



REPLACE EVERY
6 MONTHS OR
AFTER ONE
POOL SEASON,
WHICHEVER IS
SHORTER.



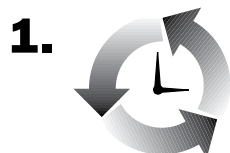
FROG® Pool Tender® Mineral Chamber®

Patented Mineral Pool Disinfectant
Operational Instructions

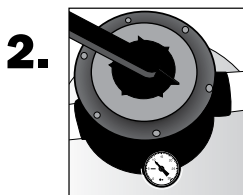


FROG Sanitizing Minerals® with up to 50% less chlorine* creates Fresh Mineral Water® that provides the benefits of cleaner, clearer and softer water that's easier to take care of. The water feels soft and doesn't fade swimsuits, damage equipment or create smelly odors.

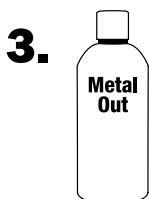
Step 1: Preparing the Pool



1. 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.



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 Total Hardness of your fill water before adding to the pool. If using source water that is high in iron or other metals, see your dealer before filling the pool. It may require the use of a metal control product.

4. Before beginning with any pool care program, you must first balance your pool water. At spring start-up always circulate the water for at least 24 hours before testing it. Take a water sample to your local pool professional or use a complete test kit that will test for the important Water Balance Guidelines.

Our recommendation for achieving water balance is to follow steps 4a through 4e in order.

IMPORTANT: Always follow printed instructions on the balancing chemical packages. Add balancing chemicals in small increments one at a time with circulation running and wait 8-12 hours before testing again and adding any additional balancing chemicals.

Water Balance Guidelines

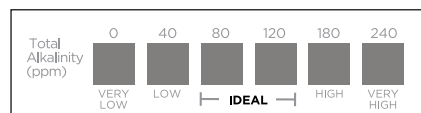
pH:	7.2 – 7.8
Total Alkalinity:	80 – 120 ppm
Total Hardness:	200 – 400
Total Dissolved Solids:	<1500
Stabilizer/Conditioner:	20 – 80 ppm
Free Chlorine:	0.5 – 1.0 ppm

- 4a. Take a water sample from the pool and dip a FROG Test Strip into it.



- 4b. 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.



- 4c. After Total Alkalinity is in range, test for **pH**. It should be between **7.2 and 7.8**. If higher or lower, add a pH adjuster.



- 4d. Then test your **Total Hardness** again. It should be between **200 and 400 ppm**. If lower than 200 ppm, add Hardness Increaser.

- 4e. 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 refill.

If balancing takes longer than 2 days, shock the water and maintain a chlorine level while continuing balancing.

- 5.



If you haven't already added a shock during balancing, shock the pool with an EPA registered chlorine shock to rid the water of contaminants and establish a chlorine residual. Follow manufacturer's directions carefully. **NOTE: THIS STEP IS VERY IMPORTANT TO START-UP. USE CHLORINE SHOCK ONLY.**



IMPORTANT

- Do not add shock in or near the skimmer or into the FROG Pool Tender Cyclor as it could damage equipment, risk potential explosion or discolor your pool surface.
- Never add any types of chlorine, pH adjusters, shock treatments or algaecides through the skimmer. These products should be added directly into the pool if required.
- Never use fast dissolving chlorine tablets, liquid bleach or calcium hypochlorite in the FROG Pool Tender Cyclor.

Step 2: Putting the System to Work

1. Install a FROG Pool Tender Mineral Chamber into the FROG Pool Tender Cyclor. (See page 3 for directions.)

Replace FROG Pool Tender Mineral Chamber 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 FROG Pool Tender Cyclor, with FROG Pool Tender Mineral Chamber inserted, for 10 minutes on the highest setting.



3. For a 90-Day Algae Protection Guarantee insert FROG Pool Tender Algaecide into FROG Pool Tender Mineral Chamber in FROG Pool Tender Cyclor. (See page 3 for directions.)



4. When chlorine reading is down to 1.0 ppm, which may take a few days, insert FROG Pool Tender Chlorine Chamber®. (See page 4 for directions.)



Step 3: Setting the Control Dial

This system is designed to work effectively with a variety of pool equipment as long as the basic procedures below are followed.

1. 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 #2 for directions.



