

FROG Leap[®] Twin[™] Mineral Pool Care System

For Pools up to 40,000 Gallons



System Includes the
FROG Leap[®] Anti-Bac Mineral Pac[®]
Patented Mineral Pool Disinfectant

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

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

FROG Leap[®] Twin[™]

Welcome to easier pool care courtesy of FROG Leap[®] Twin[™]. With FROG Leap[®] Twin[™], 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. Chlorine lasts 2X longer with FROG Leap[®] Twin[™] Mineral System.*

There are 4 main parts to the FROG Leap[®] Twin[™] System: The FROG Leap[®] Twin Infuzer[®], the FROG Leap[®] Anti-Bac Mineral Pac[®], FROG Leap[®] ALL-OUT[®] (90-day Algae Preventative) and the FROG Leap[®] Torpedo Pac[®]. Plus FROG Leap[®] offers easy and effective FROG Leap[®] Pool Wake Up[®] and FROG Leap[®] Pool Hibernation[®] convenience packs for opening a pool in the spring and closing for the winter.

Part 1 - FROG Leap[®] Twin[™] System

The water treatment center that controls the flow of water to each part of the FROG Leap[®] Twin[™] System.



FROG Leap[®] Mineral Infuzer[®]

FROG Leap[®] Chlorine Infuzer[®]

For any pool up to 40,000 gallons

Part 2 - FROG Leap[®] Anti-Bac Mineral Pac[®]

Holds the minerals and fits inside the FROG Leap[®] Mineral Infuzer[®].



THE FROG Leap[®] Anti-Bac Mineral Pac[®] MUST BE REPLACED EVERY SIX MONTHS OR AFTER ONE POOL SEASON WHICHEVER IS SHORTER.

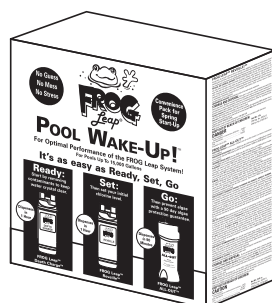
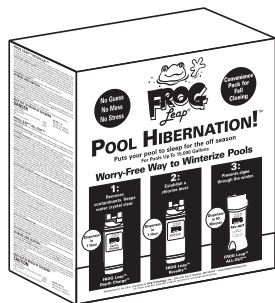
Part 3 - FROG Leap[®] ALL-OUT[®]

Use with the FROG Leap[®] System for a 90-Day Algae-Protection Guarantee.



Part 4 - FROG Leap[®] Torpedo Pac[®]

Pre-filled with chlorine tablets and fits inside the FROG Leap[®] Chlorine Infuzer[®].



FROG Leap[®] Reveille[®], FROG Leap[®] Depth Charge[™] and FROG Leap[®] ALL-OUT[®]

FROG Leap[®] Pool Wake Up![®] and Pool Hibernation[®]

An easy 3-step pool opening and pool closing program that effectively removes contaminants, prevents algae and sets a chlorine residual with precise dispensing and no touching chemicals!

FROG Leap[®] Anti-Bac Mineral Pac[®] sold inside FROG Leap[®] Twin[™] Mineral Infuzer[®] and separately for replacements. FROG Leap[®] Torpedo Pac[®] and FROG Leap[®] ALL-OUT[®] sold along with FROG Leap[®] Pool Wake Up![®] and Pool Hibernation[®], are sold separately.

†FROG Leap[®] Mineral System consists of the FROG Leap[®] minerals silver chloride and carbonate used in conjunction with 0.5 ppm chlorine. The FROG Leap[®] Anti-Bac Mineral Pac[®] must be used in conjunction with the FROG Leap[®] Torpedo 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.

Swimming Pool Tips

Start-up and Yearly Maintenance

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.

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

Water Balance Guidelines

pH:	7.2 – 7.8
Total Alkalinity:	60 – 120 ppm
Calcium Hardness:	150 – 400
Total Dissolved Solids:	<1500
Stabilizer:	20 – 80 ppm
Free Chlorine:	0.5 – 1.0 ppm

3.

Cu
Mg **Fe**

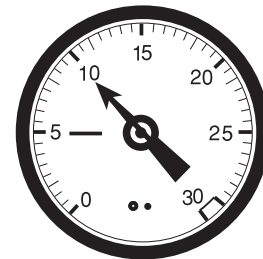
If your fill water is high in metals, use a sequestering agent or metal out product at start-up only before using the FROG Leap® Anti-Bac Mineral Pac®. See your local dealer for details on using these products and always follow manufacturers directions carefully.

4.



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


5.



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.

Start-up and Operation

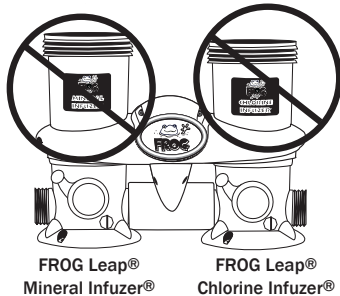
This system is designed to work effectively with a variety of pool equipment as long as the following basic procedures are followed.

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

2.  Shock the pool with chlorine to rid the water of all contaminants before beginning with FROG Leap® Twin™. Follow manufacturer's directions carefully.
**THIS STEP IS VERY IMPORTANT TO START-UP.
USE CHLORINE SHOCK ONLY.**



Skimmer




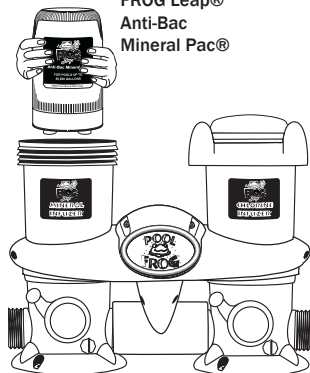
FROG Leap®
Mineral Infuzer®

FROG Leap®
Chlorine Infuzer®



If using standard chlorine shocks, Do not add in or near the skimmer or into the FROG Leap® Twin™ as it could damage equipment, risk potential explosion or discolor your pool surface.


