

Pool FROG[®] CYCLER

MINERAL PURIFIER FOR POOLS

REPLACE
MINERAL
RESERVOIR
EVERY
SEASON.



Instruction Manual

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

POOL FROG®

Welcome to easier pool care courtesy of POOL FROG®. With POOL FROG®, your pool water will look and feel better without a lot of work or a lot of chemicals. This system eliminates bacteria and prevents algae growth using a combination of minerals and reduced chlorine levels. There are 4 parts to the FROG® Purifying System, The Cyclers in above ground and inground models, the Mineral Reservoir, FROG® BAM™ 90-day algae protection and the chlorine Bac Pac.



For Inground Pools up to 40,000 gallons



For Above Ground Pools up to 18,000 gallons



Two sizes for Inground and Above Ground Pools

Part II POOL FROG® Mineral Reservoir

Holds the minerals and fits inside the Cyclers. Available in above ground and inground sizes to fit the corresponding POOL FROG® Cyclers. *REMEMBER TO REPLACE YOUR MINERAL RESERVOIR EVERY SEASON.

Part I POOL FROG® Cyclers

The water treatment center that controls the flow of water through the system. Available in above ground and inground models.

Part III FROG® BAM™

A unique mineral formula tailor-made for preventing algae up to 90-days. Use with the POOL FROG® System for a No-Algae Guarantee.



FROG® BAM™
One size fits all

Part IV POOL FROG® Bac Pac

Use the Bac Pac low-level chlorine support to benefit from a complete system. Use Flow Control Pac when using another form of chlorine support.

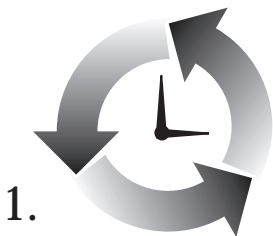


Bac Pac
One size fits all

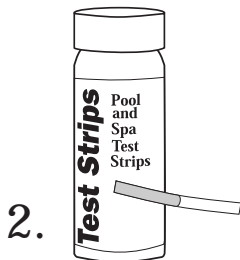
(Mineral Reservoir sold inside Cyclers and separately for replacements. Bac Pac and FROG® BAM™ sold separately.)

Ensuring a Healthy Swimming Pool

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.

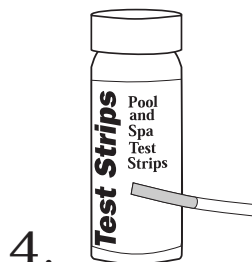


• Before beginning with any pool care program, including POOL FROG®, you must first balance your pool water. Take a water sample to your local pool professional or use a complete test kit that will test for the following important elements.

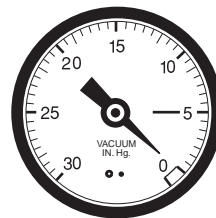


• If your fill water is high in metals, check with your pool professional on how to maintain proper levels. It may require shocking the pool and cleaning the filter.

Water Balance Guidelines	
pH:	7.2 – 7.8
Total Alkalinity:	60 – 120
Calcium Hardness:	150 – 300
Total Dissolved Solids:	<2000
Stabilizer:	20 – 50 ppm
Free Chlorine:	.5 – 1 ppm



• After your pool is up and running smoothly, continue to test your water for pH, total alkalinity and chlorine and maintain it's 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.

FROG® - Start-up and Operation

1.



• 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.

2.



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



• Do not add shock in or near the skimmer or into the Cyclizer as it could damage equipment, risk potential explosion or discolor your pool surface.

• **THIS STEP IS VERY IMPORTANT TO START-UP. USE CHLORINE SHOCK ONLY.**

3.

• Install a POOL FROG® Mineral Reservoir into the Cyclizer. (Follow Directions on Page 7.)
REMEMBER TO REPLACE YOUR MINERAL RESERVOIR EVERY SEASON.



4.



• Run Cyclizer, with Reservoir inserted, for 10 minutes on setting Maximum.

5.

• Insert FROG® BAM™, into Mineral Reservoir in Cyclizer. (See page 8 for directions.)



6.

• When chlorine reading is down to 1 ppm, which may take a few days, insert chlorine Bac Pac. (Follow directions on page 9.)



7. SETTING CONTROL DIAL

• Set control dial by matching up the parameters of your pool on the charts below. **THIS IS A STARTING POINT ONLY** and may need to be adjusted to fit your individual pool needs. See Page 6 for adjusting directions.



Above Grd. POOL SIZE	8 Hour Pump Run Time												12 Hour Pump Run Time				24 Hour Pump Run Time			
	Gallons	Diameter	PUMP SIZE				PUMP SIZE				PUMP SIZE									
			1/2 hp	3/4 hp	1 hp	1 1/2 hp	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	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							

Inground POOL SIZE	8 Hour Pump Run Time								12 Hour Pump Run Time				24 Hour Pump Run Time			
	Gallons	PUMP SIZE				PUMP SIZE				PUMP SIZE						
		3/4 hp	1 hp	1 1/2 hp	2 hp	3/4 hp	1 hp	1 1/2 hp	2 hp	3/4 hp	1 hp	1 1/2 hp	2 hp			
7,000	3.5	3	2.5	* 2.5	3	2.5	* 4	* 3.5	1.5	* 3.5	* 3	* 2.5				
9,000	4	3.5	3	2.5	3.5	3	2.5	* 4	2.5	* 4	* 3.5	* 3				
12,000	4.5	4	3.5	3	4	3.5	3	2.5	3	2.5	1.5	* 3.5				
18,000	NR	4.5	4	3.5	5	4	3.5	3	3.5	3	2.5	2				
25,000	NR	NR	4.5	3.5	NR	5	4	3.5	4	3.5	3	2.5				
30,000	NR	NR	5.5	4.5	NR	5.5	5	4	4.5	4	3.5	3				
35,000	NR	NR	6.5	5.5	NR	6.5	5.5	5	5.5	4.5	4	3.5				
40,000	NR	NR	NR	6.6	NR	NR	6.5	5.5	6.5	5.5	4.5	4				

* - Bypass installation recommended.

