AQUA SMARTE® ABOVE GROUND MINERAL SYSTEM FOR POOLS

Patented Mineral Pool Disinfectant



Instruction Manual

Customer Service 800-222-0169 www.kingtechnology.com

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For information on King Technology's entire product line, visit our website at www.kingtechnology.com

AQUA SMARTE®

Welcome to easier pool care courtesy of AQUA SMARTE[®] . With AQUA SMARTE[®] , your pool water will look and feel better without a lot of work or a lot of chlorine. <u>This system</u> <u>controls bacteria using a combination of minerals and reduced</u> <u>chlorine levels-up to 50%* less.</u> There are 3 parts to the AQUA SMARTE[®] System: The Above Ground AQUA SMARTE[®] Cycler, the AQUA SMARTE[®] Mineral Reservoir and the AQUA SMARTE[®] Bac Pac.

Part 1 AQUA SMARTE[®] Cycler

The water treatment center that controls the flow of water to each part of the AQUA SMARTE $\ensuremath{^{\circledast}}$ System.

Part 2 AQUA SMARTE[®] Mineral Reservoir

Holds the minerals and fits inside the AQUA SMARTE® Cycler.

THE AQUA SMARTE® MINERAL RESERVOIR MUST BE REPLACED EVERY SIX MONTHS OR AFTER ONE POOL SEASON WHICHEVER IS SHORTER.



For Above Ground Pools up to 25,000 gallons.





Part 3 AQUA SMARTE[®] Bac Pac

Pre-filled with chlorine tablets and fits inside AQUA SMARTE® Mineral Reservoir.



(AQUA SMARTE[®] Mineral Reservoir sold inside AQUA SMARTE[®] Cycler and separately for replacements. AQUA SMARTE[®] Bac Pac sold separately.)

Swimming Pool Tips

Start-up and Yearly Maintenance



Make sure the pool has adequate circulation. The pool water must completely circulate through the pump and filter at least 1 to 2 times per day. This usually requires 8 to 12 hours. Check with your dealer for the proper circulation time for your pool.

3. Cu Mg Fe

If your fill water is high in metals, use a sequestering agent or metal out product at start-up only before using the AQUA SMARTE[®] Mineral Reservoir. See your local dealer for details on using these products and always follow manufacturers directions carefully.



After your pool is up and running smoothly, continue to test your water for pH, total alkalinity and chlorine and maintain its balance by adding any necessary adjustment products (see your dealer for details).



Check the pool's filter gauge often and periodically clean filter per the manufacturer's directions. A dirty filter will slow the flow of water which could hamper proper circulation.

2.

Before beginning with any pool care program, you must first balance your pool water. Take a water sample to your local pool professional or use a complete test kit that will test for the following important elements.

Water Balance Guidelines

7.2 - 7.8
60 – 120 ppm
150 - 400
<1500
20 - 80 ppm
0.5 – 1.0 ppm



Add a stabilizer or conditioner to the pool at the beginning of the season if the stabilizer level is below 20 ppm. This will prevent chlorine burn off. Follow manufacturer's directions carefully.



5.

Replace cap and run AQUA SMARTE® Cycler, with AQUA SMARTE® Mineral Reservoir inserted, for 10 minutes on Setting 5.



Shock the pool with chlorine to rid the water of all contaminants before beginning with AQUA SMARTE® . Follow manufacturer's directions carefully.

THIS STEP IS VERY IMPORTANT TO START-UP.

USE CHLORINE SHOCK ONLY.



Do not add shock in or near the skimmer or into the AQUA SMARTE[®] Cycler as it could damage equipment, risk potential explosion or discolor your pool surface.



3.

Install a AQUA SMARTE[®] Mineral Reservoir into the AQUA SMARTE[®] Cycler. (Follow directions on page 7.)

REPLACE THE AQUA SMARTE® MINERAL RESERVOIR EVERY 6 MONTHS OR AFTER ONE POOL SEASON WHICHEVER IS SHORTER.



When chlorine reading is down to 1.0 ppm, which may take a few days, insert AQUA SMARTE® Bac Pac. (Follow directions on page 8.)

Start-up and Operation continued

Set control dial on the AQUA SMARTE® Cycler by matching up the parameters of your pool on the chart below. THIS IS A STARTING POINT ONLY and may need to be adjusted to fit your individual pool needs. See 7 below for adjusting directions. IMPORTANT: Pump run times less than 8 hours could result in under chlorination due to inadequate flow through the System.