3.  Install a FROG Leap® Anti-Bac Mineral Pac® into the FROG Leap® Mineral Infuzer®. (Follow directions on page 7.)





FROG Leap®
Mineral Infuzer®


FROG Leap®
Chlorine Infuzer®

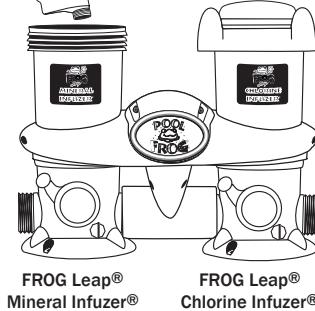
REPLACE THE FROG Leap® ANTI-BAC MINERAL PAC® EVERY 6 MONTHS OR AFTER ONE POOL SEASON WHICHEVER IS SHORTER.

4.  Replace cap and run FROG Leap® Infuzer®, with FROG Leap® Anti-Bac Mineral Pac® inserted, for 10 minutes on Setting ON.

5.  Shock the pool with FROG Leap® Depth Charge™ to rid the water of all contaminants. (see page 8 for FROG Leap® Depth Charge™ directions)


6.  Create a chlorine residual with FROG Leap® Reveille® or a chlorine shock (see page 8 for FROG Leap® Reveille® directions). **THIS STEP IS VERY IMPORTANT TO START-UP.** Always begin with chlorine in the pool water.

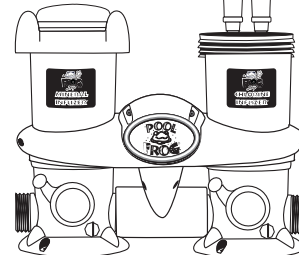
7.  For a 90-Day Algae Protection Guarantee insert FROG Leap® ALL-OUT® into FROG Leap® Anti-Bac Mineral Pac® in FROG Leap® Infuzer®. (Follow directions on page 9.)



FROG Leap®
Mineral Infuzer®

FROG Leap®
Chlorine Infuzer®

8.  When chlorine reading is down to 1.0 ppm (which may take a few days) insert a FROG Leap® Torpedo Pac® into the FROG Leap® Chlorine Infuzer®. (Follow directions on page 10.)



FROG Leap®
Mineral Infuzer®

FROG Leap®
Chlorine Infuzer®

Start-up and Operation

7. Once you've set the dial on the Mineral Infuzer® to ON, set the dial on the Chlorine Infuzer® 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 #8 below for adjusting directions. **IMPORTANT:** Pump run times less than 8 hours could result in under chlorination due to inadequate flow through the system.

POOL SIZE		8 HOUR PUMP RUN TIME				12 HOUR PUMP RUN TIME				24 HOUR PUMP RUN TIME			
Gallons	Diameter	PUMP SIZE				PUMP SIZE				PUMP SIZE			
		1/2 hp	3/4 hp	1 hp	1 1/2 hp	1/2 hp	3/4 hp	1 hp	1 1/2 hp	1/2 hp	3/4 hp	1 hp	1 1/2 hp
7,000	(18')	4.0	3.5	3.0	2.5	2.0	1.5	0.5	2.5*	1.0	0.5	0.5	1.5*
9,000	(21')	4.5	4.0	3.5	3.0	2.5	2.0	1.5	3.0*	1.5	1.0	0.5	2.0*
12,000	(24')	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.5	2.0	1.5	1.0	2.5*
15,000		NR	5.0	4.5	4.0	3.5	3.0	2.5	2.0	2.5	2.0	1.5	1.0
20,000		NR	NR	5.0	4.5	4.0	3.5	3.0	2.5	3.0	2.5	2.0	1.5
25,000		NR	NR	5.5	5.0	4.5	4.0	3.5	3.0	3.5	3.0	2.5	2.0
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.

RECOMMENDED FLOW RATE: 20-60 gpm

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 8 to determine the correct setting for your pool.

POOL SIZE		12 Hour Pump Run Time			
Gallons	Diameter	Pump Size			
		1/2 hp	3/4 hp	1 hp	1 1/2 hp
7,000	(18')	2.0	1.5	0.5	2.5*
9,000	(21')	2.5	2.0	1.5	3.0*
12,000	(24')	3.0	2.5	2.0	1.5
15,000		3.5	3.0	2.5	2.0
20,000		4.0	3.5	3.0	2.5
25,000		4.5	4.0	3.5	3.0

Find your starting dial setting by matching up the parameters of your pool on the above chart. An above ground pool with approximately 12,000 gallons with a 1 horse pump running 12 hours a day would require a starting setting of 2.0.

8. 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.

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



Do not add shock in or near the skimmer or into either of the FROG Leap® Twin™ Infuzers® as it could damage equipment, risk potential explosion or discolor your pool surface.

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

5.



Set dial on Mineral Infuzer® to ON. Leave Chlorine Infuzer® empty. Maintain a minimum chlorine reading of 0.5 ppm with a chlorine delivery device or hand feeding.

6.



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



Do not add shock in or near the skimmer or into either of the FROG Leap® Twin™ Infuzers® as it could damage equipment, risk potential explosion or discolor your pool surface.

Replacing a FROG Leap® Anti-Bac Mineral Pac®

(FROG Leap® Anti-Bac Mineral Pacs® **MUST** be Replaced Every Season)



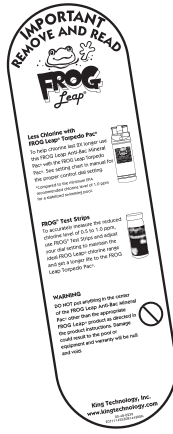
1.

Order #01-12-7852
Fits FROG Leap® Twin™,
FROG Leap® 7800 and
POOL FROG® 6100.

Check the top of the box and back label of product to make sure you have the correct FROG Leap® Anti-Bac Mineral Pac® to fit your FROG Leap® Mineral Infuzer®.

THE FROG LEAP® ANTI-BAC MINERAL PAC® 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 FROG Leap® Anti-Bac Mineral Pac®, FROG Leap® ALL-OUT® and FROG Leap® Torpedo Pac® are included inside the FROG Leap® Anti-Bac Mineral Pac® box.

3.



USE ONLY the factory recommended FROG Leap® replacement products. DO NOT USE bulk chemical tablets in the FROG Leap® Twin™ or put anything inside the FROG Leap® Twin™, other than the appropriate FROG Leap® Twin™ 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 FROG Leap® products are not used.

4.