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

■ Most common pool sizes

Start-upcontinued page 6 5

8.

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



• After each testing, adjust the dial up by 1/2 increment if the free chlorine reading has dropped below .5 ppm or adjust down by 1/2 increment if the reading has risen above 1 ppm. Continue this process each day until the free chlorine reading stabilizes between .5 and 1 ppm.



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

9.



• Shock pool once a week during the swimming season or every other week during cooler weather. Use a non-chlorine shock to reduce chlorine usage or use a chlorine shock. Add 1 pound per 10,000 gallons.

If using another means of chlorine support

Follow steps 1-5 on page 5 then continue below.

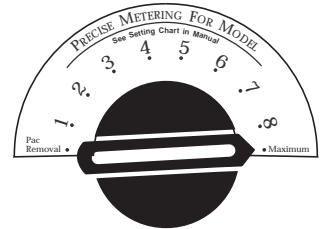
6.

• Make sure Flow Control Pac is inserted inside the Reservoir by lining up the Pac's legs with the openings inside the Reservoir. This Pac acts to divert all water through the minerals.



7.

• Set dial to maximum. No adjustments needed.



8.

• Maintain a minimum chlorine reading of .5 ppm to 1 ppm with a chlorinator, floater or hand feeding.

9.

• Shock pool once a week during the swimming season or every other week during cooler weather. Use a non-chlorine shock to reduce chlorine usage or use a chlorine shock. Add 1 pound per 10,000 gallons.



Replacing a Reservoir, FROG® BAM™ and Bac Pac Reservoirs MUST be Replaced Every Season

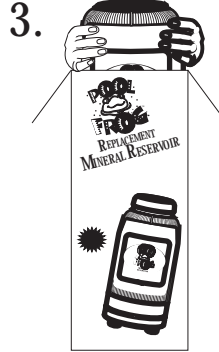
1. Contents:
- Series #5100 (up to 20,000 gallons)
 - Series #5200 (up to 20,000 gallons)
 - Series #5400 (up to 40,000 gallons)
 - Series #5600 (up to 40,000 gallons)
 -

• Check the back of the Reservoir box and back label of Reservoir itself to make sure you have the correct POOL FROG® Reservoir to fit your POOL FROG® Cyclor.

* RESERVOIRS MUST BE REPLACED EVERY SEASON.



2. • Open the box and pull out the Flow Control Pac.



3. • Then reach in and remove the Reservoir. Please note: complete instructions for inserting a Reservoir, FROG® BAM™ and Bac Pac are included inside the Reservoir box.

4.

CAUTION read carefully -

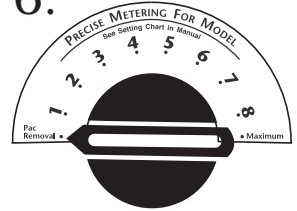
• USE ONLY the factory recommended replacement Reservoir, FROG® BAM™ and Bac Pac. DO NOT USE any other Pac or bulk chemical tablets in the Cyclor. Use of any other product could result in damage to pool equipment or surface, unsafe pool conditions, fire or explosion. Warranty will be void if the correct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

5.



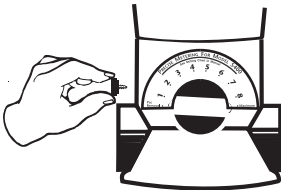
5. • Turn off pump.

6.



6. • Turn dial to Pac Removal. This reduces the flow of water into the unit when the cap is open.

7.



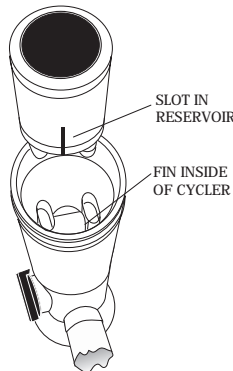
7. • Unscrew drain valve to relieve pressure.

8.



8. • Use the cap tool included with Cyclor to loosen cap by hitting the handle with the flat of your hand counter clockwise. If using the Bac Pac stand back to avoid inhaling chlorine fumes.

9.



9. • Find slot on side of Reservoir and line up with fin inside the Cyclor. Lower Reservoir into Cyclor until secure.

Using FROG® BAM™ for a No-Algae Guarantee

If you are not using FROG® BAM™, proceed to Step 18.

- One FROG® BAM™ for up to 15,000 gallons.
- Two FROG® BAM™ for up to 30,000 gallons.

10.

Remove cap from FROG® BAM™ without removing seal.



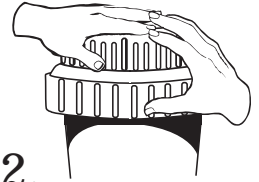
11.

Insert upside down into center of Mineral Reservoir pushing down gently on key to puncture seal.

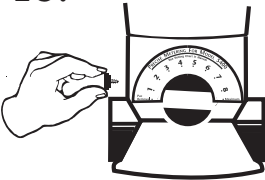


12.

Replace cap by hand only. DO NOT OVER TIGHTEN.

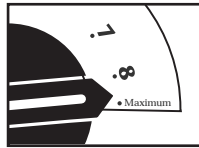


13.



• Replace drain valve on Cyclor.

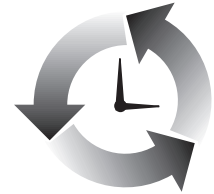
14.



• Turn control dial on Cyclor to Maximum.

15.

• Turn pump on for 90 minutes allowing FROG® BAM™ to circulate through pool.

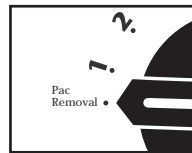


16.

• To remove FROG® BAM™ . . .



Turn pump off.



Turn dial to Pac Removal or Minimum.



Remove Cyclor cap.

17.



• Lift FROG® BAM™ up and allow any water in the container to drain through the Cyclor before discarding in trash.

NOTE: If water shows more than a hint of blue inside Cyclor, replace the Cyclor cap, turn dial to Maximum and run the pump for one minute.

