



COLD SERIES

Owner's Manual

Please Read & Save!
Important safety information, manufacturer's recommendations,
detailed installation, use, & care instructions.

INDEX

Service and Support.....	3
Safety Information.....	4
Site Preparation and Installation Recommendations.....	6
US Electrical Requirements and Recommendations	
240V Installation.....	7
240V Electrical Supply Configuration.....	8
120V with Connected Cord Installation.....	9
120V with Quick Connect Cord Installation	10
Getting to Know Your Spa	
Electronic Components.....	12
Plumbing Components.....	13
Filtration Components.....	13
Diverter, Air, & Waterfall controls.....	13
Jets.....	14
Filling with Water.....	14
Draining the Tub	15
Maintaining Water Chemistry	
Basic Fundamentals of Water Chemistry	16
How to Add Chemicals to the Water.....	16
Optional Components	
Optional Water Sanitation Components	17
Optional UV Sanitizer Care & Maintenance	18
General Spa Care and Maintenance.....	20
Spa Troubleshooting	21
Troubleshooting Water Chemistry.....	22

Customer Service & Technical Support



Scan the code to register your spa, submit a request for customer service, technical support or to file a warranty claim at any time or visit HotTubHub.com/support-center/

To speak with a member of our factory trained customer service or technical support team, please call:
423-349-2900, option 6, Monday – Friday from 9 am to 5 pm EST.

Providing technicians with photographs increases accuracy and expedites resolution.

You will be asked to provide the following information, most of which can be found your purchase receipt.

Spa Model _____

Spa Serial Number _____ Date of Purchase _____

Approximate Date of Spa Installation _____

READ, SAVE AND FOLLOW ALL INSTRUCTIONS !



Scan this code to watch
quick start instructional videos.

!! ATTENTION INSTALLER !!

**SAVE THESE INSTRUCTIONS & GIVE THIS MANUAL TO THE SPA OWNER.
IT CONTAINS IMPORTANT SAFETY INSTRUCTIONS ABOUT THE RISK OF FIRE,
ELECTRIC SHOCK, INJURY TO USERS, DAMAGE TO PROPERTY & THE SPA.**

Important Safety Information & Instructions

Please read the safety & user instructions carefully before installation and use.

Danger: Risk of Drowning. Cold Series products are for adult use only. They are not designed or intended for use by children under 18 or anyone with reduced physical, sensory, or mental capabilities.

Danger: Risk of Drowning. Take every measure to prevent access by children and pets, including fences and alarms. A responsible adult must supervise children at all times. The cover must be securely in place when the tub is not in use. Do not allow children to play with the tub or near it.

Danger: Risk of Electric Shock – 220V models. The electrical supply must include a suitably rated Ground Fault Circuit Interrupter (GFCI) between the main service panel and the tub that is readily accessible to the user, located at least 5 feet (1.5 m) but no more than 15 feet (3 m) from the tub.

Danger: Risk of Electric Shock. Install at least 5 feet (1.5 m) from all metal surfaces.

Danger: Risk of Electric Shock. Do not permit any electric appliances such as lights, radios, or televisions within five feet (1.5m) of the tub.

Danger: Risk of Entrapment and Drowning. Discontinue use immediately if the suction fittings are damaged, missing, or loose, and contact the Manufacturer for a replacement.

Warning: Risk of Injury. Adverse effects with certain medical conditions. Consult your physician before use if you are pregnant, possibly pregnant, obese, have a medical history of heart disease, low or high blood pressure, circulatory problems, diabetes, skin irritations, infectious diseases, or immune deficiencies.

Warning: Risk of Injury. Use of drugs, alcohol, or medication before or during tub use may lead to loss of consciousness with the possibility of drowning.

Warning: Risk of Injury. Adverse interaction with certain medications. Consult your physician before use. Some medications increase cold sensitivity, cause drowsiness, affect your heart rate, blood pressure or circulation.

Warning: Risk of Injury. Before entering, measure the water temperature with an accurate thermometer.

Hypothermia

Hypothermia is an abnormally low body temperature caused by over exposure to cold temperatures.

Hypothermia symptoms include:

Shivering	Confusion	Clumsiness
Exhaustion	Trouble speaking	Poor Judgment
Weak pulse	Lack of awareness	

The effects of severe hypothermia include:

Difficulty with fine motor skills, rigid muscles, physical inability to get out of the tub, changes in heart rate, respiratory and nervous systems, and loss of consciousness resulting in the danger of drowning.

Danger: Risk of Drowning: Sudden immersion in cold water may cause inability to control breathing, panic, impaired mental ability, changes in heart rate, blood pressure, and nervous system.

Always enter feet first.

Always keep your head above water.

Always use with supervision until you understand your natural response and how you react.

Pump turns off automatically after 5 minutes. To prevent over exposure, always exit after 5 minutes when the pump turns off.

Danger: Risk of Hypothermia. Prolonged immersion in cold water may induce hypothermia. Get out immediately and call 911 if you experience violent shivering, bluish skin, or other severe symptoms.

Danger: Risk of Drowning or Injury. Consuming alcohol or drugs before or during use can dramatically increase the risk of fatal hypothermia.

Hyperthermia

Hyperthermia is an abnormally high body temperature caused by over exposure to heat.

Hyperthermia symptoms include:

Dizziness	Fainting	Blurred vision
Fatigue	Headache	Muscle cramps
Delirium	Poor Judgment	Flushed or pale skin

The effects of hyperthermia include:

Lack of awareness, failure to perceive heat, physical inability to get out of the tub, and loss of consciousness resulting in the danger of drowning.

Important Safety Information & Instructions

Please read the safety & user instructions carefully before installation and use.

Warning: Risk of Injury. Water temperatures should never exceed 104°F (40° C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for healthy adults. Lower water temperatures are recommended for young children and healthy adults in the tub for more than 10 minutes.

Danger: Risk of Hyperthermia. Prolonged immersion in hot water may induce hyperthermia.

Warning: Risk of Injury. Pregnant or possibly pregnant women should consult a physician before use. Excessive water temperatures have a high risk of fetal damage during early pregnancy.

Warning: Risk of Injury. Do not use immediately after strenuous exercise.

Warning: Risk of Injury. Use caution when entering and exiting. Wet surfaces are slippery.

Warning: Risk of Injury. Cover with an approved locking cover to discourage unauthorized entry when the tub is not in use.

Caution: Always replace components with like components provided by the Manufacturer.

Caution: Do not open the tub control box without proper instruction or direction from a technical support representative.

Caution: Do not connect to the power supply until the equipment covers and cabinet panels are securely in place.

Caution: The installation site must include an adequate system to drain water away from the tub foundation and components.