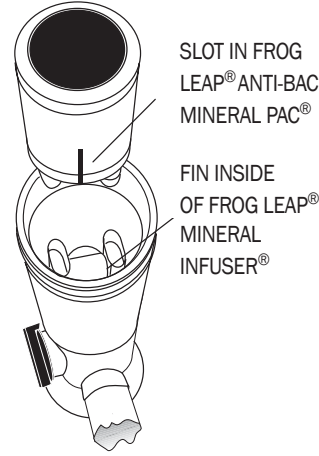
Turn off pump and turn dial to OFF. This reduces the flow of water into the unit when the cap is open.

5.



Open cap of the FROG Leap® Mineral Infuzer®.

6.



Find slot on side of FROG Leap® Anti-Bac Mineral Pac® and line up with fin inside the FROG Leap® Mineral Infuzer®. Lower FROG Leap® Anti-Bac Mineral Pac® into FROG Leap® Mineral Infuzer® until secure.

7.

Mark your calendar for the six month replacement of the FROG Leap® Anti-Bac Mineral Pac®. **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 even if you hear the spent media inside it is no longer effective and must be replaced.**

Using FROG Leap® Depth Charge™ and FROG Leap® Reveille®



FROG Leap®
Depth Charge™



FROG Leap®
Reveille®

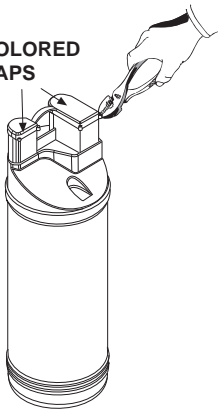


Avoid sparks, open flame or smoking when handling FROG Leap® Depth Charge™, FROG Leap® Reveille® or FROG Leap® Torpedo Pac®.

FROG Leap® Depth Charge™ is a one time start-up product used to rid the water of all contaminants. FROG Leap® Reveille® - also used at start up, sets the chlorine residual to help find the proper dial setting for maintaining up to 50%* less chlorine while using the FROG Leap® Torpedo Pac® (EPA Reg. No.: 53735-2). All three products sold separately.

1.

COLORED CAPS



To remove colored caps, grab onto the lip of one cap with a pliers and pull up until cap releases. Repeat the process for the other cap.

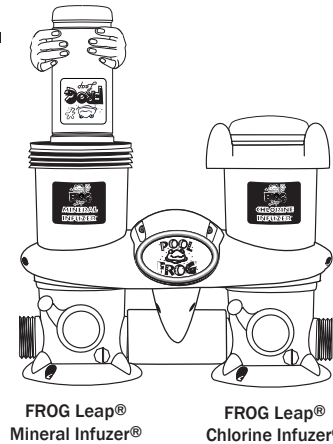
2.

PAC TOWERS — PAC TOWERS



Turn pac over and shake slightly until ingredients fall into tower areas.

3.



FROG Leap®
Mineral Infuser®

FROG Leap®
Chlorine Infuser®

Line up the small leg of the pac with the small opening in the FROG Leap® Anti-Bac Mineral Pac® and the large leg with the large opening. Lower pac into FROG Leap® Anti-Bac Mineral Pac® until secure.

FROG LEAP®
ANTI-BAC
MINERAL
PAC®

OTHER
PAC



4.



Replace cap by hand only.
DO NOT OVER TIGHTEN.

5.

Turn control dial on FROG Leap® Mineral Infuser® to setting 5.

6.

Run the pump and filter for each pac according to the directions on the product label. Remove from the FROG Leap® Twin™ when empty and discard or offer for recycling.

7.

Mark your calendar for the approximate replacement times for the FROG Leap® Torpedo Pac®. Typical pac life is 2-3 weeks.

Using FROG Leap® ALL-OUT® for a 90-Day Algae Protection Guarantee

If you are not using FROG Leap® ALL-OUT®, proceed to Step 15. See FROG Leap® ALL-OUT® product labeling for complete directions for use (EPA Reg. No. 53735-9).

For a preventive dose add:

- One FROG Leap® ALL-OUT® for pools up to 15,000 gallons.
- Two FROG Leap® ALL-OUT® for pools between 15,000 and 30,000 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 Leap® ALL-OUT® without removing seal.

2.



Insert upside down into center of FROG Leap® Anti-Bac Mineral Pac® pushing down firmly to puncture seal.

3.



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

4.



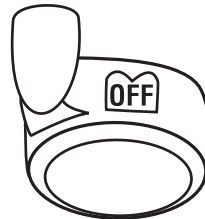
Turn control dial on FROG Leap® Mineral Infuser® to ON.

5.



Turn pump on for 90 minutes allowing FROG Leap® ALL-OUT® to circulate through pool.

6.



To remove FROG Leap® ALL-OUT®, turn pump off. Turn dial to OFF.

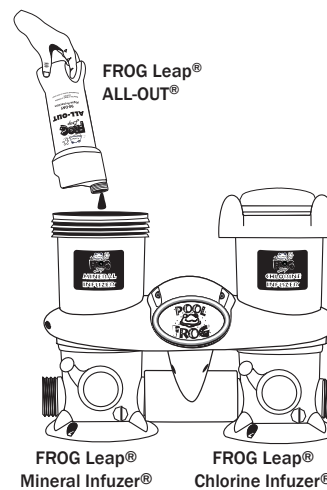
7.



Remove FROG Leap® Infuser® cap.

8.

Lift FROG Leap® ALL-OUT® up and allow any water in the container to drain through the FROG Leap® Mineral Infuser® before discarding in trash.



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

8a. If pool size requires additional FROG Leap® ALL-OUT®, repeat steps 1-8.

8b. When water is clear in FROG Leap® Mineral Infuser®, proceed to step 9.

Using the FROG Leap® Torpedo Pac®



USE ONLY the factory recommended replacement FROG Leap® Torpedo Pac®. (See label.) **DO NOT USE** any other pac or bulk chemical tablets in the FROG Leap® Chlorine Infuzer®. 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.

9. FROG Leap® Torpedo Pac® recommended to assure up to 50% reduction in chlorine use*. FROG Leap® Torpedo 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.

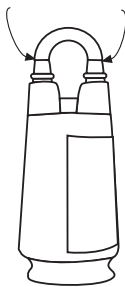


10. Avoid sparks, open flame or smoking when handling the FROG Leap® Torpedo Pac®.

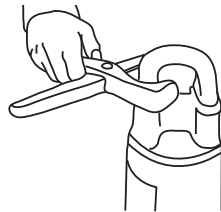


11. Cut handle from FROG Leap® Torpedo Pac® using a PVC cutting tool or a hacksaw (KEEP OUT OF REACH OF CHILDREN).

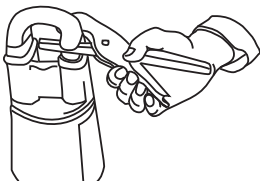
Indent in plastic



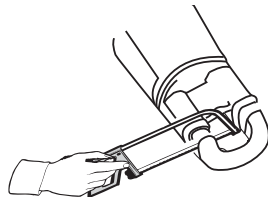
A. Find the indent in the plastic.



