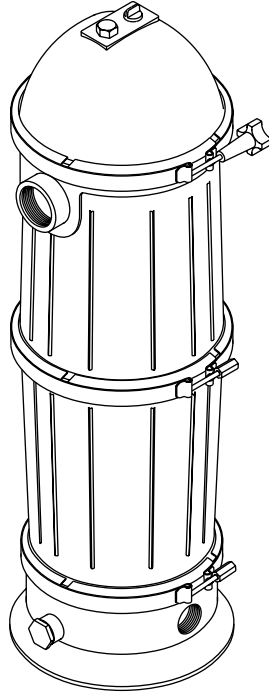


# STA-RITE®

## SEPARATION TANKS

O W N E R ' S M A N U A L



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INSTALLATION, OPERATION & PARTS

**MODEL**

60SEP

Furnish this manual to the end user of this tank; its use will reduce service calls and chance of injury and will lengthen tank life.

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**Sta-Rite Pool/Spa Group**

293 Wright Street, Delavan, WI 53115

North America: 800-752-0183, FAX 800-582-2217

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Union City, TN • Delavan, WI • Mississauga, Ont. • Murrieta, CA

# SEPARATION TANKS

To avoid unneeded service calls, prevent possible injuries, and get the most out of your filter, READ THIS MANUAL CAREFULLY!

The Sta-Rite Separation Tank:

- Is designed to separate spent diatomaceous earth and other solids from swimming pool water when backwashing your DE filter.
- Is an excellent performer; durable, reliable.

## Table of Contents

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## READ AND FOLLOW SAFETY INSTRUCTIONS!



 **DANGER**

 **WARNING**

 **CAUTION**

This is the safety alert symbol. When you see this symbol on your system or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

**DANGER** warns about hazards that **will** cause serious personal injury, death or major property damage if ignored.

**WARNING** warns about hazards that **can** cause serious personal injury, death or major property damage if ignored.

**CAUTION** warns about hazards that **will** or **can** cause minor personal injury or property damage if ignored.

The label **NOTICE** indicates special instructions which are important but not related to hazards.

**Carefully read and follow all safety instructions in this manual and on filter.**

Keep safety labels in good condition.  
Replace missing or damaged safety labels.



**⚠ WARNING** Incorrectly installed equipment may fail, causing severe injury or property damage. Read and follow operational parameters given below when installing equipment described in this owner's manual.

1. Follow instructions and procedures in owner's manual for installation, operation, and maintenance of equipment.
2. Do not connect any part of pool or spa system to city water system, well water system, or to any other type of high pressure water system or supply.
3. Do not attempt to use pool or spa equipment in any type of installation other than a pool or spa.
4. Trapped air under pressure in system can cause explosion and serious injury. Follow instructions in owner's manual or on equipment to make sure that no air is trapped in the system before testing or operating equipment.

**⚠ WARNING** Equipment that is incorrectly pressure tested may explode, causing severe injury or property damage. Pressure testing should only be done by trained pool professionals, following test parameters given below when testing the equipment described in this owner's manual.

1. Make physical check for correct tightness of all clamps, bolts, lids, and system accessories prior to test. See owner's manuals covering equipment being tested for this information.
2. Make sure there is no air entrapped in system. Release all air in system before testing.
3. When using a Sta-Rite pump and trap, tighten trap lid to 30 ft. lbs. (4.1 kg-m.) torque before testing.
4. Water pressure for testing must be 25 PSI (172kPa) or less.
5. Water temperature for testing must be 100°F (38°C) or less.
6. Test length must be 24 hours or less.
7. After test, make visual check of system to make sure that it is ready for operation. Remove Sta-Rite trap lid and retighten hand-tight only.
8. Exceeding any one of limits 2 through 6 or omitting physical checks specified in Steps 1 and 7 can result in equipment and property damage or physical injury.

**NOTICE:** These parameters apply to Sta-Rite pool and spa equipment only. For non-Sta-Rite equipment, consult manufacturer.