Caution: Maintain water chemistry following the Manufacturer's instructions

Virginia Graeme Baker Pool & Spa Safety Act Suction Safety & Maintenance Instructions

Warning: Read and follow all instructions in this manual and suction fittings. Failure to follow these instructions can cause severe injury or death.

Inspect suction drain covers frequently and replace if damaged, broken, cracked, missing, or loose.

If the fitting is missing or damaged, replace it immediately with a fitting of an equivalent or higher rating. Installing a suction fitting with a lower rating could result in entrapment, which can cause serious injury, including drowning.

Discontinue use immediately if suction fitting is missing, broken or loose.

Turning a pump on creates powerful suction at the fitting. Instruct users not to come into contact with the fitting in any way that blocks the suction outlet. If any part of a user's body blocks this fitting, serious personal injury or drowning may occur.

Warning: Suction Entrapment Hazard. Suction in suction outlets and suction outlet covers that are damaged, broken, cracked, missing, or loose may cause these entrapment hazards, resulting in severe injury or death:

Hair Entrapment: Hair entangled in the suction cover.

Limb Entrapment: Inserting a limb into a suction opening or cover that is damaged, missing, or loose can result in a mechanical bind or swelling of the limb.

Body Suction Entrapment: Negative pressure applied to a large portion of the body or limbs.

Evisceration / Disembowelment Entrapment: Negative pressure applied directly to the intestines through an unprotected suction outlet or cover that is damaged, missing, or loose.

Mechanical Entrapment: Jewelry, clothing, hair, fingers, or toes caught in an opening.

Reduce the Risks of Entrapment Hazards:

Immediately discontinue use if any suction outlet component is damaged, missing, or loose.

Replace damaged, missing, or loose suction components immediately.

Inspect suction components at least monthly.

Replace the suction drain cover within seven years from the installation date. This is a mandated regulation and is not covered under the Manufacturer's warranty.

SAVE THESE INSTRUCTIONS

Installation Site Requirements

Location & delivery considerations

Choosing a Location

The right location requires careful consideration of aesthetics, convenience and maintaining your tub.

- Choose a location out of direct sunlight, particularly in warm climates. External factors such as high ambient temperatures and sun exposure directly impact cooling ability.
- Choose a location where water naturally drains away from the tub to prevent water near the foundation.
- Choose a location away from landscaping sprinklers, gutters, downspouts, roof overhangs, and power lines.
- Close proximity to a water hose will help with maintenance and topping off the water level.
- Consider the proximity to your house. Is there a clear pathway, especially in cold weather? Consider the adverse effects of wind, sun exposure, and trees with minimal falling debris to block sunlight.
- Make sure the installation meets your local codes, covenants, and restrictions. Some communities require security precautions such as fences with locking gates.

Delivery Considerations

The pathway from the street to the installation site must be straight, relatively flat, at least 2' wider than the tub and free of obstacles like stairs, overhead cables, balconies, roof overhangs, walls, fences, small gate openings, and tree limbs. If the pathway isn't straight, each turn must have ample room to rotate the tub without obstruction.

Manufacturer's General Installation Recommendations

The combined weight of a single-person tub, water, and user can easily reach 1,500 lbs; large models can weigh over 3,000 lbs. It's imperative to place the tub on a level concrete foundation that can support the weight of the tub when filled to capacity without shifting or settling.

A drainage system that moves water away from all four sides is critical. When the drainage system is appropriately designed, splash-out, overflow, drainage for maintenance, rainfall, and runoff are quickly diverted away from the tub.

Site Preparation Recommendations

The Manufacturer recommends hiring qualified, licensed professionals for construction and electrical installation that may be required for the installation site. Always comply with local ordinances and site-specific installation requirements that exceed the Manufacturer's recommendations. Before you begin, contact local utilities to ensure no underground lines are in your chosen site.

- Place on a level, slip-resistant, concrete pad a minimum of 4" (10 cm) thick pad reinforced with rebar to support the weight of the tub when filled to capacity.
- A minimum clearance of 3 feet (1m) on all four sides of the tub is required for maintenance and service. Adequate air flow in cabinet vents for the chilling unit is imperative.
- The concrete pad should be at least 3 feet (1.25 m) wider and longer than the overall dimension of the tub. New concrete must cure for at least 72 hours before placing the tub.
- If you live in a climate with freeze/thaw zones or an area prone to ground shift, poured concrete footings must extend below the freeze line or water table to prevent the possibility of shifting.
- Do not pour concrete over the electrical rough-in.
- The installation site must be a safe distance from areas prone to run off, flooding or standing water. If necessary, incorporate a retaining wall to ensure the foundation and components remain dry at all times.
- If your site plan includes decking to give the appearance the tub is recessed, the deck must include removable or hinged access panels and minimum clearance of 3 feet' (1 m) on all four sides.

Cool Series tubs are self-contained. The entire tub must be installed above ground.. Installing any portion below grade or backfilling against the cabinet will void the Manufacturer's warranty.

Installing indoors or enclosed areas

Follow all of the Manufacturer's installation recommendations if placing your tub indoors or in an enclosed area. Because local building and electrical requirements vary, the Manufacturer recommends hiring a competent, licensed contractor to evaluate, design, and build your indoor site. A bathroom may share similar characteristics, but a bathtub is drained after each use. Cold Series tubs are not, typically requiring additional support and increased ventilation capable of continuously removing moisture and chemical gases from the air. Walls, floor coverings, and other finish materials must withstand higher humidity and moisture without deterioration.

Make sure the tub is completely level before filling. Do not level the tub with shims.

240V Electrical Requirements

Cold Series Models with Hardwired Connection

Installed in the United States operating on 60 Hz, alternating current at 240V

Cold Series Dual Zone models share the same power supply, but each side is an independent, self contained tub with a separate control box, topside, pump, drain, and plumbing system.

Danger: Risk of Electrocution. The owner is responsible for hiring a qualified, licensed electrician to install all wiring and make electrical connections in accordance with the National Electric Code (NEC), state, and local electrical codes in effect at the time of the installation. Incorrect wire gauge sizes or improper electrical connections may result in blown fuses, component damage, fire, electrocution, and injury. Damage caused by improper wiring voids the Manufacturer's warranty and all listings from independent listing agencies.

