

POOL FROG® Mineral Pool Care System

Model 5400/5430
For Pools up to 40,000 Gallons



Fresh
Mineral Water
Easy®

Cleaner

because it kills bacteria two ways

Clearer

because it helps keep pH in range

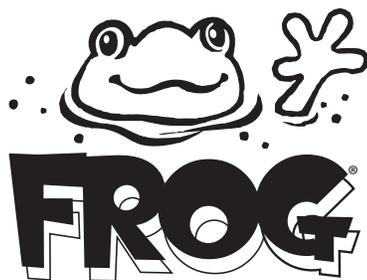
Softer

because it reduces chlorine use up to 50%*

Easier

with pre-filled pacs for no mess,
no guess and no stress

*Compared to the minimum EPA recommended chlorine level of 1.0 ppm for a stabilized swimming pool.



System Includes the
POOL FROG® Mineral Reservoir
Patented Mineral Disinfectant

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

TABLE OF CONTENTS

| | |
|--|--------------|
| POOL FROG® Introduction | 3 |
| Notes and Safety Information | 4 |
| Safety Precautions | 5 |
| Notice | 6 |
| Step 1: Preparing the Pool | 6 |
| Step 2: Putting the System to Work | 7 |
| Step 3: Setting the Control Dial | 8 |
| Step 4: Routine Pool Care | 9 |
| Replacing POOL FROG® Mineral Reservoir | 10 |
| Using FROG BAM® | 11 |
| Using POOL FROG® Bac Pac | 12 |
| Troubleshooting | 13 |
| Parts List | 14 |
| Maintenance - Replacing Control Dial O-Rings | 15 |
| Maintenance - Replacing Cap O-Rings and Knobs | 15 |
| Winterizing | 16 |
| In-line Installation | 17 |
| Off-line Installation | 18-19 |
| For Proper Performance | 20 |
| Warranty | 21 |

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

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 chlorine. This system† controls bacteria using a combination of minerals and reduced chlorine levels—up to 50%* less.

There are 4 parts to the POOL FROG® System:

1. POOL FROG® Cyclor
2. POOL FROG® Mineral Reservoir
3. FROG BAM® 90-day Algae-Preventative
4. POOL FROG® Bac Pac.

Part 1 **POOL FROG® Cyclor**

The water treatment center that controls the flow of water to each part of the POOL FROG® System.



For pools 7,000 to 40,000 gallons.
Model 5400 In-Line
Product # 01-01-5480
Model 5300 Off-Line
Product # 01-01-5490

Part 2 **POOL FROG® Mineral Reservoir**

Holds the minerals and fits inside the POOL FROG® Cyclor.
Product # 01-12-5462



Part 3 **FROG BAM®**

Use with the POOL FROG® System for a 90-Day Algae-Protection Guarantee. One bottle is good for 15,000 gallons.
Product # 01-10-5060



Part 4 **POOL FROG® Bac Pac**

Pre-filled with chlorine tablets and fits inside the POOL FROG® Mineral Reservoir.
Product # 01-03-5880



POOL FROG® Mineral Reservoir comes inside POOL FROG® Mineral Cyclor and is also separately.
POOL FROG® Bac Pac and FROG BAM® also sold separately.

†FROG® Mineral System consists of the FROG® minerals silver chloride and carbonate used in conjunction with 0.5 ppm chlorine. The FROG® Mineral Reservoir must be used in conjunction with the FROG® Bac Pac (EPA Reg. No.: 53735-2), an EPA registered chlorine pool product or a chlorine delivery device.

*Compared to the minimum EPA recommended chlorine level of 1.0 ppm for a stabilized swimming pool.

Notes and Safety Information

General Notes

These instructions contain information for the safe and proper operation of this system. Observe the following principles:

- Read the entire manual prior to installing or using this system.
- Ensure that everyone using this system follows the instructions and safety precautions.
- Keep the instructions nearby and available for reference throughout the service life of this system.

These instructions do not provide for every possible contingency that might be encountered in connection with installation, operation or maintenance of this equipment. Should further information be desired or should particular issues arise which are not covered sufficiently in this manual, the matter should be referred to the manufacturer.

Explanation of the signal words

Signal words, which depict the probability and severity of harm, are used in these instructions. They are defined as follows:

| Signal Word | Meaning |
|----------------|--|
| WARNING | Indicates a hazardous situation which, if not avoided, could result in serious injury or death. |
| CAUTION | Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. Caution also alerts against unsafe practices. |
| NOTICE | Indicates special instructions that are important but not related to physical injury hazards. |

Explanation of the safety pictographs

The following pictographs illustrate the type and source of a hazard.

| Pictograph | Type of Danger |
|---|-----------------------------|
|  | Safety Alert/General Hazard |
|  | Explosion Risk |
|  | Hazardous Pressure |
|  | Flammable Fire Hazard |

Identification of warnings

Warnings are intended to help you recognize risks and avoid negative consequences. This is how warnings are identified:

|  Signal Word |
|---|
| Pictographs |
| <p>Description of danger. Consequences if ignored.</p> <p>⇒ The arrow signals a safety precaution to be taken to eliminate or reduce the danger.</p> |

Safety Precautions



CAUTION

- ⇒ Follow instructions for the POOL FROG® SYSTEM, POOL FROG® Bac Pacs, POOL FROG® Minerals, and BAM® Algacide.
- ⇒ Avoid breathing in chemical fumes. Use protective equipment if necessary.
- ⇒ Wash your hands and arms thoroughly after using this product.



WARNING



Fire, explosion and high pressure hazards

To minimize the risk of serious injury, death or property damage, follow these instructions and safety precautions at all times while using the POOL FROG® System.

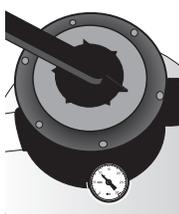
- ⇒ Read, understand and follow all instructions and safety precautions in the manual, and on this system and on any label for chemicals used with this system.
- ⇒ Use only POOL FROG® Bac Pacs, Mineral Reservoir, and FROG BAM® in the POOL FROG® SYSTEM.
- ⇒ Never use bulk chemicals, fast dissolving chlorine tablets, liquid bleach, or calcium hypochlorite in the POOL FROG® system.
- ⇒ Never mix Trichlor Chlorine tablets with Calcium Hypochlorite, or with any other form of concentrated chlorine or other chemicals.
- ⇒ Never add any other types of chlorine, pH adjusters, shock treatments or algaecides through the skimmer. These products should be added directly into the pool if required.
- ⇒ To prevent the build up of gas pressure in the POOL FROG® SYSTEM, be sure the pool return line valves are open – except when opening or servicing the unit.
- ⇒ Do not exceed maximum operating pressure of 50 psi.
- ⇒ Do not open under pressure. Always turn off pump and bleed off pressure before opening POOL FROG® SYSTEM.
- ⇒ Do not exceed maximum water temperature of 104° F.
- ⇒ Do not install automatic or fast shut off valves downstream of feeder.
- ⇒ Never install POOL FROG® before the heater.
- ⇒ Any additional sanitizing equipment that is installed with FROG® must be installed after the FROG® (never before) on the return line to the pool.
- ⇒ Avoid sparks, smoking, or any open flame near POOL FROG® SYSTEM or chemicals.

