

Apollo Spas Owner's Manual

United States



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DISCLAIMER

This manual and its contents are subject to change without notice. Although Blue Falls Manufacturing has prepared this manual as accurately and precisely as possible, Blue Falls Manufacturing will not be liable for loss, injury or damages caused by improper servicing or by use of spa (improper or otherwise).

CAUTION!

Indicates a situation in which damage to equipment or material may occur.

DANGER!

Indicates risk of injury.

WARNING!

Indicates information of critical importance.

Important Safety Instructions:

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

When installing and using this electrical equipment, basic safety precautions should always be followed, including:

- 1) **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
- 2) **WARNING:** A grounding wire connector is provided on this unit to connect a minimum No. 6 AWG solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet of the unit.
- 3) **DANGER:** Risk of Accidental Drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this hot tub unless they are supervised at all times.
- 4) **DANGER:** Risk of Injury. The suction fittings in this hot tub are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the hot tub if the suction fittings are broken or missing. Consult your local dealer for assistance in choosing an appropriate replacement suction fitting.
- 5) **DANGER:** Risk of Electric Shock. Install at least 5 feet, from all metal surfaces. As an alternative, a hot tub may be installed within 5 feet of metal surfaces if each metal surface is permanently connected (bonded) by a minimum No. 6 AWG solid copper conductor attached to the wire connector on the grounding lug, inside the equipment compartment on the equipment box.
 - 6) **DANGER:** Risk of Electric Shock. Do not permit any electrical appliance, such as a light, telephone, radio, television, etc. within 5 feet (1.5 m) of a hot tub.
 - 7) **ELECTRICAL SUPPLY:** The electrical supply for this product must include a suitable circuit breaker to open all ungrounded supply conductors. The disconnect must be readily accessible and visible to the hot tub occupant but installed at least 5 feet from the hot tub water.
 - 8) **WARNING:** To Reduce the Risk of Injury:
 - a) The water in a hot tub should never exceed 104°F. Water temperatures between 100°F and 104°F are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when hot tub use exceeds 10 minutes.
 - b) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit hot tub water temperatures to 100°F. If pregnant, please consult your physician before using a hot tub.
 - c) The use of alcohol, drugs, or medication before or during hot tub use may lead to unconsciousness with the possibility of drowning.
 - d) Persons suffering from obesity or a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a hot tub.
 - e) Persons using medication should consult a physician before using a hot tub since some medication may induce drowsiness, while other medication may affect heart rate, blood pressure, and circulation.
 - 9) A bonding lug bar is provided on the side of your spa pack to accommodate grounding of entire spa. To reduce the risk of electric shock, connect the local common bonding grid in the area of the hot tub to these terminals with an insulated or bare copper conductor not smaller than No. 6 AWG solid copper conductor.
 - 10) All field-installed metal components such as rails, ladders, drains or other similar hardware within 10 feet of the hot tub shall be bonded to the equipment grounding bus with copper conductors not smaller than No. 6 AWG solid copper conductor.
 - 11) Use the hot tub straps and clip tie downs to secure the cover when not in use. This will help to discourage unsupervised children from entering the hot tub. There is no representation that the cover, clip tie downs, or actual locks will prevent access to the hot tub.

IMPORTANT!

This manual was written to ensure the proper use and installation of any Apollo Spa. Any modifications to the procedures outlined may result in your warranty being voided. Please read this manual to avoid any unnecessary damage to your spa and equipment.

WARNINGS!

WARNING: Children should not use hot tubs without adult supervision.

WARNING: Do not use hot tubs unless all suction guards are installed to prevent body and hair entrapment.

WARNING: People with infectious diseases should not use a hot tub.

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

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

WARNING: Pregnant or possibly pregnant women should consult a physician before using a hot tub.

WARNING: Water temperature in excess of 100°F may be injurious to your health.

WARNING: Before entering the hot tub, measure the water temperature with an accurate thermometer.

WARNING: Do not use a hot tub immediately following strenuous exercise.

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

WARNING: Do not permit electric appliances (such as light, telephone, radio, television, etc.) within 5 feet of this hot tub.

CAUTION: Maintain water chemistry in accordance with manufacturer's instructions.

WARNING: The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in hot tubs.

WARNING: People using medications and / or having an adverse medical history should consult a physician before using a spa or hot tub.

Hyperthermia

Prolonged immersion in hot water may induce hyperthermia.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 99°F. The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include:

- ▶ Unawareness of impending hazard;
- ▶ Failure to perceive heat;
- ▶ Failure to recognize the need to exit hot tub;
- ▶ Physical inability to exit hot tub;
- ▶ Fetal damage in pregnant women; and
- ▶ Unconsciousness and danger of drowning.

WARNING!

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

Placement Information

Congratulations on the purchase of your Apollo spa. Here are a few helpful tips to assure you of the ease of placement and use of your spa.

Curbside Delivery or Self Delivery.