FROG Pool Tender Cyclor Gallons Diameter		SINGLE SPEED PUMP OR HIGH SPEED PUMP RUN TIME											
		8 HOUR PUMP RUN TIME				12 HOUR PUMP RUN TIME				24 HOUR PUMP RUN TIME			
		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')	5.0	4.5	4.0	3.5	4.5	4.0	3.0	5.0^	3.5	3.0	2.5	4.0^
9,000	(21')	5.5	5.0	4.5	4.0	5.0	4.5	4.0	5.5^	4.0	3.5	3.0	4.5^
12,000	(24')	6.0	5.5	5.0	4.5	5.5	5.0	4.5	4.0	4.5	4.0	3.5	5.0^
15,000		NR	6.0	5.5	5.0	6.0	5.5	5.0	4.5	5.0	4.5	4.0	3.5
20,000		NR	NR	6.0	5.5	NR	6.0	5.5	5.0	5.5	5.0	4.5	4.0

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

IMPORTANT: Pump run times of at least 6 hours per day at high speed are recommended for proper performance. If running low speed only or on high speed less than 6 hours, please follow the 24 Hour Low Speed directions.

24 HOUR, LOW SPEED PUMP RUN TIME

In order to ensure proper performance when running 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.



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 testing, adjust the dial up by 1/2 increment if the free chlorine reading has dropped below 0.5 ppm or down by 1/2 increment if the reading has risen above 1.0 ppm. Continue this process each day until the color on the test strip matches the ideal FROG range of 0.5 ppm to 1.0 ppm chlorine.

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, set the FROG Pool Tender Cyclor to the highest setting. 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 Pool Tender products. However, using a chlorine shock is OK too. Additional shocking may be required if the pool is under heavy use, high heat or rain.



5. Before closing the pool for winter, use FROG Pool Tender Algaecide following the directions below.



6. Remember to replace FROG Pool Tender Mineral Chamber and all other FROG Pool Tender replacements as directed.

Replacing a FROG Pool Tender® Mineral Chamber®

FROG® Pool Tender® Mineral Chamber®
frogproducts.com 800-222-0169

Serial No. _____ FOR POOLS UP TO 25,000 GALLONS
Product Description: The FROG Pool Tender Mineral Chamber is a container that dissolves minerals into the pool water. The patented mineral coating inside the FROG Pool Tender Mineral Chamber is a continuous source of minerals which helps keep the pH in the pool water in the recommended range. The container is made of durable plastic and is designed to last for years. The FROG Pool Tender System® includes Chlorine Chamber, Mineral Chamber and FROG Test Strips. The FROG Pool Tender System® is a complete pool care system. For more information, please visit frogproducts.com.



1. Make sure you have the correct FROG Pool Tender Mineral Chamber to fit your FROG Pool Tender Cyclor.

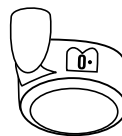
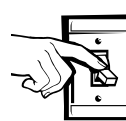
The FROG Pool Tender Mineral Chamber must be replaced every 6 months or after one pool season, whichever is shorter.

2. IMPORTANT: Remove and read the inserted information card



IMPORTANT

USE ONLY the factory recommended replacement FROG Pool Tender Mineral Chamber, FROG Pool Tender Algaecide and FROG Pool Tender Chlorine Chamber. DO NOT USE any other pac or bulk chemical tablets in the FROG Pool Tender Cyclor or put anything inside other than the appropriate FROG Pool Tender products as directed in the product instructions. Use of any other product could result in damage to pool equipment or surfaces, fire or explosion. Warranty will be void if the correct FROG Pool Tender products are not used.

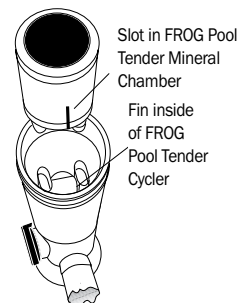


3. Turn off pump and turn dial to the lowest setting.

4. Open FROG Pool Tender Cyclor cap. If using a FROG Pool Tender Chlorine Chamber stand back to avoid inhaling chlorine fumes.

5. Find slot on side of FROG Pool Tender Mineral Chamber and line up with fin inside the FROG Pool Tender Cyclor. Lower FROG Pool Tender Mineral Chamber into FROG Pool Tender Cyclor until secure.

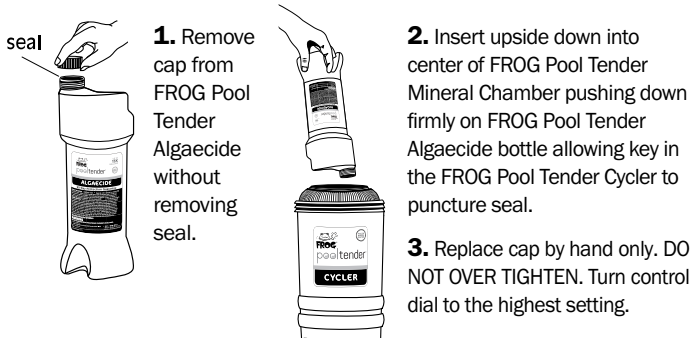
Mark your calendar for the six month replacement of the FROG Pool Tender Mineral Chamber. Once wetted, the time-released mineral coating is effective up to 6 consecutive months or one pool season, whichever is shorter. After that time, even if you hear spent media inside, it is no longer effective and must be replaced.



