

INSTRUCTION GUIDE

Models 910, 940 & 980 (Inline)

Models 930 & 960 (Off-line)

PERFORM-MAX POOL SANITIZER



Model 940



Model 910

TABLE OF CONTENTS

	Page No.
Introducing Perform-Max	3
Pool Balancing	3
Installation Introduction	4
Above Ground Base Installation	5
Above Ground Filter Installation	6
Inground Inline Installation	7
Off-line Installation	8 & 9
Special Installations	10
Refilling Chemicals	11
Changing Chemicals	11 & 12
Setting Control Dial	12
Parts List	13
Replacing Control Dial O'rings	14
Replacing Cap O'ring	15
Winterizing	15
Warranty	16

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

Thank you for choosing the Perform-Max Pool Sanitizer for your pool. Perform-Max precisely meters chlorine at a constant rate so you are ensured of a properly sanitized pool with less work and more time to enjoy.



For Inground Pools



For Above Ground Pools

Benefits

- Sanitizes with Chlorine or Bromine.
- Large capacity with a wide mouth for easier refilling.
- Bi-flow design means unit can be installed in either direction.
- Wide range of control dial settings to meet the precise needs of each pool.
- Erosion design offers better efficiency so chemicals last longer.
- Pressure relief valve offers safety feature against built-up pressure.

Pool Balancing

1. Before using your Perform-Max Sanitizer, 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.

2. If your fill water is high in metals, check with your pool professional for the necessary steps to correct this situation.

3. When testing on your own, make sure your test kit measures pH, total alkalinity and free chlorine or bromine. We recommend test strips for easy and accurate testing.

4. To achieve an initial sanitizer level, add a chlorine shock. Follow manufacturer's directions carefully.

damage equipment, risk potential explosion or discolor your pool surface.



5. DO NOT add shock in or near the skimmer or into the Perform-Max as it could



6. Finally, at the beginning of the season, add a stabilizer or conditioner to the pool if sanitizing with chlorine. This will prevent chlorine burn off. Follow manufacturer's directions carefully.



Water Balance Guidelines

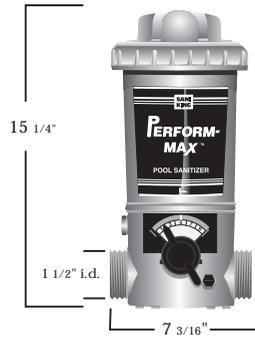
Free Chlorine:	1 - 3 ppm
Free Bromine:	2 - 5 ppm
pH:	7.2 - 7.8
Total Alkalinity:	60 - 120
Calcium Hardness:	150 - 300
Total Dissolved Solids:	<2000
Stabilizer:	20 - 50 ppm



Perform-Max Installation

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

ABOVE GROUND POOLS



Model #910
 Inline for above ground pools (Sanitizes up to 20,000 gallons using chlorine and up to 15,000 gallons using bromine.) See pages 5 & 6. **DO NOT INSTALL OFF-LINE.**



Model #930
 Off-line for hard plumbed above ground pools (Sanitizes up to 15,000 gallons using chlorine and up to 12,000 gallons using bromine.) Follow off-line directions on Pages 8 & 9. **DO NOT INSTALL INLINE.**

INGROUND POOLS



Model #940
 Inline for inground pools (Sanitizes up to 50,000 gallons using chlorine and up to 25,000 gallons using bromine.) See Page 7. **DO NOT INSTALL OFF-LINE**



Models #980
 Inline for inground pools using 1 1/2" plumbing. See page 10. **DO NOT INSTALL OFF-LINE.**



Model #960
 Off-line for inground pools (Sanitizes up to 40,000 gallons using chlorine and up to 20,000 gallons using bromine.) See Pages 8 & 9. **DO NOT INSTALL INLINE.**

Before installing the Perform-Max, make sure that:



You have all the supplies.



The pump is turned off.

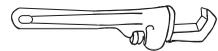


The plumbing lines are dry.