17a. If pool size requires additional FROG® BAM™, repeat steps 10-17.

17b. When water is clear in Cyclor, proceed to step 18.

Using the Bac Pac

18.

- For low level chlorine support, discard or recycle the Flow Control Pac and replace with a Bac Pac.



19.



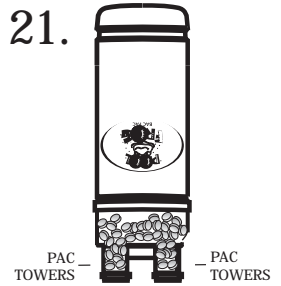
- Avoid sparks, open flame or smoking when handling the Bac Pac.

20.



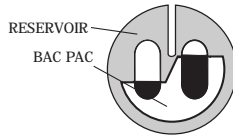
- To remove Bac Pac end caps, grab onto the lip of one cap with a pliers and pull up until cap releases. Repeat the process to the other cap.

21.



- Turn Bac Pac over and shake slightly until tablets fall into tower areas.

22.



- Line up the small leg of the Bac Pac with the small opening in the Reservoir and the large leg with the large opening. Lower Bac Pac into Reservoir until secure.



23.

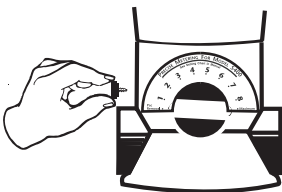


- Replace cap by hand only. DO NOT OVER TIGHTEN.



- DO NOT USE CAP TOOL TO TIGHTEN CAP. Use for removal only.

24.



- Check that drain valve is screwed in.



25.



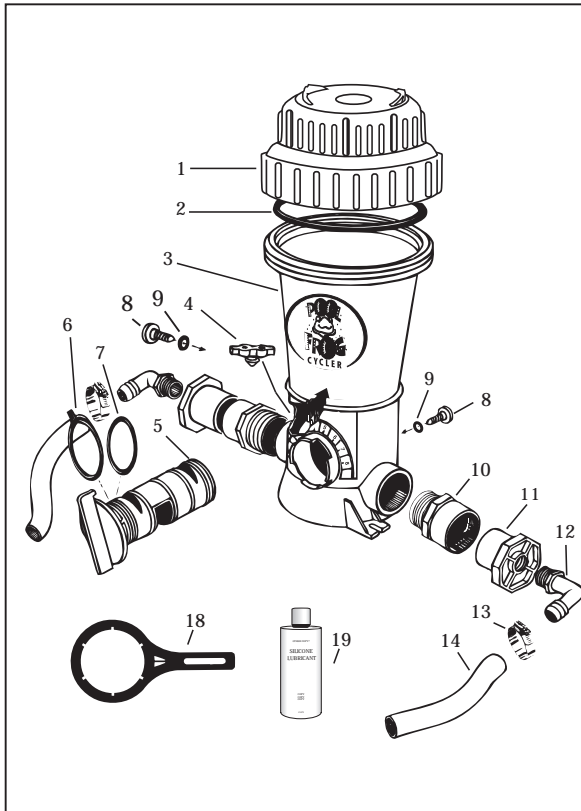
- For easy reminders, place a POOL FROG® reminder sticker on your calendar to mark the six month replacement of the Reservoir and approximate replacement times for the Bac Pac. Reminder stickers found in Reservoir box.

For winter climate pools, replace Reservoir next spring. DO NOT use the same Reservoir from season to season. The Reservoir will be ineffective if dried out and used later, even if it was not used for a full 6 months.

Trouble Shooting

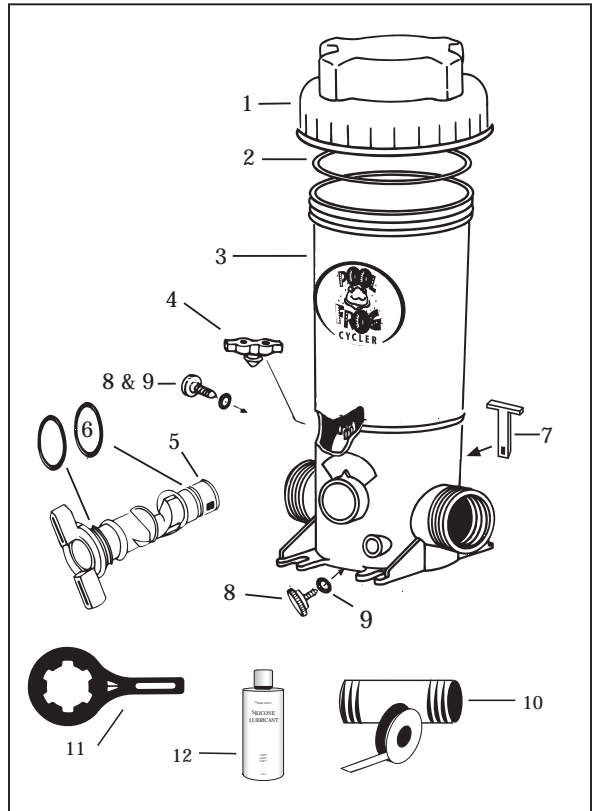
Problem	Remedy		
<p>1. What do I do if the water looks cloudy?</p>	<p>1. Make sure your filtration system is working properly (i.e. clean filter and/or skimmer).</p> <p>2. Make sure circulation time is adequate – increase pump time if not.</p>	<p>3. Make sure total alkalinity is within 60-120. Adjust with acid if needed.</p> <p>4. Shock the water to eliminate build up of any organic matter.</p>	<p>5. Make sure pool has a free chlorine reading of .5 to 1 ppm.</p> <p>6. Check with your dealer for more information.</p>
<p>2. What do I do if the water turns color?</p>	<p>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.</p>	<p>2. Algae may be trying to form – shock the pool, increase circulation time if needed and clean the filter.</p>	<p>3. Check with your dealer for more information.</p>
<p>3. What do I do if algae forms in or on my pool?</p>	<p>1. Use a nonmetallic (polyquat) algicide per the directions on the bottle and brush the sides of the pool often.</p> <p>2. Clean the filter and shock the pool with chlorine daily until water clarity returns.</p>	<p>3. If you are in an area of the country that struggles with algae growth, see your dealer regarding a 90-day No-Algae Guarantee using FROG® BAM™. See product hang tag for guarantee details.</p>	<p>4. Check with your dealer for more information.</p>
<p>4. What do I do if I am under chlorinating with the Bac Pac?</p>	<p>1. If you are unable to maintain .5 to 1 ppm, first make sure there are chlorine tablets in the tower areas of the Bac Pac and it is installed properly. If a correction was made, test the water in 24 hours.</p>	<p>2. If still low, turn the dial up 1/2 setting and test the water again in 24 hours. Continue raising the setting by 1/2 increment each day until the proper reading is achieved.</p>	<p>3. Shock the pool if the reading has been lower than .5 for more than one day.</p> <p>4. Increase pump time if possible.</p>
<p>5. What do I do if I am over chlorinating with the Bac Pac?</p>	<p>1. If the chlorine reading is over 3 ppm, remove the Bac Pac from the Reservoir and test the water daily until the reading is down to 1 ppm.</p> <p>2. Reinsert the Bac Pac, lower the dial 1/2 setting and test the water again in 24 hours. If the reading has risen, lower the dial 1/2 setting</p>	<p>again. Continue this process until proper reading is achieved.</p> <p>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</p>	<p>which results in more chlorine than is necessary.</p> <p>4. If decreasing circulation time is not enough, the installation may need to be reviewed for a potential by-pass (see page 19).</p>
<p>6. What do I do if the cap is on too tight?</p>	<p>1. Use the cap tool to loosen cap by hitting the handle counter clockwise.</p> 	<p>2. Lubricate cap o'ring with silicone lubricant every time you replace a Bac Pac or Reservoir.</p>	<p>3. Cap tool can also be used if the dial is hard to turn.</p> 