The Apollo spa you have purchased is constructed to be very durable. However, during transportation care must be given to not damage the spa exterior or structural components. The spa will weigh in excess of 800 lbs so appropriate methods must be used for transporting and positioning the spa.

It is highly recommended that you consult your local Apollo dealer to arrange backyard placement. However, if you plan to move the spa yourself:

Helpful Tips

1. More help is better than not enough. We recommend 2-3 adults with our 2 man delivery team.
2. Check that the area that you intend to install the spa has sufficient access as well as adequate drainage and room to position the spa as you would like.
3. The use of a flat deck trailer or similar is recommended. Be sure that the trailer is rated for the load you intend to transport.
4. Firmly secure the spa with tie-downs, taking care to protect the surface from abrasions from the straps.
5. The spa has a durable ABS plastic floor so that it is possible to slide the spa off the trailer gently, with assistance.
6. Once in position, lower the spa gently, again with assistance.

Placement of your Apollo spa.

Your spa must be properly situated and supported to ensure longevity of the cabinet, acrylic shell, and its components. It is mandatory that your spa sit on a flat, hard, unitized surface that is level to within one inch over 8 feet of a slope. Hard and unitized means that the surface must be a stable, tied together platform that will withstand the rigors of use and your local climate extremes. Examples of the above would be: a 3.9” reinforced concrete pad, a wood deck built to local building codes, or an engineered stage platform built to our Apollo Spa’s standards. It is important to note that when spas are placed on soft surfaces, or platforms that are not integrated, the ground may settle. This leaves a void in the structural integrity of the platform and could cause damage to the spa shell, cabinet or structure. This damage is not covered by your Limited Warranty. Contact your local Apollo Spas outlet with any concerns or questions before installing your Apollo spa.

Wood decking requires that the deck be constructed to support at least 100 pounds per square foot. Individual spa weights vary.

Check with your Apollo Spas outlet for specific model weights. You may also use the chart on page 7 for your model’s estimated average weight.

Equipment Panels and Access

When considering an installation site, always allow for a minimum of 30” of clearance for the front equipment panel. It is also recommended to allow at least 20” of minimum clearance for the remaining sides. Contact your local Apollo Spa outlet for further information when enclosing or recessing your spa.

SPA SPECIFICATIONS

	Outside Dimensions	Heights	Heater (Watts)	Water Capacity	Dry Weight	Filled Weight*	Weight per square foot	Electrical Requirements
Commander	89" x 93"	36"	4000	350 Gallons	1000 Lbs	4979 Lbs	86 Lbs per square foot	240 Volt, 30 Amp Single Phase
Saturn	89" x 93"	36"	4000	350 Gallons	1000 Lbs	5405 Lbs	94 Lbs per square foot	240 Volt, 30 Amp Single Phase
Mercury	86" x 47"	30"	4000	250 Gallons	400 Lbs	2840 Lbs	101 Lbs per square foot	240 Volt, 30 Amp Single Phase
Discover	89" x 93"	36"	4000	400 Gallons	1000 Lbs	5572 Lbs	102 Lbs per square foot	240 Volt, 30 Amp Single Phase
Cascade	82" x 82"	39"	4000	350 Gallons	800 Lbs	4955 Lbs	106 Lbs per square foot	240 Volt, 30 Amp Single Phase
Chelan	82" x 82"	39"	4000	300 Gallons	800 Lbs	4361 Lbs	93 Lbs per square foot	240 Volt, 30 Amp Single Phase
Triton	79" x 79"	37"	4000	250 Gallons	600 Lbs	2216 Lbs	102 Lbs per square foot	240 Volt, 30 Amp Single Phase
Gemini	59" x 77"	32"	4000	150 Gallons	400 Lbs	2081 Lbs	66 Lbs per square foot	240 Volt, 30 Amp Single Phase
Explorer	81" x 81"	38"	4000	300 Gallons	700 Lbs	4261 Lbs	94 Lbs per square foot	240 Volt, 30 Amp Single Phase
Columbia	91" x 91"	39"	4000	500 Gallons	1100 Lbs	6683 Lbs	116 Lbs per square foot	240 Volt, 30 Amp Single Phase
Rainier	91" x 91"	39"	4000	450 Gallons	1175 Lbs	6165 Lbs	107 Lbs per square foot	240 Volt, 30 Amp Single Phase

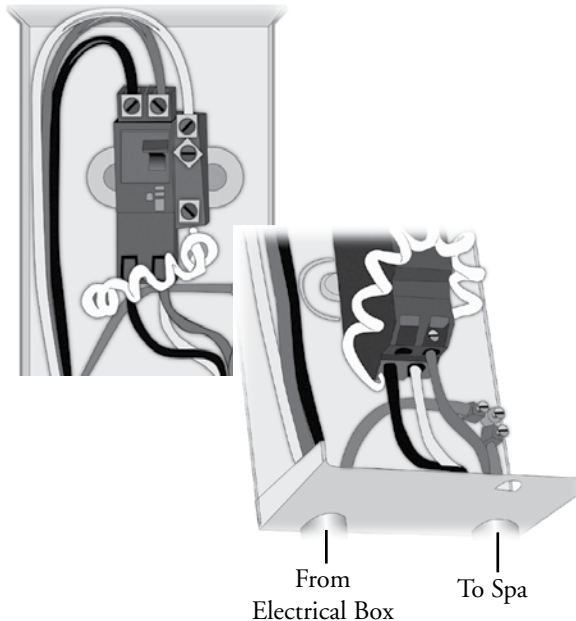
*Filled weight includes weight of water and maximum recommended number of people in the spa.
Average weight per person = 176 lbs

Electrical Specifications

WARNING!