NOTICE

- ⇒ Ensure proper plumbing connections prior to pressurizing.
- ⇒ Replace POOL FROG® System if signs of cracks, damage or degradation.
- ⇒ Failure to properly winterize your cyclor could result in freeze damage.

Step 1: Preparing the Pool

1.  Make sure the pool has adequate circulation. The total volume of 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 of circulation. Check with your dealer for the proper circulation time for your pool.

2.  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.

3. Check the Water Hardness of your fill water before adding to the pool. If calcium content is higher than 400 ppm, find a soft water source to fill your pool instead. Otherwise water balance will be very difficult.

4. Check for metals in the pool such as iron or copper. Before attempting water balance these should be removed. See your dealer for a metal out or sequesterant and follow the label directions carefully.

5. 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) to test for the important Water Balance Guidelines.
IMPORTANT: Always follow printed instructions on the balancing chemical packages. Add balancing chemicals in small increments one at a time with circulation running.
For best results, wait 8-12 hours before testing again and adding any additional balancing chemicals.

Water Balance Guidelines

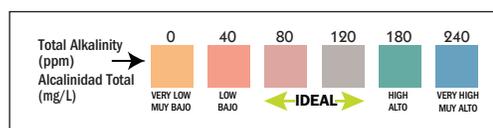
| | |
|-------------------------|---------------|
| pH: | 7.2 – 7.8 |
| Total Alkalinity: | 80 – 120 ppm |
| Calcium Hardness: | 200 – 400 |
| Total Dissolved Solids: | <1500 |
| Stabilizer: | 20 – 80 ppm |
| Free Chlorine: | 0.5 – 1.0 ppm |

For best results in achieving water balance, follow steps **a through e** in order.

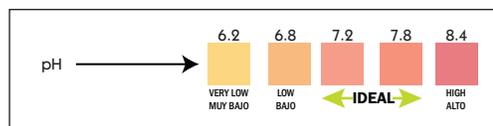
a. Take a water sample from the pool and dip a FROG® Test Strip into it.



b. Look at the **Total Alkalinity** reading first. Adjustments should be made to bring the Total Alkalinity in the range of **80 – 120 ppm** prior to making any adjustments to pH even if it throws pH off further.



c. After TA is in range, test for **pH**. It should be between **7.2 and 7.8**. If higher or lower, add a pH adjuster.



d. Then test your Water Hardness again. If lower than 200 ppm, add Calcium Increaser. Always maintain 200-400 ppm.

e. Lastly test for **stabilizer** or **conditioner** levels. Add conditioner if the level is below 20 ppm. This will prevent chlorine burn off. If stabilizer level is above 80 ppm, partially drain water and re-fill.

6. **NOTE:** This step is very important to start-up. Shock the pool with an EPA registered **chlorine shock only** to rid the water of contaminants and establish a chlorine residual. Follow manufacturer's directions carefully.



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

7. Begin Routine Pool Care as soon as the pool is prepared, page 9.

Step 2: Putting the System to Work

1.



Install a POOL FROG® Mineral Reservoir into the POOL FROG® Cycler. (See page 10 for directions.)

REPLACE THE POOL FROG® MINERAL PAC EVERY 6 MONTHS OR AFTER ONE POOL SEASON WHICHEVER IS SHORTER. AFTER THAT TIME, YOU WILL HEAR THE SPENT MEDIA INSIDE, HOWEVER IT IS NO LONGER EFFECTIVE AND MUST BE REPLACED.

2.



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

3.



Insert FROG BAM® into POOL FROG® Mineral Reservoir in POOL FROG® Cycler. (See page 11 for directions.)



4.



When chlorine reading is down to 1.0 ppm, which may take a few days, insert POOL FROG® Bac Pac. (See page 12 for directions.)

Step 3: Setting the Control Dial

1. This system is designed to work effectively with a variety of pool equipment as long as the following basic procedures are followed. Set control dial 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 #2 below for adjusting directions. **IMPORTANT:** If using a multi-speed pump, pump-run times of at least 6 hours per day at high speed are recommended for proper performance.

If running the pump at low speed only or on high speed less than 6 hours, please follow the 24 hour low-speed directions below.

| POOL SIZE Gallons | SINGLE-SPEED PUMP OR HIGH-SPEED PUMP RUN TIME | | | | | | | | | | | |
|----------------------|---|------|----------|------|-----------------------|------|----------|------|-----------------------|------|----------|------|
| | 6 HOUR PUMP RUN TIME | | | | 12 HOUR PUMP RUN TIME | | | | 24 HOUR PUMP RUN TIME | | | |
| | 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 | 4.0 | 3.5 | 3.0 | 3.0* | 3.0 | 2.5 | 4.0* | 3.5* | 1.5 | 3.5* | 3.0* | 2.5* |
| 9,000 | 4.5 | 4.0 | 3.5 | 3.0 | 3.5 | 3.0 | 2.5 | 4.0* | 2.5 | 4.0* | 3.5* | 3.0* |
| 12,000 | 5.0 | 4.5 | 4.0 | 3.5 | 4.0 | 3.5 | 3.0 | 2.5 | 3.0 | 2.5 | 1.5 | 3.5* |
| 18,000 | NR | 5.0 | 4.5 | 4.0 | 5.0 | 4.0 | 3.5 | 3.0 | 3.5 | 3.0 | 2.5 | 2.0 |
| 25,000 | NR | NR | 5.0 | 4.0 | NR | 5.0 | 4.0 | 3.5 | 4.0 | 3.5 | 3.0 | 2.5 |
| 30,000 | NR | NR | 6.0 | 5.0 | NR | 5.5 | 5.0 | 4.0 | 4.5 | 4.0 | 3.5 | 3.0 |
| 35,000 | NR | NR | 7.0 | 6.0 | NR | 6.5 | 5.5 | 5.0 | 5.5 | 4.5 | 4.0 | 3.5 |
| 40,000 | NR | NR | NR | 7.0 | NR | NR | 6.5 | 5.5 | 6.5 | 5.5 | 4.5 | 4.0 |

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

24 HOUR, LOW-SPEED PUMP-RUN TIME

In order to ensure proper performance when running the pump on low speed for 24 hours per day or high speed less than 6 hours per day, bleed the air while the pump is on by unscrewing the cap knob until water appears. Then screw the knob back on. Repeat this process each time the cap is removed for any reason. Set the control dial at 6 and follow the adjustment directions in Step 2 to determine the correct setting for your pool.

| POOL SIZE Gallons | 6 HOUR PUMP RUN TIME | | | |
|----------------------|----------------------|------|----------|------|
| | PUMP SIZE | | | |
| | 3/4 hp | 1 hp | 1 1/2 hp | 2 hp |
| 7,000 | 4.0 | 3.5 | 3.0 | 3.0* |
| 9,000 | 4.5 | 4.0 | 3.5 | 3.0 |
| 12,000 | 5.0 | 4.5 | 4.0 | 3.5 |
| 18,000 | NR | 5.0 | 4.5 | 4.0 |
| 25,000 | NR | NR | 5.0 | 4.0 |
| 30,000 | NR | NR | 6.0 | 5.0 |
| 35,000 | NR | NR | 7.0 | 6.0 |
| 40,000 | NR | NR | NR | 7.0 |

Find your starting dial setting by matching up the parameters of your pool on the above chart. An In ground pool with approximately 18,000 gallons with a 1 horse power pump running 6 hours a day at high speed would require a starting dial setting of 5. *Example above.*

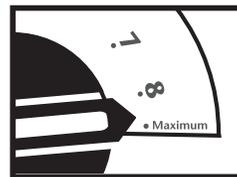
2.



