# Mineral Sanitizer

### **Owner's Manual**

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

Safety Instructions Important Information

Please read prior to installation.

Spa has been designed to sanitize spas up to 500 gallons.



ASK YOU TO WE TAKE THE GET FAMILIAR TIME ТО WITH THIS MANUAL.

Thank you for purchasing Spa Sanitizer. We believe the more you know, the more enjoyable your 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 Spa Sanitizer spend less time maintaining their spa. Every spa has its own characteristics of water type, amount of sunlight, etc. The recipe included in this manual will help ensure good water quality in any spa. Remember, your Spa Sanitizer dealer can provide advice and service.

Contents	Page
Safety Instructions	1
Start-Up	3
Balance the Water	3
Install the Spa Sanitizer	4
Operation and Maintenance	6
Provide Filtration / Circulation	8
Spa Replacement Intervals	8
Disposal	8
Spa Limited Warranty	9
Troubleshooting	10
Spa Test Strips	12

### Start-Up

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

Important: Do not install the new Spa Sanitizer until the spa water is clean and chemically balanced.

Balance spa water before installing Spa Sanitizer.

٠	pH	7.2-7.6
•	Calcium Hardness	200-400 ppm
٠	Total Alkalinity	80-120 ppm
•	Total Dissolved Solids (TDS)	300-2000 ppm

Consult your 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,

injury, including loss of life, always turn spa off prior to installing or changing Spa Sanitizer. Your spa system is operated under pressure and the pressure must be released 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 Spa Sanitizer recipe included in this manual to maintain proper water chemistry and avoid health hazards. Failure to follow thes 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.

### **Directions for Use**

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

### **Spa Compatibility**

**Important:** When converting a biguanide treated spa to a Spa Sanitizer, the spa must be completely drained and refilled. Then follow the Spa Sanitizer start-up procedure.

- ask your dealer to recommend a spa test kit for water balance.

Element: p	Н	Range: 7.2-7.6	
If too low:	The surface of your s	spa can become etched.	
	Metal parts in the pur	np 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 sp	a water. Consult your dealer.	
Element: 1	<b>Total Alkalinity</b>	Range: 80-120 ppm	
If too low: It provides no buffer so that you constantly get		so that you constantly get	
fluctuating pH readings, which can damage			
	equipment and spa surfaces.		
How to fix:	ix: Use an alkalinity increaser.		
If too high:	o high: The water becomes cloudy or milky white.		
How to fix:	Add acid to bring alkalinity down.		

The Spa Sanitizer is designed only for residential portable spas.

### Install the Spa Sanitizer

- Drain and refill your spa. Balance the water per spa manufacturer guidelines.
- 2 Install Spa Clarifier 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 dichlor to spa per 250 gallons (approx. 1000 liters).
  - Note: 1.5 tablespoons is approximately 3/4 ounce or 24 grams.
  - Do not enter the spa if the free available chlorine residual is over 5 ppm.

**Important:** Initial superoxidation with dichlor<sup>1</sup> is required to burn off contaminants and activate cartridge.