Danger: To Reduce the Risk of Electric Shock:

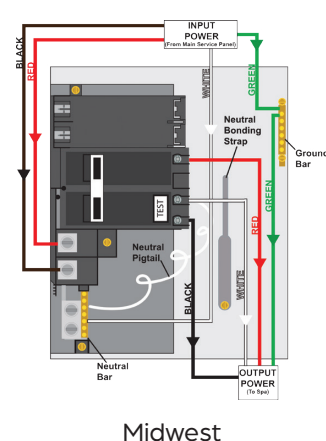
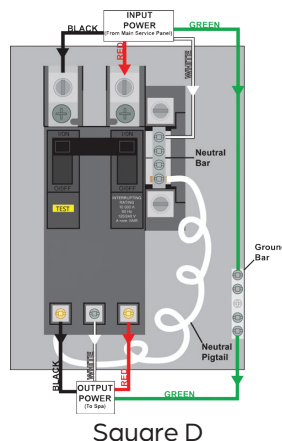
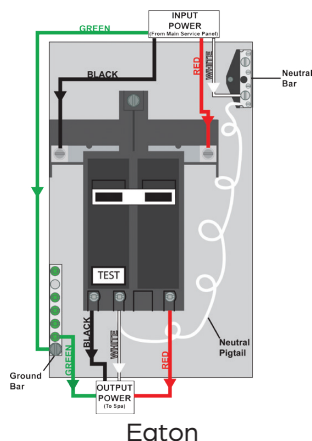
- The tub must be permanently connected (hard wired) to a power supply and grounding system protected by class 'A' double-pole Ground Fault Circuit Interrupter (GFCI)
 - The power supplied must be a dedicated circuit with no other appliances, lighting, or electronic components powered by the circuit.
 - All connections must be made with continuous copper conductors only.
 - Wires, circuit breakers, and fuses, must all be sized to accommodate the Total Ampere load.
 - The minimum wire size is # 6/3 c/w ground (6 gauge/4 conductor).
 - Electrical service must be housed in a weatherproof junction box and include a suitably rated Ground Fault Circuit Interrupter (GFCI) between the main service entrance and the tub to open all ungrounded supply conductors in compliance with the National Electrical Code and independent listing agencies.
- The GFCI must be readily accessible to the user, installed at least 5 feet (1.5m) but no more than 15' (3m) from the tub.
 - The service panel, GFCI, and terminal block wiring must include suitably rated, non-metallic, water-tight conduit with water-tight fittings at all openings. Damage caused by exposed wiring is not covered under the warranty.
 - All electrical connections must be secure and have adequate strain relief to prevent movement at the connection points.
 - All field-installed metal components and accessories, such as handrails, ladders, drains, and hardware, within 5 feet (1.5 m) of the tub must be bonded to the equipment grounding bus with solid copper conductors no smaller than No. 6 AWG..
 - The wiring specifications in this manual are for standard installations where the main power supply is within 40 feet (12m) of the tub. The electrician must make appropriate modifications if the main power supply is more than 40 feet (12m) away .
 - Electrical connections to the control terminal must comply with the color coding on the terminal block or the wiring diagram inside the control box lid. The electrical instructions and wiring diagrams in this manual vary by model and are included as a guideline only for the licensed electrician.
 - Do not permit any electrical appliances like lights, telephones, smart devices, radios or televisions within five feet (1.5m) of the tub. Failure to maintain a safe distance may result in death or serious injury from electrocution if the appliance falls into the tub.

Caution: The tub must be filled with water before the GFCI is turned on to prevent damage to critical components. The Manufacturer's warranty does not cover damage caused by turning the tub on before it is filled with water.

GFCI Wiring Diagrams

GFCI wiring diagrams for some of the most readily available brands are included to illustrate the differences in the input, output, grounding lug, neutral block, and wiring connection locations, which vary by Manufacturer.

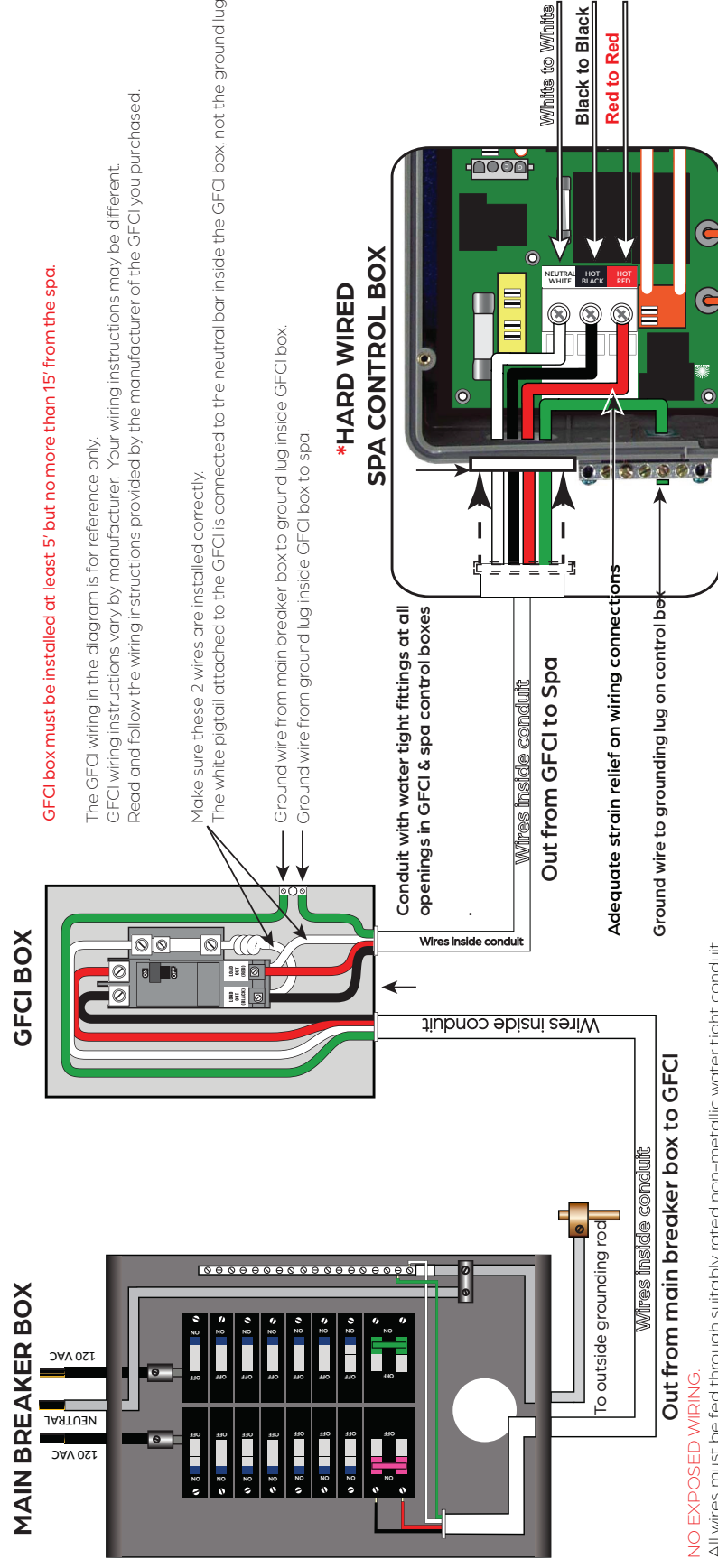
Always follow the installation instructions that are included with the GFCI you purchase.