Parts List



CYCLOR DIAGRAM/PARTS LIST • 5400/5600 SERIES

REF. #	PART NUMBER	DESCRIPTION	QTY. REQ.
1 & 2	01-22-9412	Cap w/O'Ring	1
2	01-22-9920	Cap O'Ring	1
3	N/A	Body	1
4	01-22-9480	Pressure Relief Valve	1
5, 6, 7	01-22-9441	Control Dial with Assembly Kit	1
6 & 7	01-22-9450	Control Dial O'Ring Kit	1
8 & 9	01-22-9941	Knob with O'Ring	2
10	01-22-9490	2" Male Adapter	2
18	01-22-8870	Cap/Control Dial Tool	1
19	01-22-9970	Silicone Lubricant	1

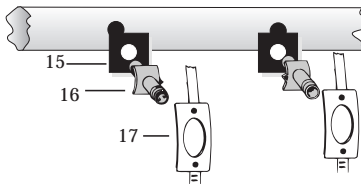


CYCLOR DIAGRAM/PARTS LIST • 5100/5200 SERIES

REF. #	PART NUMBER	DESCRIPTION	QTY. REQ.
1 & 2	01-22-1412	Cap w/O'Ring	1
2	01-22-1920	Cap O'Ring	1
3	N/A	Body	1
4	01-22-9480	Pressure Relief Valve	1
5, 6, 7	01-22-1441	Control Dial with Assembly Kit	1
6	01-22-1450	Control Dial O'Ring Set	1
7	01-22-1461	Control Dial Locking Pin	1
8 & 9	01-22-9941	Knob with O'Ring	2
10	01-22-1710	Nipple Kit	1
11	01-22-9790	Cap/Control Dial Tool	1
12	01-22-9970	Silicone Lubricant	1

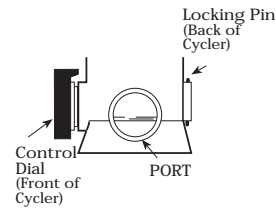
OFF-LINE PARTS Included with 5430/5630 Series

REF. #	PART NUMBER	DESCRIPTION	QTY. REQ.
11*	01-22-8620	2" X 1/2" Bushing	2
12	01-22-7800	90 Degree Elbow	2
13	01-22-7690	Small Clamp	4
14	01-22-7700	6' PVC Tubing	1
15	01-22-7850	Scoop Gasket	2
16	01-22-7790	Venturi Scoop	2
17	01-22-7910	Scoop Clamp	2

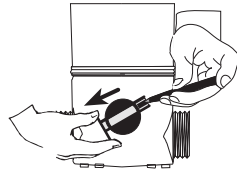


Cycler Maintenance

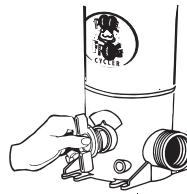
Replacing the Control Dial O'Rings for Above Ground Cyclers 5100/5200 Series



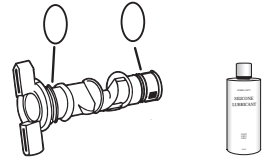
1. To replace, locate the control dial locking pin in the back of the Cycler.



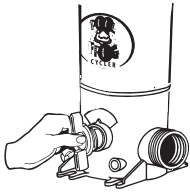
2. Depress tab at end of locking pin with a pen or screwdriver and pull pin out of valve.



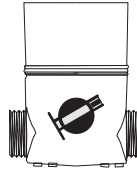
3. Turn control dial back and forth as you pull it out of the housing.



4. Replace both o-rings. Please note: the back o-ring has a loose fit in the groove. Upon replacement squeeze a little silicone lubricant that came with your Cycler on o-rings. Use your finger to spread over surface.

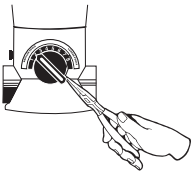


5. Carefully insert control dial back into housing.



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

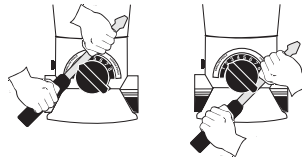
Replacing the Control Dial O'Ring Kit for Inground Cyclers 5400/5600 Series



1. Using a needle nose pliers, find the snap ring tail located at approximately the five o'clock position under the control dial.