Above Grd. POOL SIZE		8 Hour Pump Run Time PUMP SIZE			12 Hour Pump Run Time PUMP SIZE			24 Hour Pump Run Time PUMP SIZE					
												Gallons	Diameter
7,000	(18')	5	4.5	4	3.5	4.5	4	3	* 5	3.5	3	2.5	* 4
9,000	(21')	5.5	5	4.5	4	5	4.5	4	* 5.5	4	3.5	3	* 4.5
12,000	(24')	6	5.5	5	4.5	5.5	5	4.5	4	4.5	4	3.5	* 5
15,000		NR	6	5.5	5	6	5.5	5	4.5	5	4.5	4	3.5
20,000		NR	NR	6	5.5	NR	6	5.5	5	5.5	5	4.5	4

* – Bypass installation recommended.

NR – This pump size is not recommended for this size pool.

Find your starting dial setting by matching up the parameters of your pool on the above chart. An above ground pool with approximately 12,000 gallons with a 1 horse pump running 12 hours a day would require a starting setting of 4.5. See example at right.

Above Grd. POOL SIZE		8	3 Hour Pur	np Run Tin	ne	1	2 Hour Pun	np Run Tin	1e
			PUMP SIZE			PUMP SIZE			
Gallons	Diameter	1/2 hp	3/4 hp	1 hp	1 1/2 hp	1/2 hp	3/4 hp	1 hp	1 1/2 hp
7,000	(18')	5	4.5	4	3.5	4.5	4	3	* 5
9,000	(21')	5.5	5	4.5	4	5	4.5	4	* 5.5
12,000	(24')	6	5.5	5	4.5	5.5	5	(4.5)	4
15,000		NR	6	5.5	5	6	5.5	5	4.5
20,000		NR	NR	6	5.5	NR	6	5.5	5

7. For the first week test the pool water daily for free chlorine to ensure correct dial setting. Continue to test weekly throughout the season.





After each testing, adjust the dial up by 1/2 increment if the free chlorine reading has dropped below 0.5 ppm or adjust down by 1/2 increment if the reading has risen above 1.0 ppm. Continue this process each day until the free chlorine reading stabilizes to at least 0.5 ppm.

Remember to adjust dial by 1/2 increments only in order to prevent over chlorination which may bleach pool surfaces.



Shock pool every two weeks or as needed to maintain water quality. Follow label directions on the shock treatment used.



Do not add shock in or near the skimmer or into the AQUA SMARTE[®] Cycler as it could damage equipment, risk potential explosion or discolor your pool surface.

If using another means of chlorine support, follow steps 1-4 on page 5 then continue below.



RECOMMENDED FLOW RATE: 20-60 gpm

Set dial to Setting 5. Maintain a minimum chlorine reading of 0.5 ppm with a chlorine delivery device or hand feeding.

Most common pool sizes



7.

to maintain water quality. Follow label directions on the shock treatment used.

Shock pool every two weeks or as needed



Do not add shock in or near the skimmer or into the AQUA SMARTE[®] Cycler as it could damage equipment, risk potential explosion or discolor your pool surface.



Replacing an AQUA SMARTE® Mineral Reservoir

(AQUA SMARTE® Mineral Reservoir MUST be Replaced Every Season)



1 Only the AQUA SMARTE[®] Mineral Reservoir fits the AQUA SMARTE[®] Cycler.

CONTENTS:

Above Ground Series 6700 For use with the AQUA SMARTE Cycler Model 5725 or 6780

Check the front of the box and back label of product to make sure you have the correct AQUA SMARTE® Mineral Reservoir to fit your AQUA SMARTE® Cycler.

THE AQUA SMARTE® MINERAL RESERVOIR MUST BE REPLACED EVERY 6 MONTHS OR AFTER ONE POOL SEASON WHICHEVER IS SHORTER



IMPORTANT: Remove and read the information card.

Please note: Complete instructions for inserting a AQUA SMARTE® Mineral Reservoir and AQUA SMARTE® Bac Pac are included inside the AQUA SMARTE® Mineral Reservoir box.

3.



WARNING

USE ONLY the factory recommended replacement AQUA SMARTE® Mineral Reservoir and AQUA SMARTE® Bac Pac. DO NOT USE any other pac or bulk chemical tablets in the AQUA SMARTE® Cycler. Use of any other product could result in damage to pool equipment or surface, unsafe pool conditions, fire or explosion. Warranty will be void if the correct AQUA SMARTE® Mineral Reservoir and AQUA SMARTE® Bac Pac are not used.



Turn off pump and turn dial to Setting 0. This reduces the flow of water into the unit when the cap is open.



Open cap. If using AQUA SMARTE[®] Bac Pac stand back to avoid inhaling chlorine fumes.





SLOT IN AQUA SMARTE MINERAL RESERVOIR

FIN INSIDE OF AQUA SMARTE CYCLER Find slot on side of AQUA SMARTE® Mineral Reservoir and line up with fin inside the AQUA SMARTE® Cycler. Lower AQUA SMARTE® Mineral Reservoir into AQUA SMARTE® Cycler until secure.