All electrical hookups must be performed by a licensed electrician! There is a shock hazard. **DO NOT PROCEED** with connecting this spa unless you are a licensed electrician. Any and all information contained herein is for reference only.

Sub Panel
Wiring Diagram
Example



IMPORTANT CONNECTIONS:

Neutral of the GFCI must be connected to the neutral bus.

Neutral from the spa must be connected to the breaker.

Electrical Installation Instructions

APOLLO Spas MUST BE WIRED IN ACCORDANCE WITH ALL APPLICABLE LOCAL ELECTRICAL CODES. ALL ELECTRICAL WORK SHOULD BE DONE BY AN EXPERIENCED, LICENSED ELECTRICIAN AND APPROVED BY A LOCAL BUILDING/ELECTRICAL INSPECTION AUTHORITY.

The electrical supply must satisfy the requirements of the spa as marked on the certification label which is located adjacent to the spa controller (pack). If the ratings are not legible or cannot be found, please contact the factory for assistance. - DO NOT GUESS!

WARNING: Removing or bypassing any GFCI breaker will result in an unsafe spa and will void the spa's warranty.

IMPORTANT: Should you ever find the need to move or relocate your Apollo spa, it is essential that you understand and apply these installation requirements. Your Apollo spa has been carefully engineered to provide maximum safety against electric shock. Remember, connecting the spa to an improperly wired circuit will negate many of its safety features.

Start-Up Instructions

Once the spa is placed on a solid foundation and supplied with power, the spa should be filled and prepared for use. For the best results, read each step completely before proceeding with the following steps.

1. Prepare the spa for filling.

Clear all the debris from the inside of the tub.

Wipe off and clean the acrylic with a wet towel to remove dust.

Remove the service door and tighten all the hand unions at the pump(s) and heater.

Ensure all the knife valves are in the open (UP) position.



2. Fill the spa.

A. Front Access Skim Filter (Rainier, Columbia, Chelan, Cascade)

Fill the spa through the opening until the water submerges all of the jets excluding the neck jets and 1/2 way up the opening of the weir gate. DO NOT let the water go below 1/2 of the way up the weir gate assembly.

B. Pressure Filter Canister Assembly (Explorer, Triton, Gemini)

Locate the filter canister. Remove the lock ring and the filter lid. Remove the filter element. Insert the garden hose into the filter canister and begin to fill the spa. Once the water has filled the foot-well, add Stain & Scale Defense (refer to the directions on the product label). Insert the hose into the foot-well and continue to fill until the water is 1" above the wall jets (excluding the neck jets) or covering 2/3 of the skimmer. Reinstall the filter, lid and lock ring. The lock ring should spin and then lock into place.



Fill the tub with the garden hose until all jets excluding the neck jets are submerged.

C. Telescoping Filter Bucket (Discover, Saturn, Commander)

Using a garden hose with a pre-filter, fill the spa with pre-filtered water to the bottom of the pillows

3. Turn on the power.

Engage the breaker at the main panel, and then the GFCI sub panel and other switching devices installed by your electrician. If wired correctly, the control panel will blink, showing the current water temperature. At this time you should also see water movement through jets, if not you may have an air lock in the pump. The quickest way to rid an air lock is to turn power off, then locate pump one and loosen the top union to let the air bleed out. When you see a steady stream of water retighten the union and turn power back on.

4. Activate the jets.

Ensure all jet faces are in the full “open” position (clockwise). Set all the Venturi valves to the “open” position to more clearly see water coming from all the jets. Press the **PUMP 1** button to engage the lowest speed. While the low speed is running slowly, locate the filter canister, and remove the black circular cover and locate the “Air Vent Bleeder” inside. Turn the “Air Vent Bleeder” until you hear air movement. Once the air is escaping, stop unscrewing until the water bleeds out for a few seconds. Then, slowly and gently screw the “Air Vent Bleeder” back down until the water stops coming from the valve. Press the **PUMP 1** and **PUMP 2** buttons (if equipped). You should see and be able to feel water coming from all of the jets. This will show that there isn't any air trapped within the system. If water is not exiting from the jets, see the troubleshooting section of this guide or call your Apollo Spas outlet.

5. Add the Start-Up Chemicals

Add the spa chemicals as directed by your Apollo Spas salesperson, as per the instructions within this manual, or after reading the chemical supply bottles in your Start-Up kit.