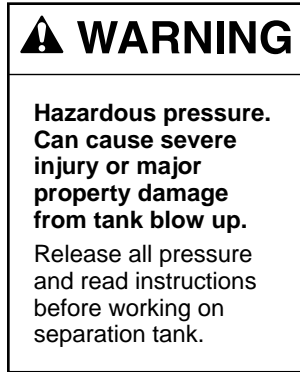
	<p><b>⚠ WARNING</b></p>	<p><b>BEFORE WORKING ON FILTER:</b></p>
	<p>If filter clamps are adjusted or removed under pressure, tank may explode, causing severe injury or major property damage.</p>	<ol style="list-style-type: none"> <li>1. Stop pump.</li> <li>2. Open air release valve.</li> <li>3. Release all pressure from system.</li> </ol>
	<p><b>⚠ WARNING</b></p>	<p><b>BEFORE WORKING ON PUMP OR MOTOR</b></p>
	<p>Filter pumps require hazardous voltage which can shock, burn, or cause death</p>	<p>Disconnect power to motor.</p>

## GENERAL INFORMATION

Clean a new pool as well as possible before filling pool and operating filter. Excess dirt and large particles of foreign matter in the system can cause serious damage to the filter and pump.

Keep pool water pH at recommended level (7.2 to 7.6).

Be sure both clamps are in place and knobs are securely tightened before starting filter. If filter is improperly disassembled or assembled, it will explode under pressure! To avoid danger of severe injury or major property damage, always follow service instructions in this manual when working on filter!



**⚠ WARNING** NEVER operate this filter system at more than 50 pounds per square inch (50 PSI/345kPa) pressure!

On a new pool installation, we recommend:

1. Disassemble the filter after the initial cleanup.

**⚠ WARNING** To prevent severe injury or major property damage, follow instructions in your filter owner's manual.

2. Remove and hose down the element assembly to remove contaminants.

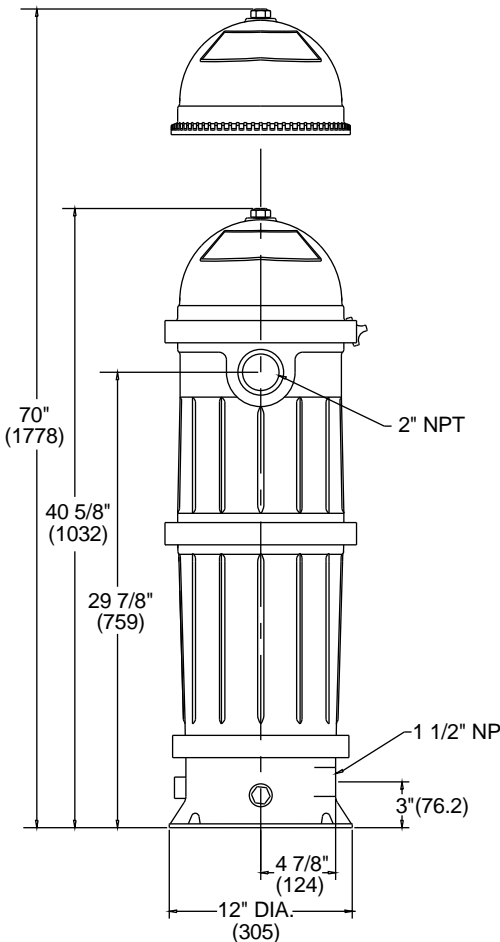


Figure 1 - Dimensions in inches (mm)

## INSTALLATION - GENERAL

Installation of separation tank should only be done by qualified, licensed personnel.

### Separation tank mount must

Provide space and lighting for easy access for routine maintenance.

Provide adequate ventilation and drainage for pump.

Be protected from weather and reasonably level.

Be less than three feet above pool water level.

Be as close to pool as possible to reduce line loss from pipe friction.

### Piping

All piping must conform to local and state plumbing and sanitary codes.

Never use pipe joint sealing compound on pipe and fittings that are plastic or may come into contact with plastic. Use only Teflon tape, Plasto-Joint Stik\* or Silastic RTV #732\*\* on PVC pipe and fittings; pipe joint compound may cause stress cracking of plastic components. Use pipe joint compounds only on metal-to-metal joints.

Support pipe independently to prevent strains on filter or pump.

Use 1-1/2" (38mm) or larger pipe to reduce pressure losses.