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

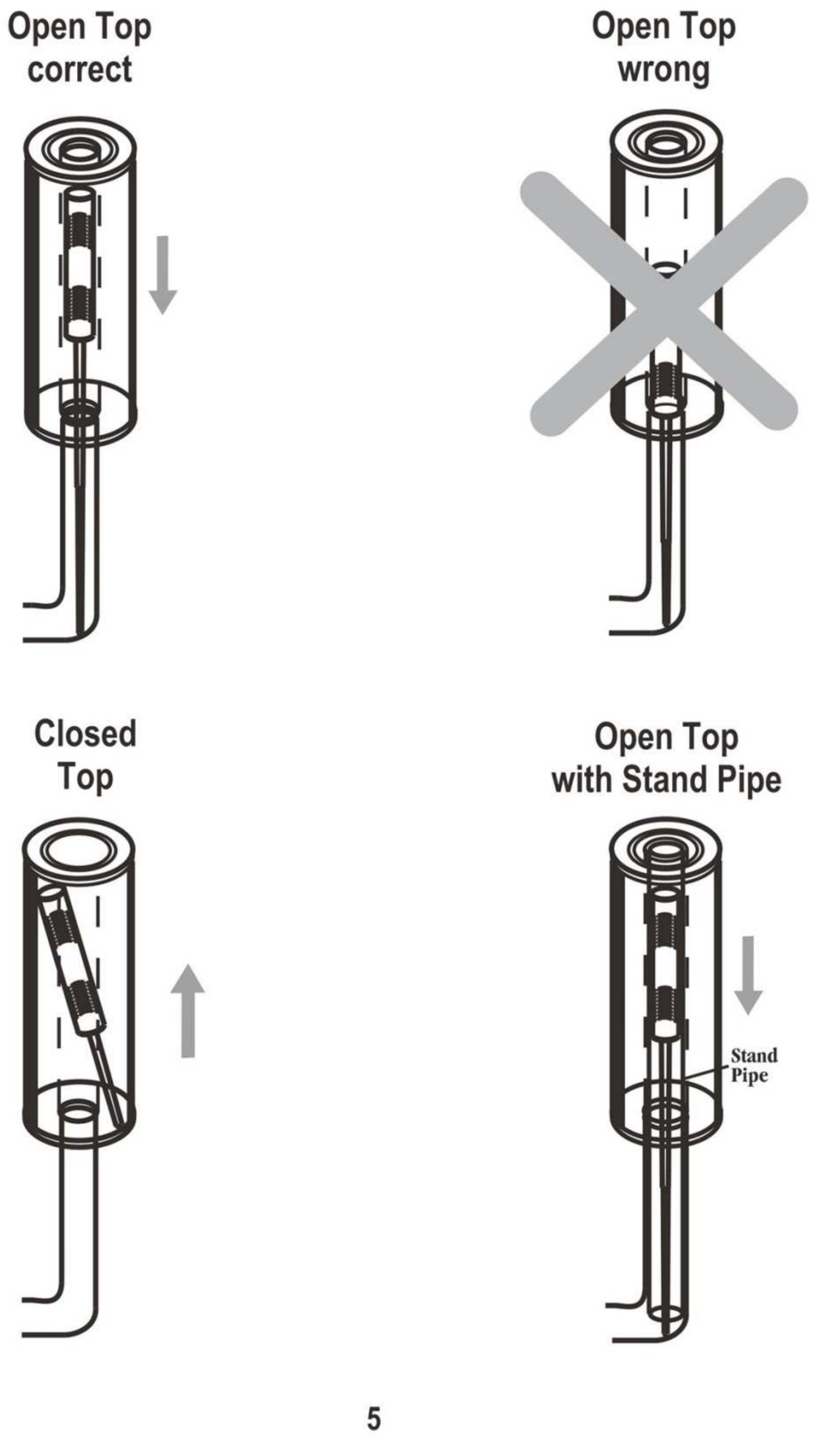
2. Slide the entire device into the core of your existing spa filter cartridge. See examples below.

**Open Top:** Slide unit in from the top. Position near the top half of the cartridge. (Support stems may be cut to position the cartridge correctly.)

**Open Top with Stand Pipe:** Some spa filter systems are configured with a standpipe running the length of the filter core. Simply slide unit in from the top. Position near the top half of the cartridge for easy retrieval.

**Closed Top:** Slide unit in from the bottom. Position unit to rest on shelf inside filter core.

**Note:** When installed, the Spa Sanitizer must be at least 1" (2.5cm) above the bottom of the filter to prevent blocking water flow.



## **Operation and Maintenance**

There is one (1) 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 Spa Sanitizer.

### Low-Chlorine Recipe

Ingredients:

- Spa Sanitizer
- Non-chlorine oxidizer (MPS<sup>2</sup>)<sup>3</sup>
- Spa Test Strips<sup>4</sup>, or equivalent (MPS<sup>2</sup>, pH, and total alkalinity)
- pH, hardness and total alkalinity adjusting chemicals
- Dichlor<sup>1</sup>, EPA registered source