6. Set the Temperature.

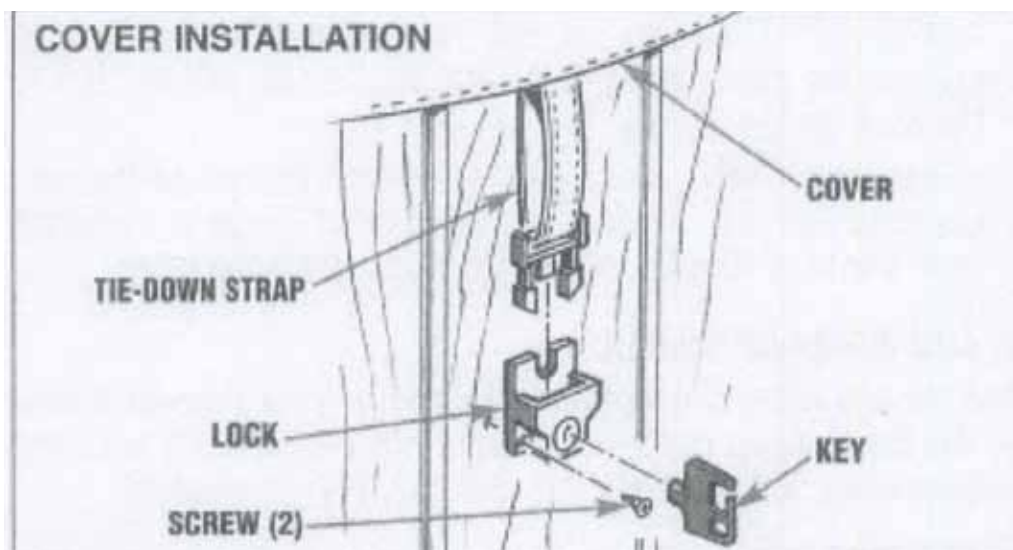
Your spa has a standard temperature range of 59-104°F. You may adjust these settings using the **UP** or **DOWN** buttons on your spa side control. Simply press and hold the button until the correct setting is reached and release. See the Quick Reference Card (**QRC**) provided with your spa for specific controller information.

7. Set the Filtration.

Please refer to the Quick Reference Card (**QRC**) provided with your spa for assistance in setting the filtration.

8. Install the Hardcover.

Place the cover on your spa, ensuring that it sits squarely around the corners. Position the locking straps on the cabinet walls and attach them with the screws that have been supplied. Allow some slack in the tie downs for shrinkage in cold weather.



Note: Having a hardcover on whenever the spa is not in use will greatly reduce the cost of operating the spa. When the spa is not in use, the cover must be in place at all times. This reduces the risk of thermal distress. This is caused by leaving the spa uncovered in the sunlight. Which allows the spa to absorb the heat, causing damage to the surface of the spa. This form of damage is not covered under your Limited Warranty.

Spa Care & Maintenance

Your Apollo Spa is manufactured from the highest quality, most durable materials available. Even so, the spa care and maintenance program you develop will ultimately determine how long your spa and its individual components will last. Regular maintenance following the advice in this section will help you to protect your investment.

Draining the Water

Detergent residues and dissolved solids from bathing suits and chemicals will gradually accumulate in your spa's water. Normally, in about three to four months the water will become difficult to balance and should be replaced. Showering without using soap prior to entering the spa or using only the rinse cycle when laundering your bathing suit will help to reduce detergent residue in the spa water. However, foam problems are more likely to be caused by a build up of organic pollutants in the spa, mostly from body oils. If you're using your spa frequently with a high bather load the water will need to be replaced more often. Spa water gradually loses quality because of build-ups of unfilterable pollutants.

IMPORTANT: Remember to change your water every three to four months.

To Drain Your Spa:

1. Shut off the GFCI breaker located in the sub panel or the quick disconnect.
2. All Apollo spas have an external drain that can be attached to a typical garden hose for convenient draining. Simply locate the drain on the side of the floor, pull the nozzle out, remove cap, and attach your hose. Once the hose is attached, push the nozzle in slightly to open the internal valve and the spa will start draining.

Note: All Apollo Spas models will drain through the floor drain. Equipment such as the pump(s) and heater will drain. All models will leave a small amount of water in the footwell. Any water remaining in the plumbing or equipment after draining will only need to be removed if the spa is being winterized.

3. When empty, inspect the spa shell and clean as required.
4. Close the drain valve.
5. Refill the spa BEFORE restoring power.

IMPORTANT: With reusable filters, it is necessary to rinse the filter cartridges as often as weekly depending on your bather load. Every month, and each time the spa is drained for cleaning, clean the cartridges in filter cleaner. Or, if using disposable filters change as needed or every 3 months otherwise.

Ozone Mixing Chamber (Commander, Saturn, Mercury, Discover, Cascade, Chelan, Columbia, Rainier)

This chamber mixes the ozone into the water, rather than a standard ozone unit that merely produces gas bubbles that float to the top of the water and does little to assist in sanitization. The chamber prolongs the interaction of ozone in the water to increase the effectiveness and requires no maintenance.

