

\$2.50



A Comprehensive Guide to
Hot Water Care

ARCTIC PURE

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This Spa booklet has been prepared as a step by step guide to enjoy clean, healthy water. Your Arctic Pure dealer will be pleased to answer any questions regarding specific or unusual problems. Just bring a sample of your Arctic Pure water to your dealer for a complete analysis at no charge.



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SPA / HOT WATER GUIDE

Enjoy your Spa with pride and confidence:

Your spa is a source of relaxation and enjoyment practised throughout the ages.

To get the most satisfaction out of your spa, the water must look clear, enticing and be free of bacteria.

Three important factors contributing to this are filtration, water balance and disinfection. Throughout this guide we will use the term “spa” to include spas or hot tubs.

A jetted spa creates a mild massage, relieves stress and tension, and

improves overall circulation. Aches and pains disappear as the warm swirling water relaxes your muscles after a hard day.

Each spa owner uses their spa for different reasons, some more frequently than others. This booklet is a guide to spa water care. You will personally get to know your spa and how water conditions can be controlled. Keep this book as a guide in case of trouble or if water imbalance should arise.



KEEP IT CLEAN!

Disinfection

Disinfecting your spa water means killing the harmful bacteria and keeping the water clean. **Arctic Pure** offers two types of disinfectant systems to choose from: chlorine and bromine. Both have their advantages.

CHLORINE:

There are different types of chlorine treatments available to the spa owner as illustrated by the chart. **Spa Tabs** are 90% available chlorine and offer a continual slow release of disinfectant. Tabs require a feeder or skimmer basket to dissolve. **Boost** granular chlorine dissolves completely and immediately for instant disinfection and does not alter the pH.

BROMINE:

There are two common types of bromine systems available. Organic bromine tablets and the two part liquid bromine program. **Bromine tablets** are convenient and require a skimmer basket or feeder to dispense the disinfectant. The two part bromine systems can be added directly and immediately to the spa. Make sure the bromine level is 3-5 p.p.m.

SHOCK TREATMENT:

After using your spa, body oils, perspiration, hair and dirt accumulate which can turn your spa cloudy. Periodic shock treatments with **Refresh** will oxidize these organic contaminants. **Refresh** is compatible with both chlorine and bromine disinfectant systems.



Sanitation Treatments for Residential Spas

SPA TABLETS	BROMINE TABLETS	BOOST	PEAK BOOST
<ul style="list-style-type: none"> • Chlorine Tabs • slow dissolving • continual release of disinfectant • 90% available chlorine • completely soluble • lowers pH • lowers total alkalinity • requires feeder or skimmer basket 	<ul style="list-style-type: none"> • slow dissolving • continual release of disinfectant • completely soluble • no odour from water • lowers pH • lowers total alkalinity • requires feeder or skimmer basket 	<ul style="list-style-type: none"> • Lithium Hypochlorite • disinfects immediately • completely soluble • 35% available chlorine • no scale build up • raises pH • easy to measure and apply 	<ul style="list-style-type: none"> • two part bromine • requires the addition of Refresh to disinfect • disinfects immediately • completely soluble • no odour from water • does not effect pH or total alkalinity of water • easy to apply



PREVENTATIVE MAINTENANCE

Water Balance

Water balance is important to the overall performance of your spa. No spa's water conditions are exactly alike. The water source, location of the spa and frequency of use all effect the water balance. Unbalanced water can damage the equipment, make the water uncomfortable for the user, and decrease the effectiveness of the disinfectant. Total alkalinity, pH, and calcium hardness must be within the correct ranges to balance the water.



pH:

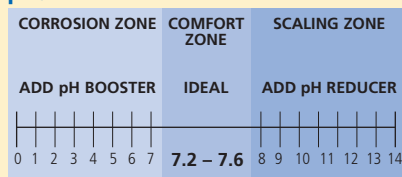
Simply, pH is a scale indicating whether spa water is basic, neutral or acidic. Spa water should be slightly basic with a reading of 7.2 – 7.6

A low pH (below 7.2) leads to corrosion of spa equipment and will irritate the skin of the bathers. Also, the sanitizer will dissipate more rapidly. A low pH can be corrected by adding **Adjust Up**.

A high pH (above 7.6) promotes scaling on heat exchange tubes, creates cloudy water, calcium deposits and reduces the effectiveness of disinfecting agents. A high pH can be corrected by adding **Adjust Down**.



pH CHART





ALKALINITY:

Total alkalinity is a measure of the alkalines in the water. They act as a pH buffer or a pH stabilizer preventing large changes in the pH. The total alkalinity should be between 80–150 p.p.m.; ideally 120 p.p.m. Tablet chlorines and bromine tend to gradually lower the alkalinity level.

A low total alkalinity causes:

- the pH to wander
- corrosive water
- disinfectants to be ineffective

To raise the total alkalinity add

Perfect Balance.

A high total alkalinity causes:

- cloudy water
- scale formation

To lower the total alkalinity add

Adjust Down.

CALCIUM HARDNESS:

Calcium hardness is the hardness present due to dissolved calcium. The desired range is 150 – 280 p.p.m.