For the first week test the pool water daily for free chlorine with FROG® Test Strips 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.



If using another means of chlorine support set dial to Maximum. Maintain a minimum chlorine reading of 0.5 ppm with a chlorine delivery device or hand feeding.

Step 4: Routine Pool Care



1. Run filtration system enough hours to circulate all water 1 to 2 times per day. More than that could result in over chlorination.



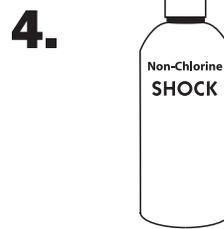
2. Regularly test water with FROG® Test Strips to maintain pH and Total Alkalinity.

NOTE: Water balance is affected by bather load, chemical usage, evaporation and the makeup of source water, so maintaining water balance regularly is important.



3. Maintain 0.5 to 1.0 ppm free chlorine level at all times.

Note: These lower chlorine levels are only acceptable when using FROG® minerals.



4. Shock the pool every other week or as needed. We recommend a non-chlorine shock as reducing chlorine use is the goal of FROG® products. However, using a chlorine shock is OK too.



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



5. Before closing the pool for winter, use FROG BAM® following the directions on page 11.



6. Remember to replace POOL FROG® Mineral Reservoir and all other FROG® replacements as directed.

Replacing a POOL FROG® Mineral Reservoir

(POOL FROG® Mineral Reservoirs **MUST** be Replaced Every Season)



1.

POOL FROG® MINERAL RESERVOIR
 The Complete Low-Chlorine Alternative™
 www.FrogProducts.com • 800-292-0169

Series 5400 (01-12-5462)
 FOR POOLS UP TO 40,000 GALLONS

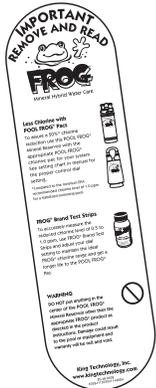
Serial No. _____

Product Description: The POOL FROG Mineral Reservoir is the heart of an advanced pool care system that destroys bacteria. The patented mineral formula in the POOL FROG Mineral Reservoir also neutralizes acids, which helps keep the pH in an acceptable range with less monitoring. The controlled release of minerals provides an optimum level of protection in your pool. The FROG Mineral System™ reduces chlorine use up to 50%. Simply use with at least 0.5 ppm of an EPA registered source of chlorine such as the POOL FROG Bac Pac (EPA Reg. No. 53735-2) or a chlorine delivery device. Using the POOL

Check the top of the box and back label of product to make sure you have the correct POOL FROG® Mineral Reservoir to fit your POOL FROG® Cycler.

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

2.



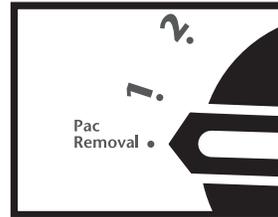
IMPORTANT: Remove and read the information card.

Please note: Complete instructions for inserting a POOL FROG® Mineral Reservoir, FROG BAM® and POOL FROG® Bac Pac are included inside the POOL FROG® Mineral Reservoir



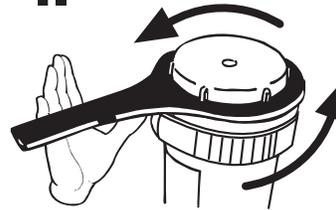
USE ONLY the factory recommended replacement POOL FROG® Mineral Reservoir, FROG BAM® and POOL FROG® Bac Pac. DO NOT USE bulk chemical tablets in the POOL FROG® Cycler or put anything inside the POOL FROG® Cycler, other than the appropriate POOL FROG® product as directed in the product instructions. Use 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 POOL FROG® Mineral Reservoir, FROG BAM® and POOL FROG® Bac Pac are not used.

3.



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

4.

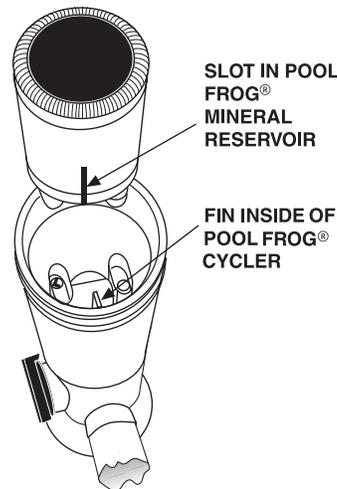


Use the cap tool included with POOL FROG® Cycler to loosen cycler cap by hitting the handle with the flat of your hand counter clockwise. Stand back to avoid inhaling chlorine fumes from the POOL FROG® Bac Pac.

5.

Remove the FROG® Bac Pac and if not empty, set to the side or store for winter. Then remove the FROG® Mineral Reservoir and discard if has been used for one pool season or 6 months whichever is shorter.

6.



Find slot on side of POOL FROG® Mineral Reservoir and line up with fin inside the POOL FROG® Cycler. Lower POOL FROG® Mineral Reservoir into POOL FROG® Cycler until secure.

Replace FROG® Bac Pac unless winterizing (see page 16).

7.

Mark your calendar for the six month replacement of the POOL FROG® Mineral Reservoir. **Once wetted, the time-released mineral coating of this product is effective up to 6 consecutive months or one pool season whichever is shorter. After that time, you will hear the spent media inside, however it is no longer effective and must be replaced.**

Using FROG BAM® for an Algae-Protection Guarantee

If you are not using FROG BAM®, refer to page 12 for Using the POOL FROG® Bac Pac. See FROG BAM® product labeling for complete directions for use (EPA Reg. No. 53735-9).

For a preventive dose add:

- One FROG BAM® for pools up to 15,000 gallons.
- Two FROG BAM® for pools between 15,000 and 30,000 gallons.
- Three FROG BAM® for pools between 30,000 and 40,000 gallons.

***NOTE: If using directly after a shock treatment, test the water first to ensure the pH is in the proper range of 7.2-7.8 and the chlorine level is no more than 4.0 ppm. Avoid using other chemicals until this product has been circulated (filtered) for at least 24 hours.**

1.



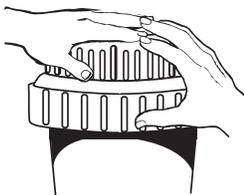
Remove cap from FROG BAM® without removing seal.

2.



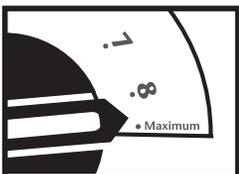
Insert upside down into center of POOL FROG® Mineral Reservoir pushing down firmly on FROG BAM® bottle allowing key in POOL FROG® Cycler to puncture seal.

3.



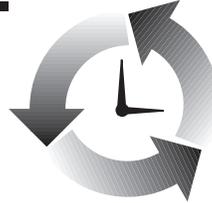
Replace cap by hand only. **DO NOT OVER TIGHTEN.**

4.



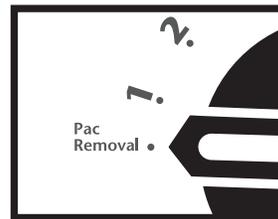
Turn control dial on POOL FROG® Cycler to Maximum.