#### When: What to do:

**Every day** Run spa according to recommendations supplied to you by the manufacturer of your spa.

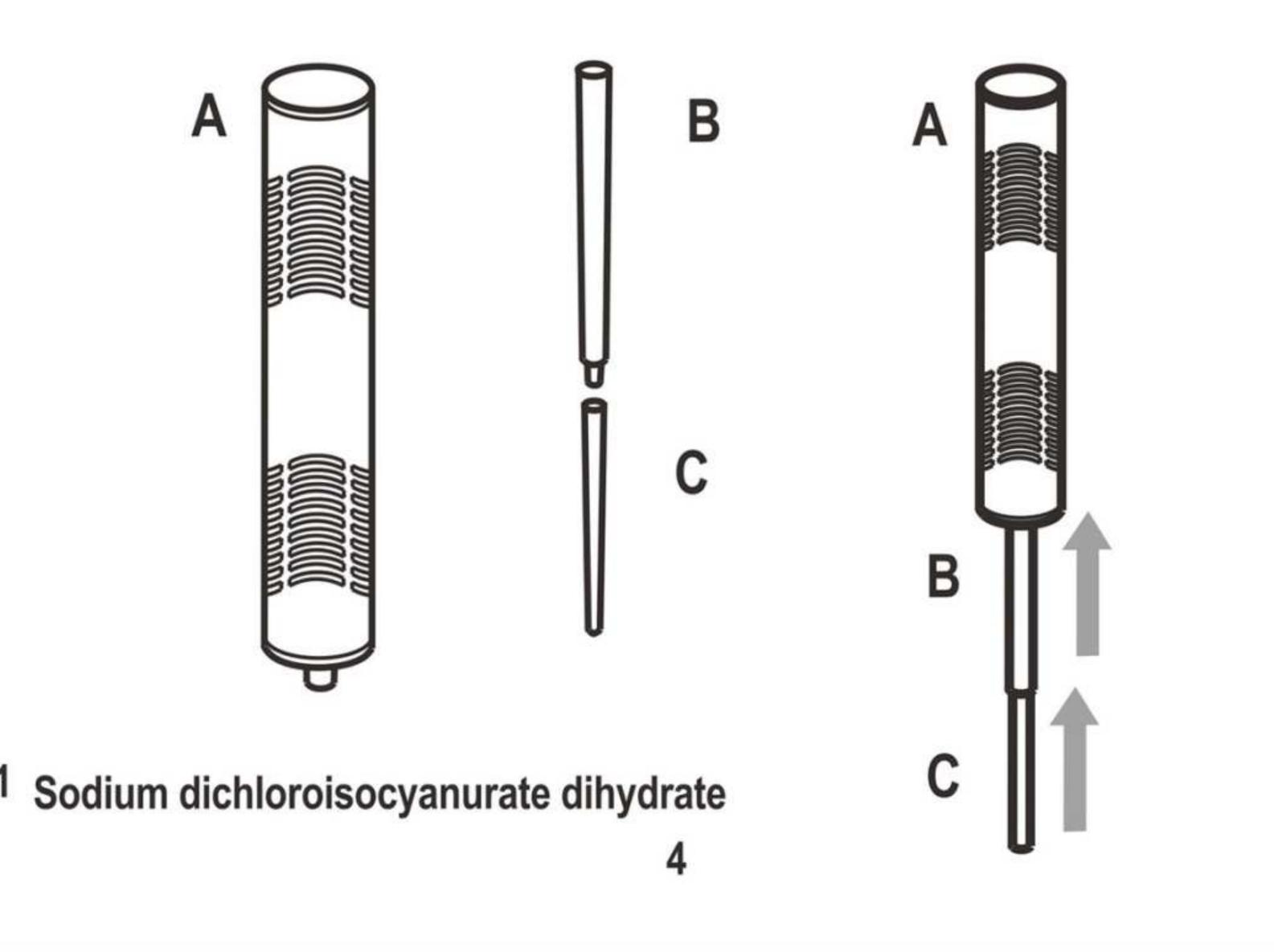
repeat sanitizer start-up.