Filtration System

Apollo Spas are equipped with balanced filtration, meaning that the filter cartridges are sized to meet the needs of the pump system. As with any water filtration system, the filter cartridge may become clogged, resulting in reduced water flow. It is important to maintain a clean, un-obstructed filter system.

Cleaning a Reusable Filter (Rainier, Columbia, Chelan, Cascade)

NOTE: The re-usable **FILTER CARTRIDGE** should be cleaned with Spray & Rinsed weekly and soaked whenever the spa is drained. **FILTER CARTRIDGES** should be replaced at least once every year, or as often as needed.

1. Turn the power to the spa OFF.
2. Lift up the front face of the filter and slide tray out of the way for total access to the filter.
3. Clean reusable filter as directed above and place back in canister.
4. Slide tray back into place and set the front face of the filter back into position.
5. Turn your spa back on.

Cleaning a Reusable Filter/Replacing a Disposable Filter (Explorer, Triton, Gemini)

NOTE: These models are compatible with either a reusable or disposable filter. If you are using a reusable filter, please read the note above and then follow the steps listed below.

Disposable filter cartridges are a great option to reusable filters. They typically filter down to a smaller particle size and never require cleaning. They have a lifespan of 3 or 4 months. The use of Clarifiers and Foam inhibitors is not recommended with disposable filters! Consult Customer Care for more information on disposable filter cartridges.

1. Turn the power to the spa OFF.
2. Open the AIR VENT BLEEDER, remove the FILTER NICHE COVER (plastic disk-shaped piece)
3. Lift the grey lock tab and remove the lock ring by turning it counter-clockwise.
4. Pull the FILTER LID up and remove it.
5. Rinse the element using a garden hose with a pressure nozzle. Rotate and separate the filter pleats while spraying in an up/down motion. Let the filter dry, and then inspect the pleats for calcium build up or an oily sheen. If either are present, consider soaking or replacing the element.
6. Replace the FILTER CARTRIDGE in the opposite order it was removed. The LOCK RING should easily snap into place. DO NOT turn it past the grey LOCK TAB position (the first click).
7. Turn the power to the spa ON. With the spa operating on the low speed, slowly unscrew the AIR VENT BLEEDER until the air bleeds out and you have allowed water to bleed out for a few seconds.
8. Then slowly and gently screw the AIR VENT BLEEDER back down until the water stops coming from the valve.
9. Replace the FILTER NICHE COVER.
10. Run the jets on HIGH speed until you can see, and feel that the water is coming from all the jets.
11. Revert to low speed and set temperature to desired setting.

Filter Replacement (Discover, Saturn, Commander)

1. Turn the spa off using the on/off button on the topside control panel.
2. Remove the telescoping filter cylinder
3. Unscrew the filter cartridge and either clean the reusable filter or discard the disposable filter.
4. Re-thread the clean or new filter.
5. Replace the telescoping filter cylinder.

Care of the Spa Shell

Your Apollo Spas has a fiberglass reinforced, cast acrylic shell. Stains and dirt generally will not adhere to your spa's surface. A soft cloth or sponge should easily remove most dirt. Most household chemicals are harmful to your spa's shell.



Sodium bicarbonate (baking soda) or vinegar can also be used for minor surface cleaning. Always thoroughly rinse off any spa shell cleaning agent with fresh water.

Service Notes:

1. Iron and copper in the water can stain the spa shell if allowed to go unchecked. Your Apollo Spas Dealer stocks Stain and Scale Inhibitor to use if your spa water has a high concentration of dissolved minerals.
2. The use of alcohol or any household cleaners other than those listed to clean the spa shell surface are **NOT** recommended. **DO NOT** use any cleaning products containing abrasives or solvents since they may damage the shell surface. Damage to the shell by the use of harsh chemicals is not covered under the warranty.



MANUAL SAFETY COVER

 WARNING	 AVERTISSEMENT
AVOID DROWNING RISK	ÉVITEZ DE NOYER LE RISQUE
<small>KEEP CHILDREN AWAY. CHILDREN OR OBJECTS CANNOT BE SEEN UNDER COVER. REMOVE COVER COMPLETELY BEFORE ENTRY - BATHERS ENTRAPMENT POSSIBLE. NON-SECURED OR IMPROPERLY SECURED COVERS ARE A HAZARD. FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN INJURY OR DROWNING.</small>	<small>ENFANTS DE SUBSISTANCE PARTIS, DES ENFANTS OU LES OBJETS NE PEUVENT PAS ÊTRE VUS SOUS LA COUVERTURE. ENLEVEZ LA COUVERTURE COMPLÈTEMENT AVANT L'BAIGNEUR - OCCLUSION D'ENTREE POSSIBLE. LES COUVERTURES NON-FIXÉES OU INCORRECTEMENT FIXÉES SONT UN RISQUE. LE MANQUE DE SUIVRE TOUTES LES INSTRUCTIONS PEUT AVOIR COMME CONSÉQUENCE LES DOMMAGES OU LA NOYADE.</small>

Care of the Spa Cover

WARNING: The cover is a manual safety cover that meets or exceeds all prevailing requirements of ASTM Standards for spa safety covers when installed and used correctly as of the date of manufacture. Non-secured or improperly secured covers are a hazard. Open the cover to its fully open position before use. Be sure to inspect the cover for premature wear or deterioration. Over time, with use, there is a chance of normal cover wear and deterioration. To properly maintain your cover see directions below.