5.



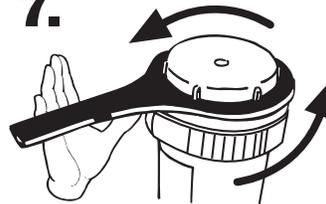
Turn pump on for 90 minutes allowing FROG BAM® to circulate through pool.

6.



To remove expended FROG BAM® bottle, turn pump off. Turn dial to Pac Removal.

7.



Remove POOL FROG® Cycler cap.

8.



Lift FROG BAM® up and allow any water in the container to drain through the POOL FROG® Cycler before discarding in trash.

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

8a. If pool size requires additional FROG BAM®, repeat steps 1-8.

8b. When water is clear in POOL FROG® Cycler, proceed to Using a POOL FROG® Bac Pac on page 12.

Using the POOL FROG® Bac Pac



USE ONLY the factory recommended replacement POOL FROG® Bac Pac. (See label.) DO NOT USE any other pac or bulk chemical tablets in the POOL FROG® Cyclor. 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.



POOL FROG® Bac Pac recommended to assure up to 50% reduction in chlorine use*. POOL FROG® Bac Pac sold separately. (EPA Reg. No. 53735-2)

**Compared to the minimum EPA recommended chlorine level of 1.0 ppm for a stabilized swimming pool.*



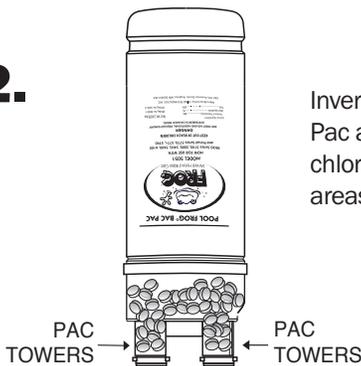
Avoid sparks, open flame or smoking when handling the POOL FROG® Bac Pac.

1.



Remove colored tabs by grabbing on to the lip of one cap with a pliers and pulling up until cap releases. Repeat the process for the other cap.

2.

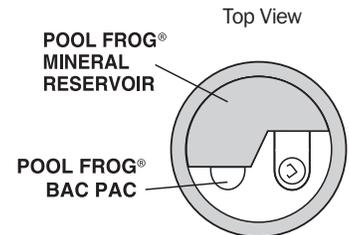


Invert POOL FROG® Bac Pac and shake slightly until chlorine tablets fall into tower areas.

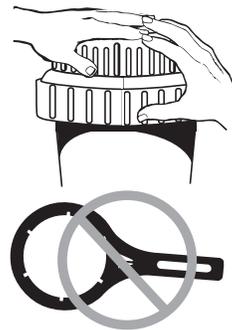
3.



Line up the small leg of the POOL FROG® Bac Pac with the small opening in the POOL FROG® Mineral Reservoir and the large leg with the large opening. Lower POOL FROG® Bac Pac into POOL FROG® Mineral Reservoir until secure.



4.



Replace cap by hand only. DO NOT OVER TIGHTEN.

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

5.



The chlorine pacs are made of HDPE plastic. Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Rinse thoroughly before recycling or discarding in trash.

6.



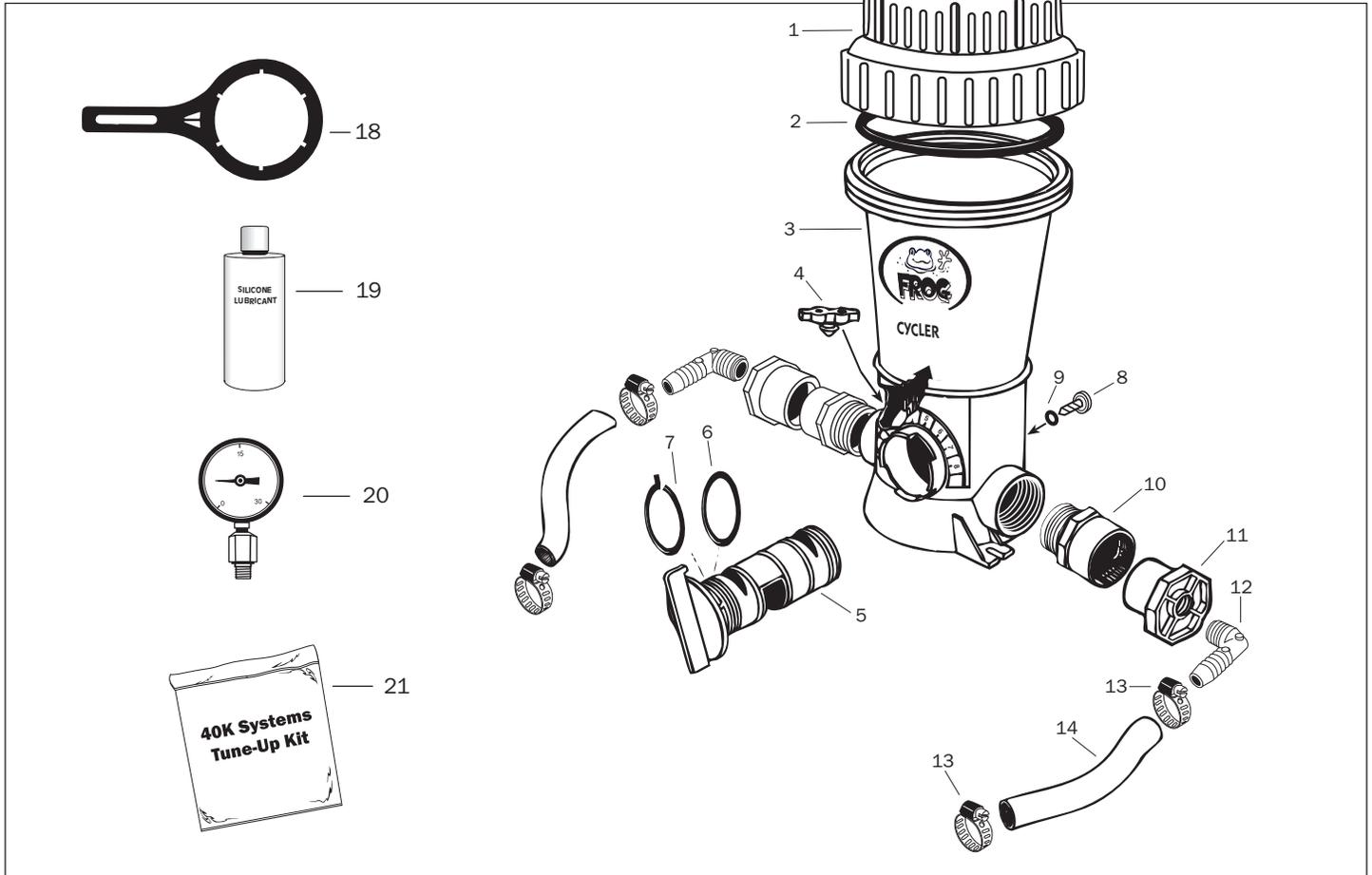
Mark your calendar for the approximate replacement times for the POOL FROG® Bac Pac.