However, we do not recommend adding calcium to your spa.

A high calcium hardness causes:

- scaling of heating pipes
- cloudy water
- staining of spa

To prevent this problem

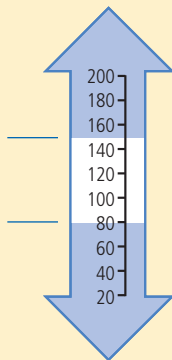
add **Best Defence.**

Do not fill the spa with soft water!



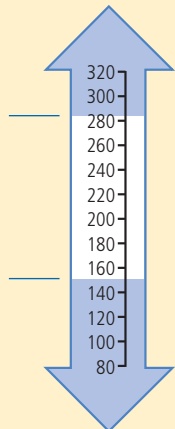
ALKALINITY

The total alkalinity should be between 80–150 p.p.m.; ideally 120 p.p.m.



CALCIUM HARDNESS

The desired range is 150 – 280 p.p.m.



TROUBLESHOOTING

Common spa water problems – cause and remedy

P R O B L E M	P O S S I B L E C A U S E
CLOUDY WATER	<ul style="list-style-type: none">A) organic contaminants build-upB) suspended particlesC) pH highD) total alkalinity highE) hardness too highF) poor filterG) high dissolved solidsH) combined chlorine in the water
COLOURED WATER	<ul style="list-style-type: none">A) dissolved metals from equipment or water sourceB) low chlorine/bromine levelsC) fragrance
FOAMING	<ul style="list-style-type: none">A) high concentration of oils and organics being agitated by jets
SCALE DEPOSITS	<ul style="list-style-type: none">A) high calcium level, high pH, high alkalinity
ODOUR	<ul style="list-style-type: none">A) high level of organic contaminants, combined with chlorine
EYE/SKIN IRRITATION	<ul style="list-style-type: none">A) pH lowB) combined chlorine due to high concentration of organic contaminants
NO CHLORINE/ BROMINE READING	<ul style="list-style-type: none">A) high concentration of organic contaminants using up sanitizersB) test reagents ineffectiveC) test strips expired or exposed to moisture

SOLUTION

- A) shock treatment with REFRESH™.
- B) add EASY CLEAR™
- C) add ADJUST DOWN™ until level reads 7.2–7.6
- D) add ADJUST DOWN™, adjust T.A. level to 100–130 p.p.m.
- E) add BEST DEFENSE™, until level reads hardness is 150–280 p.p.m.
- F) dirty filter, clean with FILTER RESTORE™
- G) empty spa and refill
- H) Shock treatment until combined chlorine is eliminated (see container instructions).

- A) use BEST DEFENSE™ and have your dealer check water balance
- B) BOOST™ treatment and test chlorine/bromine levels
- C) stop the use of fragrance.

- A) squirt FOAM DISSOLVE™ on foam.

- A.) drain partially, add BEST DEFENSE™, correct pH level to 7.2–7.6 and alkalinity to 100–130 p.p.m.

- A.) shock with REFRESH™, add SANITIZERS.

- A) add ADJUST UP™ until level reads 7.2–7.6. p.p.m.
- B) add REFRESH™, add SANITIZERS.
Drain and refill spa if necessary.

- A) add sanitizers until levels are up to the recommended levels
- B) replace at least once a year
- c) replace at least once a year



GETTING STARTED

Initial Start-Up

Before adding chemicals, know your spa water capacity in gallons or litres.

- 1 As you fill the spa add 2 oz. (60mL) of **Best Defence** per 250 gal. (1000 litres) to inhibit staining and scale formation.
- 2 Once the spa has sufficient water for circulation, turn on the filtering equipment.
- 3 Test the total alkalinity. The ideal range is 80-150 p.p.m. Adjust with **Perfect Balance** or **Adjust Down**.
- 4 Test the pH. The ideal range is 7.2 to 7.6. Adjust if necessary with **Adjust Up** or **Adjust Down**.
- 5 Circulate the water for 30 minutes.
- 6 At this point the spa owner must decide to use the bromine or chlorine disinfectant system...



SANITIZE B : Bromine

After water is balanced add 1 1/2 oz (50 g) of **Peak Boost** per 250 gal (1000 litres). Add 4 oz (120 g) of **Refresh** per 250 gal (1000 litres). This will establish an immediate bromine residual for disinfection. Fill your floating or automatic feeder with bromine tablets and adjust the bromine level to 3-5 p.p.m.

OR

SANITIZE C : Chlorine

Add 4 oz. (120 gm) of **Refresh** per 250 gallons (1000 litres). Add 1/2 oz. (15 g) per 250 gallons (1000 litres) of **Boost**.

If you are using **Spa Tabs** fill your floating or automatic feeder and adjust until the chlorine residual level is 3-5 p.p.m. The skimmer basket can also be used to dispense **Spa Tabs**. If you use **Boost** granular chlorine, maintain a 3-5 chlorine residual.

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Test for chlorine or bromine after 15 minutes of circulation.

