New Water Fresh and Clean

Easy-Does-It Chlorine Pool-Care System



The New Water® Cycler and Replacement Cycler Pac

Instruction Manual

Customer Service 800-222-0169

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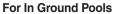
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For information on all King Technology's products, visit our website at www.kingtechnology.com

New Water®

Thank you for choosing New Water. This system will maintain a clean, clear swimming pool while you spend less time on maintenance and more time having fun!







For Above Ground Pools

New Water® Cycler

The New Water Cycler is on constant watch dispensing chlorine to control bacteria and provide a protective bank of sanitizer for your pool.

Pool Balancing

Water Balance Guidelines

 Free Chlorine:
 1.0 - 3.0 ppm

 pH:
 7.2 - 7.8

 Total Alkalinity:
 60 - 120 ppm

 Calcium Hardness:
 150 - 400

 Total Dissolved Solids:
 <1500</td>

 Stabilizer:
 20 - 80 ppm

1. 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.



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



2. If your fill water is high in metals, use a sequestering agent or metal out at pool opening only before inserting a Pac. Follow manufacturer's directions.



3. 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).



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



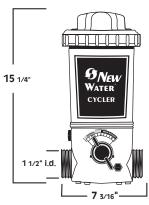
6. Add a stabilizer or conditioner to the pool at the beginning of the season if the stabilizer level is below 20 ppm. This will prevent chlorine burn off. Follow manufacturer's directions carefully.

New Water® Cycler

Installation

The New Water Cycler comes in several different models. Please review this list, determine which model you have and follow the appropriate installation instructions for that model only.

ABOVE GROUND POOLS



Cycler Model #100

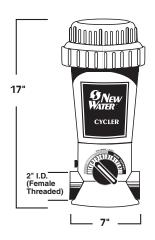
In-line for above ground pools ranging from 5,000 to 20,000 gallons. Uses a 5 lb. Cycler Pac. See Pages 6 & 7.



Replacement Cycler Pac

Model 105C for use in the New Water Cycler Model 100.

IN GROUND POOLS



Cycler Model #400

In-line for in ground pools ranging from 5,000 to 40,000 gallons. Uses a 7 lb. Cycler Pac. See Page 8.



Replacement Cycler Pac

Model 407C for use in the New Water Cycler Models 400 and 430.

IN GROUND - Off-line



Cycler Model # 430

Off-line for in ground pools ranging from 5,000 to 25,000 gallons. Uses a 7 lb. Cycler Pac. See Pages 9 and 10.

Installation Tips

- Do not plumb into copper pipe as corrosion will occur.
- By installing a flow indicating device on the inlet line you can monitor the gallons per minute.

 See manufacturer's directions for the installation of the flow.

 The provided transfer that is a factor of the flow.

See manufacturer's directions for the installation of the flow indicating device.

Before installing any of these Cyclers, make sure that:



You have all the supplies.

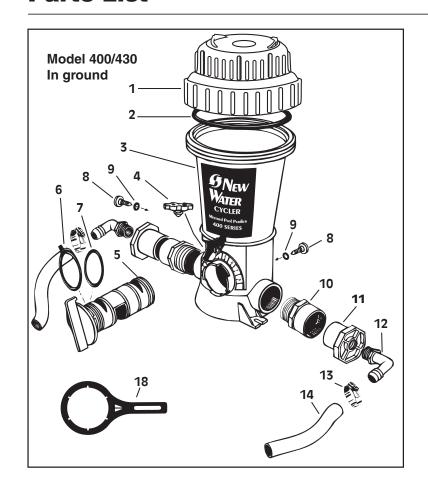


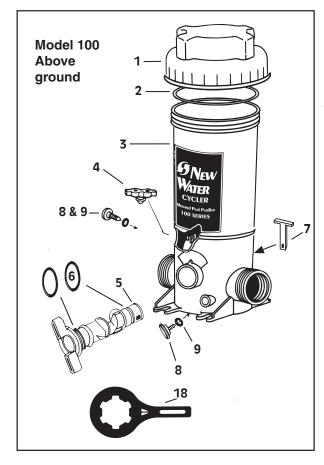
• The pump is turned off.



• The plumbing lines are dry.

