the acid level in the water will begin to corrode the metal parts in the spa jet unit. Also, the sanitation agents in the water will not be effective if the pH level is not properly maintained. Damage caused by improper pH levels is not covered under the warranty. To maintain the proper pH level, you should test the pH of the water regularly. To test the water, purchase a pH test kit at a pool and spa supplier. The pH reading should be between 7.2 and 7.8. If the level is too low, add a pH increaser (usually soda ash). If the level is too high, add a pH reducer (usually sodium bisulfate). Test the water again after five minutes. See the instructions with your pH test kit for additional information about testing and adjusting the pH.

### TEMPERATURE SENSOR FAILURE

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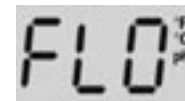
After a power-up, the display will blink until a key on the control panel is pressed. This feature is to let the user know that a power failure has occurred.



#### Overtemp Mode

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OH indicates the water temperature has reached 112 degrees Fahrenheit ( 44.4 degrees Celcius ). The heater and all output functions will turn off until water cools to 109 degrees Fahrenheit ( 43 degrees Celcius ). The only functions that will operate during Overtemp Error will be the Smart Winter Mode and all the keys that do not start an accessory.



#### Pressure Switch

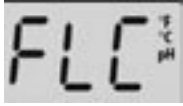
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The heater is turned off during a FLO error. When pump 1 is on, the pressure switch is given 5 seconds to close. If, after this delay, the switch is still open, a FLO error occurs. During this 5 second delay, the heater can't be turned on.

To prevent dry run, if the FLO error occurs for more than 0 minutes, the PUMP 1 or circulation pump will turn OFF. Once in dry run protection mode, if any key is pressed, the pump will restart. The error will display until the flow problem is resolved. When the system detects that the error message condition no longer exists, it will clear the error itself.

## TROUBLESHOOTING cont...

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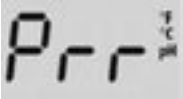


### Error

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The heater is turned off during an FLC error. The controller is always checking the current state of the pressure switch. When the Pump 1 is not running, the switch must be open. If not, an FLC error occurs. While the pump is running, an FLC error, which was present before pump activation, is removed only if an FLO error occurs.

If an FLO error occurs or if the pump is not running, an FLC error is removed when the switch opens. When the system detects that the error message no longer exists, it will clear the error itself.

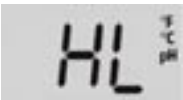


### Temperature Sensor Failure

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This display indicates that the heater has been turned off because the temperature probe is out of range. This will remain active until the unit reads a temperature between 32 degrees F and 126 degrees F.

This error should be ignored during the first hour after a power-up.



### High Limit

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HL in the display indicates the High Limit probe temperature has reached 119 degrees Fahrenheit ( 44.4 degrees Celcius ) and the heater has turned off. The error will display until the HL probe temperature falls below 119 degrees and the power is reset.

# WARRANTY

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This section is a description of your warranty. Here you will find descriptions of what is covered under your Island Spa by Artesian warranty and what can void your warranty.

## ***Lifetime Shell Warranty***

May Manufacturing, Inc. warrants the spa against loss of water due to a defect in the shell to the original owner for the life of the spa shell. In the event of a defect in the material and/or workmanship, the spa shell will be repaired or replaced at the option of the manufacturer. When submitting a claim under this warranty, you must provide us with proof of purchase, such as a copy of the invoice from the retailer where the purchase was made. You must also send us photographs of the damaged or defective areas, and the foundation the spa is resting on, and a detailed description of the problem. The information must be sent to the dealer from which you purchased your spa for review and resolution.