Using FROG Pool Tender® Algaecide for an Algae Protection Guarantee

For a preventive dose add:

- One FROG Pool Tender Algaecide for pools up to 15,000 gallons.
- Two FROG Pool Tender Algaecide for pools between 15,000 and 30,000 gallons.



4. Turn pump on for 90 minutes allowing FROG Pool Tender Algaecide to circulate through pool.

5. To remove, turn pump off, turn dial to lowest setting and remove cap. Lift FROG Pool Tender Algaecide up to allow any water in the container to drain through the FROG Pool Tender Cycler before discarding in trash or offering for recycling if available.

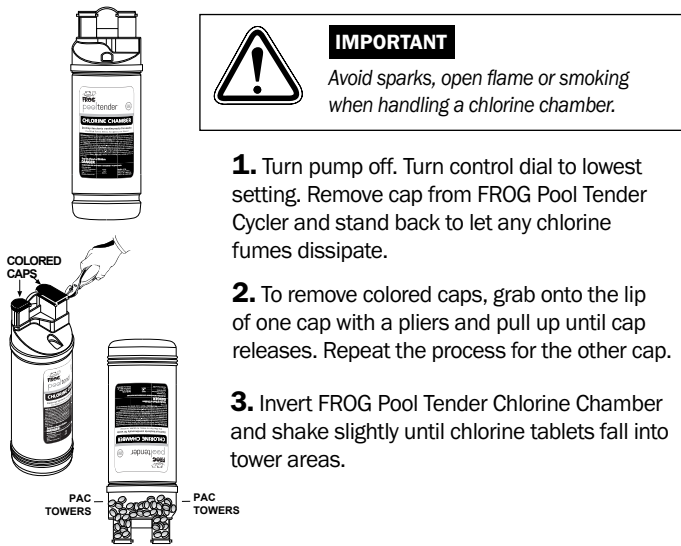
If pool size requires additional FROG Pool Tender Algaecide, repeat steps 1-5.

Mark your calendar for the 90-day replacement of FROG Pool Tender Algaecide.

See FROG Pool Tender Algaecide product labeling for complete directions for use.



Using the FROG Pool Tender® Chlorine Chamber®



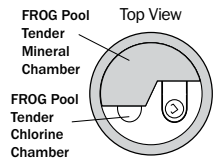
4. Line up small leg of FROG Pool Tender Chlorine Chamber with small opening in FROG Pool Tender Mineral Chamber and large leg with large opening. Lower FROG Pool Tender Chlorine Chamber until secure.

5. Replace cap by hand only. Do not over tighten.



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

7. Once you know how long your pacs last, mark your calendar for the approximate replacement times for the FROG Pool Tender Chlorine Chambers.

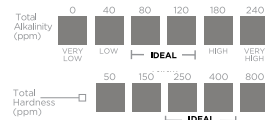


Troubleshooting

Learn more at frogproducts.com or call 1-800-222-0169

Cloudy Water or Low Chlorine Levels

1. Check water balance. Ensure pH, Total Alkalinity, Total Hardness and Stabilizer levels are correct.



2. Check FROG Pool Tender Chlorine Chamber. If empty, replace, following directions on the label.

3. Make sure your FROG Pool Tender Mineral Chamber is not older than 6 months as it will be ineffective and more chlorine will be required to maintain the pool until you replace the FROG Pool Tender Mineral Chamber.

4. Turn the FROG Pool Tender Cycler dial up or run your pump longer per day to increase chlorine output.

5. Shock the pool to regain clarity.



High Chlorine Levels

- Remove the FROG Pool Tender Chlorine Chamber from the FROG Pool Tender Cycler until the chlorine level is down to 1.0 ppm.
- Lower the dial setting on the FROG Pool Tender Cycler by 1 number.
- Test in 24 hours. Repeat process until chlorine level stays within 0.5 to 1.0 ppm.

Algae

- Use an algaecide following manufacturer's directions carefully. This may involve more than one dose.
- Run circulation 24 hours a day and brush the sides of the pool often.
- When clarity starts to return, shock the pool.
- To prevent algae for 90 days, try FROG Pool Tender Algaecide and its Algae Protection Guarantee.

MANUFACTURED FOR

king
TECHNOLOGY

6000 CLEARWATER DR, MINNETONKA, MN 55343
800-222-0169 | frogproducts.com

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

°° Cleaner, Clearer and Softer water for pools, hot tubs and swim spas.

Assembled in USA
Patents: kingtechnology.com/IP



Escanear para manual en español y de datos de seguridad