**NOTICE:** Filter locations remote from pool are possible but may require larger pipe to produce adequate flow through filter.

Check local codes if considering a remote installation.

Fittings restrict flow; for best efficiency use fewest possible fittings.

Keep piping tight and free of leaks: pump suction line leaks may cause trapped air in filter tank or loss of prime at pump; pump discharge line leaks may show up as dampness or jets of water.

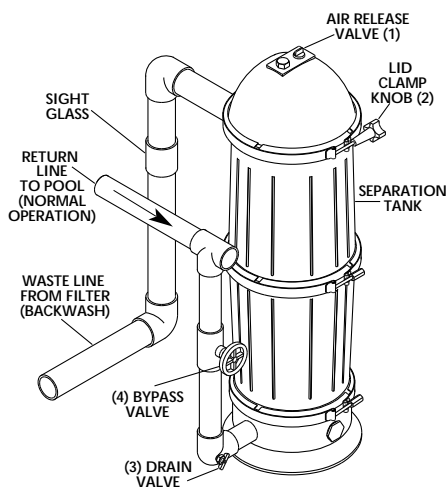


Figure 2 - Piping

### Valves

A Multi-port Valve to allow backwash cleaning is recommended.

A recirculation line with shutoff valve installed between pool return line and pump suction will allow recirculation of water during precoat if you have a precoat pot.

### Electrical

**BE SURE** filter grounding and bonding meets local and National Electrical Code standards. All wiring, grounding and bonding of associated equipment must meet local and National Electrical Code standards.

### New Installations:

**NOTICE:** A new pool should be cleaned as well as possible before filling pool and operating filter system. See your Filter Owner's Manual for initial startup and cleaning procedures.

\* Lake Chemical Co., Chicago, IL

\*\* Dow Corning

## OPERATION

When the filter is backwashed, use separation tank as follows to clean the diatomaceous earth filter media of pool residue, hair, etc. During normal filter operation the separation tank is not in use.

### Backwashing through Separation Tank:

1. Turn filter pump OFF.
2. Put filter valve in BACKWASH position.
3. Open Air Release Valve (Key No. 1, Figure 3).
4. Open return line By-Pass Valve (Key No. 4, Figure 3).
5. Start filter pump. when a steady stream of water comes out of Air Release Valve, close Air Release Valve and continue to backwash until water is clear in sight glass.
6. STOP filter pump. Return filter handle to FILTER position; close return line Bypass Valve.
7. Open small drain valve (Key No. 3) below By-Pass Valve and open Air Release Valve on Separation Tank lid. Allow Separation Tank to drain.

**⚠ DANGER**  
Hazardous pressure.

To avoid tank blow-up and severe personal injury or major property damage, BE SURE filter pump is off and all pressure is released from system before proceeding to next step (opening tank).

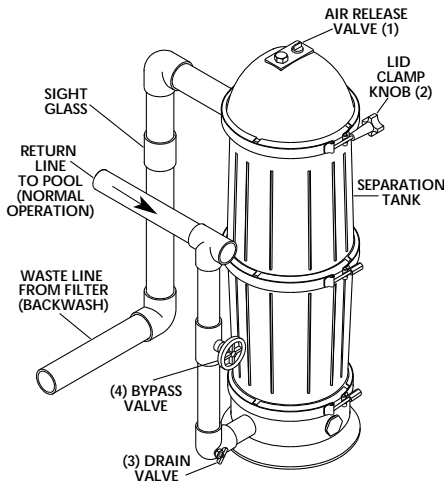


Figure 3

## OPENING/CLOSING TANK

### Opening Tank:

1. STOP FILTER PUMP and disconnect electrical power to pump before working on separation tank..
2. CLOSE suction and return line valves (if used).
3. OPEN air release valve on top of separation tank.
4. WAIT until all pressure is released from separation tank and system before loosening any clamps.

**⚠ DANGER**  
Hazardous pressure.

Releasing any clamp with pressure on system will cause tank or tank head to blow off of base, causing severe injury or major property damage! NEVER adjust, tighten or loosen any "V" band clamp when tank is under pressure!