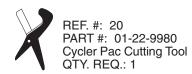
Parts List



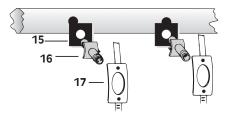


CYCLER DIAGRAM/PARTS LIST • Model 400

REF.#	PART No.	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 O-Rings	1
6 & 7	01-22-9450	Control Dial O-Ring K	it 1
8 & 9	01-22-9941	Knob with O-Ring	2
18	01-22-8870	Cap/Control Dial Tool	1



REF. #: 19 PART #: 01-22-9970 Silicone Lubricant QTY. REQ.: 1



OFF-LINE PARTS Included with Model 430

CYCLER DIAGRAM/PARTS LIST • Model 100

REF. #	PART No.	DESCRIPTION QT	Y. 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 O-Rings	1
6	01-22-1450	Control Dial O-Ring Set	1
7	N/A	Control Dial Locking Pin	1
8 & 9	01-22-9941	Knob with O-Ring	2
18	01-22-9790	Cap/Control Dial Tool	1

OFF-LINE PARTS Included with Model 430

REF. #	PART No.	DESCRIPTION Q	ΓΥ. REQ.
10	01-22-9490	2" Male Adaptor	2
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	2
15	01-22-7850	Scoop Gasket	2
16	01-22-7790	Venturi Scoop	2
17	01-22-7910	Scoop Clamp	2
19	01-22-9970	Silicone Lubricant	1
20	01-22-9980	Cycler Pac Cutting To	ol 1



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

Corrosion Resistant Check Valve

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

OPTION

Half Union



or



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

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

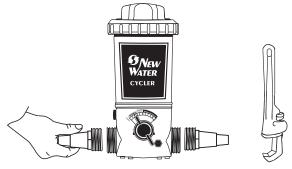
Above Ground, Base Installation - Model 100



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



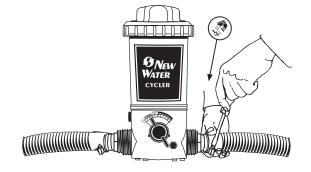
Apply teflon tape to the threaded end of both hose adapters.

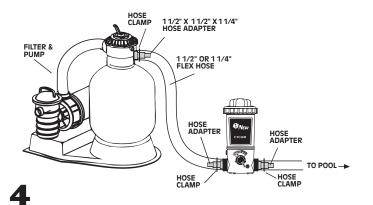


Screw adapters into each end of Cycler. Tighten turning 1 to

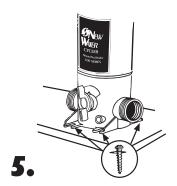
2 revolutions with wrench. **DO NOT OVER TIGHTEN**.

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.





Isolating the Cycler by installing a corrosion resistant check valve is recommended to protect the equipment and prevent discoloration of pool surface.



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

Screwdriver



Wrench



MATERIALS NEEDED

Teflon Tape



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



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

Corrosion Resistant Check Valve

Above Ground, Filter Installation - Model 100



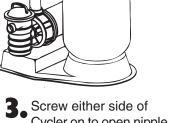
Apply teflon tape to each threaded end of nipple.



Screw one end of nipple into the filter return.



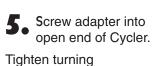
1 to 2 revolutions with wrench. **DO NOT OVER TIGHTEN.**



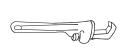
Screw either side of Cycler on to open nipple end until upright and secure.

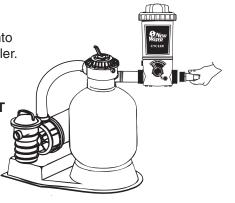


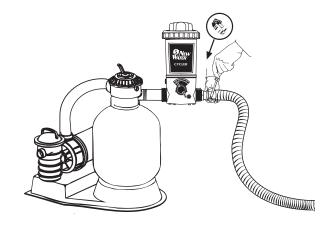
Apply teflon tape to threaded end of hose adapter.



1 to 2 revolutions with wrench. **DO NOT OVER TIGHTEN.**

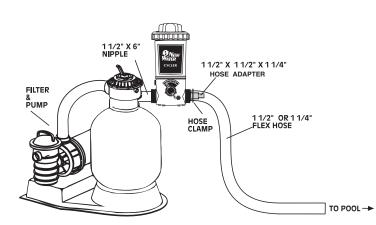






6.

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



7.

Installing a corrosion resistant check valve is recommended.