TOOLS NEEDED



Screwdriver



Wrench

MATERIALS NEEDED:



Teflon Tape

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



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



Two
Hose
Clamps



RECOMMENDED:



Check Valve
Rainbow #172288

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



OPTION:



Half
Union

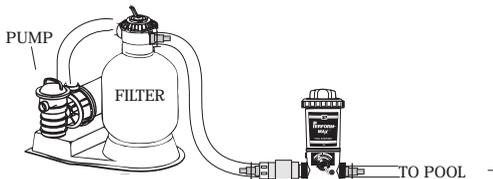


or

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

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

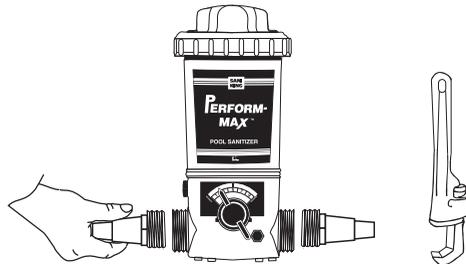
Above Ground, Base Installation - Model 910



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

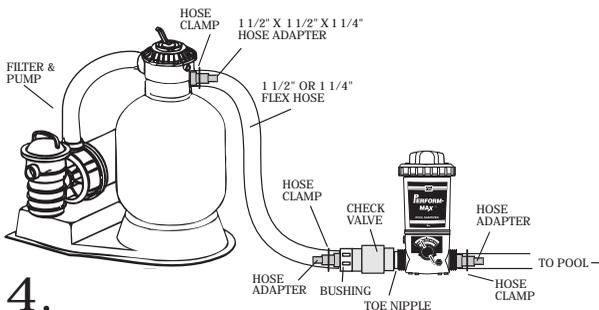
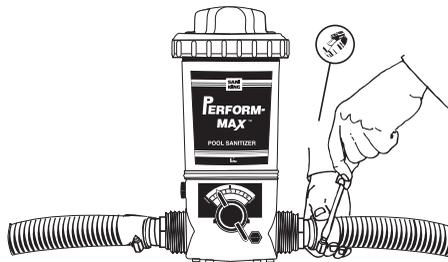


1. Apply teflon tape to the threaded end of both hose adapters.



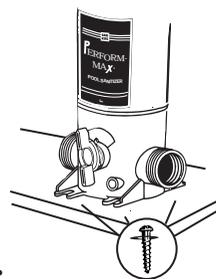
2. Screw adapters into each end of Perform-Max. Tighten turning 1 to 2 revolutions with wrench. DO NOT OVERTIGHTEN.

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



4.

Installing a corrosion resistant check valve is recommended for the protection of pool equipment especially a heater, from chemical corrosion.



5.

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

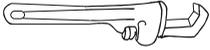
Above Ground, Filter Installation - Model 910

TOOLS NEEDED

Screwdriver



Wrench



MATERIALS NEEDED:

Teflon Tape



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



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



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



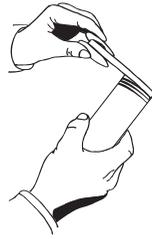
One
Hose
Clamp



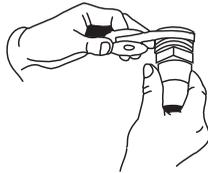
RECOMMENDED:



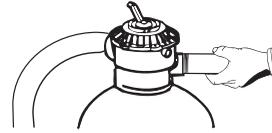
Check Valve
Rainbow #172288



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

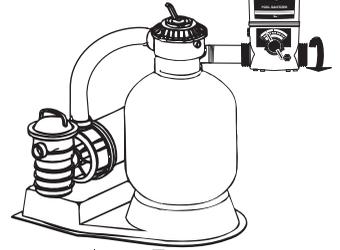


4. Apply teflon tape to threaded end of hose adapter.



2. Screw one end of nipple into the filter return.

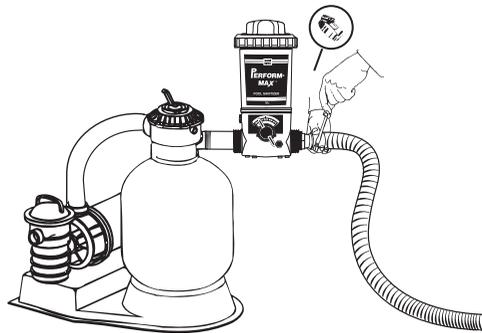
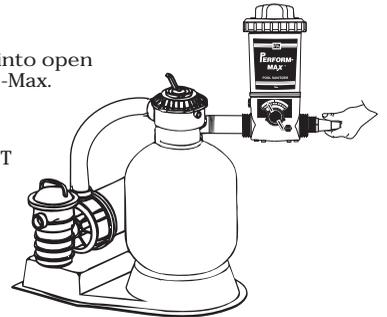
Tighten turning 1 to 2 revolutions with wrench. **DO NOT OVERTIGHTEN.**



3. Screw either side of Perform-Max on to open nipple end until upright and secure.

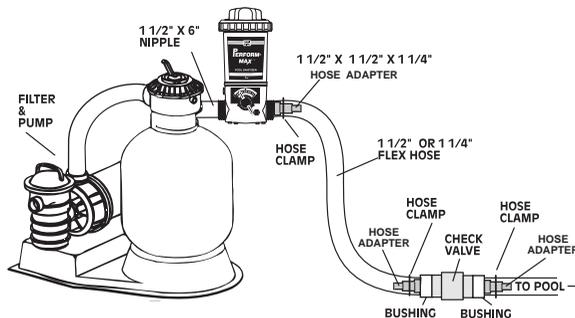
5. Screw adapter into open end of Perform-Max.

