FreshWater Ag+®
Continuous Silver Ion Sanitizer
Lasts a Full 4 Months!

Continuous Silver Ion Sanitizer
The No Bromine Alternative*

FOR SPARKLING CLEAR WATER...
Ends routine usage of chlorine and bromine and restores water quality when used in conjunction with MPS.***

ENHANCED BATHER COMFORT...
Reduces potential for unpleasant odor and scum lines.

ACTIVE INGREDIENTS:
Metallic Silver** 0.52%
OTHER INGREDIENTS 63.68%
TOTAL 100.00%
** From Silver Nitrate

KEEP OUT OF REACH OF CHILDREN
CAUTION
See back panel for additional precautionary statements.
EPA Reg. No. 571-21572031
EPA Est. No. 77712-CA-011
Net Contents: 98 grams (0.22 lbs.)
Spa Capacity: Up to 500 gallons

For Use With Hot Spring®, Tiger River®, Hot Spot® and Solana® Spas

rev 12.31.09
The FreshWater Ag+ sanitizer comes in two parts, the main body and the handle.

INSTALLS IN SECONDS RIGHT INTO YOUR FILTER.
1. Attach handle to main body.
2. Remove gray cap from filter standpipe.
3. Drop sanitizer into filter standpipe, handle up.
4. Replace cap onto filter standpipe.

Please refer to the operating manual for complete installation instructions.

PRECAUTIONARY STATEMENTS
Hazard to Humans and Domestic Animals.

CAUTION
In the unlikely event that a cartridge breaks, mineral media should not be ingested by humans or animals as it may cause gastric distress.

FIRST AID
If ingested: Call the Poison Control Center or a doctor immediately for treatment advice.

STORAGE/DISPOSAL
Storage—Store in areas inaccessible to small children.
Disposal—After 4 months of use, discard cartridge in household trash. Do not save the cartridge for re-use. The cartridge is manufactured with mineral sealed media inside. In the unlikely event a cartridge breaks, remove it and vacuum out any media introduced into the spa water.

DIRECTIONS FOR USE
It is a violation of federal law to use this product in a manner inconsistent with its labeling. See Owner's Manual inside box for directions for use.

CHANGE THIS CARTRIDGE EVERY 4 MONTHS
Use of this cartridge for longer than 4 continuous months will void the warranty. Discard this cartridge at the end of 4 months.

Continuous Silver Ion Sanitizer
Brilliantly clear, odor-free spa water

IT'S EASY.
Quickly and easily install FreshWater Ag+ sanitizer, then relax while it consistently and conveniently sanitizes your water for a full 4 months.

IT'S COMPATIBLE.
FreshWater Ag+ is specifically designed to use with Hot Spring®, Tiger River®, Hot Spot® and Solana® Spas. Compatible with the FreshWater® III ozone system.

For Use With Hot Spring®,
Tiger River®, Hot Spot®
and Solana® Spas
Continuous Silver Ion Sanitizer

Owner's Manual

**IMPORTANT** Spa Owner, save this manual. Installer, leave this manual with the spa owner.

Safety Instructions

**Important Information**

FreshWater®Ag+ has been designed to sanitize spas up to 300 gallons.

**ATTENTION** Failure to heed the following can result in permanent injury or drowning.

**EQUIPMENT UNDER PRESSURE**
- Always turn spa off prior to installing or changing FreshWater®Ag+.
- Your spa system is operated under pressure and the pressure must be relieved before you begin work. Please see your spa owner's manual for further instructions.

**PREVENT CHILD DROWNING**
- Do not let anyone, especially small children, sit, step, lean or climb on any equipment installed as part of your spa's operational system.

**LOW CHLORINE RECIPE**
- You must strictly follow the FreshWater®Ag+ recipes included in this manual to maintain proper water chemistry and avoid health hazards. Failure to follow these instructions can lead to sickness from bacteria and other noxious organisms.

**CAUTION**

**PRECAUTIONARY STATEMENT**
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:**

In the unlikely event that a cartridge breaks, mineral media should not be ingested by humans or animals as it may cause gastric distress.