Wrench



Hacksaw



MATERIALS NEEDED

Pipe Thread Sealant



PVC Cement



Two 2" Threaded X 2" or 1 1/2" Slip **PVC** Bushings (not included)



RECOMMENDED

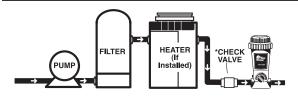
Corrision Resistant Check Valve

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



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

In Ground, In-line Installation - Model 400



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



Do NOT install in copper pipe as chemical corrosion occurs.



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



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



12" to 15"

Leave 12" to 15" above and around Cycler to allow room for easy replacement

of Cycler Pac.



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



Brush sealant on the threads of both male adapters.

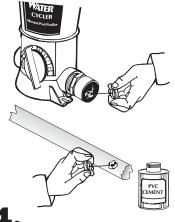
DO NOT USE TEFLON TAPE as the threads on these units are not suitable for this use and leaking or fitting failure could result.



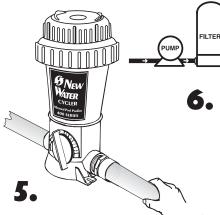
Screw a male adapter into each port of Cycler and hand tighten.

Completely tighten turning 1 to 2 revolutions with wrench.

DO NOT OVER TIGHTEN.

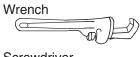


Following PVC cement directions brush PVC cement on to ends of pipe and the inside of male adapters.



Insert PVC pipe into male adapters. Hold in place 5 to 10 seconds to bond.

Isolating the Cycler by installing a corrosion resistant check valve is recommended to protect the equipment and prevent discoloration of pool surface.



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



Two Scoop Clamps



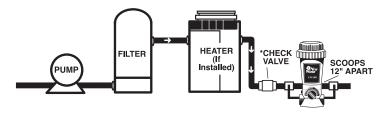
RECOMMEND

Corrosion Resistant Check Valve

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



In Ground, Off-line Installation - Model 430



Install off-line when insufficient room for an inline 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 control dial.



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



Brush sealant on threads of both male adapters.



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.

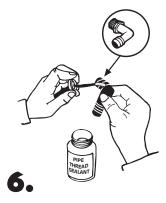


Following PVC cement directions, brush PVC cement on reducer bushings and

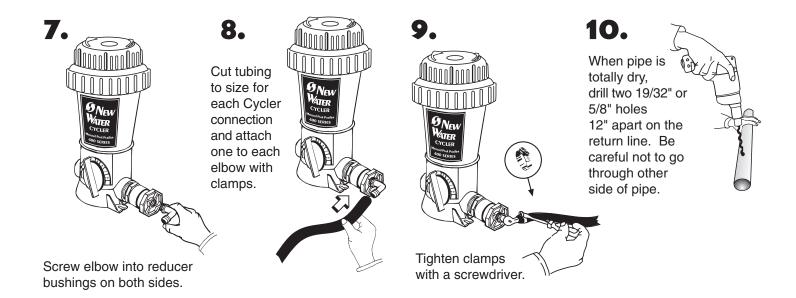
inside of male adapters.



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



Following pipe thread sealant directions, brush sealant onto elbow threads.





Attach a gasket to each scoop.

12.

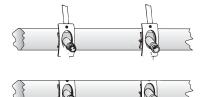
Place scoops inside holes so the inlet scoop faces the water flow and the outlet scoop faces away from the water flow. Scoop arrows should be facing each other when correct.



Arrows on scoops must face each other.

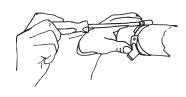


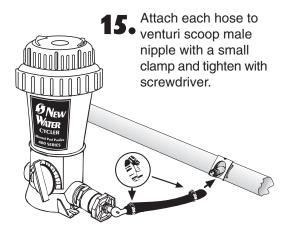
Attach scoop clamps over the scoops and around the pipe.





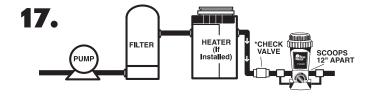
Tighten scoop clamps with a screwdriver.





16. NIE

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



Isolating the Cycler by installing a corrosion resistant check valve is recommended to protect the equipment and prevent discoloration of pool surface.

Replacing a Cycler Pac

CAUTION Read Carefully – **USE ONLY** the factory recommended replacement Pac. (See label.) DO NOT USE any other Pac or bulk chemical tablets in the 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.



Turn off pump. Turn dial to Minimum. This reduces the flow of water into the unit when the cap is open so isolation valves are unnecessary.



Use the cap tool included with Cycler to loosen cap by hitting the handle with the flat of your hand counter clockwise. Stand back upon removing cap to avoid inhaling fumes.