B. If using a PVC 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



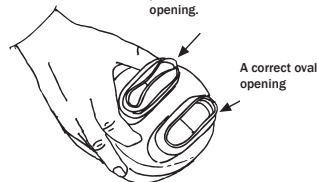
D. If using a hacksaw to cut the pac, line up hacksaw blade on indent and cut with a smooth sawing action.

Finished cut ends



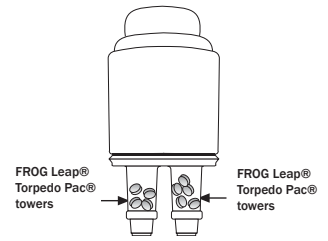
E. Whether using a PVC cutting tool or a hacksaw, make sure the blade comes straight across on the indent line for a clean cut.

Avoid a pinched opening.

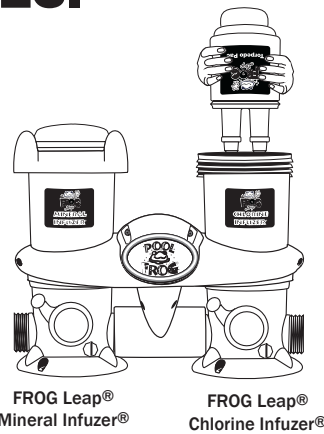


F. If openings are pinched together, open with fingers or re-cut closer to the colored screens inside FROG Leap® Torpedo Pac®. Leave at least 1/4" of plastic to fit into FROG Leap® Chlorine Infuzer® base.

12. Turn FROG Leap® Torpedo Pac® over and shake slightly until chlorine tablets fall into tower areas.



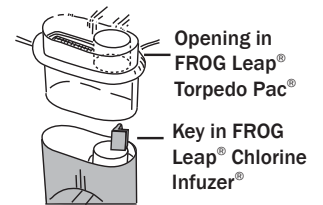
13.



FROG Leap® Mineral Infuzer® FROG Leap® Chlorine Infuzer®

Insert FROG Leap® Torpedo Pac® into FROG Leap® Chlorine Infuzer®, lining up the openings in the FROG Leap® Torpedo Pac® with keys in the FROG Leap® Chlorine Infuzer®.

NOTE: Openings are a different shape than keys



Avoid sparks, open flame or smoking while handling the FROG Leap® Torpedo Pac®.



14.

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



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.

15. Mark your calendar for the six month replacement of the FROG Leap® Anti-Bac Mineral Pac®, 90-day replacement of FROG Leap® ALL-OUT® and approximate replacement times for the FROG Leap® Torpedo Pac®. Once wetted, the time-released mineral coating of the FROG Leap® Anti-Bac Mineral Pac® is effective up to 6 consecutive months or one pool season whichever is shorter. After that time, even if you hear the spent media inside, it is no longer effective and must be replaced.