240V / 50 amp Wiring Requirements & Diagrams

Cold Series Models Installed in the United States operating on 60 Hz, alternating current at 240V

ALL WIRING AND ELECTRICAL CONNECTIONS MUST BE PERFORMED BY A LICENSED ELECTRICIAN IN ACCORDANCE WITH NEC, STATE, & LOCAL CODES IN EFFECT AT THE TIME OF INSTALLATION. DAMAGE AND FAILURE CAUSED BY IMPROPER WIRING & MOISTURE IS NOT COVERED UNDER THE MANUFACTURER'S WARRANTY.



NO EXPOSED WIRING.

All wires must be fed through suitably rated non-metallic water tight conduit.

ALL CONNECTIONS MUST BE WATER TIGHT.

Conduit must be connected with water tight fittings at every opening.

Water tight conduit and fittings prevent wire damage and protect components from moisture damage.

ALL WIRES MUST HAVE ADEQUATE STRAIN RELIEF

Strain relief allows wires to bend and move within the relief area. Without it, wires can only move at the connection points, leading to loose connections, damaged wires, & component failure.

*Spa control box wiring configuration shown is for reference only.

Refer to and follow the model specific supply line color coding on the terminal block or the wiring diagram located inside the cover. The torque range for supply line connections to the terminal block is 27 to 30 in. lbs. Over tightening will damage the circuit board.

120V Electrical Requirements

Cold Series Plug-In Models with Quick Connect Cord

Installed in the United States operating on 60 Hz, alternating current at 120V

All electrical connections must be performed by a qualified licensed electrician in accordance with the National Electric Code (NEC) following state and local electrical codes in effect at the time of the installation.

Electrical Supply Requirements:

Voltage	Breaker	Poles	Wires
120V	20 Amp Dedicated	2	3

Danger: Risk of Electric Shock. Connecting the tub to an improperly wired circuit or altering or modifying the cord or plug in any way will eliminate many of the tub's built-in safety features, which may result in fire, electrocution, other injury, damage to property, or damage to the tub. Damage caused by improper electrical installation or use is not covered under the Manufacturer's warranty and terminates all listings from independent listing agencies.

Danger: To Reduce the Risk of Electric Shock:

- A 4-foot Quick Connect cord with an appropriately rated GFCI is included for use with the tub only. Never connect any cord to the tub that the Manufacturer did not supply, and never use the Quick Connect cord with any other electronic device.
- Always connect the Quick Connect power cord to the tub side first and verify the connection is secure before plugging the power cord into the outlet.
- A cord clamp is included and must be used to prevent accidental disconnection of the Quick Connect cord, wire strain at connection points, and sharp bends in the power cord.
- If the Quick Connect cord is accidentally disconnected from the tub, unplug the cord from the outlet before touching the Quick Connect cord or reconnecting it to the tub.
- Power to your tub must be supplied by a dedicated circuit not shared with any other appliance, lighting, or electronic device.
- The connection port in the tub must be within 3½ feet of the dedicated outlet, leaving ample slack on both ends of the Quick Connect cord to relieve wire strain at the connection points and prevent sharp bends. If the tub must be more than 3½ feet from the outlet, contact the Manufacturer for a longer Quick Connect cord.
- Do not use an extension cord or surge protector. Damage to components caused by low voltage is not covered under the Manufacturer's warranty.

- Never cut, splice, modify, or alter the Quick Connect cord, GFCI, or metal prongs on the plug in any way.
- Do not permit any electrical appliances, including lighting, telephone, audio, or video, within 5 feet (1.5m) of the tub. Failure to maintain a safe distance may result in death or serious injury from electrocution if the appliance should fall into the tub.
- Never touch or come into contact with the Quick Connect cord or any other electric appliance when you are in the tub or any part of your body is wet.
- Do not use the tub if the Quick Connect cord is damaged. First, remove the GFCI plug end from the outlet, then unplug from the connection port in the tub. Do not use the tub until the cord is replaced. Failure to do so may result in serious permanent injury or death by electrocution.
- Do not run the Quick Connect power cord across walkways, through windows, or doorways. Do not bury the cord. Keep it away from lawnmowers, weed eaters, and other equipment that may damage it.
- Test the GFCI before each use. If the GFCI works properly, pressing the test button will turn the tub off. Pressing the reset button will turn it back on. If the tub does not turn on and off as expected, unplug it immediately and do not use it until your electrician corrects the ground current fault.

Caution: Replace the protective covers on the connection port and Quick Connect plug when the cord is not in use.

Caution: Fill the tub with water before plugging the Quick Connect cord into the outlet to prevent damage to critical components. The Manufacturer's warranty does not cover damage caused by turning the tub on before filling.

Caution: When the tub is filled with water, keep it plugged in continuously under normal conditions. Your tub is designed to perform maintenance cycles periodically that require a permanent connection to the power supply.

Caution: Always unplug the Quick Connect cord from the outlet before draining, performing maintenance, or servicing.

The cord clamp must be installed to prevent accidental disconnection, wire strain at connection points, and cord damage. If the tub cannot be placed within 3 ½ feet of the outlet, contact the Manufacturer for a longer Quick Connect Cord. Before remounting the cord clamp, feed approximately 4" of cord between the clamp and the connection port.

120V Electrical Requirements

Using the Quick Connect Cord

Using the Quick Connect Cord



Quick Connect Port in Tub

Make sure the cord is plugged in securely before plugging the GFCI end into the outlet.



Cord Clamp

Mounted in the cabinet near the Quick Connect Port



Quick Connect Cord

Plug this end into the Connection Port before plugging the GFCI end into the outlet.

Start Up – Step by Step:

- When placing the tub, verify the connection port is within 3½ feet of the dedicated outlet.
- Remove the protective covers from the connection port on the tub and cord. Plug the cord into the connection port on the tub.
- Remove the mounting screw from the cord clamp. Widen the clamp opening, put the cord inside and slide the clamp toward the hole for the mounting screw. Feed approximately 4" of the slack power cord between the clamp mount and the connection port to prevent wire strain.
- Squeeze the clamp around the cord and screw the clamp onto the tub.
- Fill the tub with water.
- Verify the cord is securely connected to the tub. Plug the cord into the dedicated outlet and press the reset button on the GFCI.