The vinyl spa cover is an attractive, durable foam insulation product. Monthly cleaning and conditioning is recommended to maintain its beauty.

To clean and condition the vinyl cover:

1. Remove the cover from the spa and gently lean it against a wall or fence.
2. With a garden hose, spray the cover to loosen and rinse away dirt or debris.
3. Using a large sponge and/or a soft bristle brush, and using a very mild soap solution or baking soda, scrub the vinyl top in a circular motion. Do not let the vinyl dry with a soap film on it before it can be rinsed clean.
4. Scrub the cover's perimeter and side flaps. Rinse clean with water.
5. Rinse off the underside of the cover with water only (use no soap), and wipe it clean with a dry rag.
6. Use a vinyl protector on the vinyl at least twice a year to maintain the life of the vinyl. We recommend a vinyl and cabinet restore product.

Vacation Care Instructions

If you plan to be away from home for 7 - 14 days, follow these instructions to ensure that the water quality of your spa is maintained.

1. Adjust pH as needed.
2. Ensure you have sufficient sanitizer to last until you return.
3. Shock the spa with a non chlorine oxidizer.
4. Lower the temperature.

Upon your return:

1. Shock the spa with a non chlorine oxidizer.
2. Ensure you have sufficient sanitizer for regular use.
3. Return the temperature to its original setting. You can use your spa once the residual sanitizer level falls within the ideal range.

Note: If you will not be using your spa for more than 14 days and a neighbor, friend or an outside maintenance service is not available to check and balance the water chemistry, draining or winterizing (for winter only) the spa is recommended.

Winterizing Your Spa

If you plan to leave your spa unused for a long period of time in severely cold weather, you should drain the spa to avoid accidental freezing due to power or equipment failure.

We recommend your local authorized dealer winterize your spa. Freezing can severely damage your spa. Improper winterizing of your spa can void your warranty.

Water Maintenance

It's important to have clean water. Water maintenance is one of the least understood, but very important areas of spa ownership. Your dealer can guide you through the process of achieving and maintaining perfect water in your spa, given your local conditions. Your program will depend on your water's mineral content, how often you use your spa, and how many people use it. Here is our suggested step-by-step program:

General Information

There are three fundamental areas of water maintenance. They are (1) Water Filtration, (2) Water Sanitation, and (3) Chemical Balance/pH Control.

Before you even begin it is highly recommended to use the pre-filter when filling your spa, because tap water is not really pure water. By starting with water that is already filtered clean you will find that you have fewer problems maintaining crystal clear water.

Although your spa's filter system is working several hours a day to remove particles from your water, it does not remove bacteria or viruses. Water sanitation is the responsibility of the spa owner. It can be achieved through the regular and periodic (daily, if necessary) addition of an approved sanitizer. The sanitizer will chemically control the bacteria and viruses present in the spa water. Bacteria and viruses can grow quickly in under sanitized spa water. The water's chemical balance and pH control are also the responsibility of the spa owner. You will have to add chemicals to maintain proper levels of Total Alkalinity (TA), Calcium Hardness (CH) and pH. Proper water balance and pH control will minimize scale buildup and corrosion of metals, extend the life of the spa, and allow the sanitizer to work at maximum efficiency.

Methods For Testing The Spa Water

Accurate water testing and analysis are an important part of effectively maintaining your spa water. To follow the recommended program, you must have the ability to test for:

- Total Alkalinity (TA)
- Calcium Hardness (CH)
- pH
- Sanitizer

Although reagent liquid test kits provide the highest level of accuracy, Test Strips are the most convenient testing method used by many spa owners. Keep in mind that test strips are susceptible to heat and moisture contamination, which will result in inaccurate readings. Very high sanitizer levels will also render test strips unreliable.

IMPORTANT: Always read and carefully follow the directions included with the Test Kit or Test Strips to ensure the accuracy of the test results.

Hints For Successful Water Testing

When using the reagent test kit:

- Always take water samples 12" - 18" below the water surface.
- Rinse the test cells before and after each use.
- Do not dispose of test samples into the spa water.
- When adding drops of chemicals from the kit (the reagents) into the test block, hold the bottle vertically and add the drops slowly to be sure the correct quantity is used.
- The reagents should be replaced on a yearly basis to maintain the accuracy of the test results.