The Pac is made of HDPE #2 plastic. When the Pac is empty, triple rinse in pool water, drain, and recycle or wrap in newspaper and discard in trash.

4. Cutting handle from Cycler Pac using Pac Cutting Tool or a hacksaw (KEEP OUT OF REACH OF CHILDREN)



Finished cut ends



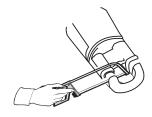
E. Whether using a Pac Cutting Tool or a hacksaw, make sure the blade comes straight across on the indent line for a clean cut.



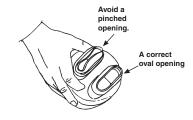
B. If using a Pac Cutting Tool, place curved section of tool around the narrow end of one Pac tower and line up blade on indent.



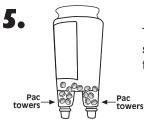
C. Squeeze the handles together. Repeat for other side.



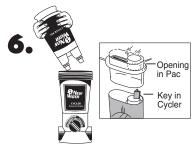
D. If using a hacksaw to cut the Pac, line up hacksaw blade on indent and cut with a smooth sawing action.



F. If openings are pinched together, open with fingers or re-cut closer to the colored screens inside Pac. Leave at least 1/4" of plastic to fit into Cycler base.



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



Insert Pac into Cycler, lining up the openings in Pac with keys in Cycler. **NOTE:** Openings are a different shape than keys. Avoid sparks, open flame or smoking when handling the Pac.



Replace cap by hand only. **DO NOT OVERTIGHTEN.**



DO NOT USE CAPTOOL TO TIGHTEN CAP. FOR REMOVAL ONLY.

Setting Control Dial

POOL	POOL SIZE		12 Hour Pump Run Time			24 Hour Pump Run Time			
			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	11/2 hp
7,000	(18')	2.5	2	1	* 3	1.5	1	1	* 2
9,000	(21')	3	2.5	2	* 3.5	2	1.5	1	* 2.5
12,000	(24')	3.5	3	2.5	2	2.5	2	1.5	* 3
15,000		4	3.5	3	2.5	3	2.5	2	1.5
20,000		4.5	4	3.5	3	3.5	3	2.5	2

POOL SIZE	12 Hour Pump Run Time			24 Hour Pump Run Time				
POOL SIZE	PUMP SIZE				PUMP SIZE			
Gallons	3/4 hp	3/4 hp 1 hp 1 1/2 hp 2 hp				3/4 hp 1 hp 1 1/2 hp 2 h		
7,000	2.5	2	* 3.5	* 3	1	* 3	* 2.5	* 2
9,000	3	2.5	2	* 3.5	2	* 3.5	* 3	* 2.5
12,000	3.5	3	2.5	2	2.5	2	1	* 3
18,000	4.5	3.5	3	2.5	3	2.5	2	1.5
25,000	NR	4.5	3.5	3	3.5	3	2.5	2
30,000	NR	5	4.5	3.5	NR	3.5	3	2.5

ABOVE GROUND POOLS Approximate Dial **Setting for New Water** 5 Lb. System

IN GROUND **POOLS Approximate Dial** Setting for **New Water** 7 Lb. System

Dial settings based on 1.5 ppm. * Bypass installation recommended.

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

1. Find your starting dial setting by matching up the parameters of your pool on the above charts. A 24 foot above ground pool with approximately 12,000 gallons and a 1 horse pump running 12 hours a day would require a starting setting of 2.5. See example below.

ABOVE GROUND POOLS

	DOO	CIZE	12 Hour Pump Run Time						
ı	POOL SIZE		PUMP SIZE						
	Gallons	Diameter	1/2 hp	3/4 hp	1 hp	1 1/2 hp			
	7,000	(18')	2.5	2	1	* 3			
	9,000	(21')	3	2.5	2	* 3.5			
	12,000	(24')	3.5	3	(2.5)	2			
	15,000		4	3.5	3	2.5			
	20.000		4.5	4	3.5	3			



2. For the first week or so, test the water daily for free chlorine.



- 3. After day one, adjust the dial up by 1/2 increment if the free chlorine reading has dropped or down by 1/2 increment if the reading has risen. Continue this process each day until the reading stabilizes at your desired level between 1.0-3.0 ppm. Remember to adjust dial by 1/2 increments only. Higher than suggested settings could result in over chlorination and/or bleached pool surfaces.
- 4. Use the handle end of cap tool if the dial is hard to turn.