Tighten turning 1 to 2 revolutions with wrench. **DO NOT OVERTIGHTEN**



- 6.

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



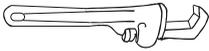
- 7.

Installing a corrosion resistant check valve is recommended.

Inground, Inline Installation - Model 940

TOOLS NEEDED

Wrench



Hacksaw



MATERIALS NEEDED:

Pipe Thread Sealant



PVC Cement



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

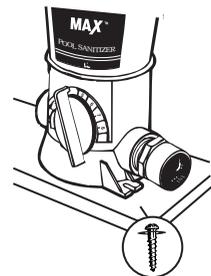


RECOMMENDED:

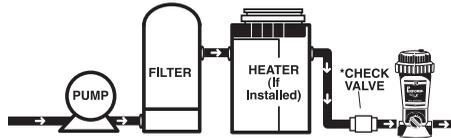
Check Valve Rainbow #172288



#10 X 1 1/4" Phillips Pan



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



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



Do NOT install in copper pipe as chemical corrosion occurs.



Do NOT install an inline Perform-Max off-line as this Perform-Max is different than an off-line unit.



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



Leave 12" to 15" above and around Perform-Max to allow room for easy refilling.

1.



Following pipe thread sealant directions, brush sealant onto Perform-Max threads in both ports.

2.



Brush sealant on the threads of both bushings.

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

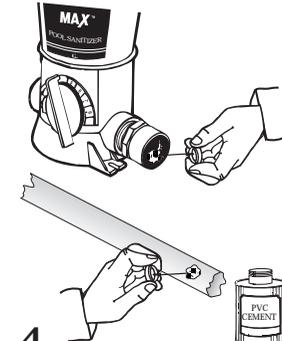


3.

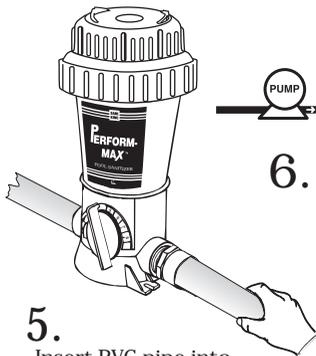


Screw a bushing into each port of Pool Sanitizer and hand tighten.

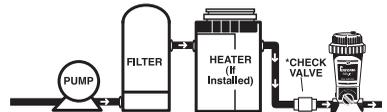
Completely tighten turning 1 to 2 revolutions with wrench. DO NOT OVERTIGHTEN.



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



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



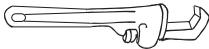
6.

Isolating the Perform-Max by installing a corrosion resistant check valve or creating a plumbing loop is recommended to protect the equipment and prevent possible discoloration of pool surface.

Off-line Installation - Model 960 or 930

TOOLS NEEDED

Wrench



Screwdriver



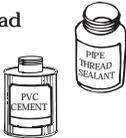
Battery

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



MATERIALS NEEDED:

Pipe Thread
Sealant



PVC
Cement



OFF-LINE KIT

• Included with 960

Two Male
Adapters



Two Reducer
Bushings



• Included with 930

Two Reducer
Bushings
Start with step 5A.



• Included with 960 & 930

Two
90 Degree Elbows



Four Hose Clamps



6' of Tubing



Two
Scoops



Two Scoop
Gaskets



Two Scoop
Clamps

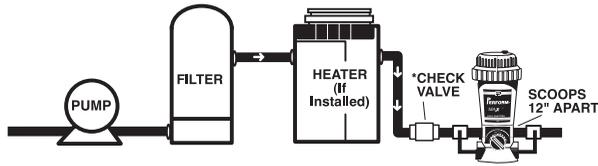


RECOMMENDED:

Check Valve
Rainbow #172288



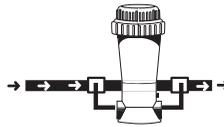
#10 X 1 1/4" Phillips Pan
Head Screws with
Washers



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



Do NOT install an off-line Perform-Max inline as this Perform-Max is different than an inline unit.