2. Pull down and out of the groove.



3. Using a large screwdriver, loosen the control dial by carefully prying each side a little at a time.



Then pull dial out of the housing.



4. Carefully replace the rubber o-ring without stretching it. Squeeze a little silicone lubricant that came with your Cycler directly on the o-ring and spread it over the o-ring surface with your finger.



5. Push control dial completely into the housing and turn the dial to setting 2.

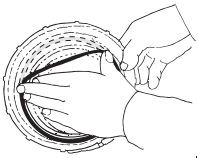


6. Insert the non-lipped end of snap ring into the groove opening beginning at the 5 o'clock position and push it up so that it threads itself around the control dial.

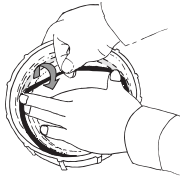


7. Using a small screwdriver or pointed tool to help guide it, make sure the snap ring stays in the groove as it is inserted.

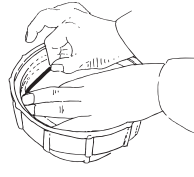
Replacing Cap O'Ring



1. 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 forefinger of one hand.



2. 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



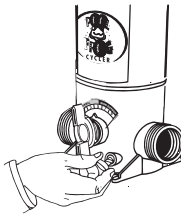
as you stretch the o'ring into the remainder of the cap groove.



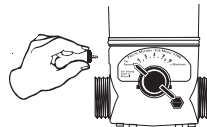
3. Lubricate o'ring often with silicone lubricant that came with your Cyclor. **DO NOT USE** petroleum based lubricants.

Replacing Drain Valve

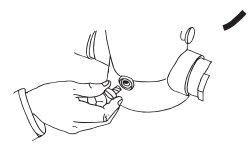
To replace, simply unscrew old drain valve and replace with the new one.



Front of 5100/5200 Cyclor



Side of 5100/5200 Cyclor

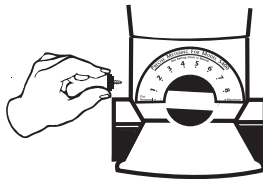


Back and side of 5400/5600 Cyclor

Winterizing



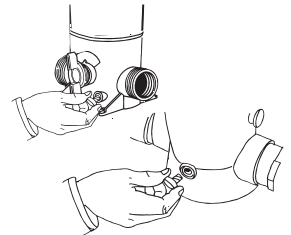
1. Turn pump off and turn dial to Pac Removal.



2. Unscrew side drain valve to relieve pressure.



3. Remove cap.



4. Unscrew drain valve in back of Cyclor (5400/5600) or from the front of Cyclor (5100/5200). Allow all water to drain.



5. If the Bac Pac still contains chlorine at winterizing, wrap in a plastic bag and store in shed or garage away from children, pets, open flame or anything metal.



6. Remove the Reservoir and discard in trash. Once activated by water, the minerals will hold their purifying power for six months. Do not attempt to re-use the Reservoir the following season.



7. Replace the cap and drain valves loosely.

Above Ground Filter Installation - Models 5100/5200

TOOLS NEEDED

Screwdriver



Wrench



INCLUDED WITH CYCLER
-Nipple Kit

Teflon Tape



One 6" X 1 1/2" TBE
PVC Nipple

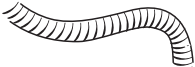


MATERIALS NEEDED:

One Hose Adapter
1 1/2" X 1 1/2" X 1 1/4"



One Section of
1 1/2" Flex Hose
(provided with filter)



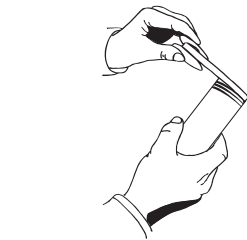
One
Hose
Clamp



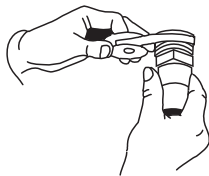
RECOMMENDED:



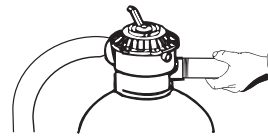
Check Valve
Rainbow #172288



1. Apply teflon tape to each threaded end of nipple.



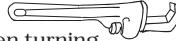
4. Apply teflon tape to threaded end of hose adapter.



2.

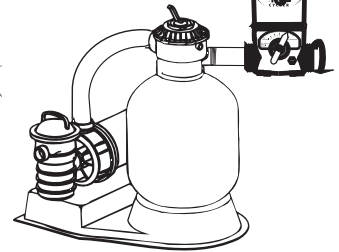
Screw one end of nipple into the filter return.

Tighten turning 1 to 2 revolutions with wrench. Do NOT over tighten.

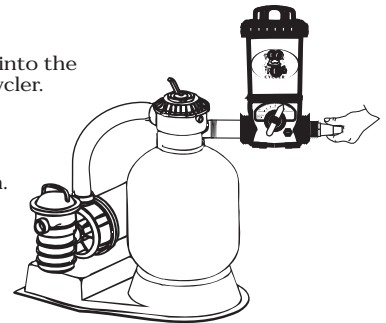


5. Screw adapter into the right port of Cyclar.

Tighten turning 1 to 2 revolutions with wrench. Do NOT over tighten.

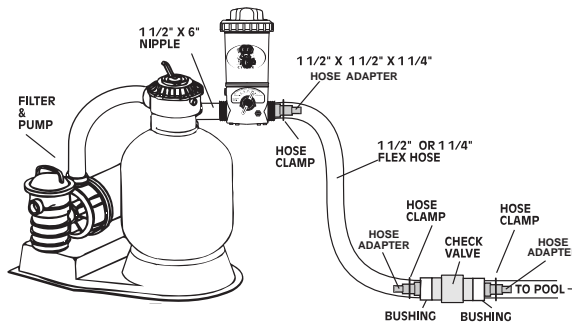
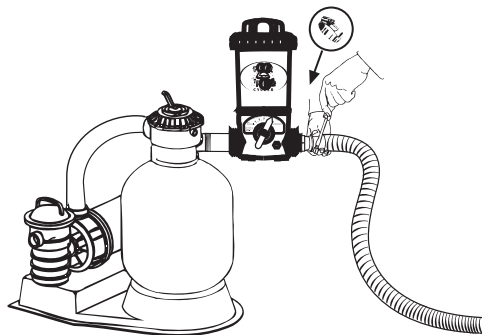


3. Screw the left port of Cyclar on to open nipple until upright and secure.



6.