Troubleshooting

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

| 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, skimmer and pump basket).</p> <p>2. Make sure circulation time is adequate – increase pump</p> | <p>time if not.</p> <p>3. Make sure the pool is properly balanced. (See page 6.)</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 0.5 to 1.0 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. Algae may be trying to form – shock the pool, increase circulation time if needed and clean the filter.</p> | <p>2. Metals in the fill water may have been oxidized. Have the pool tested. See pool dealer if a metal control product is required.</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 FROG BAM® or an effective algaecide 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</p> | <p>regarding a 90-day Algae Protection 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 POOL FROG® Bac Pac?</p> | <p>1. 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 POOL FROG® 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 one setting and test the water again in 24 hours. Continue raising the setting by one</p> | <p>increment each day until the proper reading is achieved.</p> <p>3. Shock the pool if the reading has been lower than 0.5 ppm for more than one day.</p> <p>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 cap knob (see page 20 for directions).</p> | <p>5. Contact your dealer to have your back pressure tested. If under 4 psi consider a smaller eye-ball fitting in the return jet.</p> <p>6. 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.</p> <p>7. Contact King Technology's Customer Service Department at 800-222-0169.</p> |
| <p>5. What do I do if I am over chlorinating with the POOL FROG® Bac Pac?</p> | <p>1. If the chlorine reading is over 3.0 ppm, remove the POOL FROG® Bac Pac from the POOL FROG® Mineral Reservoir and test the water daily until the reading is down to 1.0 ppm.</p> <p>2. Reinsert the POOL FROG® 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.</p> | <p>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>4. Contact your dealer to have your back pressure tested. If over 8 psi consider a larger eye-ball fitting in the return jet.</p> | <p>5. Check to see if the pressure relief valve is loose or missing and replace. It is a clear plastic piece approximately 1" long installed inside near the base. If loose or missing, it can provide another avenue for water to reach the chlorine.</p> <p>6. Contact King Technology's Customer Service Department at 800-222-0169.</p> |

Parts List Models 5400 and 5430



INCLUDED WITH THE POOL FROG® Model 5400

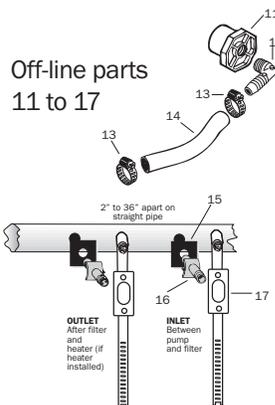
| REF. # | DESCRIPTION | QTY. INCLUDED |
|---------|--------------------------------------|---------------|
| 1 & 2 | Cap w/O-Ring | 1 |
| 3 | Body | 1 |
| 4 | Pressure Relief Valve | 1 |
| 5, 6, 7 | Control Dial with O-Ring & Snap Ring | 1 |
| 8 & 9 | Knob with O-Ring | 2 |
| 10 | 2" Male Adapter | 2 |
| 18 | Cap/Control Dial Tool | 1 |
| 19 | Silicone Lubricant 3/4 oz. | 1 |

REPLACEMENT PARTS FOR POOL FROG® Model 5400

| REF. # | PART NUMBER | DESCRIPTION |
|---------|-------------|--------------------------------------|
| 1 & 2 | 01-22-9417 | Cap w/O-Ring |
| 2 | 01-22-9926 | Cap O-Ring |
| 4 | 01-22-9486 | Pressure Relief Valve |
| 5, 6, 7 | 01-22-9448 | Control Dial with O-Ring & Snap Ring |
| 6 & 7 | 01-22-9456 | O-Ring Kit for Control Dial |
| 8 & 9 | 01-22-9628 | Knob with O-Ring |
| 10 | 01-22-9490 | 2" Male Adapter |
| 18 | 01-22-8870 | Cap/Control Dial Tool |
| 19 | 01-22-9971 | Silicone Lubricant 3/4 oz. |
| 20 | 01-22-4000 | Pressure Gauge |
| 21 | 01-22-9950 | 40k Tune-Up Kit |

OFF-LINE PARTS Included with Model 5430

| REF. # | DESCRIPTION | QTY. INCLUDED |
|--------|-------------------|---------------|
| 11* | 2" x 1/2" Bushing | 2 |
| 12 | 90° Elbow | 2 |
| 13 | Small Clamp | 4 |
| 14 | 6' PVC Tubing | 1 |
| 15 | Scoop Gasket | 2 |
| 16 | Venturi Scoop | 2 |
| 17 | Scoop Clamp | 2 |

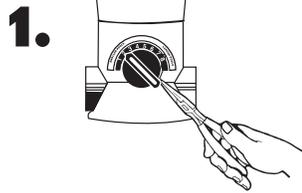


REPLACEMENT PARTS FOR OFF-LINE Model 5430

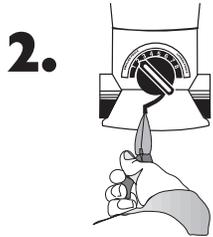
| REF. # | PART NUMBER | DESCRIPTION |
|--------|-------------|-------------------|
| 11* | 01-22-8620 | 2" x 1/2" Bushing |
| 12 | 01-22-7800 | 90° Elbow |
| 13 | 01-22-7690 | Small Clamp |
| 14 | 01-22-7700 | 6' PVC Tubing |
| 15 | 01-22-7850 | Scoop Gasket |
| 16 | 01-22-7790 | Venturi Scoop |
| 17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

POOL FROG® Cyclers Maintenance

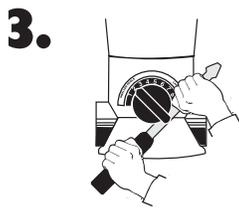
Replacing the Control Dial O-Rings



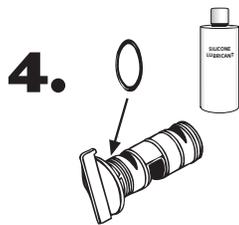
Using a needle nose pliers, find the snap ring tail located at approximately the five o'clock position under the control dial.



Pull down and out of the groove.



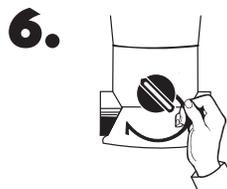
Using a large screwdriver, loosen the control dial. Carefully pry the dial until it pulls out.



Carefully replace the rubber o-ring without stretching it. Apply silicone lubricant, that came with your POOL FROG® Cyclers, on o-ring.



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

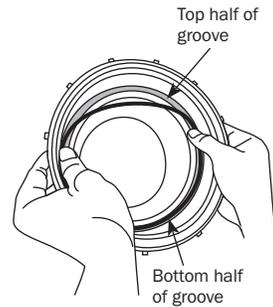


Insert the non-lipped end of snap ring into the groove opening beginning at the 5 o'clock position and push it up so that it threads itself around the control dial.



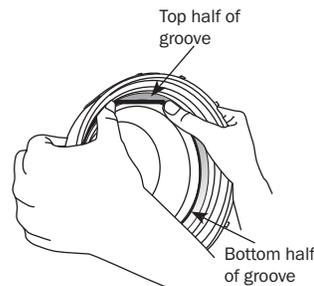
Using a small screwdriver or pointed tool to help guide it, make sure the snap ring stays in the groove as it is inserted.

Replacing Cap O-Ring



Place o-ring in bottom half of groove.

Place your thumbs on each side of the cap over the o-ring in the groove.