Basic Chemical Safety

When using chemicals, read the labels carefully and follow directions precisely. Though chemicals protect you and your spa when used correctly, they can be hazardous in concentrated form. Always observe the following guidelines:

- ALWAYS KEEP CHEMICALS OUT OF CHILDREN'S REACH.
- NEVER MIX CONCENTRATED CHEMICALS TOGETHER.
- ALWAYS THOROUGHLY RINSE ANY CONTAINER USED TO MIX CHEMICALS AFTER USE.
- ALWAYS RINSE OUT ANY EMPTY CHEMICAL STORAGE CONTAINER BEFORE DISPOSAL.
- Accurately measure the quantities specified. Do not overdose your spa. Amount required will vary depending on water condition, quantities to be used are only guidelines.
- Store chemicals in a cool, dry, well ventilated place.
- Always keep chemical containers closed when not in use.
- Don't inhale fumes or allow chemicals to come in contact with your eyes, nose, or mouth. Wash your hands immediately after use.
- Follow the emergency advice on the product label in case of accidental contact.
- Never smoke around chemicals. Some fumes can be flammable.
- Don't store any chemicals in the spa equipment compartment.

IMPORTANT "SUPER CHLORINATION / NON-CHLORINE SHOCK TREATMENT"

NOTE: After administering a super chlorination treatment or non-chlorine shock to your spa, leave the cover open for a minimum of 20 minutes to allow the oxidizer gas to vent. A high concentration of trapped oxidizer gas which may exist as a result of the shock treatment (not daily sanitation) may eventually cause discoloration or vinyl degradation to the bottom of the cover. This type of damage is considered chemical abuse and is not covered under warranty.

Balance the Total Alkalinity (TA)

1. The recommended Total Alkalinity (TA) for your spa water is 80-120 ppm.

Balancing the pH

1. The recommended pH range for your spa water is; 7.2-7.6.

Calcium Hardness (CH)

1. Most spa manufacturers recommend a Calcium Hardness (CH) level for your spa of 150-200 ppm. However, we do not recommend adding calcium to your spa if your spa water is above 100 ppm, or if your incoming water has a very low level of calcium hardness.

Sanitize the Spa

Sanitizer is extremely important for killing algae, bacteria and viruses, and preventing unwanted organisms from growing in the spa. At the same time, you don't want too high a sanitizer level, or it can irritate your skin, lungs and eyes.

1. Always maintain the sanitizer level in your spa at the recommended level for each type of sanitizer.
2. We recommend the following sanitizers:
 - For a Chlorine System: Pool Boss Mini Tabs, Spa Oxidizing Shock, Spa Chlorinating Granules.
 - For a Bromine System: Bromine Tablets, Spa Oxidizing Shock, Chlorinating Granules.

IMPORTANT: Sanitizers are acidic and will decrease the Total Alkalinity. Regular testing and balancing of TA is extremely important with these products. This is why Apollo Spas Alkalinity Increaser is part of the system.

IMPORTANT: Always remove floating dispenser while the spa is not in use. Remove dispenser with a plastic bucket (keeping submerged) and store out of reach of children until spa use has ended.

Using Chlorine System

Start-Up:

1. Let water reach 90°F.
2. Add 1 tablespoons (14 grams) of Apollo Spas Chlorinating Granules per 200 gallons of water.
3. Add 1 tablespoon (14 grams) of Spa Oxidizing Shock per 200 gallons of water.
4. Wait 24 hours and then test and balance Alkalinity and pH levels of the water using Alkalinity Increaser, pH Up or pH Down respectively.

Note: Have jets on high speed for 1-2 minutes when adding chemicals to mix the chemicals through the water more effectively. Circulate water using filtration mode for two additional hours.

After Each Use:

1. If you have an ozonator and/or use a Silver Sentinel Filter, add 1 teaspoon (4.75 grams) of Chlorinating granules per person to the spa water (again, this is when you get out).
2. If you do not have an ozonator and/or use a Silver Sentinel Filter, add two teaspoons (9.5 grams) of Chlorine Granules to the spa water.
3. If you do not use your spa for 3-4 days, add 1-2 tablespoons (4.75 - 9.5 grams) of Apollo Spas Chlorinating Granules to the spa water for maintenance purposes.

Note: Have jets on high speed each time you add Chlorine to better mix it into the water.

Weekly:

1. Test water for Alkalinity and pH. Adjust as needed.
2. Add two (2) tablespoons (28 grams) of Spa Oxidizing Shock to spa water. Leave cover open and jets on high speed for 20 minutes.

IMPORTANT: Shock significantly reduces pH and TA. One hour after adding Spa Oxidizing Shock test and adjust pH and TA as needed.

Using Bromine System:

Start-Up:

1. Fill floating dispenser with pucks and open setting #7.
2. Add 2 tablespoons (28 grams) of Spa Oxidizing Shock per 265 gallons of water.
3. Add 2 1/2 tablespoons (35 grams) of Chlorinating Granules per 265 gallons of water, to establish a Bromide reserve.
4. Test the Bromide level. Once bromine reads within the ideal range (3-5 ppm) turn tablet dispenser down to 2 or 3 or more depending on bather load.