Cold Series Components

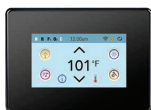
Electronic Controls, Pumps, & Water Temperature Maintenance

Cold Series Dual Zone models share the same power supply, but each side is an independent, self contained tub with a separate control box, topside, pump, drain, and plumbing system.



The Topside Control displays essential information about your tub and is used to control the water temperature, filtration cycles, pump, lighting and other functions. Some topside buttons may temporarily disabled during maintenance cycles. For example, pressing the PUMP button may not turn the pump off until the cycle is complete. You can safely use the topside controls from inside or outside the tub.

Topside controls vary by model.



The Control Box: computerized controls that regulate user functions, automatic maintenance, diagnostics, and safety features. For example, the controls turn the pump on when it's time to begin a filtration cycle and turn it off when it is complete.

(For 240V 50 amp Hardwired models only.)
Remove the cabinet panel below the topside controls to access the tub controls. *The cold water side cannot be converted from 120V to 240V.*

The Circulation Pump is an energy-efficient low-flow pump that steadily circulates water through the chilling unit and filtration system, keeping the water clean and cool. *If your tub doesn't have a heater and is exposed to freezing temperatures, continuous circulation won't prevent freezing. When the ambient temperature is 40°F, drain and winterize your tub.*



A Therapy Pump (if equipped) has a higher flow rate than a circulation pump, so it can move a large volume of water much faster, generating ample power for every jet to deliver a powerful massage. If the pump button is not pressed to turn the pump off, the hot water pump turns off automatically after 20 minutes; the cold water pump turns off automatically after 5 minutes to prevent over exposure.

The Manufacturer installs the Chilling Unit; additional assembly is not required. The chiller is located inside the cabinet behind the vented panels. Air circulation inside and around the cabinet is critical to the chiller performance. Keep plants, towels, steps, furniture, the cover, and other objects at least 3' from the cabinet vent. Obstructing air flow, even for a very short time, can cause overheating and irreparable damage that isn't covered under the warranty.

The minimum temperature setting is 37°F. However, external factors such as high ambient temperatures and sun exposure directly impact the cooling ability. Warm climates with an ambient temperature of 90°F or exposure to direct sunlight may limit the chiller's capacity to cool the water to your cold water temperature setting. Water temperatures will be coolest in the early morning and late evening.



The Water Heater (if equipped) is inside the stainless steel tube below the tub control box. When the low ambient temperature is 40°F, increase the water temperature setting a few degrees and check the tub regularly. If the water temperature is 3°F below the temperature setting or falls below 37°F, monitor the tub carefully to prevent freezing. *The cold water side cannot be converted from 120V to 240V.*

Cold Series Components

Plumbing, Filtration, Air, & Water Feature Controls

Cold Series Dual Zone models share the same power supply, but each side is an independent, self contained tub with a separate control box, topside, pump, drain, and plumbing system.

Plumbing Components



T Stems (or slice valves) are installed in the plumbing lines so components can be serviced without draining the water. Pushing the T stem down seals the plumbing line. When service is complete, the T stems are raised to restore water flow. Make sure T stems are up and locked before power is supplied. If the locks won't hold the T stem up, disconnect from the power supply and do not use the tub until they're replaced.



The Plumbing Unions connect the plumbing lines to the pump, tub controls, heater, and chilling unit. Make sure the unions are tight before filling the tub with water. If you develop a leak inside the cabinet, ensure the unions are tight, and the seals are properly seated and in good condition. *If tools are used to tighten unions, wrap them with a towel or heavy cloth and rotate them no more than 1/4 turn to prevent over tightening.*

Air in the Plumbing Lines & Pumps

If you hear a "humming" sound, the pump is surging, or the jets don't work when you turn the pump on, there may be an airlock in the pump. To release the airlock, slowly loosen the union on top of the pump and tighten it when water trickles from the union. Air trapped in the pump or plumbing lines can damage the pump instantly. Never allow a pump that is not primed to run for more than 2 minutes.



The Filter and Skimmer: The filter traps fine particulates like dirt, hair, and body oil; the skimmer traps larger debris. Accumulating deposits obstruct water flow, which makes jets less powerful and causes overheating that can damage the tub.

To remove the filter:

Lift the lid off the skimmer.
Rotate the filter counterclockwise until the screw separates from the filter housing, lift the filter out

Reverse the process to install.



Wipe debris from the skimmer regularly.

Soak filters in clean water & rinse between pleats monthly.

Replace the filters every 6 months.



Suction Drain Covers in the footwell protect users from powerful suction when the pumps are on and prevent debris from entering the plumbing lines. Instruct users to keep their bodies, hair, clothing, and jewelry away from the suction drains. Blockages and debris on the suction drain covers obstruct water flow, which may damage your tub.

Remove debris from the drain cover surfaces when you exit and inspect regularly to ensure it is in good condition and securely in place. Discontinue use if they are missing, damaged, or loose. Contact the Manufacturer for replacements.

Suction drain covers must be replaced within 7 years of installation. This is a mandated requirement that is not part of the Manufacturer's warranty.



Hot Water Side Air Control located on the lip regulates air injection into the water. Rotate the air control in one direction to maximize jet pressure. Rotate in the opposite direction to reduce airflow or stop it entirely.

Close the air controls when you exit. Seasonal air temperatures have a direct impact on water temperature.



The Water Feature Control (if equipped) is located on the lip rotates to increase and decrease flow through the water features. Rotate in one direction to turn on and increase the water flow. Rotate in the opposite direction to decrease or stop it.

Turn water features off when you exit to prevent water loss, leaks, and component and cover damage.

Cold Series Components

Jets, Drain Valve, & Filling with Water

Cold Series Dual Zone models share the same power supply, but each side is an independent, self contained tub with a separate control box, topside, pump, drain, and plumbing system.



Therapy Jets (if equipped) swirl, pulsate, and stream to produce a range of water pressure and variety of massage options – from gentle and relaxing to robust and reinvigorating – to meet your changing needs.

Pressure from many of the larger therapy jets can be adjusted by rotating the outer ring. If a jet is adjustable, the ring will rotate easily. Rotate clockwise to decrease flow. Rotate approximately 1/4 turn to close the jet. To open or increase flow, rotate counterclockwise. When the outer ring is turned approximately 1/4 turn, it will “stop,” indicating it’s fully open. Rotating further will loosen screw threads and unseat the jet from the housing.

Make sure all jets are open when you exit and add chemicals so water circulates through all of the jets.



The Drain Valve is in the cabinet panel on the right side of the topside control. Connect your garden hose to control where the water goes when your tub is drained. Check to be sure it’s closed when you fill your tub.

The Water Level

Fill to the minimum water level marker inside the tub. Generally, the water level should be approximately 1" above the highest jets in the seating area, excluding neck and shoulder jets. Neck and shoulder jets must always be above the water line.