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MAINTENANCE

Daily

To keep your spa water sparkling clear and odour free, follow these steps:

- 1 Operate the filter for at least two hours to remove suspended particles that may exist.
- 2 Test total alkalinity. Maintain the desired range of 80-150 p.p.m.
- 3 Test pH to maintain a level of 7.2-7.6.
- 4 Proceed with your appropriate disinfectant system...

SANITIZE B :

If you are using **Bromine Tablets** adjust your feeder so the bromine residual is 3-5 p.p.m. Add 2 oz. (60 gm) of **Refresh** per 250 gallons (1000 litres).



OR

SANITIZE C:

If you are using **Spa Tabs** adjust your feeder so the chlorine residual is 3-5 p.p.m. Add 2 oz. (60 gm) of **Refresh** per 250 gallons (1000 litres).

If you are using **Boost** granular chlorine add 1/2 teaspoon as necessary to maintain level of 3-5 p.p.m. Test for chlorine residual after 15 minutes. Heavy daily use of the spa may require a **Shock Treatment**, 2 oz. (60 gm) of **Refresh** per 250 gallons (1000 litres).





MAINTENANCE

Weekly

When the spa is not in use:

- 1 Add 1 oz. (30 mL) of **Best Defence** per 250 gal. (1000 litres) to inhibit scaling and staining. Circulate the water for 30 minutes.
- 2 Proceed with your appropriate disinfectant system...

SANITIZE B:

If you are using **Bromine Tablets** test for Bromine and adjust feeder to maintain a bromine residual of 3-5 p.p.m.

OR

SANITIZE C:

If you are using **Spa Tabs** test for chlorine and adjust feeder to maintain a chlorine residual of 3-5 p.p.m.

If you are using **Boost** the daily addition should be sufficient to maintain a level of 3-5 p.p.m.

With both the **Bromine** and **Chlorine** sanitizing systems contaminants may build up during the week. The spa should be shocked with **Refresh** at a rate of 3 oz. (100 gm) per 250 gal. (1000 litres). This will eliminate any odour and restore clarity to the water.



Periodic



- 1 Greases, oils and organic waste can accumulate on the filter cartridge reducing their efficiency and limiting the effectiveness of the disinfectant. Once a month remove cartridge and soak overnight in **Filter Restore**. Physically clean the basket daily.
- 2 Add 1 oz. (30 mL) of **Easy Clear** per 250 gal. (1000 litres). Circulate the water for 30 minutes.
- 3 After administering a non-chlorine shock treatment with **Refresh**, or a super chlorinator treatment with **Boost**, leave cover open for 20 minutes to allow oxidized gas to vent. The use of a thermal insulated hard cover will reduce evaporation and heat loss.
- 4 Over time, oxidation of the spa cover and cabinet will create a dull finish. An application of **Cover and Cabinet Renew** will bring back and protect the finish.
- 5 Once you have established a comfortable water temperature to soak at, leave the thermostat at that temperature. Rapid changes in water temperature consume more energy.
- 6 Replace test kit reagents each season. Care should be taken to keep solutions out of the sun. Check expiry date of test strips.
- 7 Take a sample of water to your spa dealer to test for alkalinity, pH, calcium and total dissolved solids.
- 8 Due to the warm water temperature and high evaporation rate, the total dissolved solids tend to build up. For this reason we recommend draining and refilling the spa periodically. Before draining spa add **Fresh Start** and circulate as directed. Follow this rule of thumb for draining the spa:

$$\begin{array}{l} \frac{1}{3} \text{ GALLONS} \\ \div \quad \text{Average number of bathers per day} \\ \text{EXAMPLE:} \\ \frac{1}{3} \times 300 \\ \div \quad 2 \\ \hline = \quad \mathbf{50 \text{ DAYS}} \end{array}$$



SAFETY TIPS

Spa Safety

- 1 To avoid possible health hazard to users, **never** heat spa water above 104° F (40°C). The spa use should be limited to 15 minute intervals to avoid nausea.
- 2 Do not enter a spa under the influence of alcohol or medication that could cause drowsiness. If you are on medication consult a doctor before using the spa.
- 3 Children should not use the spa without adult supervision.
- 4 Because of high water temperatures, pregnant women and small children should use caution.
- 5 Do not use electricity near the water.
Example: radios or hairdryers.
- 6 Hot water is an ideal medium for spreading infection. People with open wounds should not use the spa.
- 7 Always enter and leave the spa with caution.





Chemical Safety

- 1 Read the directions carefully.
- 2 **Always** add chemicals to the spa, **never** add water to the chemicals.
- 3 Do not mix chemicals together. Add chemicals one at a time. Rinse out the measuring cup before the addition of the next chemical.
- 4 Store chemicals in a cool, dry place — out of reach of children. Do not store chemicals in the spa equipment compartment.
- 5 In case of contact or if chemical is swallowed, follow emergency advice on product label.
- 6 Do not smoke near chemicals. Keep the container closed when not in use.





Spa-Ball absorbs body oils and sun tan oils but repels water. The unique flow-through action allows water to pass through the ball while removing dirt and debris. Spa-Ball helps prevent foaming and scum ring. It will increase filter life and efficiency.

LOCAL DEALER



ARCTIC SPAS

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