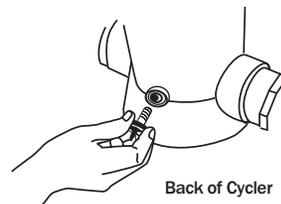
Roll your thumbs back and forth over the o-ring while pushing upward until the o-ring falls into the top of the groove.



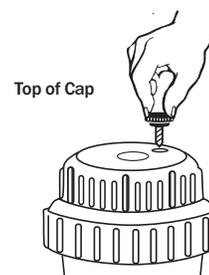
Product # 01-22-9971

Lubricate o-ring every couple of months with silicone lubricant that came with your POOL FROG® Cyclers. DO NOT USE petroleum based lubricants.

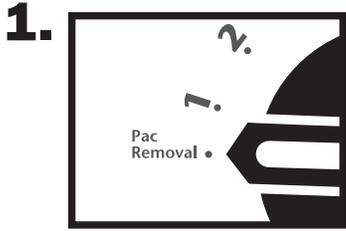
Replacing Knobs



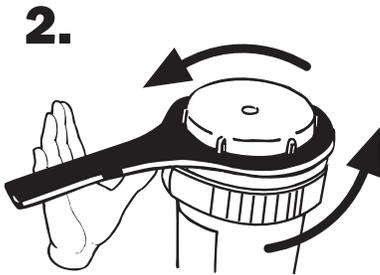
Replace knob in back or on cap of POOL FROG® Cyclers by unscrewing old one and screwing in new one.



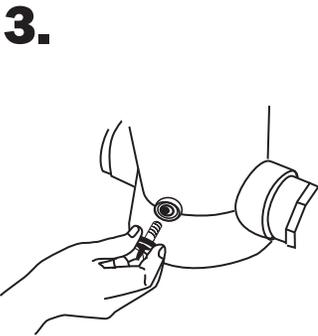
Winterizing



Turn pump off and turn dial to Pac Removal.



Remove cap.



Unscrew knob in the back of POOL FROG® Cyclor. Allow all water to drain.



If POOL FROG® Bac Pac still contains chlorine, wrap in plastic bag and store in shed or cool well-ventilated location away from children, pets, cars, motorcycles or anything metal that can rust, pit, etc. Make sure POOL FROG® Bac Pac is away from open flame.



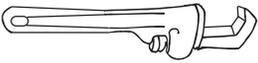
Remove the POOL FROG® Mineral Reservoir and discard in trash. You will hear spent media inside, however it is no longer effective.



Replace the cap and knob loosely.

TOOLS NEEDED

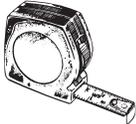
Pipe Wrench



Hacksaw

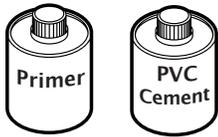


Tape Measure

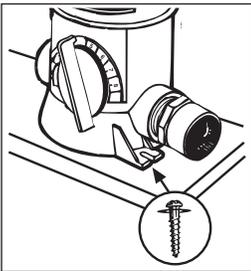


MATERIALS NEEDED

Primer and PVC Cement

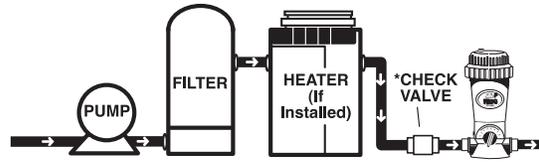


Secure Cyclor



For better stability, POOL FROG® Cyclor may be mounted on a treated wood base using **Phillips pan head screws**. One in front and one in back.

In-Line Installation - 5400 Model For pools 7,000 to 40,000 gallons

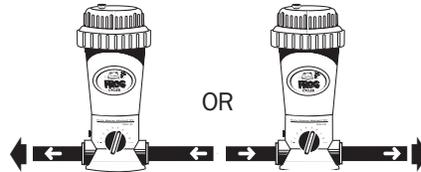


Do NOT install in copper pipe if using POOL FROG® Bac Pac as chemical corrosion occurs.

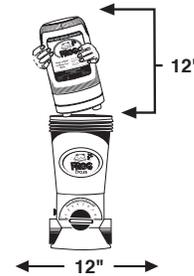
- Install after all equipment and as far as possible from heater.
- Any additional sanitizing equipment that is installed with FROG® must be installed after FROG® (never before) on the return line to the pool.



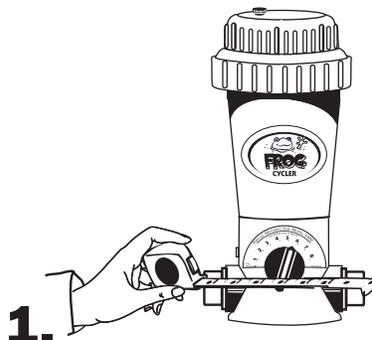
Do NOT install this POOL FROG® Cyclor off-line.



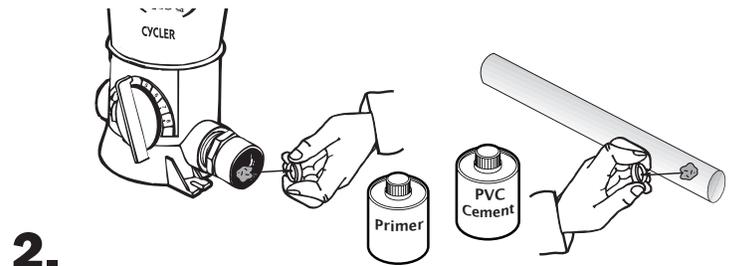
Bi-flow valve design allows installation in either flow direction.



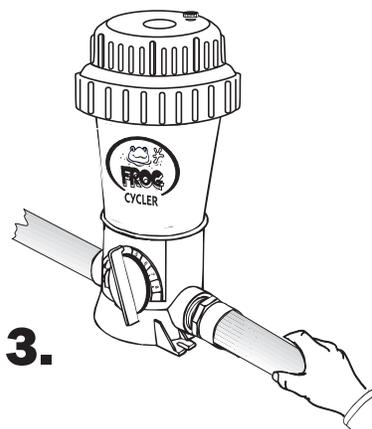
Leave approximately 12" above and around POOL FROG® Cyclor to allow room for easy replacement of POOL FROG® Mineral Reservoir and POOL FROG® Bac Pac.



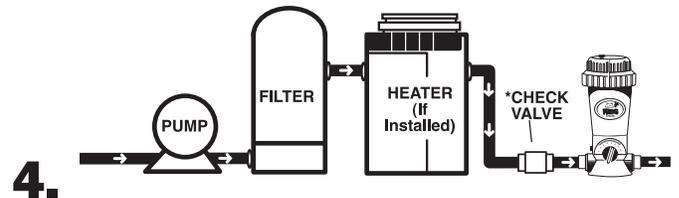
1. Measure the distance between POOL FROG® Cyclor male adapters and cut out a section of pipe 3" less than that dimension.



2. Following Primer directions, brush Primer on the inside of the male adapters and to ends of pipe. Repeat this process with PVC cement following directions on that product.



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



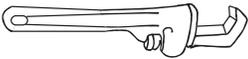
4. When using a POOL FROG® Bac Pac, isolating the POOL FROG® Cyclor by installing a **corrosion resistant check valve** is recommended, especially if a heater is installed.