Air and restricted water flow can damage components if the water level is too low. If the water level or bather load is too high, overflowing water may damage critical components. It's important to pay attention to the water level as bathers enter and exit, and you should expect to add or remove water depending on the bather load. Make sure pillows, water features, rotating valves, and topside controls are never submerged. When you exit the tub, check the water level and add water if necessary.

Draining and Filling in Cold Weather

Under normal circumstances, water should only be drained when the ambient temperature is above freezing. If water must be drained when temperatures are freezing or below, the process must be completed quickly, and the tub must either be refilled or winterized immediately. Water remaining in the lines will freeze quickly, and damage caused by freezing isn't covered under the warranty.

Water Disposal

Heavily treated water can be harmful to the environment. Follow State, Local, and Community requirements for water disposal. Typically, if the pH and chemical levels are correct, you can drain the water on your lawn, provided it drains away from the tub, you take adequate measures to keep the water out of public storm drains, and there is no potential for erosion or flooding on surrounding properties.

Always fill the tub with water before connecting to the power supply.

Always disconnect the power supply before draining, maintenance, or servicing the tub.

Each side of a dual zone tub is a self contained, closed system with separate drains & plumbing systems. Each step must be followed on both sides.

Filling with Water

- Open the drain valve.
- Rinse the acrylic surface and wipe it with a clean, soft cloth. Close the drain valve.
- Lift the skimmer lid and remove the filter. Rotate the filter counterclockwise until the screw separates from the filter housing, lift the filter out and place it inside the tub while it fills with water. *Never install a dry filter.*

Cold Series Components

Filling, Draining, & Winterizing the Tub

Cold Series Dual Zone models share the same power supply, but each side is an independent, self contained tub with a separate drain and plumbing system.

- Place a garden hose inside the filter fitting and turn the water on. Filling the tub through the filter housing reduces the risk of an airlock when power is supplied.
- Make sure water flows through all of the jets. Rotate jets to open and center diverters if necessary.
- Check the drain valve to be sure it's completely closed.
- When the water level reaches the minimum water level marker, remove the garden hose and turn the water off. Screw the filter into the fittings, replace the skimmer lid.

Draining the Water

Each side of a dual zone tub is a self contained, closed system with separate drains & plumbing systems. Each step must be followed on both sides.

- Turn the GFCI off or unplug the cord from the outlet.
- Twist the drain valve left and right while pulling outward until the valve is approximately 1" from the cabinet.
- Remove the cap, exposing the threads.
- Attach the water hose to the drain and push the valve into the cabinet approximately 1/2" to open the drain. If the water doesn't drain, push the valve in slightly to open.
- When the tub is empty, remove the hose, replace the drain cap, and push the valve back in until it's flush with the cabinet.

Draining for Winter or Storage

You're encouraged to hire a professional to drain the tub for winter or long-term storage. Draining the tub as you would for routine maintenance is inadequate. All water must be removed from the filtration system, pumps, chilling unit, heater, jets, hoses, plumbing lines, and interior surfaces. Damage caused by freezing, standing, or untreated water is not covered under the Manufacturer's warranty.

- Turn the GFCI off
- Follow the instructions to drain your tub and dispose of the water.
- When the tub is empty, loosen unions on both sides of the heater, pump, and chilling union.
- Lift the lid from the filter skimmer and remove the filter. Set a wet-dry vacuum to blow, not vacuum; put the vacuum hose inside the filter canister and blow out all the water. **DO NOT REINSTALL USED OR WET FILTERS!**
- Place the hose over each suction fitting for 30 seconds to blow all the water out of the suction line.
- Rotate the jets, water features, and air controls to open. Starting at the top of each seat working down, blow the water out of each jet until all of the water is removed. Repeat this process at least twice, moving from the top to the bottom with every jet in every seat until all the water is removed.
- Vacuum all standing water in the seats, footwell, and inside the tub cabinet.
- Clean the acrylic surface thoroughly with a soft cloth and wipe until completely dry.
- Replace the drain cap, close the drain, and tighten the plumbing unions.
- Allow the cabinet inside to air dry before replacing the cabinet panels.
- Replace the insulating cover and lock it in place.
- Cover the tub with watertight tarp to protect it from harsh weather and debris. Brush snow off to prevent cover damage. Check regularly to make sure it's dry.

Antifreeze is not recommended. Even with thorough flushing, residual antifreeze may irritate skin and eyes and make water chemistry challenging to balance. When the tub is empty, o-rings and seals dry out. When the tub is refilled, inspect plumbing unions for leaks and reseal or replace damaged seals if necessary.

Water Chemistry

Adding Chemicals

Water Chemistry

Each step of a water maintenance routine requires balancing the previous steps within the recommended ranges. The omission of any step or failure to adjust to recommended ranges can damage the tub and cause discomfort for bathers. Always follow the instructions on the label when adding chemicals or using test strips. Never touch the test of the strip, as it may alter your results.

Step 1.) Balancing Total Alkalinity (TA)

The recommended total alkalinity level is between 80 and 120 ppm. The Total Alkalinity (TA) measures the water's resistance to changes in the pH. TA is like a tether that holds the pH in place. If the TA is low, the pH level fluctuates quickly, easily, and significantly. Low TA can be corrected with a pH increaser. If the TA is high, the pH level is elevated. High Total Alkalinity levels can be adjusted with pH decreaser. When the Total Alkalinity is within the recommended range, proceed to the next step.

Step 2.) Balancing Calcium Hardness (CH)

The recommended calcium hardness level is between 150–250 ppm. Calcium Hardness is a measurement of the total dissolved calcium in the water. Calcium helps control the corrosive nature of the water. Calcium-low (CL) water, commonly called "soft" water, is highly corrosive and may stain the acrylic surface. If your water passes through a softener, you should bypass it when filling your tub. Calcium-high (CH) water, commonly called "hard" water, causes scaling on the tub and the components. Calcium hardness can usually be corrected with a mixture of 75% "hard" and 25% "soft" water. If "soft" water is not available, add a stain and scale inhibitor according to the label instructions. Once the CH is balanced, it usually remains stable and shouldn't change when small quantities of water are added. When the Calcium Hardness is within the recommended range, proceed to the next step.

Step 3.) Balancing the pH

While pH levels between 7.2 and 7.8 are acceptable, the ideal range for bather comfort is 7.4 to 7.6. Maintaining pH within the acceptable range is imperative for the efficiency of sanitizers, the comfort of bathers, and the prevention of equipment deterioration. Problems become more severe the further the pH moves outside the acceptable range. When the pH level falls below 7, sanitizer will dissipate rapidly, the water may irritate users, and the tub equipment may corrode. The pH can be increased with pH/Alkalinity Up. If the pH level is too high, the sanitizer is less effective, scale may form on the

surface and components, the water may become cloudy, and fibers in the filter cartridge will clog, obstructing water flow. Decrease the pH with pH/Alkalinity Down. If pH up or down is added to the water, wait two hours before testing the pH levels again. Checking the pH level every week is essential. When the pH is within the recommended range, proceed to the final step.