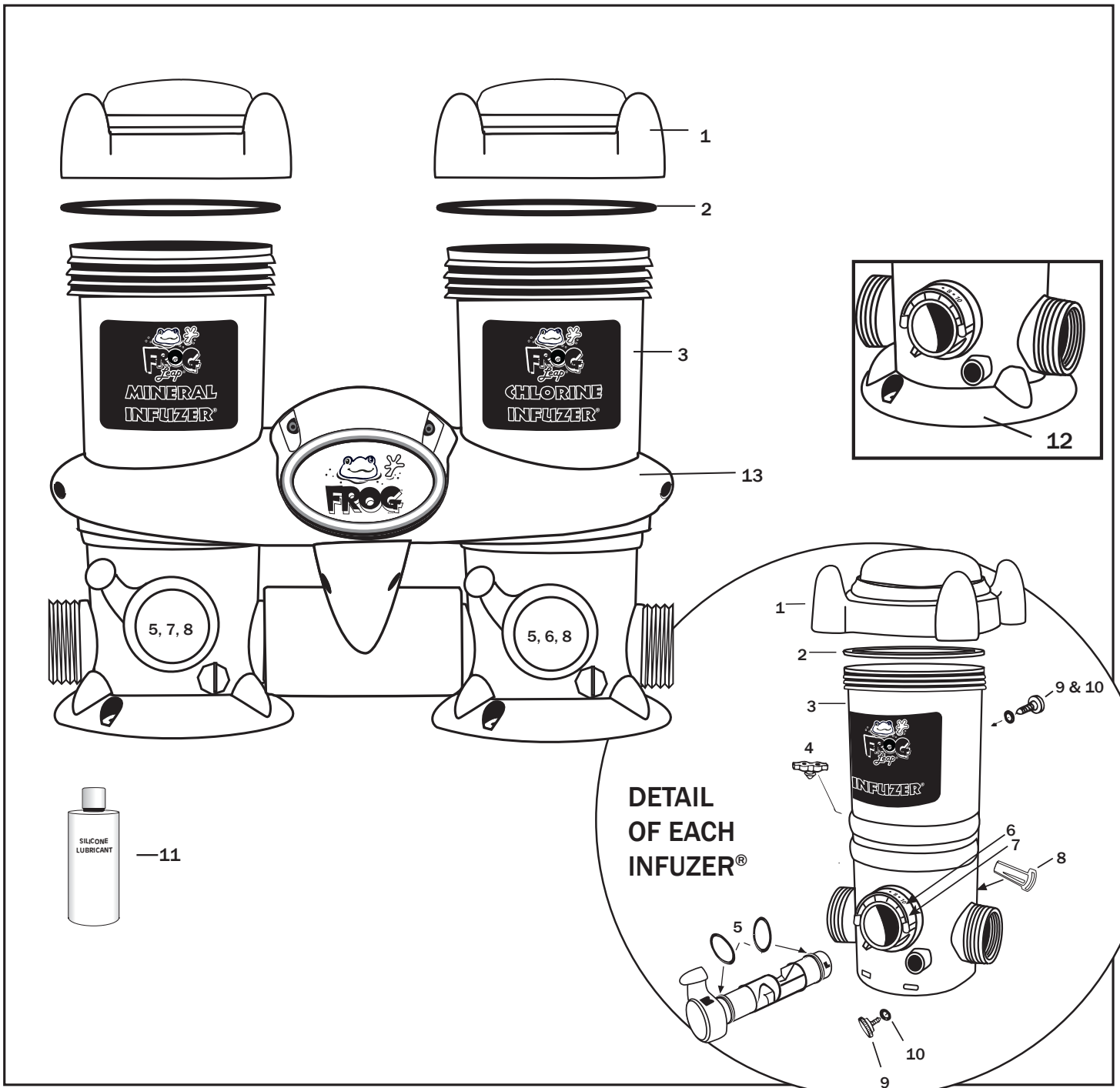


Troubleshooting

For more in-depth troubleshooting, go to www.KingTechnology.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 time if not.</p>	<p>3. Make sure the pool is properly balanced (see page 4).</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. Metals in the fill water may have been oxidized. Have the pool tested. Shock the pool and clean the filter until water clarity returns.</p>	<p>2. Algae may be trying to form – shock the pool, increase circulation time if needed and clean the filter.</p>	<p>3. Check with your dealer for more information.</p>
<p>3. What do I do if algae forms in or on my pool?</p>	<p>1. Use a nonmetallic (polyquat) 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 regarding a 90-day Algae Protection Guarantee using FROG Leap® ALL-OUT®. 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 FROG Leap® Torpedo 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 FROG Leap® Torpedo 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 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 back knobs.</p> <p>5. Contact your dealer to have your back pressure tested to ensure it is at least 4 psi.</p>	<p>6. Check for a suction side leak by looking for air bubbles in your pump basket or at the return jet. Your water level will be low and the skimmer will be taking in air. 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 FROG Leap® Torpedo Pac® ?</p>	<p>1. If the chlorine reading is over 3.0 ppm, remove the Torpedo Pac® from the FROG Leap® Chlorine Infuser® and test the water daily until the reading is down to 1.0 ppm.</p> <p>2. Reinsert the FROG Leap® Torpedo Pac®, lower the dial one setting and test the water again in 24 hours. If the reading has risen, lower the dial one setting again. Continue this process until proper reading is achieved.</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</p>	<p>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>

FROG Leap® Twin™ Parts List



Included with FROG Leap® Twin™

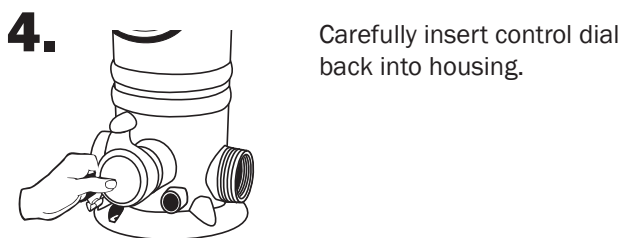
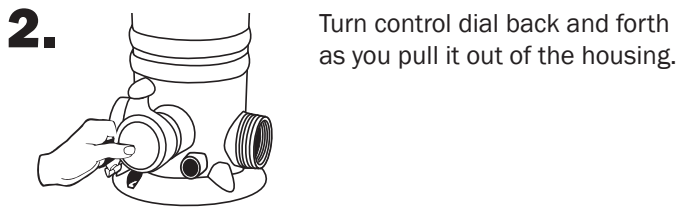
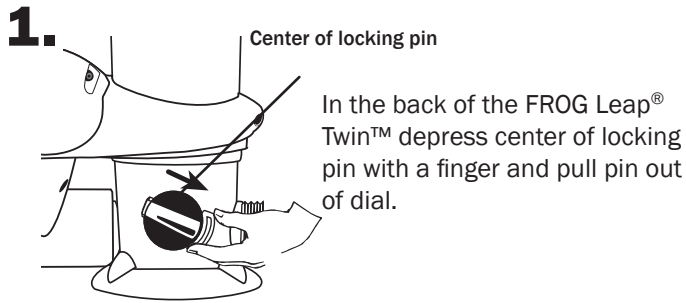
REF. #	DESCRIPTION	QTY. INCLUDED
1 & 2	Cap w/O-Ring	2
3	Body	2
4	Pressure Relief Valve	2
5, 6, 8	Chlorine Control Dial with O-Rings and Locking Pin	2
5, 7, 8	Mineral Control Dial with O-Rings and Locking Pin	2
9 & 10	Knob with O-Ring	4
11	Silicone Lubricant	1
12	Mounting Base	2
13	Shroud	1

Replacement parts for FROG Leap® Twin™

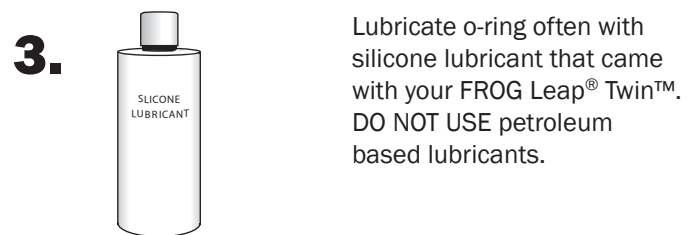
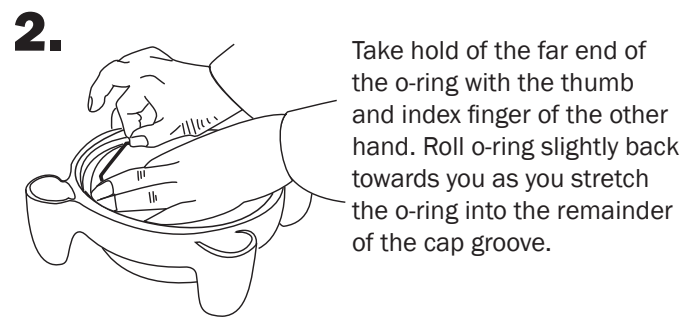
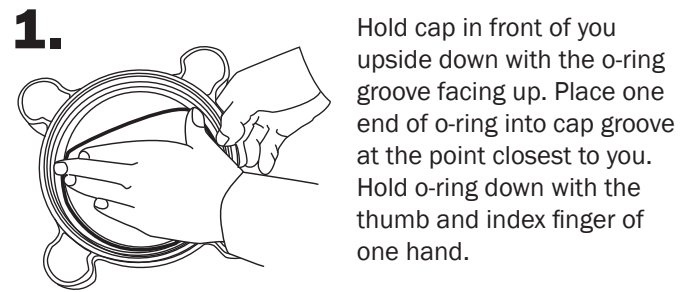
REF. #	PART NO.	DESCRIPTION
1 & 2	01-22-1416	Cap w/O-Ring
2	01-22-1920	Cap O-Ring
4	01-22-9480	Pressure Relief Valve
5, 6, 7, 8	01-22-1451	Control Dial with O-Rings and Locking Pin
5	01-22-1450	Chlorine or Mineral Control Dial O-Ring Set
9 & 10	01-22-9621	Knob with O-Ring
11	01-22-9971	Silicone Lubricant
12	01-22-1481	Mounting Base

