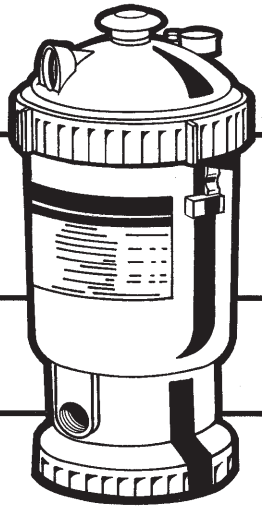
O W N E R ' S G U I D E

HAYWARD®

ReGenX™

Grid Element D.E. Filter

MODEL RG450 SERIES



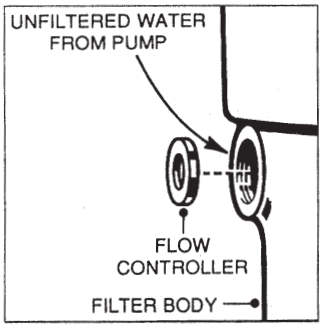
The ReGenX model RG450 is a high performance swimming pool filter with a maximum flow rating of 2,700 gallons (10.2 KL) per hour. Manufactured from Hayward's exclusive PermaGlassXL™ material, ReGenX is designed to provide years of trouble-free operation.

FEATURES

- Patent pending sunburst grid design ensures a balanced flow of water through your filter.
- Exclusive piston action regeneration instantly purges the grids of dirt and debris—extending the cleaning cycle of the filter.
- New glass reinforced, non-corrosive PermaGlassXL™ filter tank will provide years of trouble-free operation.
- Easy-Lok™ ring design allows quick access to all internal components.
- Unique safety latch prevents unwanted entry into the tank.
- Self-venting design automatically purges any air present in the system.

PUMP SELECTION

To power your ReGenX filter, select a continuous duty pump designed for above-ground pools, such as the Power-Flo™ LX. As a general guide, choose a pump with an average output rating of at least 40-50 gallons (151-189 Liters) per minute. A flow controller is furnished with each unit to ensure a hydraulic balance which maximizes performance of the filter system.



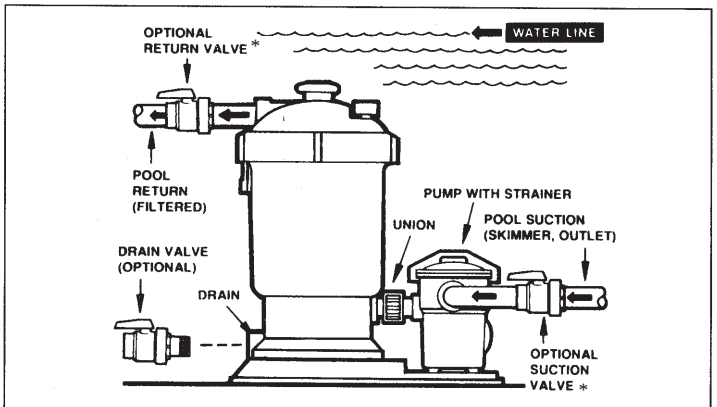
FILTER LOCATION

1. Though the filter is designed for outdoor use, it is advisable to protect electrical components from the weather. Select a well-drained area, one that will not flood when it rains.
2. For best pump performance, locate the system below the swimming pool water line. If the system must be located above the pool water line, it can be raised as high as 2 feet (0.61 m) above the pool water line. (NOTE: PRIMING WILL TAKE LONGER AS PUMP IS RAISED HIGHER ABOVE WATER LEVEL.)
3. Set the filter and pump on firm, level ground. Position the tank for easy access to the internals, pressure gauge and piston knob, with at least 24" (61 cm) of top clearance in order to regenerate properly. Position the filter so that it may drain by gravity.