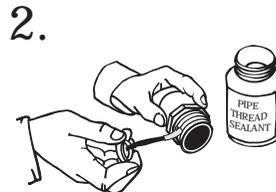
Can be installed with the water flow in either direction due to its bi-flow valve.



Instructions for Model 960 start with Step 1. • Instructions for Model 930 start with Step 5A.



Following pipe thread sealant directions, brush sealant onto Perform-Max threads in both ports.



Brush sealant on threads of both male adapters.

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

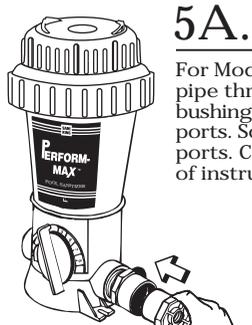


Screw a male adapter into each port of Perform-Max and hand tighten.

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

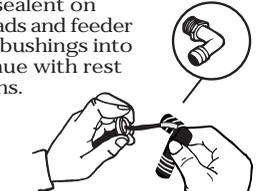


4. Following PVC cement directions, brush PVC cement into reducer bushings and inside of male adapters.

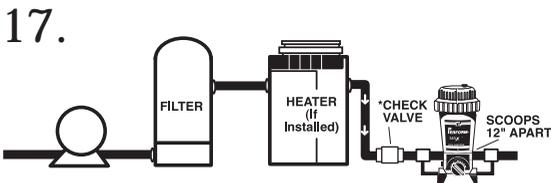
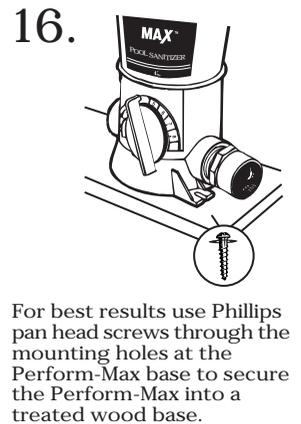
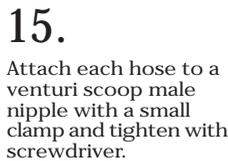
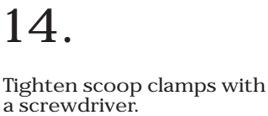
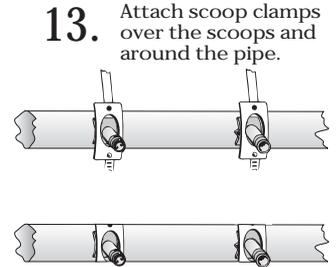
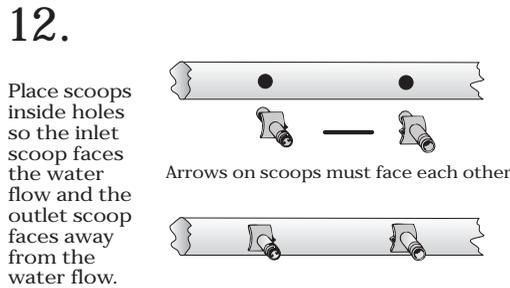
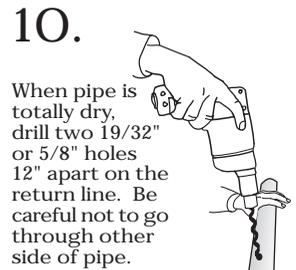
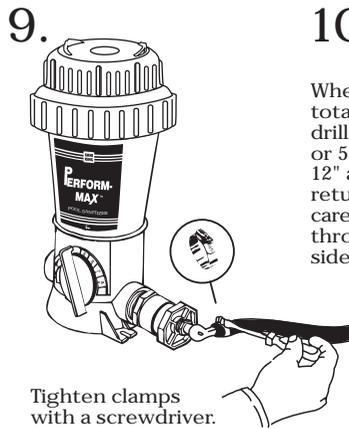
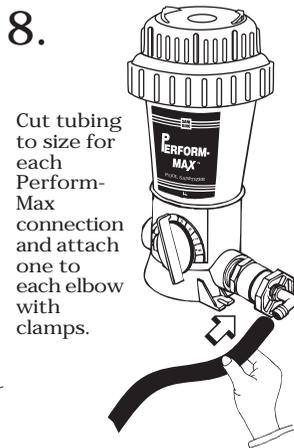
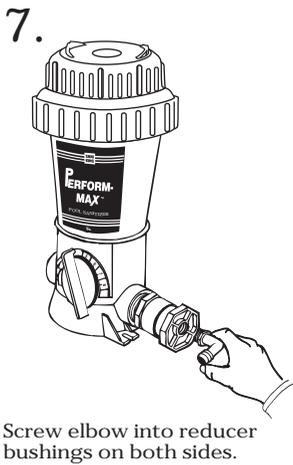


5. Insert reducer bushing into male adapter on both sides. Hold in place 5 to 10 seconds to bond.

5A. For Model 930 only, brush pipe thread sealant on bushing threads and feeder ports. Screw bushings into ports. Continue with rest of instructions.