**FIRST AID IF INGESTED:** Call poison control center or doctor immediately for treatment advice.

This FreshWater®Ag+ is designed only for residential portable spas.
We ask you to take the time to get familiar with this manual.
Thank you for purchasing FreshWater® Ag+. We believe the more you know, the more enjoyable your family's bathing experience will be - and the more you will reduce the time, effort and cost of maintaining your spa. Spa owners who switch from conventional chemical programs to the FreshWater® Ag+ spend less time maintaining their spas. Every spa has its own characteristics of water type, amount of sunlight, etc. The recipe included in this manual will help insure good water quality for your spa. Remember, your HotSpring dealer can provide advice and service.

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Directions for Use:

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

FreshWater® Ag+ Compatibility

Attention: Not to be used with product containing biguanides. If biguanide or bromide products are being used, be sure to drain and refill with fresh water when using the low chlorine recipe.
Start-Up

Before starting up a new FreshWater® system, clean debris and algae out of the spa and spa equipment.

Important: Do not install the new FreshWater® system until the spa water is clean and chemically balanced.

- Balance spa water before installing FreshWater®
  - pH: 7.2-7.6
  - Calcium hardness: 200-400 ppm
  - Total alkalinity: 80-120 ppm
  - Total Dissolved Solids (TDS): 300-2000 ppm

Consult with your HotSpring® Dealer for specific water balance instructions.

Balance the Water

To find out if your spa water is balanced:
- take a water sample to your dealer to be tested regularly; or
- ask your dealer to recommend a spa test kit for water balance

Element: pH  
Range: 7.2-7.6
If too low: The surface of your spa can become etched. Metal parts in the pump and plumbing will corrode.
How to fix: Add pH increaser

If too high: “Scale” forms on the surface of your spa. The water can become cloudy. Equipment can be damaged.
How to fix: Add pH decreaser

Element: Calcium Hardness  
Range: 200-400 ppm
If too high: Rough, discolored deposits (“scale”) will form on the spa surface and inside spa equipment.
How to fix: Drain or dilute the spa water. Consult your dealer.

Element: Total Alkalinity  
Range: 80-120 ppm
If too low: It provides no buffer so that you constantly get fluctuating pH readings, which can damage equipment and spa surfaces.
How to fix: Use an alkalinity increaser.
If too high: The water becomes cloudy or milky white.
How to fix: Add acid to bring alkalinity down.
**Install the FreshWater® Ag⁺**

1. Drain and refill your spa. Balance water per spa manufacturer guidelines.

2. **Install the FreshWaterAg⁺** after water is balanced.
   
   Refer to Assembly and Installation Diagrams below for instructions regarding your particular model’s installation.

3. **Superoxidize** the spa water with an EPA registered source of chlorine according to manufacturer’s instructions to burn off contaminants and activate cartridge:
   
   - Add 1.5 tablespoons of dichlor¹ to spa per 250 gallons (approx. 1000 liters). Note: 1.5 tablespoons is approximately 3/4 oz or 24 grams.
   - Do not enter the spa if the free available chlorine residual is over 5 ppm.

   **Important:** Initial superoxidation with dichlor¹ is required to burn off contaminants and activate cartridge.

4. Run spa according to recommendations supplied to you by the manufacturer of your spa.

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**Assembly and Installation Diagrams**

The FreshWaterAg⁺ comes in two (2) parts, the main body (A) and the handle (B).

1. Attach the handle to the main body to create a single device as shown.

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¹ Sodium dichloroisocyanurate dihydrate
2. Remove gray cap from filter standpipe.
3. Drop sanitizer into filter standpipe, handle up as shown.

4. Replace gray cap onto filter standpipe.
Recipe

There is one recipe for maintaining clean, clear, sanitized water with minimum time and effort.

This recipe provides the easiest and most economical way to care for your FreshWaterAg.

Low-Chlorine Recipe

Ingredients:

- FreshWaterAg
- Non-chlorine oxidizer (MPS)³
- HotSpring® MPS Test Strip, or equivalent (MPS², pH, total alkalinity)
- pH, hardness and total alkalinity adjusting chemicals
- Dichlor¹, EPA registered source