Step 4.) Maintaining the Sanitizer Levels

If the tub has an optional UV Sanitizing System, maintain a free chlorine level of .5 to 1 ppm.

Sanitizers kill algae, bacteria, and viruses while preventing the growth of unwanted organisms in the water. If sanitizer levels are too high, skin, lungs, and eyes may be irritated. Always maintain the recommended levels of sanitizer you are using. Check your sanitizer and pH levels before each use and at least twice weekly, even if the tub is not in use.

Warning: To prevent the risk of injury:

- Handle tub chemicals with care.
- Risk of chemical reaction and toxic fumes.
- Never mix Bromine, Chlorine, or other chemical sanitizers!
- Always dissolve chemicals in warm water. Do not add dry chemicals directly into the tub.
- Read and follow the instructions on the label.
- Always wear safety goggles and gloves.
- Do not enter if chemicals exceed the recommended levels.

Do not use tri-chlor chlorine, bromo-chlor-dimethyl-hydantoin (BCDMH), compressed bromine or chlorine tablets, acid of any kind, hydrogen peroxide, enzymes, or any other chemical not recommended by the Manufacturer.

Adding Chemicals

Each side of a dual zone tub is a self contained, closed system with separate drains & plumbing systems. Each step must be followed on both sides.

- Stir chemicals in warm water until dissolved. Use care not to splash chemicals while stirring.
- Measure the recommended amount of the first chemical following the instructions on the label. Replace the lid.
- Stir the chemical in warm water until dissolved.
- Turn the pump on. Pour into the tub.
- Repeat with each chemical.
- When all chemicals have been added, run the pump for 20 minutes with the cover off.
- Replace and lock the cover.

Water Chemistry

Filter Care, Optional Sanitizing Systems

Filter Care and Replacement

Each side of a dual zone tub is a self contained, closed system with separate drains & plumbing systems. Each step must be followed on both sides.

Filters catch small particulates like hair, lotion, and body oil. Over time, filter fibers break down and become saturated. Your filters should be cleaned monthly or sooner if jets seem less powerful or the water is hazy or discolored. *Replace the filter every three to four months.*

Never operate the tub when the filter is not in place.

- Turn the GFCI off or unplug the power cord from the outlet, and remove the skimmer lid and filter.
- Use a high-pressure spray nozzle on your garden hose to rinse between each pleat.
- Allow the filter to air dry completely.
- Brush between each pleat with a fine brush. Never use a wire brush.
- Place the filter in a bucket of water until it's saturated.
- Screw the filter in and replace the skimmer lid.

Always turn the GFCI off before removing the filters.

Never put your filter in the dishwasher.

Never put a dry filter in the filter in the tub.

Chemical Safety Reminders

- Wash your hands after handling chemicals.
- In case of accidental contact or ingestion, follow the emergency advice on the product label. If a doctor's visit is needed, take chemical containers with you.
- Clean up spilled chemicals immediately with a water hose. To ensure safety, thoroughly saturate the surrounding area with fresh water, especially areas used by children and pets.
- Never use a vacuum to clean up chemical spills.
- Keep chemicals in their original container with the lid tightly closed when not in use.
- Keep chemicals away from children and pets.
- Store chemicals in a cool, dry, well-ventilated place. Do not expose to extreme temperatures or bright light.
- Never allow the water from your tub to run into public water sources.
- Never smoke when handling chemicals.
- Do not store chemicals inside the tub cabinet.
- Do not add chemicals when bathers are in the tub.
- Inhaling fumes or chemicals in contact with your eyes, nose, or mouth is dangerous.
- Never use muriatic acid, hydrogen peroxide, household bleach, enzymes, or any other chemical the

Manufacturer has not approved.

Ozone Generator(if equipped): Ozone generators do not replace chemical sanitizers, but they do reduce chemical consumption. Ozone breaks down dissolved solids and increases the oxygen in the water, making chemical sanitizers more efficient and making it easier to maintain water chemistry. The ozone generator does not require regular maintenance but may become less effective over time. Under normal use, the ozonator should be replaced every 12 months.

Optional UV Sanitizer(if equipped): UV sanitation doesn't eliminate chemicals, but it does reduce chemical consumption. When UV light combines with ozone, a short-lived and environmentally safe chemical reaction occurs, creating hydroxyl radicals that eliminate sediments, metals, salts, and complex organic matter that may be present in your water. Disinfection only occurs as water circulates through the system, and eventually, all of the water circulates through, but chemical sanitizers must be used to destroy microbes that survive or are newly introduced.

Since UV light must reach the bacteria, the system's effectiveness is dependent upon exposure time, lamp intensity, and equipment maintenance. Your water must be clear and the quartz sleeve must be kept clean. Murky water creates a barrier between the UV rays and micro-organisms, blocking the transmission of UV light waves and preventing the direct contact required for disinfection. Organic matter, sediment, and water with high mineral content can coat the quartz sleeve, resulting in lowered doses and reduced disinfection.

Care Recommendations

Routine Cleaning & Maintenance

Caring for the Tub Surface

Your tub was cast from durable and resilient acrylic. The surface is dirt and stain-resistant, requiring very little care. When needed, wipe the surface with warm water and a soft cloth. Avoid using household cleaners and detergents; the residue will dull the shine. Never use abrasive, ammonia, chlorine, or citrus-based cleaners, which can mar the finish and may react negatively with the chemicals in the water. Keep cover on when not in use. Exposure to the elements may cause irreparable damage that is not covered under the Manufacturer's warranty.

Caring for the Cabinet Panels

Your tub cabinet is virtually maintenance-free. You never need to wax, paint, or seal it. When necessary, rinse the cabinet with a moderate-pressure nozzle on a water hose. Rub with a damp, soft cloth to remove stubborn dirt. Never use abrasive cleaners or a pressure washer, which may scar the cabinet.

Caring for the Pillows

Foam core pillows are coated in water-resistant vinyl. Prolonged contact with chemical sanitizers will damage the vinyl coating. Foam cores will retain water if the vinyl coating is damaged. To prevent premature deterioration and discoloration, wipe chemical residue off periodically with clear water and a soft cloth. Avoid oil or alcohol-based vinyl protectors, which can damage the pillow and adversely affect water chemistry. For added protection, remove the pillows after each use, dry them with a soft towel, and store them in a cool, dry place.