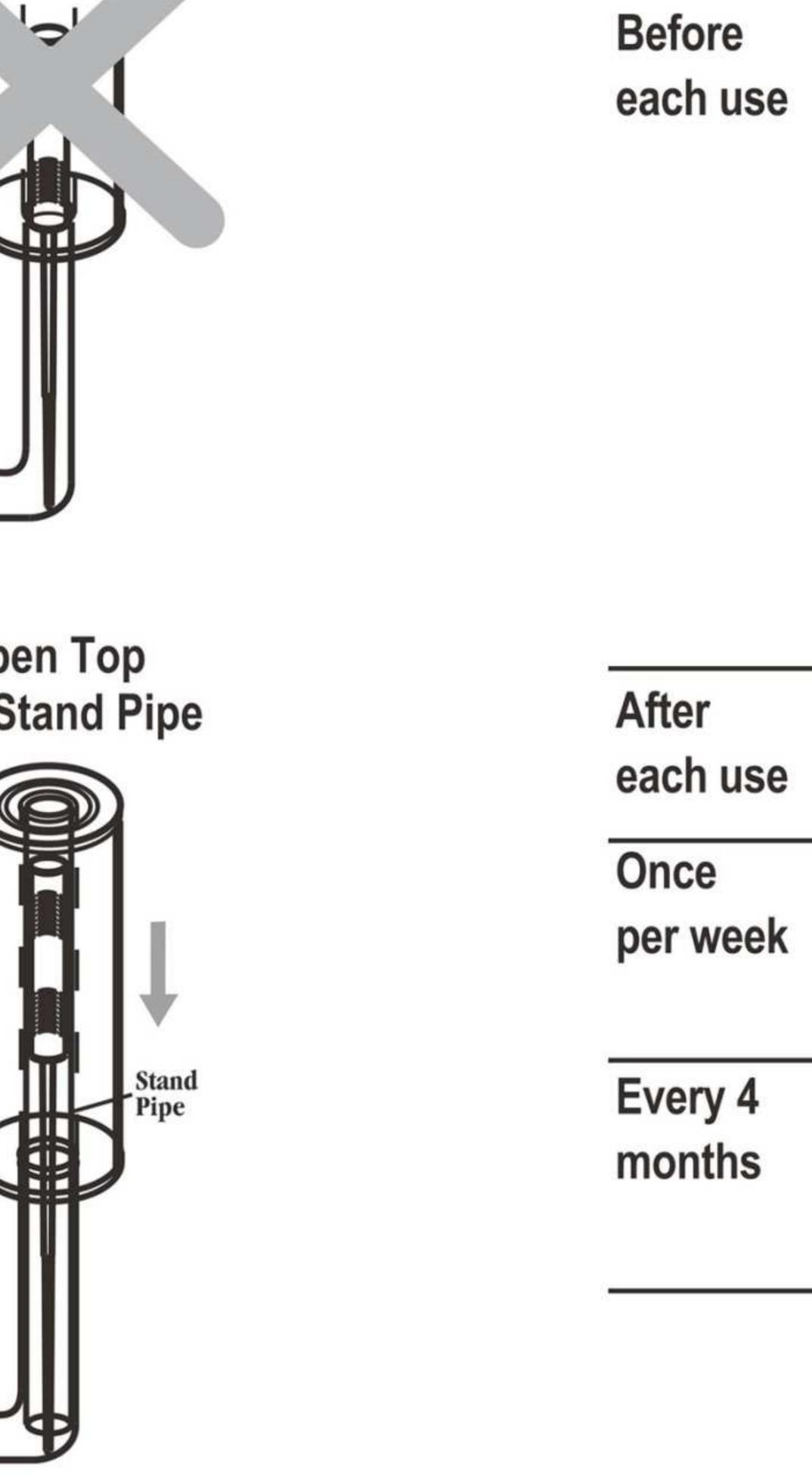
### **Assembly and Installation Diagrams**

The Spa comes in three (3) parts: the main body (A) and two (2) support stems (B and C).

Connect the support stems together and press onto main body to create a single device as shown.

**Note:** The Spa Sanitizer is designed to fit most portable spas. add company name here assumes no liabilities for the product if installed in any way other than the methods described in this manual.