PLUMBING

1. Use 1-1/4" or 1-1/2" I.D. flexible plastic pipe, or hose, joined with insert fittings and stainless steel clamps. If rigid PVC is used, be sure to provide unions for easy servicing.
2. All plumbing connections on the RG450 filter are 1-1/2" N.P.T. When making connections, use plastic male-end adapters. Apply three turns of Teflon tape or plastic pipe sealant to the male threads. Screw the fitting into the threads hand tight; then, using wrench, tighten one more full turn if necessary. Adapters have varying tolerances and overtightening with a wrench may only cause damage to the filter.
3. Refer to the diagrams for suggested valving. Ball-type valves are recommended where needed.
4. Securely hand tighten the union nut between the filter and pump.
5. Connect the pool suction plumbing between the skimmer, pool outlet, and pump.
6. Connect the pool return (inlet) plumbing.
7. A filter drain valve or plug is furnished with each filter and is all that is needed for complete filter draining. A manual air vent valve is furnished to aid in the bleeding of unwanted air when starting or draining the filter.
8. All electrical connections should be made in accordance with local codes.
9. Refer to pump instruction book for pump information.

PREFERRED FILTER LOCATION—**BELOW** WATER LINE



**Not furnished with filter.*

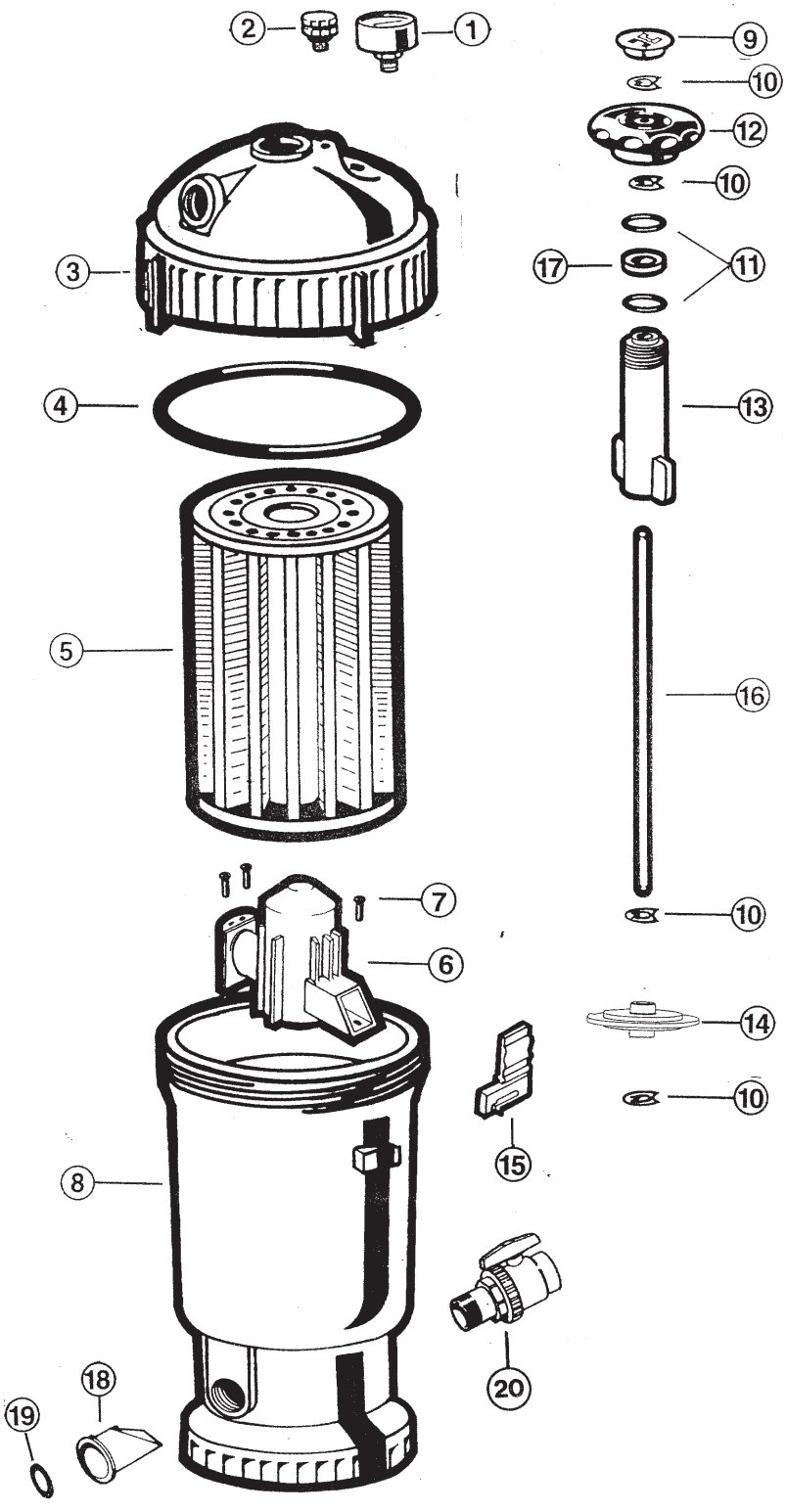
NOTE: ANSI/NSPI-4 Article V, standard for above-ground and on-ground pools, advises that components such as the filtration system, pumps and heater be positioned so as to prevent their being used as a means of access to the pool by young children.