FROG Leap® Twin™ Maintenance

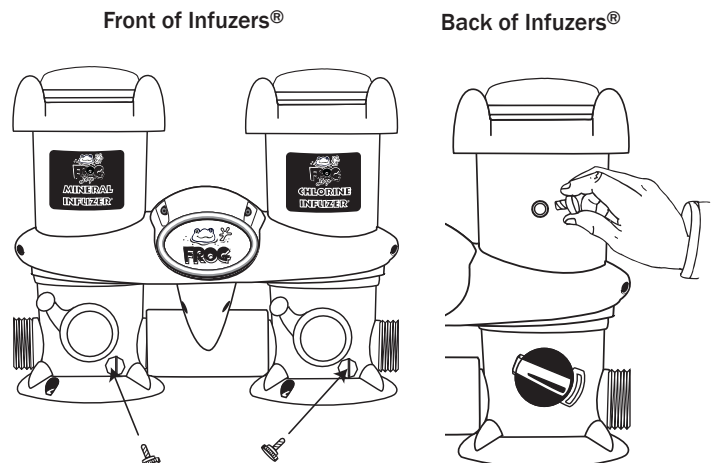
Replacing the Control Dial O-Rings



Replacing Cap O-Ring



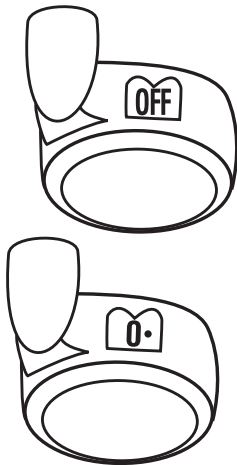
Replacing Knobs



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

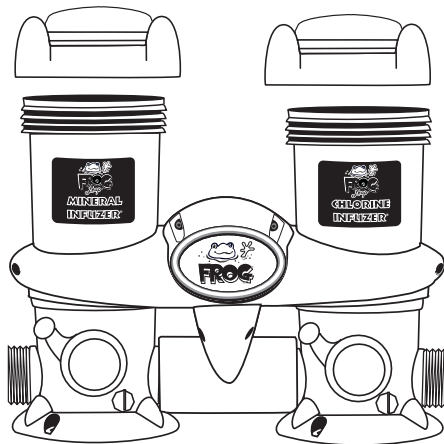
Winterizing

1.



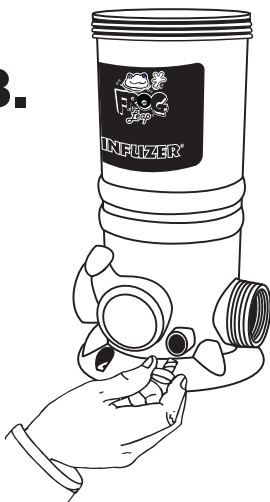
Turn pump off and turn dial to OFF on Mineral Infuzer® and to setting 0 on Chlorine Infuzer®.

2.



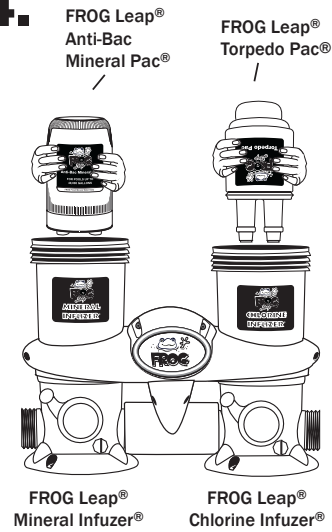
Remove both caps.

3.



Unscrew knob from the front of BOTH FROG Leap® Twin™. Allow all water to drain.

4.



Remove the FROG Leap® Anti-Bac Mineral Pac® and discard in trash. Even if you hear spent minerals inside, it is no longer effective.

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



5.

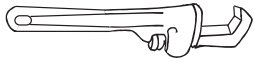
Replace both the caps and knobs loosely.

TOOLS NEEDED

Screwdriver



Pipe Wrench



MATERIALS NEEDED

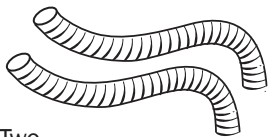
Pipe Thread Tape or Sealant



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



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



Two Hose Clamps

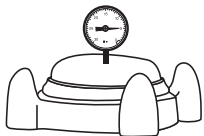


RECOMMENDED

Corrosion Resistant Check Valve

4-8 psi Back Pressure

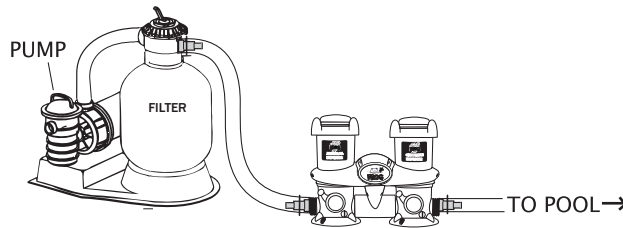
To avoid over or under chlorination, replace eye ball fittings in the return jets to a smaller or larger size to adjust back pressure.



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



Flex Hose Installation



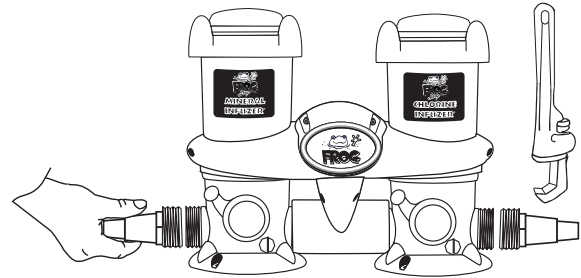
The FROG Leap® Twin™ should always be installed between the filter and pool (or between heater and pool if applicable).