Test the water with Spa Test Strip equivalent). If the MPS<sup>2</sup> level is low, add 1 tablespoon of MPS<sup>2</sup> to spa per 250 gallons (approx. 1000 liters). Note: 1 tablespoon is approximately 1/2 ounce or 1.6 grams Use the Spa Test Strip (or equivalent) to test the spa water after each addition of MPS<sup>2</sup>. If the test strip indicates levels below the OK range, add 1 tablespoon MPS<sup>2</sup> to spa per 250 gallons and re-test. Enter spa only after test strip indicates a sufficient level of MPS<sup>2</sup>. Add 1 tablespoon of MPS<sup>2</sup> to spa per 250 gallons each use (approx. 1000 liters). Adjust the pH, total alkalinity, and hardness as needed. A convenient way to test pH and total alkalinity is the Spa Test Strip. Drain and refill your spa. Replace Spa Sanitizer and

#### What to do: When:

As needed Shock treat with 1.5 tablespoons of an EPA registered source of dichlor<sup>1</sup> per 250 gallons (approx. 1000 liters) to remedy problems which may occur when bathing loads are high, when successive MPS<sup>2</sup> test strip reading 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<sup>2</sup>, 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 Spa Sanitizer is not to be used with products containing biguanides. If these products are being used, DRAIN AND REFILL SPA WITH FRESH WATER.

### Spa 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 Spa Sanitizer. 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 Spa Sanitizer in 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.

## Spa Limited Warranty

The limited warranties contained within this document are the only warranties given with your Spa Sanitizer and supercede any prior warranties. All other warranties, expressed or implied, including the implied 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 Spa Sanitizer. The warranty applies to the original owner only.

#### THE LIMITED WARRANTIES OF THE Spa Sanitizer ARE:

Spa 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. Spa 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 biguanide 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**

Spa Sanitizer 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 Spa Sanitizer.

### **Provide Filtration / Circulation**

You need to: To manage:

Circulation 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 Spa dealer for optimum run times.

Filtration Check the spa filter periodically and clean it as recommended by the manufacturer.

1 Sodium dichloroisocyanurate dihydrate

2 Potassium peroxymonosulfate

3 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.

4 Spa Test Strips are available at your local Dealer.

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** 

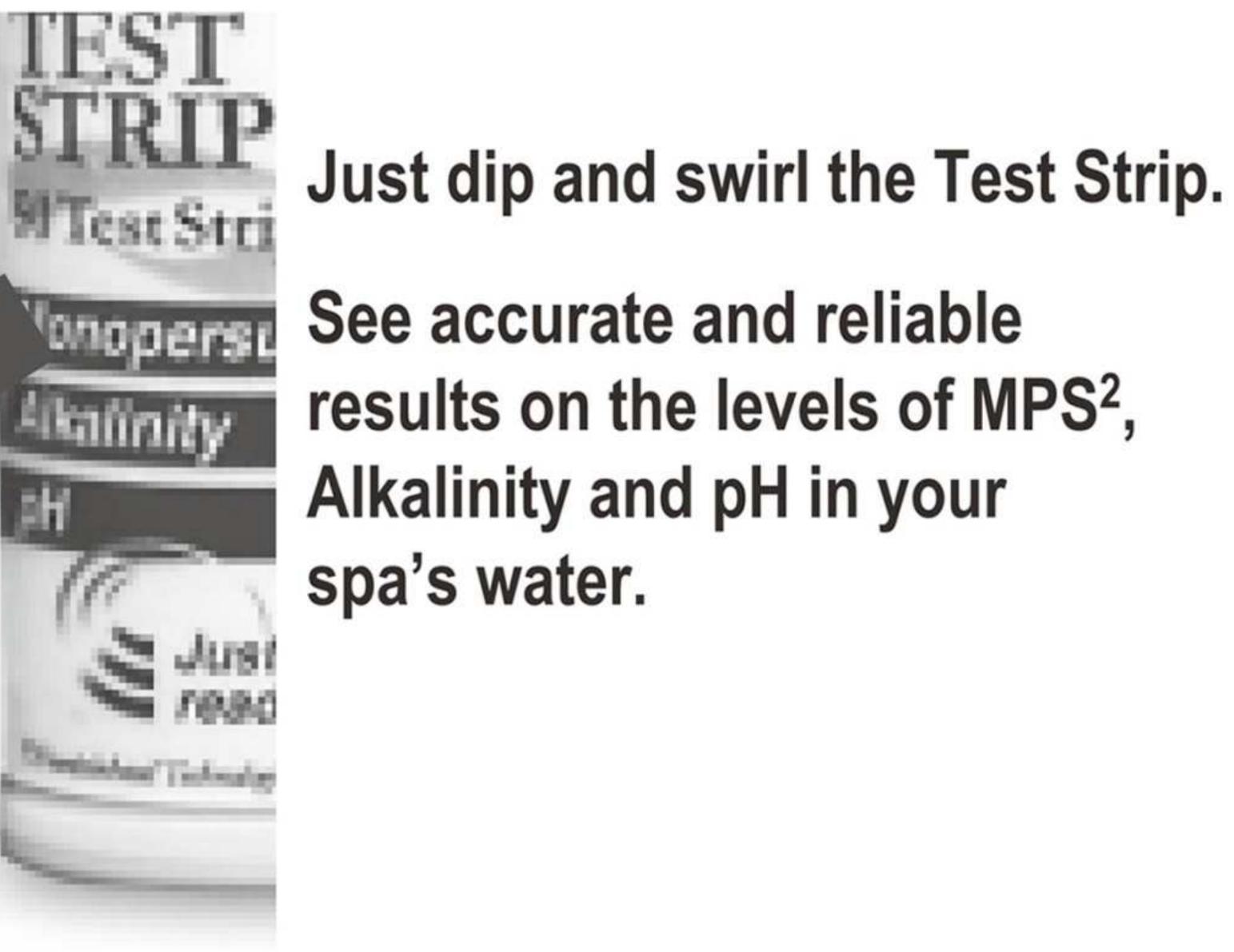
Only the original purchaser may submit a claim under this limited warranty. Claims must be accompanied by an original purchase receipt.