Weekly:

1. Fill floating dispenser with pucks and reset the setting if necessary.
2. Add 2 tablespoons (28 grams) of Spa Oxidizing Shock per 265 gallons of water.
3. Wait at least one hour and add 1 tablespoon (14 grams) of Best Defense per 265 gallons of water.

IMPORTANT: Spa Oxidizing Shock significantly reduces pH and TA. One hour after adding Spa Oxidizing Shock test and adjust pH and TA as needed.

The use of Clarifiers and Foam inhibitors are not recommended with a disposable filter.

Common Spa Water Problems - Cause & Remedy

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
CLOUDY WATER	<ul style="list-style-type: none"> A. Poor Filtration B. Suspended particles C. Organic contaminants build up D. pH high E. Total alkalinity high F. Combined chlorine in the water G. High dissolved solids H. Hardness too high 	<ul style="list-style-type: none"> A. Dirty filter, clean with Apollo Spas Filter Clean (not with disposable filter). B. Add Apollo Spas Clarifier C. Shock treatment with Apollo Spas Spa Oxidizing Shock D. Add Apollo Spas pH Down until level reads 7.2-7.6 E. Add Apollo Spas pH Down to adjust TA level to 100-130 ppm F. Shock treatment until combined chlorine is eliminated (see container instructions) G. Empty spa and refill H. Add Apollo Spas Stain & Scale until level reads 100-280 ppm
COLOURED WATER	<ul style="list-style-type: none"> A. Dissolved metals from water source B. Low chlorine/bromine levels C. Fragrance 	<ul style="list-style-type: none"> A. Use Arctic Pure[®] Best Defense and have your dealer check your water balance B. Add Apollo Spas Chlorinating Granules treatment to raise chlorine levels and test chlorine levels or for Bromine system add Spa Chlorinating Granules & test Bromine levels C. Stop the use of fragrance
FOAMING	<ul style="list-style-type: none"> A. High concentration of oils and organics being agitated by the jets and/or Therapy Air 	<ul style="list-style-type: none"> A. Squirt Apollo Spas Defoamer on foam. Refer to pg 20 for more information. (not with disposable filter).
SCALE DEPOSITS	<ul style="list-style-type: none"> A. High Calcium level, high pH, high alkalinity 	<ul style="list-style-type: none"> A. Drain partially, add Apollo Spas Stain & Scale, correct pH level to 7.2 - 7.6 and alkalinity to 100-130 ppm.
ODOR	<ul style="list-style-type: none"> A. High level of organic contaminants, combined with chlorine 	<ul style="list-style-type: none"> A. Check pH and adjust as required. B. Shock with Apollo Spas Spa Oxidizing Shock, add Chlorinating Granules or Spa Chlorinating Granules (dependent on whether you have a chlorine or bromine system) C. Dilution of water will reduce contaminants and odor. D. Check any ozone system is operational
EYE/SKIN IRRITATION	<ul style="list-style-type: none"> A. pH too low B. Combined chlorine due to high concentration of organic contaminants C. Allergic reaction to sanitizer D. Bacterial contamination 	<ul style="list-style-type: none"> A. Add Apollo Spas pH Up until level reads 7.2-7.6 ppm B. Add Apollo Spas Spa Oxidizing Shock, add Chlorinating Granules or Spa Chlorinating Granules. C. Change from Bromine to Chlorine or vice versa. D. Drain and refill spa.
NO CHLORINE/ BROMINE READING	<ul style="list-style-type: none"> A. High concentration of contaminants using up sanitizers B. Test kit reagents ineffective 	<ul style="list-style-type: none"> A. Add sanitizers until levels are up to the recommended levels B. Replace test kits at least once a year C. Chlorine/Bromine level very high and is bleaching test reagent, Allow sanitizer levels to recede by opening cover and running jets.

Troubleshooting Spa Problems

1. **Nothing functions:** The GFCI Breaker has tripped or there is a power failure. Test GFCI Breaker. Turn breaker back on and see if spa powers up, if not contact your factory authorized dealer.
2. **Spa does not heat:** Check to see if the heat indicator is on or there are any error messages on the topside control panel. If the heat indicator is on and no error message appears contact your factory authorized dealer.
3. **Poor Jet Pressure:** First check to see that the jet(s) are turned on fully. Check your filter to see if it's clogged or dirty. Next, check to see if the jet(s) are obstructed or if the venturi air dial is turned on. Finally, check to see if the jet(s) are surging. If so, your pump is cavitating (sucking in air). This usually occurs when the water level is too low and can be solved by adding water to the spa. Adjust Filter Weir to increase or decrease feed flow. If the problem still persists, contact your factory authorized dealer.
4. **Spa comes on by itself:** This function is normal when heating and filtering. No action required.
5. **Spa doesn't drain completely:** The spa is drained by gravity. It will not always drain fully. It is not necessary to drain the spa in its entirety except when winterizing the spa. If you wish to remove the last little bit of water, we recommend you vacuum it out with a wet/dry vacuum.

Apollo Spas may make product modifications and enhancements without notice.
Specifications and dimension are approximate and for reference only.

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1-800-441-7727

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