- Never install FROG Leap®Twin™ before the heater.
- Any additional sanitizing equipment that is installed with FROG Leap®Twin™ must be installed after FROG Leap®Twin™ (never before) on the return line of the pool.

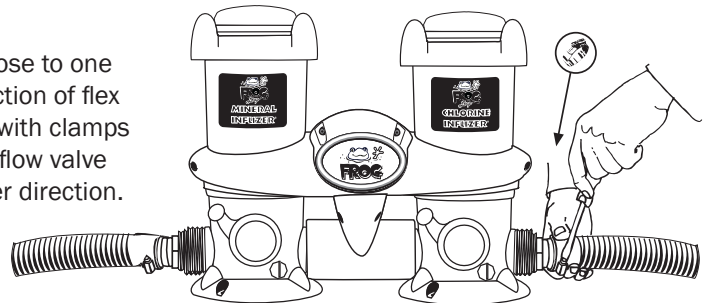


1. Apply pipe thread tape or sealant to the threaded end of both hose adapters.

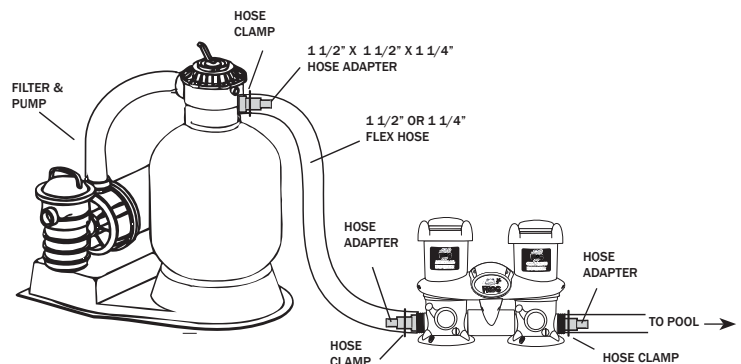


2. Screw adapters into each end of FROG Leap® Twin™. Hand tighten. Finish tightening by turning 1 to 2 revolutions with wrench. **DO NOT OVER TIGHTEN.**

3. Attach the filter section of flex hose to one hose adapter and the return section of flex hose to the other hose adapter with clamps and tighten with screwdriver. Bi-flow valve design allows water flow in either direction.



4. If using a FROG Leap® Torpedo Pac® installing a corrosion resistant check valve is recommended.

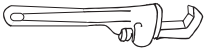


5. For better stability, FROG Leap® Twin™ may be mounted on a base using Phillips pan head screws. One in front and two in back.

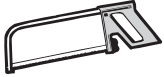


TOOLS NEEDED

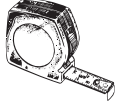
Pipe Wrench



Hacksaw

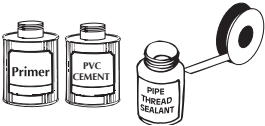


Tape Measure



MATERIALS NEEDED

Pipe Thread Tape or Sealant and Primer and PVC Cement



OPTION

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



or

2" Female Adapter (slip x FPT)



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

RECOMMENDED

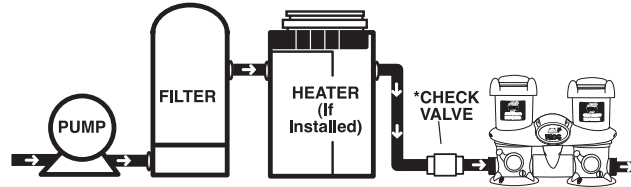
Corrosion Resistant Check Valve

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



Use Phillips pan head screws through the mounting holes in the FROG Leap® Twin™ bases to secure the FROG Leap® Twin™ into a treated wood base.

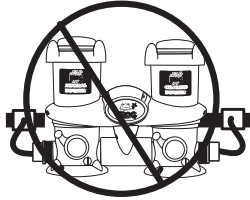
Hard Plumbed Installation



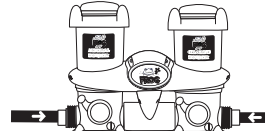
Install after all equipment and as far as possible from heater.



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



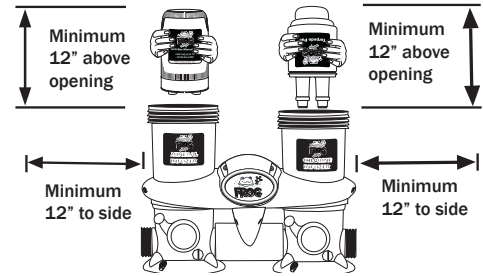
Do NOT install FROG Leap® TWIN™ off-line.



Minerals Chlorine
Install with water flowing through the minerals first and then the chlorine.

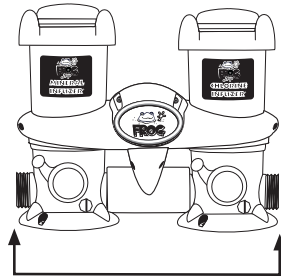


- Never install FROG Leap®Twin™ before the heater.
- Any additional sanitizing equipment that is installed with FROG Leap® Twin™ must be installed after FROG Leap® Twin™ (never before) on the return line the pool.



Allow a minimum of 12" above and on each side of FROG Leap® Twin™ to ensure room for easy replacement of FROG Leap® Anti-Bac Mineral Pac® and FROG Leap® Torpedo Pac®.

1.



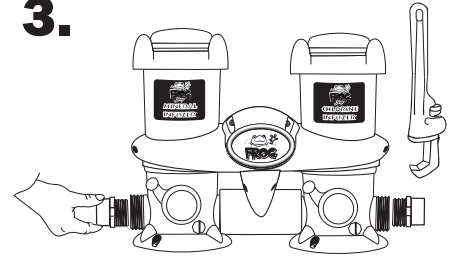
Measure the distance between outside male adapters and cut out a section of pipe 3" less than that dimension.

2.



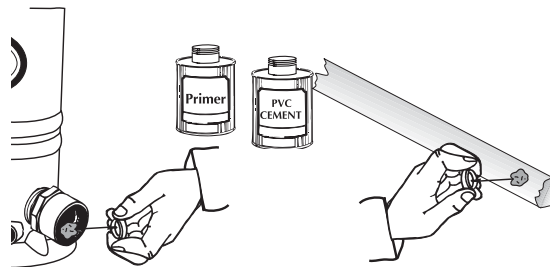
Apply pipe thread tape or sealant to the threaded end of both male adapters.