TOOLS NEEDED

Screwdriver



Pipe Wrench



Battery Operated Drill



with 5/8" or 19/32" Bit

MATERIALS NEEDED

Pipe Thread Sealant



Primer and PVC Cement



OFF-LINE KIT

Included with the POOL FROG® Cyclor

Two Male Adapters



Two Reducer Bushings



Two 90 Degree Elbows



Four Hose Clamps



6' of Tubing



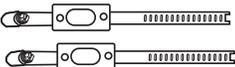
Two Scoops



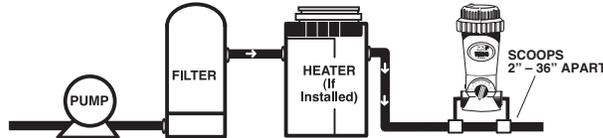
Two Scoop Gaskets



Two Scoop Clamps



Off-Line Installation - 5430 Model



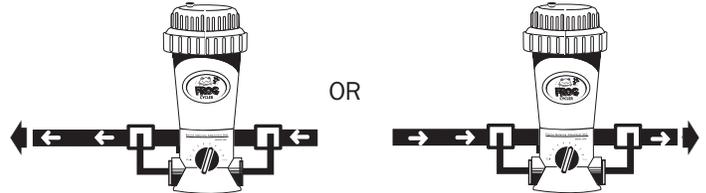
When insufficient room for an in-line application, install off-line in straight pipe with scoops between 2" - 36" apart.



- Install after all equipment and as far as possible from heater.
- Any additional sanitizing equipment that is installed with FROG® must be installed after FROG® (never before) on the return line to the pool.

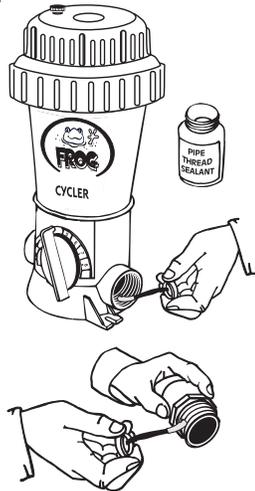


Do NOT install an off-line POOL FROG® Cyclor in-line as this POOL FROG® Cyclor is different than an in-line unit.



Bi-flow valve design allows installation in either flow direction.

1.



Following pipe thread sealant directions, brush sealant onto POOL FROG® threads in both ports and on both male adapters.

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

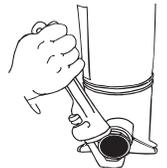


2.



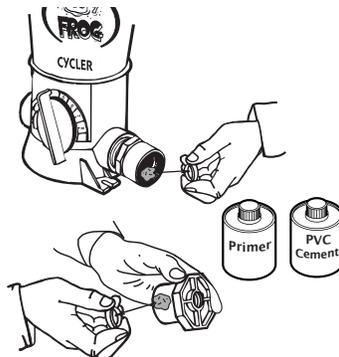
Screw a male adapter into each port of POOL FROG® Cyclor and hand tighten.

Completely tighten turning 1 to 2 revolutions with a wrench.



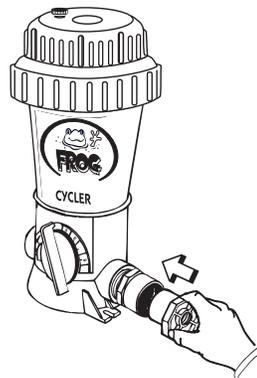
DO NOT OVER TIGHTEN.

3.



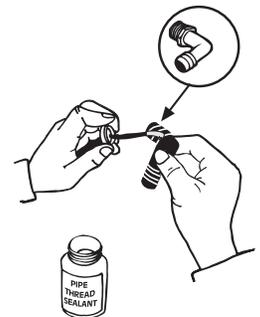
Following Primer directions, brush Primer on reducer bushings and inside of male adapters. Repeat this process with PVC cement following directions on that product.

4.

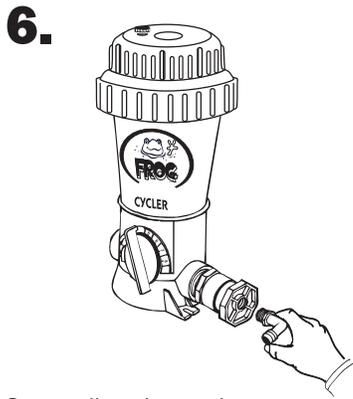


Insert reducer bushing into male adapter on both sides with a twisting action. Hold in place 5 to 10 seconds to bond.

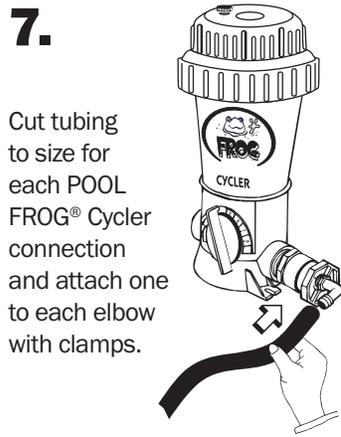
5.



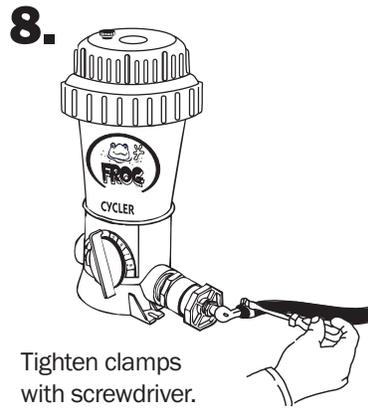
Following pipe thread sealant directions, brush sealant onto elbow threads.



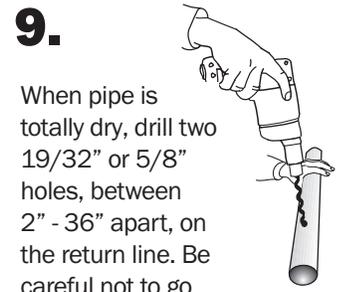
Screw elbow into reducer bushings on both sides.



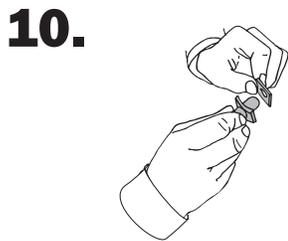
Cut tubing to size for each POOL FROG® Cyclor connection and attach one to each elbow with clamps.



Tighten clamps with screwdriver.

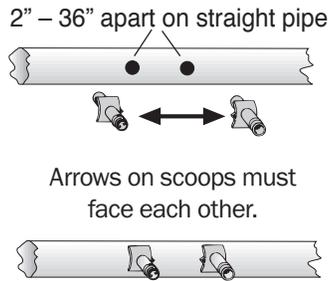


When pipe is totally dry, drill two 19/32" or 5/8" holes, between 2" - 36" apart, on the return line. Be careful not to go through other side of pipe.

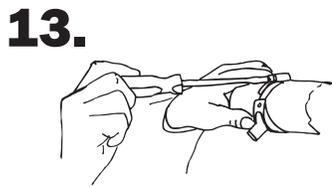
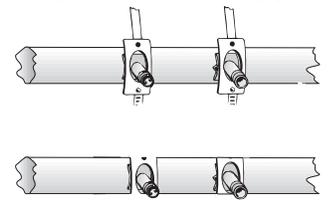


Attach a gasket to each scoop.