Attach return section of hose to the adapter with clamp. Tighten clamp with screwdriver.



7.

If using a chlorine Bac Pac installing a corrosion resistant check valve is recommended.

TOOLS NEEDED



Screwdriver



Wrench

MATERIALS NEEDED:

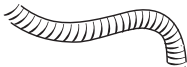


Teflon Tape

Two Hose Adapters
1 1/2" X 1 1/2" X 1 1/4"



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



Two
Hose
Clamps



RECOMMENDED:



Check Valve
Rainbow #172288

#10 X 1 1/4" Phillips
Pan Head Screws with
Washers



OPTION:

Half
Union



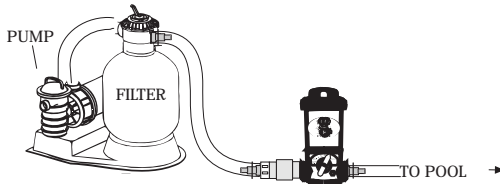
or



1 1/2" Threaded by
1 1/2" Slip Bushing.

When installing with
hard PVC pipe, use
either a half union on
the outside port
threads or a bushing
on the inside port
threads.

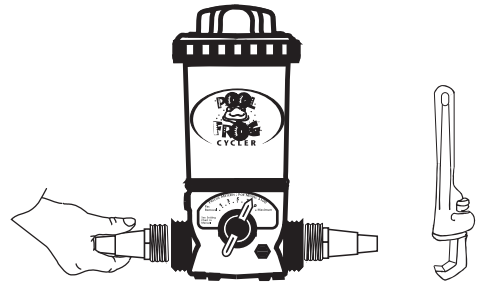
Above Ground, Base Installation - Models 5100/5200



The Cyclor should always be installed between the filter and pool (or between heater and pool if applicable).

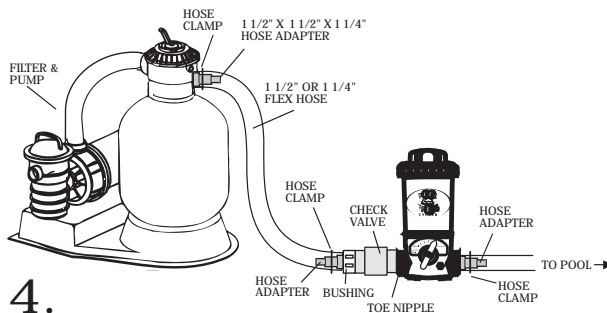
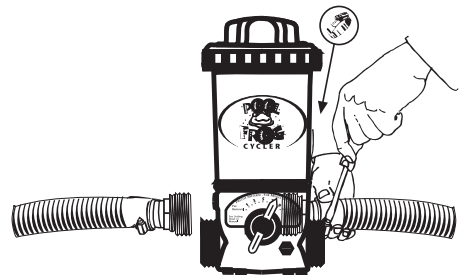


1. Apply teflon tape to the threaded end of both hose adapters.

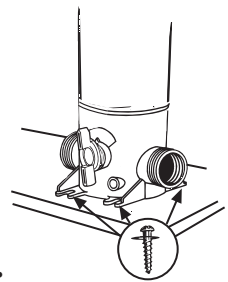


2. Screw adapters into each end of Cyclor. Tighten turning 1 to 2 revolutions with wrench. Do Not over tighten.

3. Attach the filter section of flex hose to one hose adapter and the return section of flex hose to the other hose adapter with clamps and tighten with screwdriver.



4. If using a chlorine Bac Pac installing a corrosion resistant check valve is recommended.



5. For better stability, Cyclor may be mounted on a base using Phillips pan head screws.

Inground Installation - Models 5400/5600

TOOLS NEEDED

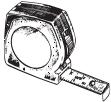
Wrench



Hacksaw



Tape Measure



MATERIALS NEEDED:

PVC Cement

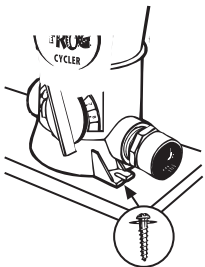


RECOMMENDED:

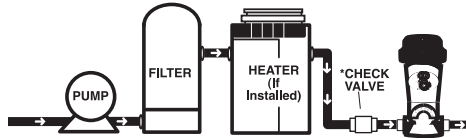
Check Valve
Rainbow
#172288



#10 X 1 1/4" Phillips Pan
Head Screws with
Washers



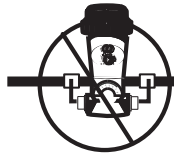
Use Phillips pan head screws through the mounting holes at the Cyclor base to secure the Cyclor into a treated wood base.



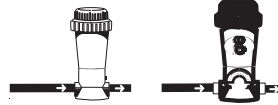
Install after all equipment and as far as possible from heater.



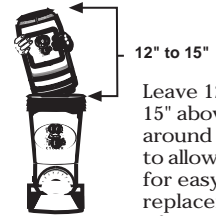
Do NOT install in copper pipe if using Bac Pac as chemical corrosion occurs.



Do NOT install this Cyclor off-line.



Can be installed with the water flow in either direction due to its bi-flow valve.

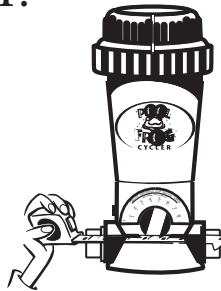


12" to 15"

Leave 12" to 15" above and around Cyclor to allow room for easy replacement of Reservoir and Pac.