### Troubleshooting

Consult your Dealer for additional info.

	Problem	What to look for	Treatment
Cloudy water Frequently caused by	Spa filtration	Slow filter turnover rates	<ol> <li>Backwash and clean filter.</li> <li>Run filter for 24 hours.</li> <li>Increase run time per day.</li> </ol>
improper start up. See section on Start Up	Algae growth	Hazy spa water; may have slightly green appearance.	Superchlorinate water manufacturer's instructions.
and Install the Cartridge.	Unbalanced water	<ol> <li>High hardness</li> <li>High TDS (total dissolved solids)</li> <li>High pH</li> <li>High total alkalinity</li> </ol>	Balance the spa water.
Algae may be caused by insufficient levels	Green or white algae	Pea green to white color; attaches to spa walls, sometimes colors the entire body of water.	<ol> <li>Check pH and adjust if necessary</li> <li>Superchlorinate water according to manufacturer's instructions.</li> <li>Repeat steps 1 and 2 until algae is gone.</li> </ol>
of oxidizer and/or	Note: Do not u	ise algae treatments containing	

### Spa Test Strips



See accurate and reliable results on the levels of MPS<sup>2</sup>, Alkalinity and pH in your

inadequate water circulation.	copper.		
Stains	Blue/green	Copper or iron from spa equipment corrosion or water supply	<ol> <li>Adjust pH and total alkalinity to ideal ranges.</li> <li>Vigorously brush stained areas.</li> <li>Add sequestrant.</li> <li>Run filter.</li> <li>Twelve hours later, superchlorinate the spa.</li> <li>Test and balance water.</li> <li>Test spa water for dissolved metals.</li> <li>Clean with soft cloth and mild detergent.</li> <li>Test water for minerals; use a sequestrant; maintain water balance.</li> </ol>
	Red/brown	Iron or manganese from equipment corrosion or water supply.	
	Black	Manganese in water supply.	
	Metal tarnishing	High native mineral content in water; unbalanced water	
Scale	le Crusty deposits on spa surfaces	High pH and high total alkalinity	Adjust pH and total alkalinity to ideal ranges.
		High TDS (total dissolved solids) or high hardness 10	<ol> <li>Replace a volume of spa water with water low in hardness and dissolved solids.</li> <li>Use sequestrant to prevent scale buildup if high hardness is a continuing problem.</li> <li>If remedial action has been taken, and problem still persists, drain and refill spa.</li> </ol>