<table>
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<tr>
<th>When</th>
<th>What to do</th>
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<tr>
<td>Every day</td>
<td>Run spa according to recommendations supplied to you by the manufacturer of your spa</td>
</tr>
<tr>
<td>Before each use</td>
<td>Test the water with the HotSpring MPS Test Strip (or equivalent)</td>
</tr>
<tr>
<td>If the MPS² level is low, add 1 tablespoon of MPS to spa per 250 gallons (approx. 1000 liters). Note: 1 tablespoon is approximately 1/2 ounce or 16 grams. Use the HotSpring MPS Test Strip (or equivalent) to test the spa water after each addition of MPS. If the test strip indicates levels below the OK range, add 1 tablespoon MPS to spa per 250 gallons and re-test. Enter spa only after test strip indicates a sufficient level of MPS³.</td>
<td></td>
</tr>
<tr>
<td>After each use</td>
<td>Add 1 tablespoon of MPS to spa per 250 gallons (approx. 1000 liters)</td>
</tr>
<tr>
<td>Once a week per month</td>
<td>Adjust the pH, total alkalinity, and hardness as needed. A convenient way to test pH and total alkalinity is the HotSpring MPS Test Strip.</td>
</tr>
<tr>
<td>Every 4 months</td>
<td>Drain and refill spa. Replace FreshWaterAg and repeat sanitizer start-up.</td>
</tr>
</tbody>
</table>
When: What to do:

As needed: Shock treat with 1.5 tablespoons of an EPA registered source of dichlor per 250 gallons (approx. 1000 liters) to remedy problems which may occur when bather loads are high; when successive MPS test strip readings indicate high demand; when water appears hazy or dull; when unpleasant odors or eye irritation occur; after heavy wind and rainstorms or if foam develops.

Note: As an alternative to MPS, an EPA registered source of dichlor<sup>1</sup> may be substituted. 1 tablespoon dichlor<sup>1</sup> = approximately 3 tablespoons MPS<sup>2</sup>

Important: Perform start-up procedures for spas which have been unused or unattended. The FreshWater<sup>®</sup> MPS is not to be used with products containing biguanides. If biguanide or bromide products are being used, BE SURE TO DRAIN AND REFILL SPA WITH FRESH WATER WHEN USING THE LOW CHLORINE RECIPE.

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<sup>1</sup> Sodium dichloroisocyanurate dithrate

<sup>2</sup> Potassium peroxymonosulfate

<sup>3</sup> MPS may cause a lowering of the pH and total alkalinity of your spa water. Please monitor pH and total alkalinity at least once per week and adjust accordingly.

<sup>4</sup> MPS Test Strips are available at your local Hot Spring Dealer.
## Provide Filtration/Circulation

<table>
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<th>To manage</th>
<th>You need to:</th>
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</thead>
<tbody>
<tr>
<td>Circulation</td>
<td>Follow the manufacturer's directions for keeping the circulating pump in good working order and operate it at least four (4) hours a day. Consult your HotSpring® dealer for optimum run times.</td>
</tr>
<tr>
<td>Filtration</td>
<td>Check the spa’s filter periodically and clean it as recommended by the manufacturer.</td>
</tr>
</tbody>
</table>

## FreshWater® Ag+ Replacement Intervals

Use the month indicator decal to identify the date on which the cartridge should be replaced. Always turn spa off prior to installing or changing FreshWater® Ag+. Your spa is operated under pressure and the pressure must be released before you begin work. Please see your spa owner’s manual for further instructions.

A cartridge lasts four (4) months. The cartridge should not be used longer than four (4) months.

## Disposal

After four (4) months of use, discard FreshWater® Ag+ in the household trash. Do not save the cartridge for re-use. The cartridge is manufactured with the mineral media sealed inside. In the unlikely event a cartridge breaks, remove it and vacuum out any media introduced into the spa.
Limited Warranty

FRESHWATER® LIMITED WARRANTY
The limited warranties contained herein are the only warranties given with your FreshWater® spa, and supersede any prior warranties. All other warranties, expressed or implied, including the limited warranty of merchantability or the implied warranty of fitness for a particular purpose are hereby disclaimed. Our sole obligation under this warranty, and the purchaser's sole remedy, is limited to repair or replacement of the FreshWater® spa. The FreshWater® warranty applies to the original owner only.

THE LIMITED WARRANTIES OF THE FRESHWATER®
FreshWater® is warranted to be free of defects in materials and to perform satisfactorily for a period of four (4) months from the date of purchase. FreshWater® is warranted not to cause staining in your spa. This limited warranty requires that you exercise reasonable care of your spa and keep water in balance at all times. This limited warranty does not cover discoloration to chromium fittings. This warranty does not cover cartridges used with any biocidal products. If the cartridge is defective and does not perform satisfactorily for the entire four (4) months, we will replace the cartridge.