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



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

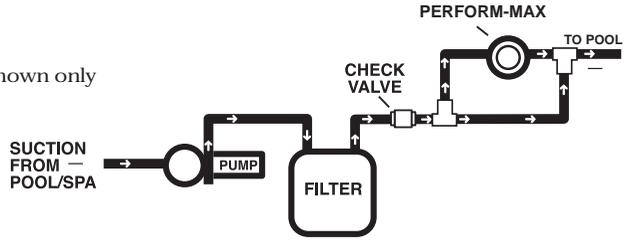
Special Perform-Max Installations

Special installations should be considered when:

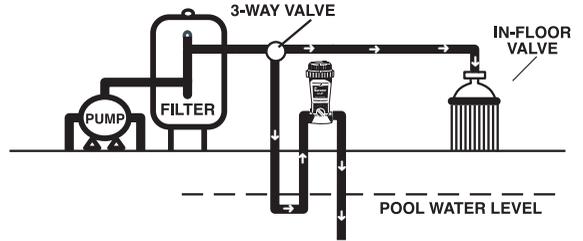
1. Water flow is higher than 80 gpm.
2. In-floor cleaner is included with pool.
3. Pool and spa combination with common equipment.

Over chlorination or damage to the Perform-Max or other equipment could result if these special installations are not used in these situations.

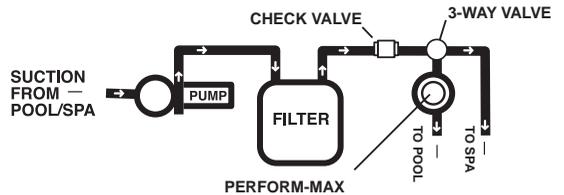
- A. With High GPMS
Install T-fittings as shown only



- B. In-Floor Cleaners



- C. Pool and Spillover Spa Combination



Inline Installations for 1 1/2" Plumbing

Perform-Max 980

If installing a Model 980 Perform-Max, follow steps 1 through 3 on page 7 using the reducer bushing included with the Model 980.

Repeat steps 1 through 3 using a 1 1/2" threaded by 1 1/2" slip bushing (you provide).

Then follow the remaining inline directions on page 7.



Model 980

Two 2" Threaded by 1 1/2" Threaded Bushings (included)



Two 1 1/2" Threaded by 1 1/2" Slip Bushing (you provide)



Refilling Chemicals

CAUTION Read Carefully

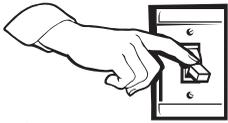
USE ONLY ...

Slow dissolving Trichloro-s-Triazinetrione (Trichlor) tablets or pucks or Bromine tablets or sticks in the Perform-Max. **NEVER MIX CHEMICALS**

DO NOT USE ...

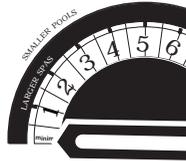
CALCIUM HYPOCHLORITE, FAST DISSOLVING TRICHLOR OR ANY GRANULAR OR LIQUID MATERIAL IN THE PERFORM-MAX. USE OF THESE PRODUCTS COULD RESULT IN FIRE OR EXPLOSION

When using slow dissolving Trichlor, the Perform-Max should be operated based on its normal erosion design where only the bottom layer of tablets are wetted. This provides better controllability and longer lasting sanitation per refill. When using Bromine, the Perform-Max should be operated as a soaking feeder as this chemical works best when all tablets are wetted. Therefore bleeding the air by unscrewing the cap knob is recommended.



1.

Turn pump off.



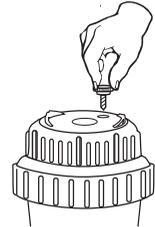
2.

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



3.

Unscrew side knob on Models 910 & 930 or cap knob on Models 940, 960 & 980 to relieve pressure.



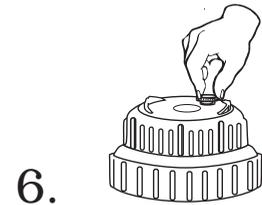
4.