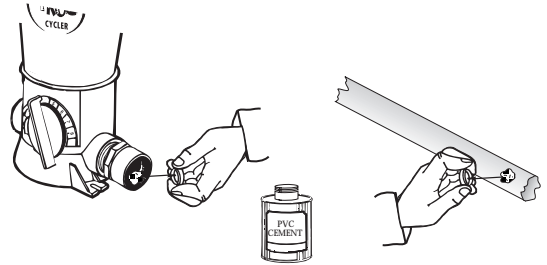
12" to 15"

1.



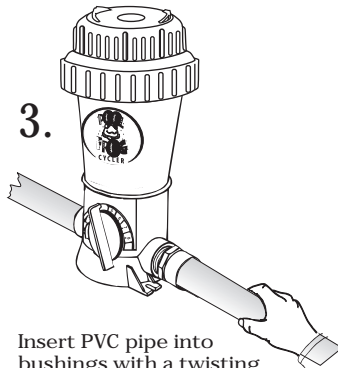
Measure the distance between Cyclor bushings and cut out a section of pipe 1" less than that dimension.

2.



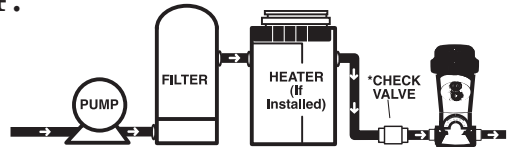
Following PVC cement directions brush PVC cement on the inside of the bushings and to ends of the pipe.

3.



Insert PVC pipe into bushings with a twisting action. Hold in place 5 to 10 seconds to bond.

4.

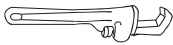


If using a chlorine Bac Pac, isolating the Cyclor by installing a corrosion resistant check valve is recommended.

Off-line Installation – Models 5430/5630

TOOLS NEEDED

Wrench



Screwdriver



Battery Operated Drill with 5/8" or 19/32" Bit



MATERIALS NEEDED:

Pipe Thread Sealant



PVC Cement



OFF-LINE KIT

Included with Cycler

Two Male Adapters



Two Reducer Bushings



Two 90 Degree Elbows



Four Hose Clamps



6' of Tubing



Two Scoops



Two Scoop Gaskets



Two Scoop Clamps

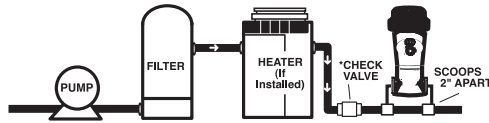


RECOMMENDED:

Check Valve Rainbow #172288



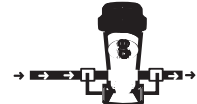
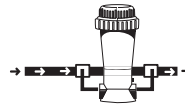
#10 X 1 1/4" Phillips Pan Head Screws with Washers



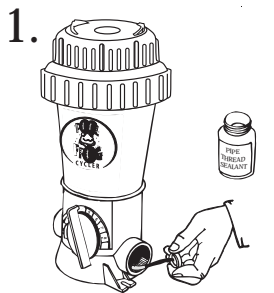
Install off-line when insufficient room for an in-line application. Install as far from heater as possible.



Do NOT install an off-line Cycler in-line as this Cycler is different than an in-line unit.



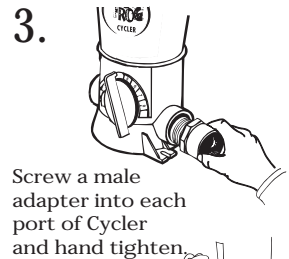
Can be installed with the water flow in either direction due to its bi-flow valve.



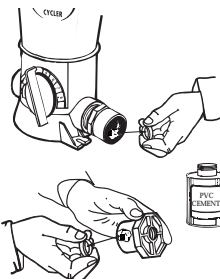
Following pipe thread sealant directions, brush sealant on to Cycler threads in both ports.



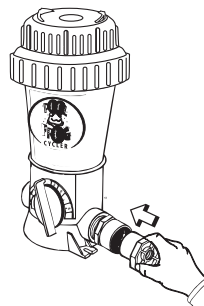
DO NOT USE TEFLON TAPE as the threads on these units are not suitable for this use and leaking or bushing failure could result.



Completely tighten turning 1 to 2 revolutions with a wrench. DO NOT OVER TIGHTEN.



4. Following PVC cement directions, brush PVC cement on reducer bushings and inside of male adapters.

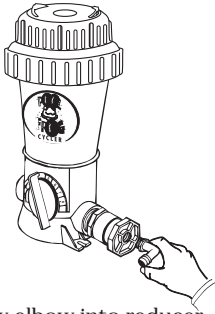


5. Insert reducer bushing into male adapter on both sides. Hold in place 5 to 10 seconds to bond.



6. Following pipe thread sealant directions, brush sealant on to elbow threads.

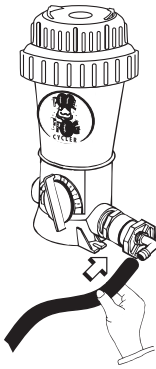
7.



Screw elbow into reducer bushings on both sides.

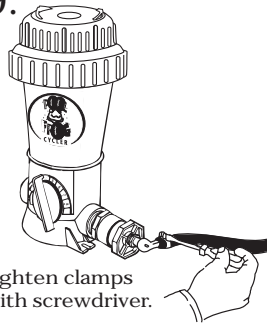
8.

Cut tubing to size for each Cyclor connection and attach one to each elbow with clamps.



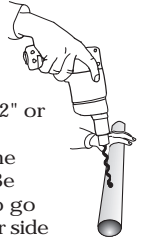
9.

Tighten clamps with screwdriver.



10.

When pipe is totally dry, drill two 19/32" or 5/8" holes 2" apart on the return line. Be careful not to go through other side of pipe.



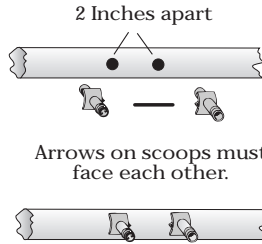
11.