EXCLUSIONS FROM WARRANTY
FreshWater® is designed for use on residential portable spas up to 500 gallons. If it is used in any other application, the warranty is void, and the purchaser and/or spa owner releases the manufacturer from any and all claims related to the use of the FreshWater® spa.

This warranty does not cover problems arising in whole or in part from purchaser's negligence, misuse or abuse, improper maintenance or storage, accident, improper installation, improper application, failure to follow all appropriate safety precautions, acts of God, abnormal weather conditions, damage from plants or animals, and improper use of chemicals.

This warranty specifically excludes all incidental or consequential damages, except where state law requires them to be paid. This warranty gives you specific rights. You may have other rights that vary from state to state.

TO SUBMIT A CLAIM
Report claims to Watkins Manufacturing Corporation at 800-599-4688. Only the original purchaser may submit a claim under this limited warranty. Claims must be accompanied by an original purchase receipt.
### Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>What to look for</th>
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<tr>
<td><strong>Cloudy water</strong>&lt;br&gt; Frequently caused by improper start up. See section on Start Up and Install the Cartridge</td>
<td><strong>Spa filtration</strong>&lt;br&gt; Slow filter turnover rates</td>
</tr>
<tr>
<td><strong>Algae growth</strong></td>
<td>Hazy spa water, may have slightly green appearance</td>
</tr>
<tr>
<td><strong>Unbalanced water</strong>&lt;br&gt; Note: Do not use algae treatments containing either copper or sodium bromide</td>
<td>1. High hardness&lt;br&gt; 2. High TDS (total dissolved solids)&lt;br&gt; 3. High pH&lt;br&gt; 4. High total alkalinity</td>
</tr>
<tr>
<td><strong>Algae</strong>&lt;br&gt; Algae may be caused by insufficient levels of oxidizer and/or inadequate water circulation</td>
<td>Green or white algae&lt;br&gt; Pea green to white color; attaches to spa walls, sometimes colors the entire body of water</td>
</tr>
<tr>
<td><strong>Stains</strong></td>
<td>Bluegreen&lt;br&gt; Copper or iron from spas equipment corrosion or water supply</td>
</tr>
<tr>
<td>Redbrown</td>
<td>Iron or manganese from equipment corrosion or water supply</td>
</tr>
<tr>
<td><strong>Black</strong></td>
<td>Manganese in water supply</td>
</tr>
<tr>
<td><strong>Metal staining</strong></td>
<td>High native mineral content in water: unbalanced water</td>
</tr>
<tr>
<td><strong>Scale</strong></td>
<td>Crusty deposits on spa surfaces&lt;br&gt; High pH and high total alkalinity&lt;br&gt; High TDS (total dissolved solids) or high hardness</td>
</tr>
</tbody>
</table>
Treatment

1. Backwash and clean filter.
2. Run filter for 24 hours.
3. Increase run time per day.

Superchlorinate water with EPA registered source of
dichlor according to manufacturer’s instructions.

Balance the spa water.

1. Check pH and adjust if necessary.
2. Superchlorinate water with EPA registered source of
dichlor according to manufacturer’s instructions.
3. Repeat steps 1 and 2 until algae is gone.

1. Adjust pH and total alkalinity to ideal ranges.
2. Vigorously brush stained areas.
3. Add sequestrant.
4. Run filter.
5. Twelve hours later, superchlorinate the spa.
6. Test and balance water.
7. Test spa water for dissolved metals.

Clean with soft cloth and mild detergent.
Test water for minerals; use a sequestrant, maintain water balance.

Adjust pH and total alkalinity to ideal ranges.

1. Replace a volume of spa water with water low in hardness and dissolved solids.
2. Use sequestrant to prevent scale buildup if high hardness is a continuing problem.
3. If remedial action has been taken, and problem still persists:
   - Drain and refill spa.
   - Sodium citrate or sodium citrate.

Consult your HotSpring Dealer for additional information or call 800.999.4689.
HotSpring® MPS Test Strips

Just dip and swirl the Test Strip.

See accurate and reliable results on the levels of MPS', Alkalinity and pH in your spa's water.

Now available at your local HotSpring Dealer.