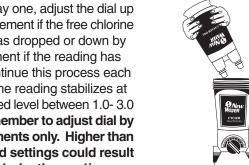
Increase the number of hours your pump runs per day. If reading drops below 1.0 ppm, shock pool again. Turn control dial to minimum when shocking and NEVER ADD SHOCK IN OR NEAR THE SKIMMER. Reset dial 1/2 setting higher than before and continue to monitor daily until desired chlorine level is achieved.

If over chlorinating



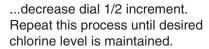


Decrease the number of hours your pump runs per day. Water must circulate fully once a day. Remove the Pac and place open ends down on the equipment pad until dry. Avoid inhaling fumes. Avoid placing on any surface that may be damaged by chemical exposure. Keep out of reach of children and pets.





When reading drops to desired ppm, replace Cycler Pac and ...





For Ultimate Performance

1) Make sure back pressure Is between 3 and 8 psi

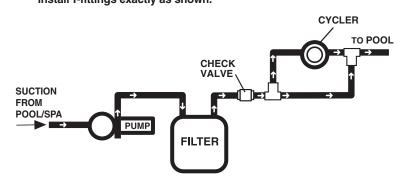
Higher back pressures result in over chlorination. Lower back pressures result in under chlorination. Adjust eye ball fittings in the return jets to a larger size to decrease back pressure or smaller size to increase back pressure.

2) Determine possible high-flow situations that require a special installation such as:

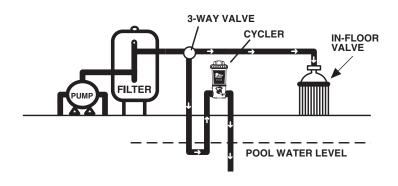
- A. Water flow is higher than 80 gpm.
- B. In-floor cleaner is included with pool.
- C. Pool and spa combination with common equipment.

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

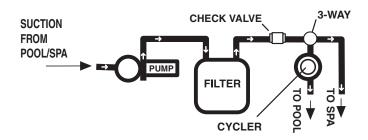
A. With High GPMS Install T-fittings exactly as shown.



B. With In-floor Cleaners



C. Pool and Spillover Spa Combination



Cycler Maintenance

Replacing the Control Dial O-Rings for Above Ground Cyclers



1. In the back of the Cycler depress tab at end of locking pin with a pen or screwdriver and pull pin out of dial.



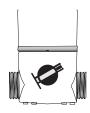
2. Turn control dial back and forth as you pull it out of the housing.



3. Replace both o-rings. Please note: the back o-ring has a loose fit in the groove. Apply silicone lubricant that came with your Cycler on o-rings.



4. Carefully insert control dial back into housing.



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

Replacing the Control Dial O-Ring Kit for In Ground Cyclers



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. Carefully pry the dial until it pulls out.



4. Carefully replace the rubber oring without stretching it. Apply silicone lubricant that came with your Cycler on o-ring.



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-rings



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 Cycler. DO NOT USE petroleum based lubricants.

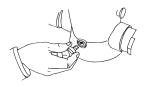
Replacing Knobs • To replace, simply unscrew old knob and replace with the new one.



• Front of 100 Cycler



Side of 100 Cycler



Back of 400 Cycler

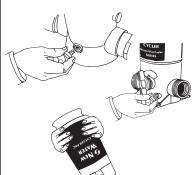
Winterizing



1. Turn dial to minimum. Turn pump off . Unscrew side knob of Model 100 to relieve pressure.



2. Remove cap.



3. Unscrew drain valve in back of Cycler #400 or from the front of Cycler #100. Allow all water to drain.



4. Remove Pac.



5. Replace the cap and knobs loosely.



6. If Pac still contains chlorine wrap in plastic bag and store in shed or garage away from children and pets.



7. Make sure Pac is away from open flame or anything metal.

Limited One-Year 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 one (1) year 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.

- 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 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.
- D. Misuse or failure to use the proper chlorine Pac for New Water as directed in the instruction manual may cause damage to equipment or personal injury. This warranty will be null and void if this unit is not used with the recommended chlorine Pac or Trichlor tablets.
- 4. This warranty is the exclusive warranty for the NEW WATER® 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 NEW WATER® 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.

Made in U.S.A.
U. S. Patent Numbers: 4,662,387; 5,076,315; 5,218,983
and other U.S. and Foreign Patents Pending





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