Use the cap tool included with Perform-Max to loosen cap by turning counter clockwise. Stand back upon removing cap to avoid inhaling fumes.



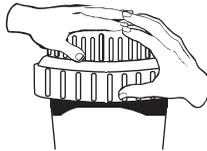
5.

Fill unit to top with chemical. **DO NOT MIX BROMINE AND CHLORINE.** Do not put small particles in feeder. Always wear protection for eyes, skin and clothing. Avoid sparks, open flame or smoking when handling chemicals.



6.

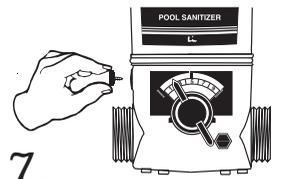
Make sure cap knob is screwed down before replacing cap.



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



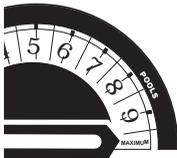
DO NOT USE CAP TOOL to tighten cap. For removal only.



7.

Replace side knob on Models 910 and 930.

Changing Chemicals



1. Operate Perform-Max until empty of all chemical. When empty, set control dial to maximum & let run empty 24 hrs.



2. Turn pump off.



3. Unscrew side knob on Models 910 & 930 or cap knob on Models 940, 960 & 980 to relieve pressure.



Changing Chemicals continued...



4. Remove cap. Follow safety precautions outlined in #5 of Refilling Chemicals – page 11.

5. Make sure all small particles have dissolved and been flushed out of feeder. Fill unit with new chemical.



6. Make sure cap knob is screwed down before replacing cap. Replace cap by hand only. DO NOT OVERTIGHTEN



7. Replace side knob on Models 910 and 930.

8. For proper initial setting continue to next section: Setting Control Dial.

Setting Control Dial

To start...



1. For all pools using chlorine..... set the control dial at #2.



For all pools using bromineset the control dial at #4.



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



3. After day one, adjust the dial up by 1/2 increment if the reading has dropped or down by 1/2 increment if the reading has risen. Continue this process each day until the reading stabilizes at your desired level between 1 and 3 ppm.



Remember to adjust dial by 1/2 increments only. Higher than suggested settings could result in over chlorination and/or bleached pool surfaces.



4. Use the handle end of cap tool if the dial is hard to turn.

If under chlorinating • Begin with Option 1 and continue with other options if necessary

OPTION 1
Increase the number of hours your pump runs per day.

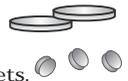


OPTION 2

If reading dropped below 1 ppm shock pool. Turn control dial to minimum when shocking and NEVER ADD SHOCK IN OR NEAR THE SKIMMER. Reset dial 1/2 setting higher than before and continue monitoring daily until desired chemical level is achieved.



OPTION 3
Switch from 3 inch pucks to 1 inch tablets.



OPTION 4
Try bleeding the air, soaking tablets for greater output.



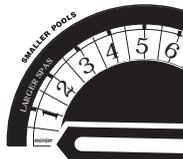
If over chlorinating • Begin with Option 1 and continue with other options if necessary

OPTION 1
Decrease the number of hours your pump runs per day. Water must circulate fully once a day.

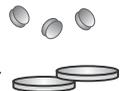


OPTION 2

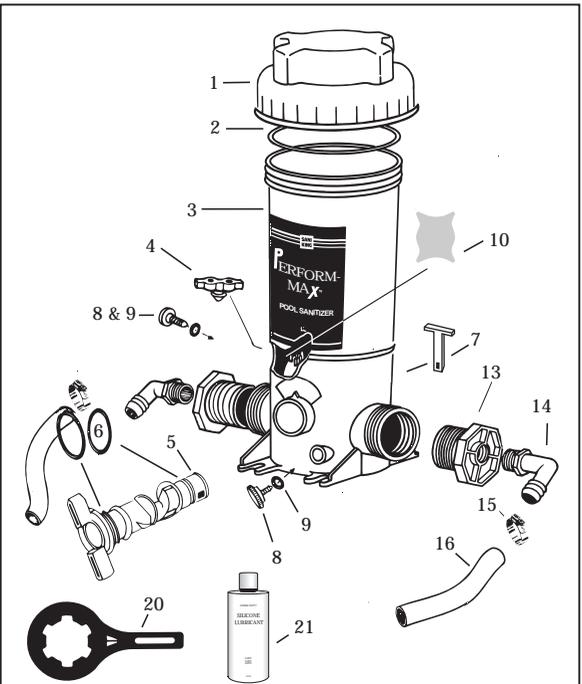
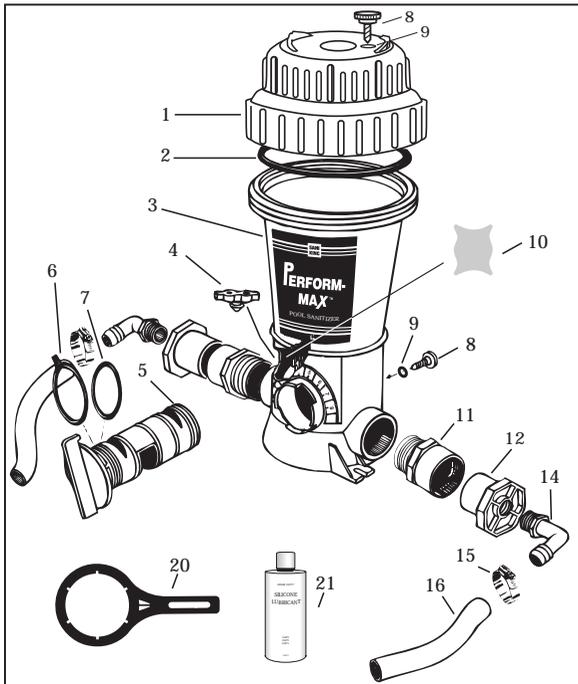
Turn dial to minimum. When reading drops to desired, reset dial 1 setting lower than the starting dial setting and continue monitoring daily.