Caring for the Jets

If your tub is equipped with removable jets that become difficult to rotate, you may need to remove mineral deposits that accumulate over time. Turn the GFCI off and rotate the outer ring counterclockwise until it reaches its natural "stop." Continue turning and pull outward gently to remove the jet. Place jets in a bucket of equal parts water and white vinegar overnight. Rinse with warm water. Remove stubborn debris with a soft bristle brush. Do

not use steel wool or a wire brush. When clean, place the jet inside the housing, tap gently to engage, and rotate clockwise until it's securely in place. Have your water tested if you find heavy calcium deposits on your jets.

Caring for the Lights

Lens covers are permanently affixed. Do not attempt to remove them for cleaning. To remove surface debris, wipe with a soft cloth.

Caring for the Vinyl Cover

The foam cores protect the tub from the elements, reduce heat loss, keep unwanted debris out, and prevent evaporation. Clean the vinyl skin with a drop of mild dish soap diluted in warm water and a soft sponge 3 or 4 times a year and allow it to dry. If desired, wipe the vinyl with an oil-free, non-alcohol-based vinyl protector. Avoid using oil-based products, which can affect water chemistry and be difficult to correct. Using alcohol or chlorine-based cleaning products can deteriorate stitching to deteriorate and UV inhibitors in the vinyl. The locking tie-downs are not designed to keep the cover in place in heavy winds. Use the handles to remove and replace the cover. Foam cores are not designed to hold heavy weight loads. Use a soft bristle broom to remove snow and debris. Replace and secure the cover when the tub is not in use. Keep children and pets off the cover. Never leave the tub unattended when the cover is not in place.

Troubleshooting

Cold Series Tub

Problem	Might be caused by	Might be corrected by
LED Display is Blank	Power is off or fuse is blown	Reset GFCI and Main Service. Replace blown fuses
Can't Turn Pump Off	Tub is heating	Normal function of tub. Lower temperature settings
	Tub is filtering	Normal function of tub
Leaking	Loose unions	Tighten unions, reseal or replace seals
GFCI Tripping	Improper wiring / overloaded circuit	Contact electrician to check wiring, dedicated circuit, and amperage.
Pump Not Working	Air Lock	Loosen union to bleed air
	Pump timed out (20 minutes)	Press button to turn pump on
	"T Stems" closed	Pull stem up and secure lock
	Operating mode	Verify tub in Standard or Ready, not Sleep, Economy, or Rest Mode
	Fuse blown	Replace fuse
	Connection to pack	Make sure pump connection in control box is secure
Pump(s) run hot	High ambient temperature	Move chiller vent obstructions, clean chiller vents, gap cover, add cool water
	Flow restricted	Remove debris from suction covers, clean filters, check T-Stems
Pump / Jets Surge	Water level too low	Add water
	Blockage or restriction	Wipe debris from suction drain covers, change filters, check T-Stems
No or Low Heat	Low temperature setting	Normal function, increase temperature setting
	Operating mode	Verify tub in Standard or Ready Mode, not Economy, Sleep, Rest or Low Range
	Temperature setting	Check LED display to see if Heater is illuminated
	Breaker(s) off	Reset GFCI and Main Breaker
	Dirty filter	Change filter
	Air lock or closed "T Stem"	Make sure T-Stems are up and pump isn't air locked
	Improper line voltage	Contact electrician to check voltage
Heats too Much	Filtration settings	Change filtration settings - fewer, shorter cycles
	High ambient temperature	Vent cover and/or add cold water
		Move chiller vent obstructions, clean chiller vents, gap cover, add cool water
Lights Don't Work	Bulb or fuse burned out	Replace bulb or fuse
	Loose, dirty connection	Check light connections
Jets Sluggish Not Working	Air lock in pump	Loosen unions to bleed pump
	T-Stems closed	Open T-Stems and secure lock
	Diverter valve position	Rotate diverter to increase flow
	Jet closed	Rotate outer rim of jet clockwise to open
	Debris obstructing flow	Remove jet, clear debris
Can't Rotate Jets	Debris or mineral build-up	Soak overnight in 50/50 water & vinegar solution
Low Water Flow	Tub heating or filtering	Normal operation
	Diverter valve position	Rotate diverter valve to increase flow
	Water level low	Add Water
	Dirty suction covers or filter	Wipe debris from suction cover, clean or change filter.
	T Stem closed	Lift stem and secure lock
	Improper line voltage	Contact electrician check voltage

Troubleshooting

Water Care

Problem	Could Be Caused By	Could Be Solved By
Water Will Not Balance	Well, untreated, softened, or old water	Contact technical support for assistance
Cloudy Water	Dirty filter	Clean or replace filter
	Excessive/suspended organic matter	Clean/replace filter, add shock, run jets
	Bacteria inside cover dripping into water	Spray cover with medium pressure hose, allow to dry
	Improper sanitization	Add sanitizer
	Hard water	Add scale preventative or soft water until hardness is 80-150 ppm
	Alkalinity too high	Add pH reducer, adjust total alkalinity to 80-150 ppm
	pH too high	Add pH reducer, adjust pH to 7.2-7.6 ppm
	End of water life / calcium pH imbalance	Drain & refill tub, replace filter
Green or Brown Water	Excessive metal /algae	Add metal sequestering agent
Excessive Foam	Oil, cosmetics, or detergent	Add defoamer Clean or replace filter Run extra rinse cycle when washing swim wear
	Soft water	Add calcium increaser until hardness is 150-280 ppm
Water has Bad Smell	Excessive organic matter - bacteria	Add shock
	Improperly sanitized	Add sanitizer
	Low pH	Adjust pH
	Chloramines	Add oxidizing shock
Smells Musty	Bacteria growth	Add shock
Ring Around Tub	Build up of oil & dirt	Wipe surface with cloth, drain and refill tub
Algae	High pH / leaving cover off	Add pH reducer
	Low sanitizer level	Add shock & sanitizer
Eye, Skin Irritation or Rash	Improper sanitation	Test water. Add shock & sanitizer as needed
	Chlorine level low after adding water	Correct chlorine levels
	Too Much Chlorine	Drain several inches of water & replace with fresh water
	Dirty filter or pH imbalance	Adjust pH to 7.2-7.6 ppm, clean or replace filter
Stains on Acrylic Surface	High alkalinity or low pH	Adjust pH to 7.2-7.6 ppm, adjust alkalinity to 80-150 ppm
	High mineral content	Use stain & scale reducer
	High metal content	Use metal sequestering agent
Scale Build Up	High calcium levels, high pH, high alkalinity	Drain partially, adjust pH to 7.2-7.6 ppm, adjust alkalinity to 80-150 ppm; Use stain and scale preventative