Using the AQUA SMARTE[®] Bac Pac

WARNING – USE ONLY the factory recommended replacement AQUA SMARTE® Bac Pac. (See label.) DO NOT USE any other pac or bulk chemical tablets in the AQUA SMARTE® Cycler. Use of any other product could result in over chlorination, bleached liners, unsafe pool conditions, fire or explosion. Warranty will be void if the correct pac is not used.



Troubleshooting

For more in-depth troubleshooting, go to www.kingtechnology.com

Problem		F		
1.	What do I do if the water looks cloudy?	 Make sure your filtration system is working properly (i.e. clean filter, skimmer and pump basket). Make sure circulation time is adequate – increase pump 	time if not. 3. Make sure the pool is properly balanced (see page 4). 4. Shock the water to eliminate build up of any organic matter.	5. Make sure pool has a free chlorine reading of 0.5 to 1.0 ppm.6. Check with your dealer for more information.
2.	What do I do if the water turns color?	1. Metals in the fill water may have been oxidized. Have the pool tested. Shock the pool and clean the filter until water clarity returns.	2. Algae may be trying to form – shock the pool, increase circulation time if needed and clean the filter.	3. Check with your dealer for more information.
3.	What do I do if algae forms in or on my pool?	 Use a nonmetallic (polyquat) algaecide per the directions on the bottle and brush the sides of the pool often. Clean the filter and shock 	the pool with chlorine daily until water clarity returns. 3. If you are in an area of the country that struggles with algae growth, see your dealer	for an algae preventative. 4. Check with your dealer for more information.
4.	What do I do if I am under chlorinating with the AQUA SMARTE® Bac Pac?	 If you are unable to maintain 0.5 to 1.0 ppm, first make sure there are chlorine tablets in the tower areas of the AQUA SMARTE® Bac Pac and it is installed properly. If a correction was made, test the water in 24 hours. If still low, turn the dial up one setting and test the water again in 24 hours. Continue raising the setting by one increment each day 	until the proper reading is achieved. 3. Shock the pool if the reading has been lower than 0.5 ppm for more than one day. 4. Make sure pump run time is at least 6 hours on high speed (40 gpm or higher) or if not, bleed the air from the back knob each time the cap is open.	 Contact your dealer to have your back pressure tested to ensure it is at least 4 psi. Check for a suction side leak by looking for air bubbles in your pump basket or at the return jet. Contact dealer for help in correcting this situation. Contact King Technology's Customer Service Department at 800-222-0169.
5.	What do I do if I am over chlorinating with the AQUA SMARTE® Bac Pac?	 If the chlorine reading is over 3.0 ppm, remove the AQUA SMARTE® Bac Pac from the AQUA SMARTE® Mineral Reservoir and test the water daily until the reading is down to 1.0 ppm. Reinsert the AQUA SMARTE® Bac Pac, lower the dial one setting and test the 	 water again in 24 hours. If the reading has risen, lower the dial one setting again. Continue this process until proper reading is achieved. 3. If over-chlorinating at the lowest possible setting, consider decreasing the circulation time. Depending on your pump size, you may 	 be circulating the water more than is necessary. 4. Contact your dealer to have your back pressure tested. If over 8 psi consider a larger eye-ball fitting in the return jet. 5. Contact King Technology's Customer Service Department at 800-222-0169.



Included with AQUA SMARTE® Model 6700 REF. # DESCRIPTION OTY. INCLUDED

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1&2	Cap w/O-Ring	1
3	Body	1
4	Pressure Relief Valve	1
5, 6, 7	Control Dial with O-Rings	
	and Locking Pin	1
8&9	Knob with O-Ring	2
10	Silicone Lubricant	1
11	Nipple Kit	1
12	Mounting Base	1

Replacement Parts AQUA SMARTE® Model 6700

REF. #	PART NO.	DESCRIPTION
1&2	01-22-1418	Cap w/O-Ring
2	01-22-1920	Cap O-Ring
4	01-22-9480	Pressure Relief Valve
5, 6, 7	01-22-1443	Control Dial with O-Rings
		and Locking Pin
6	01-22-1450	Control Dial O-Ring Set
8&9	01-22-9940	Knob with O-Ring
10	01-22-9971	Silicone Lubricant
11	01-22-1710	Nipple Kit
12	01-22-1480	Mounting Base

Cycler Maintenance

Replacing the Control Dial O-Rings



In the back of the AQUA SMARTE[®] Cycler depress center of locking pin with a finger and pull pin out of dial.

Replacing the Cap O-Ring



Hold cap in front of you upside down with the o-ring groove facing up. Place one end of o-ring into cap groove at the point closest to you. Hold o-ring down with the thumb and index finger of one hand.



Turn control dial back and forth as you pull it out of the housing.