OPTION 3
Switch from 1 inch tablets to 3 inch pucks.



Parts List



PERFORM-MAX DIAGRAM/PARTS LIST • 940,960, 980

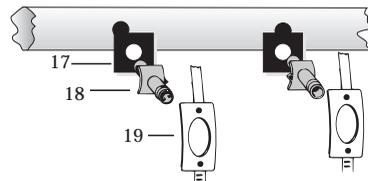
REF. #	PART NUMBER	DESCRIPTION	QTY. REQ.
1 & 2	01-22-9411	Cap w/O'Ring	1
2	01-22-9920	Cap O'Ring	1
3	N/A	Body	1
4	01-22-9480	Pressure Relief Valve	1
5, 6, 7	01-22-9440	Control Dial with Assembly Kit	1
6 & 7	01-22-9450	Control Dial O'Ring Kit	1
8 & 9	01-22-9940	Knob with O'Ring	2
10	01-22-9660	Screen	1
20	01-22-8870	Cap/Control Dial Tool	1
21	01-22-9970	Silicone Lubricant	1
	FOR MODELS 980		
	01-22-9820	Reducer Bushing/980	2

PERFORM-MAX DIAGRAM/PARTS LIST • 910 & 930

REF. #	PART NUMBER	DESCRIPTION	QTY. REQ.
1 & 2	01-22-1411	Cap w/O'Ring	1
2	01-22-1920	Cap O'Ring	1
3	N/A	Body	1
4	01-22-9480	Pressure Relief Valve	1
5, 6, 7	01-22-1440	Control Dial with Assembly Kit	1
6	01-22-1450	Control Dial O'Ring Set	1
7	01-22-1460	Control Dial Locking Pin	1
8 & 9	01-22-9940	Knob with O'Ring	2
10	01-22-9660	Screen	1
20	01-22-9790	Cap/Control Dial Tool	1
21	01-22-9970	Silicone Lubricant	1

OFF-LINE PARTS Included with series 930 and 960

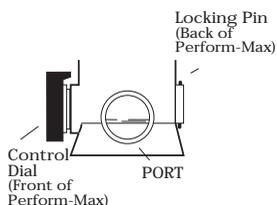
REF. #	PART NUMBER	DESCRIPTION	QTY. REQ.
11*	01-22-9490	2" Male Adaptor	2
12*	01-22-8620	2" X 1/2" Bushing	2
13**	01-22-9850	1 1/2" X 1/2" Bushing	2
14	01-22-7800	90 Degree Elbow	2
15	01-22-7690	Small Clamp	4
16	01-22-7700	8' PVC Tubing	2
17	01-22-7850	Scoop Gasket	2
18	01-22-7790	Venturi Scoop	2
19	01-22-7910	Scoop Clamp	2



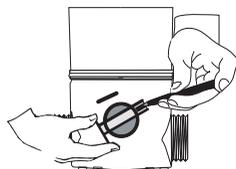
* Model #960 only ** Model #930 only

Perform-Max Maintenance

Replacing the Control Dial O'Rings for Above Ground Perform-Max



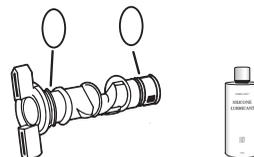
1. To replace, locate the control dial locking pin in the back of the Perform-Max.