3.



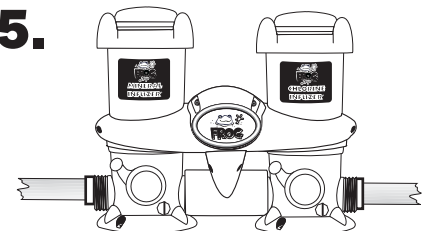
Screw adapters into each end of FROG Leap® Twin™. Hand tighten. Finish tightening by turning 1 to 2 revolutions with wrench. **DO NOT OVER TIGHTEN.**

4.



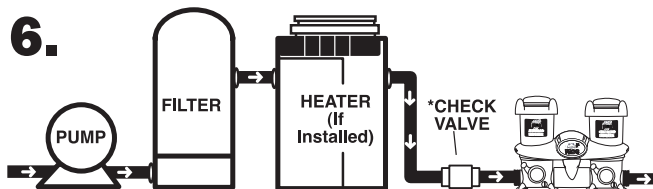
Following Primer directions, brush Primer on the inside of the male adapters and to ends of pipe. Repeat this process with PVC cement following directions on that product.

5.



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

6.

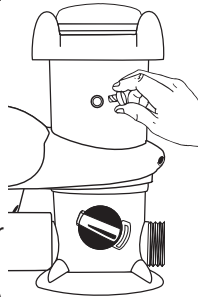


Isolating the FROG Leap® Twin™ by installing a corrosion resistant check valve is recommended.

For Proper Performance

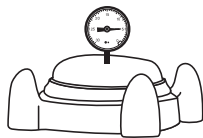
1) If using a multi-speed pump, run pump for at least 6 hours per day at high speed (at least 40 gpm).

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 back knob until water appears. Then screw the knob back in. Repeat this process each time the cap is removed for any reason.



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

Lower back pressures could result in under chlorination. Change the eye ball fittings in the return jets to a smaller size to increase back pressure. Contact King Technology at 800-222-0169 for a cap tapped for a pressure gauge to determine back pressure at pool start-up.



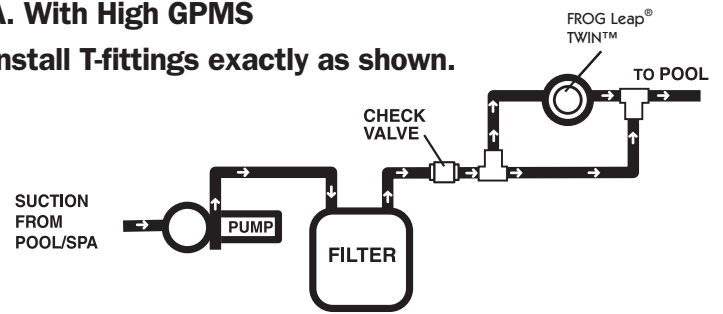
3) Special installation:

- 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 Leap® must be installed after FROG Leap® (never before) on the return line to the pool.

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

A. With High GPMS

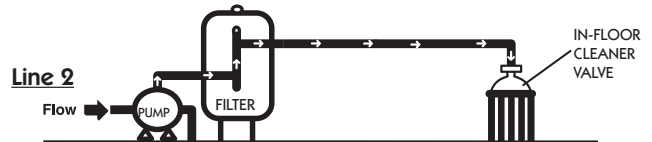
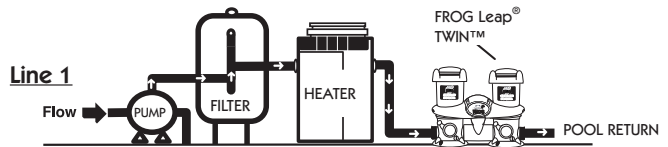
Install T-fittings exactly as shown.



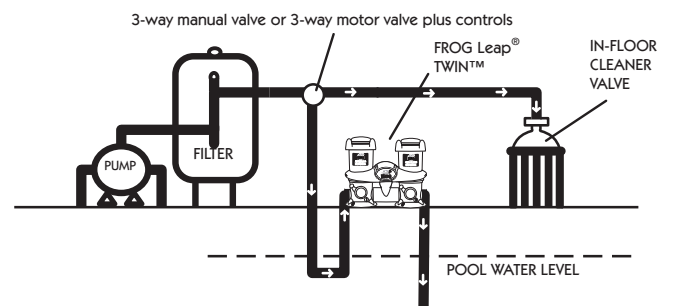
B. With In-Floor Cleaner - TWO OPTIONS

OPTION 1 - A Two-Line Installation

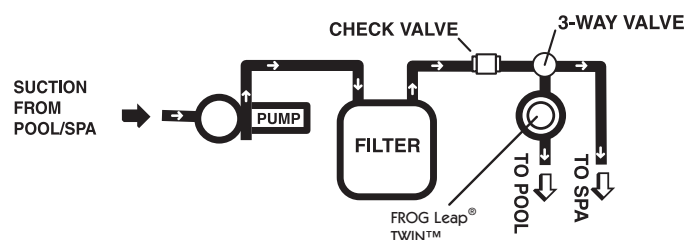
The best option is to have two lines. One line with pump, filter, heater and infuser and a second line with a separate pump for the in-floor cleaning system (filter optional).



OPTION 2 - A 3-Way Valve Installation



C. Pool and Spillover Spa Combination



FROG Leap® Twin™ Two-Year Limited Warranty

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

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

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

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

A. This unit is not designed for shock treatment of pools. See your pool dealer or distributor for further information concerning shock treatments.

B. Control dial settings higher than needed can result in excess sanitizers being discharged into the pool. If the sanitizer level goes unmonitored, it can result in bleaching or discoloration of areas around the pool inlet or in some cases bleaching or discoloration of the entire pool liner or paint.

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

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

4. This warranty is the exclusive warranty for the FROG Leap® Twin™. 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 FROG LEAP® TWIN™.** 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.



Manufactured by: King Technology, Inc.
530 11th Ave S, Hopkins, MN 55343 U.S.A.
952-933-6118 • 800-222-0169 • FAX 952-933-2206
www.KingTechnology.com

Made in U.S.A.
Patents: www.KingTechnology.com/IP

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