Take hold of the far end of the o-ring with the thumb and index finger of the other hand. Roll o-ring slightly back towards you as you stretch the o-ring into the remainder of the cap groove.



Replace both o-rings. Apply silicone lubricant that came with your AQUA SMARTE® Cycler on o-rings.



Lubricate o-ring often with silicone lubricant that came with your AQUA SMARTE® Cycler. DO NOT USE petroleum based lubricants.

Replacing Knobs





Carefully insert control dial back into housing.



Replace locking pin by pushing it through the slots on the dial until it locks into place.

Winterizing





Unscrew knob from the front of AQUA SMARTE® Cycler. Allow all water to drain.



Replace the cap and knob loosely.

TOOLS NEEDED

Above Ground, Filter Installation





TOOLS NEEDED

Screwdriver

Pipe Wrench

Materials Needed

Pipe Thread Tape or Sealant

PIPE THREAD SEALANT

Two hose adapters 1 1/2" x 1 1/2" x 1 1/4"

Two Sections of 1 1/2" Flex Hose (one provided with filter)

Two Hose Clamps

Recommended

Corrosion Resistant Check Valve

10 x 1 1/4" Phillips Pan Head Screws with Washers

<u>Option</u>

1 1/2" Male Adapter (slip x MPT)

or

2" Female Adapter (slip x FPT)

When installing with hard PVC pipe, use either a female adapter on the outside port threads or a male adapter on the inside port threads.

pool surface.

Above Ground, Base Installation



using Phillips pan head

two in back.

screws. One in front and

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AQUA SMARTE® Cycler Two-Year Limited Warranty

King Technology, Inc. warrants to the original purchaser this unit will be free from any defects in workmanship and/or material, for a period of two (2) years from the date of original purchase. This warranty covers body, cap and control dial, but specifically excludes o-rings. King Technology at its option may replace any defective parts or the entire unit without charge after it is determined what is needed to correct any deficiency. Replacement parts with the exception of o-rings are warranted for the remainder of the original warranty. To extend the limited warranty from two years to ten years, simply complete the warranty card that came with your unit and return it to King Technology within 30 days of purchase and installation.

1. To obtain warranty service, you must deliver the unit to King Technology or its nearest authorized dealer. Shipping expenses are the purchaser's responsibility. The name of the nearest authorized dealer can be obtained by writing or calling King Technology at the address and telephone number provided below. Proof of purchase is required when requesting warranty service. Purchaser must present the sales receipt or other documentation verifying proof of purchase.

2. This warranty does not cover defects caused by: Modification, alteration, repair or service of the unit contrary to the accompanying instructions; physical abuse to or misuse of the product or operation or installation in a manner contrary to the accompanying instructions. This warranty also excludes all costs arising from the installation, adjustment, removal or replacement of defective units or parts. This warranty also excludes any and all claims arising out of the chemicals used in the product or their characteristics.

3. CAUTION - Read carefully – Failure to follow these instructions will void the warranty. Do not add shock in or near skimmer.

A. This unit is not designed for shock treatment of pools. See your pool dealer or distributor for further information concerning shock treatments. B. Control dial settings higher than needed can result in excess sanitizers being discharged into the pool. If the sanitizer level goes unmonitored, it can result in bleaching or discoloration of areas around the pool inlet or in some cases bleaching or discoloration of the entire pool liner or paint.

C. Excess trichlor in the pool can create health hazards to bathers. Consult each chemical manufacturer's warnings and cautions for specifics.

D. Misuse or failure to use the proper AQUA SMARTE® Mineral Reservoir and AQUA SMARTE® Bac Pac may cause damage to equipment or personal injury. This warranty will be null and void, if this unit is not used with the recommended AQUA SMARTE® Mineral Reservoir and AQUA SMARTE® Bac Pac.

4. This warranty is the exclusive warranty for the **AQUA SMARTE**[®] **Cycler. This warranty is not transferable. KING TECHNOLOGY MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER MATTER CONCERNING THE AQUA SMARTE**[®] **CYCLER.** Any express warranty not provided herein, and any remedy for breach of contract but which for this provision might arise by implication or operation of law is hereby excluded and disclaimed. THE EXCLUSIVE REMEDY FOR ANY CUSTOMER IS THE REPAIR OR REPLACEMENT OF THE UNIT, AND THE RECOVERY OF DAMAGES WILL NOT EXCEED THE PURCHASE PRICE OF THE UNIT. IN NO EVENT WILL KING TECHNOLOGY BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES FROM ANY CAUSE.

5. Under no circumstance shall King Technology be liable to purchaser or any other person for any damage or loss incurred because of any chemicals used in the product or their physical characteristics, or interruption of service of the product, or any resulting special, incidental or consequential damages or losses. Some states do not allow the exclusion or limitation of incidental consequential damages, so the above limitation or exclusion may not apply to you.



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