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.

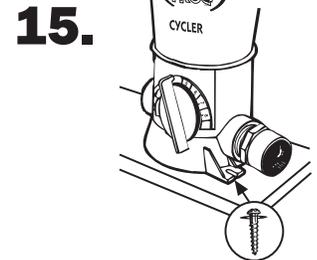
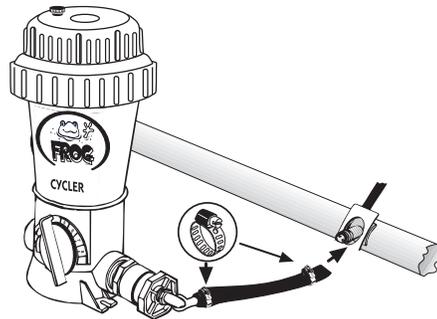


Attach scoop clamps over the scoops and around the pipe.

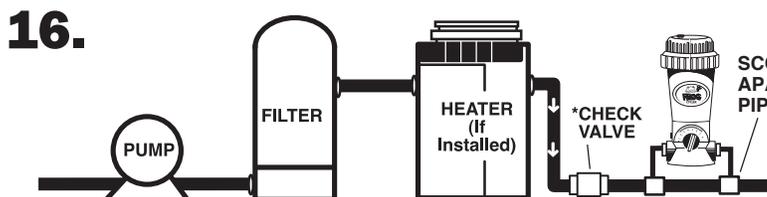


Tighten scoop clamps with a screwdriver.

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



For better stability, POOL FROG® Cyclor may be mounted on a treated wood base using **Phillips pan head screws**. One in front and one in back.



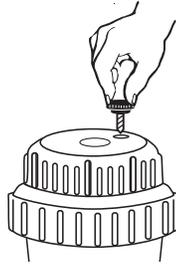
SCOOPS 2"-36" APART ON STRAIGHT PIPE

When using a POOL FROG® Bac Pac, isolating the POOL FROG® Cyclor by installing a **corrosion resistant check valve** is recommended, especially if a heater is installed.

For Proper Performance

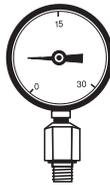
1) If using a multi-speed pump, run pump for at least 6 hours per day at high speed (at least 40 gpm).

If the pump will run on low speed 24 hours per day or less than 6 hours per day on high speed, you must bleed the air while the pump is on by unscrewing the cap knob until water appears. Then screw the knob back on. Repeat this process each time the cap is removed for any reason.



2) Install system with 4-8 psi back pressure.

To prevent under or over chlorination, use our pressure gauge with a special fitting that allows you to use it in the air vent hole on the product cap. Follow the instructions that come with the gauge for achieving the correct pressure.



3) Special installation:

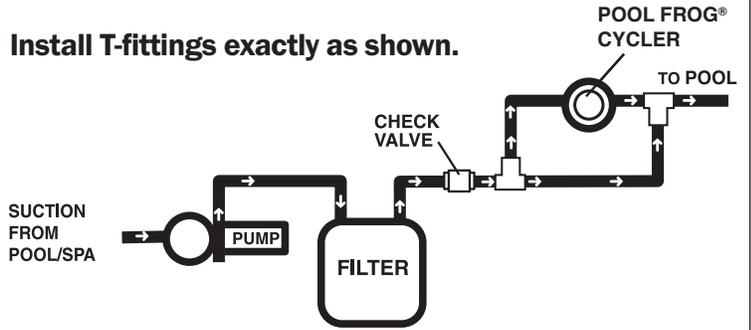
- If water flow is higher than 80 gpm, see diagram A.
- If an in-floor cleaner is included with pool, see diagram B, with two options. Preferred installation is Option 1 with two separate lines.
- If set-up is a pool and spa combination with common equipment, see diagram C.
- Any additional sanitizing equipment that is installed with FROG® must be installed after FROG® (never before) on the return line to the pool.

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

Questions? Call Customer Service at 800-222-0169 Monday thru Friday, 8am to 5pm central standard time.

A. With High GPMS

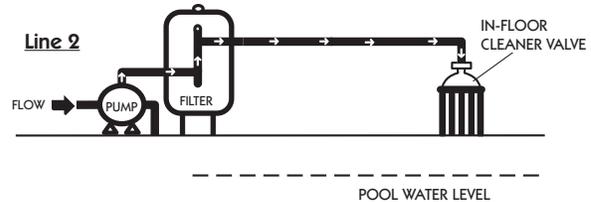
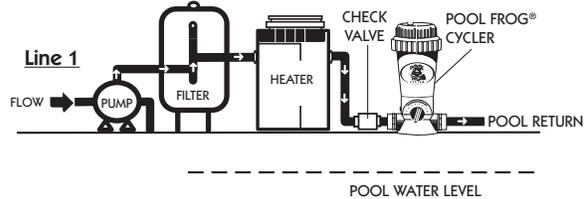
Install T-fittings exactly as shown.



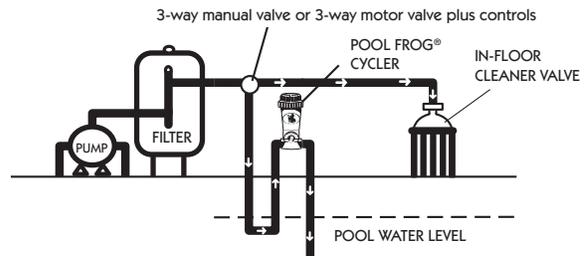
B. With In-Floor Cleaner - TWO OPTIONS

OPTION 1 - A Two-Line Installation

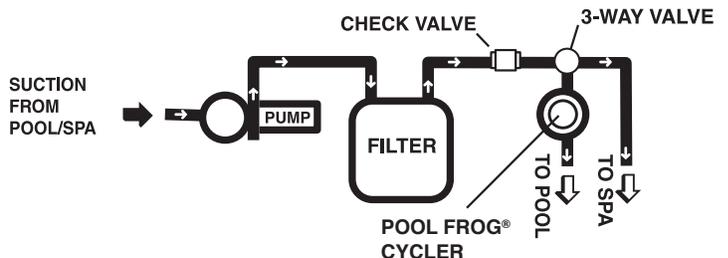
The best option is to have two lines. One line with pump, filter, heater and cyclor and a second line with a separate pump for the in-floor cleaning system (filter optional).



OPTION 2 - A 3-Way Valve Installation



C. Pool and Spillover Spa Combination



POOL FROG® Cyclor Two-Year Limited Warranty

Register your product online today to extend your POOL FROG® warranty to 10 years.

www.frogproducts.com/product-registration-2/

King Technology, Inc. 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/installation. 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 expenses are the purchaser's responsibility. The name of the nearest authorized dealer can be obtained at www.frogproducts.com/find-a-dealer or by calling King Technology at 1-800-222-0169. 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 two years. 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 POOL FROG® Mineral Reservoir and Bac Pac may cause damage to equipment or personal injury. All warranty null and void if this product is not used with the recommended POOL FROG® Mineral Reservoir and Bac Pac.



Manufactured by: King Technology, Inc.

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www.frogproducts.com



*The Association of
Pool & Spa Professionals™*

Made in U.S.A.

Patents: www.kingtechnology.com/IP

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