## ***Five-Year Surface Warranty***

May Manufacturing, Inc. warrants the interior surface of the spa against blistering, cracking, or delamination, to the original owner for five (5) years from the original date of purchase. In the event of a defect in the material and/or workmanship, the spa shell will be repaired or replaced at the option of the manufacturer. When submitting a claim under this warranty, you must provide us with proof of purchase, such as a copy of the invoice from the retailer where the purchase was made. You must also send us photographs of the damaged or defective areas, and the foundation the spa is resting on, and a detailed description of the problem. The information must be sent to the dealer from which you purchased your spa for review and resolution.

## ***Three-Year Component/Plumbing Warranty***

May Manufacturing, Inc. warrants the controls and mechanical equipment of the spa against blistering, cracking, or delamination, to the original owner for three (3) years from the original date of purchase. The filter cartridge, spa pillows, fuses and light bulbs are NOT included in this warranty, but are warranted to be free from defects at the time of delivery. Also the spa cover, ozone generator, stereo components, speakers, and related parts, and fiber optics are not included in this warranty but are covered under separate warranties from the original manufacturer. Ask your dealer for warranty details on these spa components. Warranty on any moving parts in hydrotherapy jets, and/or components will be voided if they are allowed to be adversely affected by poor water chemistry.

## ***One-Year Cabinet***

May Manufacturing, Inc. warrants its cabinets for a period of one (1) year from the original purchase date. Wood staining is excluded from coverage. Wood products require care and maintenance by the customer. In the event of a defect, the damaged wood will be repaired or replaced at the option of the manufacturer.

## ***Performance:***

In the event of any defect covered by this LIMITED Warranty, a May Manufacturing, Inc. authorized agent will correct such defect within the terms and conditions contained herein. There will be no charge for parts and labor within the above terms. However, travel charges are not covered if you live outside a normal service area of the agent. If it is determined by May Manufacturing, Inc. that the repair of the product is not feasible, a replacement spa equal to the value of the original purchaser price will be provided. **Cost for removal of the defective spa and delivery and installation of the replacement spa is the responsibility of the spa owner and will not under any circumstances be covered by May Manufacturing, Inc.**

## ***Limitations:***

This warranty is void if this Island Spa has been subjected to alteration, misuse or abuse, or if any repairs have been done by anyone other than an authorized agent of May Manufacturing, Inc. Misuse or abuse is defined as : use of the spa in a non-residential situation, water temperature outside the normal range of 32 degrees F-

## **WARRANTY cont...**

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to 110 degrees F, damage caused by clogged or dirty filter cartridges, damage to the spa from the absence of a hard cover, damage to the components from improper pH, use of any type of acid, or from chemical imbalance. Damaged caused by natural disasters such as tornados and are not covered under this warranty.

### ***Disclaimer:***

May Manufacturing, Inc. or its agent shall not be liable for any injury, loss, cost, or other damage, whether incidental or consequential, arising out of any defect covered by the LIMITED WARRANTY. The liability of May Manufacturing, Inc. under this LIMITED WARRANTY shall not exceed the original amount paid for the spa.

### ***Legal Remedies:***

This LIMITED WARRANTY gives you specific rights, and you may have other rights which vary from state to state.



# INTERIOR SPA DIAGRAM



1) Spa Pack

2) Heater



3) Therapy Pump



4) 24-hr Circulation pump



5) Flow Switch

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Please do not send products or other correspondence to the address below.

Place  
Stamp  
Here

**ARTESIAN SPAS**  
Attn: Customer Care Department  
4720 N. Lamb Blvd.  
Las Vegas, NV 89115

Mr  Ms.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone Number \_\_\_\_\_

Date of Installation \_\_\_\_\_ Spa Serial Number \_\_\_\_\_

Spa Model \_\_\_\_\_

Your Dealers Name and Location \_\_\_\_\_

What other spa brands did you consider buying? \_\_\_\_\_

***Optional Questions***

How many people are in your household? \_\_\_\_\_

What is your age bracket?    25-30    31-40    41-50    51-60    61-70    71+

What is your reason for purchasing a spa?     Health Benefits     Stress     Relief     Relaxation

Other: \_\_\_\_\_