1. Open air release valve (Key No. 1, Figure 3) on top of separation tank to release all pressure from inside of tank.
2. Open drain valve (Key No. 3, Figure 3) and drain all water from tank.
3. Remove clamp knob from top clamp.
4. Loosen top clamp; remove top clamp by lifting it straight up over tank or dropping it onto filter base.

**NOTICE:** Do not pull clamp sideways to remove; to do so will bend and damage clamp.

5. Remove tank lid from upper tank body. Be careful not to damage "O" Ring. Place tank head in clean area.

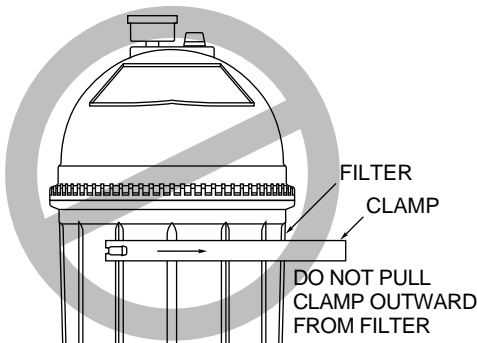


Figure 4

## MAINTENANCE:

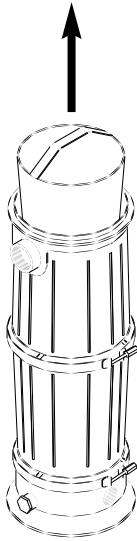


Figure 5: Lift basket to remove.

1. Thoroughly clean separation tank bag as follows:

A. Remove bag (see Figure 5) and dump spent DE into waste container.

**NOTICE:** Do not expose bag to direct sun for long periods. Direct sun will cause the cloth to deteriorate.

B. Hose down bag and replace in separation tank.

C. Replace with a new bag if necessary.

2. Inspect "V" Band clamps.



If faulty "V" band clamp is used, clamp may fail, causing tank to blow up. This can cause severe injury or major property damage. See side-bar (at left) for clamp inspection instructions.

3. Clean air release valve of accumulated dirt, hair, etc.

### Reassembly/Closing Tank:

1. Clean "O" Ring and sealing area of tank body. Check "O" Ring for damage. If it is damaged, replace it. If it is OK, lubricate with approved lubricant (see chart) and place in seat.

**NOTICE:** Top and middle clamps and "O" Rings are not interchangeable with bottom clamp and "O" Ring; DO NOT mix them up.

2. Do not remove or damage safety and instruction labels during cleaning. Replace any decals which may have been damaged.

3. Install clamp and knob assembly; tighten knob securely hand tight. To assist sealing, tap clamp around tank with mallet while tightening knob. Gap between ends of clamp should be 1/4" to 3/8" when clamp is tight and properly seated (see side-bar at left). If not, consult your pool professional.

4. Replace plugs or close valves in Tank Drain and Auxiliary Drain ports.

**NOTICE:** Leave Air Release Valve OPEN and return line By-Pass Valve CLOSED. Separation Tank should not be under pressure during normal filter operation.

6. Consult Filter Owner's Manual for filter startup procedure.

#### Clamp Inspection

1. Check for broken or cracked welds.
2. Check threads for galling, dirt, excessive wear.
3. Check knob/nut for cracks, breakage, thread wear, thread galling, etc.
4. Check tank sealing surfaces and clamp inner surface for dirt or corrosion. Clean where necessary.
5. Replace any parts showing damage or visible wear and tear.

#### Clamp Tightening

1. Normal tightening will cause threads to squeak; do not use the squeak as an indication of tightness.
2. Tap clamp with a mallet while tightening to aid clamp seating.
3. Tighten until clamp ends are between 1/4" and 3/8" apart.
4. If tank leaks after tightening clamp, proceed as follows:
  - A. Stop pump; release all pressure.
  - B. Remove clamp; clean clamp, O-Ring, and tank flanges.
  - C. Follow instructions under "Reassembly/Closing Tank"(at right) to reassemble tank.
  - D. If leak persists, consult your pool professional.