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



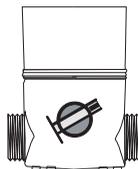
3. Turn control dial back and forth as you pull it out of the housing.



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

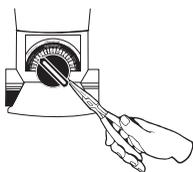


5. Carefully Insert control dial back into housing.



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

Replacing the Control Dial O'Ring Kit for Inground Perform-Max



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



2. Pull down and out of the groove.



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



Then pull dial out of the housing.



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



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

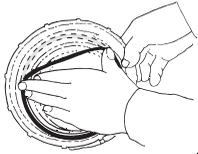


6. Insert the non-lipped end of snap ring into the groove opening beginning at the 5 o'clock position and push it up so that it threads itself around the control dial.



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

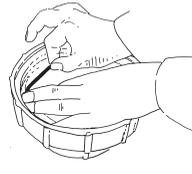
Replacing Cap O'Ring



1. Hold cap in front of you upside down with the o'ring groove facing up. Place one end of o'ring into cap groove at the point closest to you. Hold o'ring down with the thumb and forefinger of one hand.



2. Take hold of the far end of the o'ring with the thumb and index finger of the other hand. Roll o'ring slightly back towards you



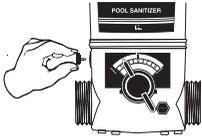
as you stretch the o'ring into the remainder of the cap groove.



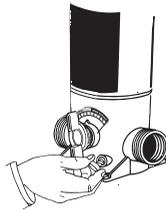
3. Lubricate o'ring by squeezing a little silicone lubricant that came with your Perform-Max directly on the o'ring. Use your finger to spread over surface. This allows for longer o'ring life and prevents breakdown of the rubber or a sticky residue that often occurs with other lubricants. Especially avoid petroleum based lubricants.

Replacing Knob

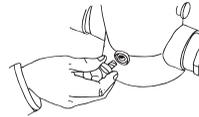
To replace, simply unscrew old knob and replace with the new one.



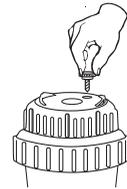
Side of Perform-Max (Models 910 and 930)



Front of Perform-Max (Models 910 and 930)

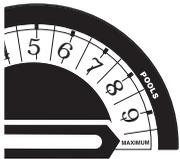


Back of Perform-Max (Models 940, 960 and 980)



Cap of Perform-Max (Models 940, 960 and 980)

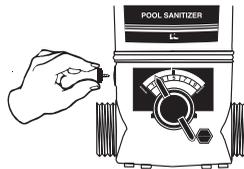
Winterizing



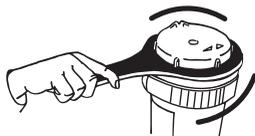
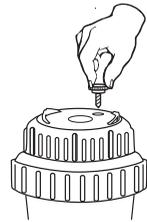
1. Operate Perform-Max until empty of all chemical. When empty, set control dial to maximum and let run empty for 24 hours.



2. Turn pump off.



3. Unscrew side knob on Models 910 & 930 or cap knob on Models 940, 960 & 980 to relieve pressure.



3. Remove cap.



4. Unscrew drain knob in front of Models 910 and 930 and back of Models 940, 960, and 980. Allow all water to drain.



6. Replace the cap and knobs loosely.

Limited One-Year Warranty

King Technology will warrant this unit with a complete replacement for the original purchaser should it prove defective by reason of improper workmanship and/or material, for a period of one (1) year from the date of original purchase. 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 that may arise. Parts used for replacement are warranted for the remainder of the original warranty.

1. To obtain warranty service, you must deliver product to King Technology or its nearest authorized dealer. Shipping expense are the purchaser's responsibility. The name of the nearest authorized dealer can be obtained by writing or calling King Technology at the address and telephone number provided below. 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 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 spas or pools. See your spa or pool dealer or

distributor for further information concerning shock treatments.

B. Control dial settings in excess of the recommended setting levels for trichlor or bromine can result in excess sanitizers being discharged into our spa or pool. This can result in bleaching or discoloration of areas around the spa or pool inlet or in some cases bleaching or discoloration of the entire spa or pool liner or paint.

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

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

Made in U.S.A.

Patent #4662387

U.S. Patents Pending

Foreign Patents Pending

Manufactured by: KING TECHNOLOGY, INC.

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

www.kingtechnology.com

PN #20-48-0115

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