Attach a gasket to each scoop.

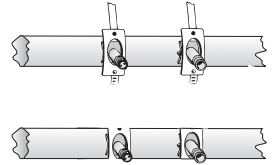
12.

Place scoops inside holes so the inlet scoop faces the water flow and the outlet scoop faces away from the water flow. Scoop arrows should be facing each other when correct.



13.

Attach scoop clamps over the scoops and around the pipe.



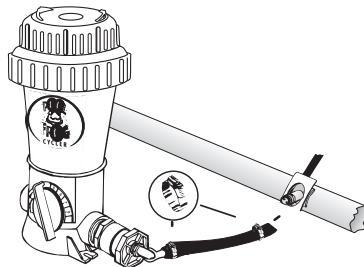
14.



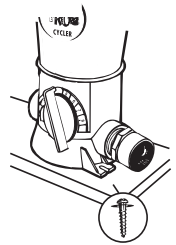
Tighten scoop clamps with a screwdriver.

15.

Attach each hose to venturi scoop male nipple with a small clamp and tighten with screwdriver.

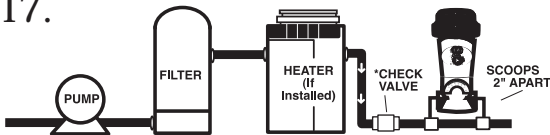


16.



For best results use Phillips pan head screws through the mounting holes at the Cyclor base to secure the Cyclor into a treated wood base.

17.



If using the chlorine Bac Pac, isolating the Cyclor by installing a corrosion resistant check valve is recommended.

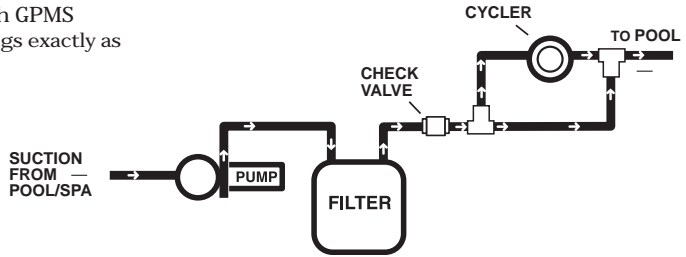
Special Inground Installations

If using POOL FROG® with the chlorine Bac Pac, special installations should be considered when:

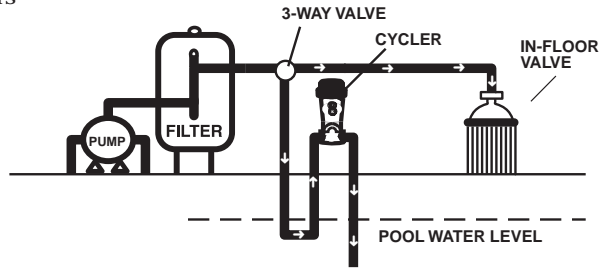
1. Water flow is higher than 80 gpm.
2. In-floor cleaner is included with pool.
3. Pool and spa combination with common equipment.

NOTE: Over chlorination or damage to the Cyclor or other equipment could result if these special installations are not used in these situations.

A. With High GPMS
Install T-fittings exactly as shown.



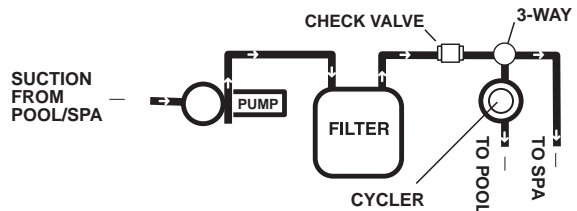
B. With In-floor Cleaners



BACK PRESSURE

3 to 8 psi is the recommended back pressure for this system. Higher back pressures result in over chlorination. Adjust eye ball fittings in the return jets to a larger size to decrease back pressure or a smaller size to increase back pressure.

C. Pool and Spillover Spa Combination



Limited Two-Year Warranty

King Technology will warrant this unit with a complete replacement for the original purchaser should it prove defective by reason of improper 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 excluding o'rings. King Technology holds the option of replacing any defective part without charge if it is determined to be all that is needed to correct any situation. Parts used for replacement with the exception of o'rings are warranted for the remainder of the original warranty.

1. To obtain warranty service, you must deliver product to King Technology or its nearest authorized dealer. Shipping expense 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 on back page. Proof of purchase is required when requesting warranty service. Purchaser must present the sales receipt or other document which establishes proof of purchase. To validate your warranty, complete the warranty card that came with your unit and return it to King Technology within 30 days of purchase and installation.

2. This warranty does not cover defects caused by: Modification, alteration, repair or service of the product 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 - 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 in excess of the recommended setting levels for trichlor can result in excess sanitizers being discharged into the pool. This 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.

4. Any express warranty not provided for herein, and any remedy for breach of warranty or breach of contract which, but for this provision, might arise by implication or operation of law, is hereby expressly excluded and disclaimed. 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 implied warranties of merchantability and of fitness for any particular purpose are expressly limited to a term of one year. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

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 special, incidental or consequential damages or losses, whether arising out of breach of warranty, breach of contract or otherwise. Some states do not allow the exclusion or limitation of incidental consequential damages, so the above limitation or exclusion may not apply to you.

6. Misuse or failure to use the proper Reservoir and Pac may cause damage to equipment or personal injury. All warranty null and void if this product is not used with the recommended Reservoir and Pac.

For a FREE warranty extension to 10 years, complete warranty card and return postage paid, within 60 days of installation date.

Made in U.S.A.

Cycler: US Patent Numbers 4,662,387; 5,076,315; 5,218,983

Foreign Patents Pending

Reservoir: US Patent Numbers 6,210,566; 6,190,547; D391,624 and

Foreign Patents Pending

KING TECHNOLOGY, Inc.

530 11th Avenue South, Hopkins, MN 55343 U.S.A. (952) 933-6118 • FAX (952) 933-2206

www.kingtechnology.com

PN #20-48-0127

FROGOPMAN 553110143