5. In normal use, middle and bottom clamps should not need removal.

### STA-RITE APPROVED O-RING LUBRICANTS

Petroleum Jelly (Vaseline)	Semi-Permanent Lubrication
Parker Super-O-Lube*	Semi-Permanent Lubrication
Aqua-Lube by Allube**	Semi-Permanent Lubrication
5% or less Mild Soap Solution	Assembly Lubrication

## **SEPARATION TANK INSPECTION**

**Weekly Inspection:** Skimmer basket - remove debris. For systems with bypass valve, make sure separation tank is not under pressure.

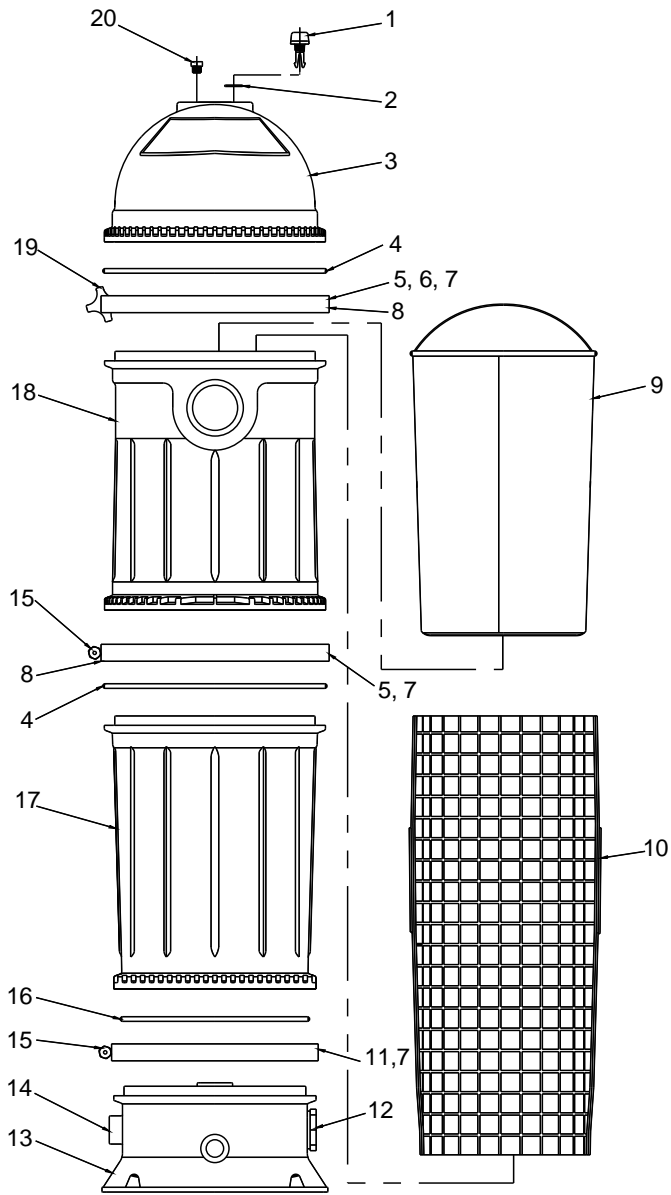
**Bi-Yearly Inspection:** Check separation tank/return line bypass valve for proper sealing as follows: With filter valve in 'FILTER' position and separation tank cover off, start pump. No water should enter separation tank from lower port. If water does enter, stop pump and inspect bypass valve for leaks and debris. Clean or replace as necessary.

## **WINTERIZING**

1. Open air release valve; open all system valves. Position multiport valve between port positions to allow air passage to all ports.
2. Remove all drain plugs from trap, pump, valve, filter, and separation tank.
3. Drain all piping and cover system with plastic or tarpaulin to keep it dry.



## REPAIR PARTS



Key No.	Part Description	No. Used	Part No.
1	Air release valve Assembly	1	25010-0200
2	O-Ring	1	*
3	Lid Assembly (Incl. #1, #20, & Decals)	1	25005-9001
4	O-Ring	2	31935-0001
5	Decal "Top Clamp"	2	WC27-46
6	Decal "Pressure Warning"	1	WC27-23
7	Decal "Clamp Warning"	3	WC27-19
8	"V" Clamp	2	25010-9101
9	Separation bag	1	25005-0015
10	Separation tank liner	1	25005-0016
11	"V" Clamp	1	25010-9100
12	1-1/2" PVC plug	1	36205-4008T
13	Base assembly	1	WC104-78PB
14	Decal "Thread Seal Warning"	1	WC27-27
15	Clamp nut	2	WC36-1
16	O-Ring	1	WC9-3
17	Lower body	1	25010-0001
18	Upper body	1	25005-0001
19	Clamp knob	1	WC36-22
20	1/4" NPT Plug	1	WC78-40T
	• Model Decal	1	32155-4050
	• Warning Decal	1	32155-4049
	• Operating Instruction Decal	1	32155-4051

• Not Illustrated.

\*Standard hardware item; purchase locally.





## STA-RITE LIMITED WARRANTY

Pumps, filters, skimmers, underwater lights (except bulbs), accessories and fittings manufactured by Sta-Rite are warranted to be free of defects in material and workmanship for one (1) year from date of installation.

\* Full warranty coverage is in effect for one year after installation. The pro-rated warranty covers the *tank only* during the 2nd through 10th year after installation. The amount covered decreases by 10% each year. (ie., 2nd year 90% covered, 3rd year 80% covered, etc.).

Product specific warranties:	Year from date of installation
<i>HRPB, DEPB, System 3, and PL</i> – Tanks .....	10 years
Internal filter components and valves .....	1 year
<i>Max-E-Therm</i> – Pool/Spa Heaters .....	2 years
Heater Enclosure only (Upper RH & LH; lower enclosure; and control board enclosure)...	10 years
<i>Automatic Pool Cleaners including Hose</i> .....	2 years
<i>Cristal-Flo filters</i> – Tanks .....	10 years pro-rated*
Valve and internal components. ....	1 year
<i>Posi-Flo II</i> – Tanks .....	10 years
Elements .....	1 year
<i>PRC Cartridge</i> –	
Filter Tanks .....	5 years pro-rated (1st 2 years full)
Elements .....	1 year
<i>System 3 Above Ground Systems</i> – Tanks .....	10 years
Pumps / Platform and Internals .....	1 year
<i>Pumps</i> .....	1 year
When equipped with A.O. Smith 2-compartment motors (Does not include pumps sold as part of a systems package) .....	2 years
<i>Traps / In-Line Strainers</i> .....	1 year
<i>Vertical Commercial Filter</i> – Tanks .....	10 years
Internals .....	1 year
<i>Horizontal Commercial Filter</i>	
Tanks .....	5 years
(Years 6-9, Prorated declining 20%/year, Yr. 10 - 10%)	
Internals .....	1 year

The foregoing warranties relate to the original consumer purchaser (“Purchaser”) only. Sta-Rite shall have the option to repair or replace the defective product, at its sole discre-

tion. Purchasers must pay all labor and shipping charges necessary to replace the product covered by this warranty. Requests for warranty service must be made through the installing dealer. This warranty shall not apply to any product that has been subject to negligence, misapplication, improper installation or maintenance, or other circumstances which are not in Sta-Rite’s direct control.

This warranty sets forth Sta-Rite’s sole obligation and Purchaser’s exclusive remedy for defective products.

**STA-RITE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR CONTINGENT DAMAGES WHATSOEVER.**

**THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE DURATION OF THE APPLICABLE EXPRESS WARRANTIES PROVIDED HEREIN.**

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Supersedes all previous publications.

**Sta-Rite Industries, Inc.,  
293 Wright St., Delavan, WI 53115**

▲ Retain Warranty Certificate (upper portion) in a safe and convenient location for your records.

DETACH HERE: Fill out bottom portion completely and mail within 10 days of purchase/installation to:

▼ Sta-Rite, Attn: Warranty Dept., 293 Wright St., Delavan, WI 53115

**STA-RITE®**



## Warranty Registration Card

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Purchase Date \_\_\_\_\_

Product Purchased \_\_\_\_\_

New installation       Replacement

Type of Pool     Inground     Vinyl     Fiberglass     Gunite

Size of Pool \_\_\_\_\_

Years pool has been in service     less than 1     1-3     3-5     5-10

Purchased from: \_\_\_\_\_

Company name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please send me more information on these other products from Sta-Rite.

- Pumps     Filters     Automatic Pool Cleaners  
 Maintenance Equipment     Test Strips  
 Heaters