PARTS

MODEL RG450

SERIES FILTER

REF. NO.	PART NUMBER	DESCRIPTION	NO. REQ'D.
1	ECX27091	Pressure Gauge	1
2	ECX1322A	Air Relief	1
3	RGX45B	Filter Head w/Lock Ring	1
4	RGX45G	Filter Head O-Ring	1
5	RGX55GE	Grid Element	1
6	RGX45D	Diffuser	1
7	RGX45Z1	Diffuser Screws	3
8	RGX45AA	Filter Body	1
9	RGX45L	Logo Cap	1
10	RGX45R1	Retainer Ring	4
11	SPX1082Z410	Piston O-Ring (pkg of 10)	2
12	RGX45K	Piston Knob	1
13	RGX45J	Seal Locator	1
14	RGX55PA	Piston Mechanism	1
15	CX400D	Locking Ring Latch	1
16	RGX45R	Piston Rod	1
17	RGX45F	Polyethelene Washer	1
18	ECX4077B1	Check Valve	1
—	ECX1005A	Snap Ring for Check Valve	1
19	ECX1055	Flow Controller	1
20	SP0723	1-1/2" Ball-Type Drain Valve	1



REGENX SPECIFICATIONS

Model No.	RG450	
Design Flow Rate	30 GPM	114 LPM
Pressure Loss at Design Flow Rate	1.0 PSI	0.07 BAR
Maximum Working Pressure	50 PSI	3.45 BAR
Required Clearance		
Side	18 IN	46 CM
Above	20 IN	51 CM
Recommended Amount of Diatomite (D.E.)	2 LBS.	0.91 KGS.

BEFORE STARTING THE FILTER

1. Obtain a supply of operating chemicals, D.E. (or cellulose based substitute), and a pool test kit. Use only the swimming pool grades of D.E. Consult your local dealer for further information and brand choices. In recent years, wood based cellulose products have been used as an alternative filter media to D.E.
2. Superchlorinate the pool water by adding unstabilized granular or liquid chlorine. Stabilized forms of chlorine are recommended for normal use after the initial clean-up of the water. Follow chemical manufacturer's recommendations for superchlorination and daily use.

STARTING THE FILTER

Be sure filter drain plug is closed. Open manual air vent valve a few turns and open suction and return valves (when used). **Caution: All suction and discharge valves must be open before operating the filter system. Failure to do so could cause severe personal injury and/or property damage.** Be sure the ReGenX Easy-Lok™ lid is secure and locked.

Prime and start the pump following the manufacturer's instructions. Air trapped in the system will automatically vent to the pool. When there is a steady flow of water back to the pool, the filter is ready for precoating. Be sure to close the manual vent valve. DO NOT operate the filter for more than one minute without the precoat charge.

PRECOATING

Scoop 2 lbs. (0.91 kgs) diatomite into the system through the skimmer as fast as the plumbing will take it. Note and record the pressure gauge reading after the diatomaceous earth has been added. This is the "pre-coat pressure." If using a cellulose filter media use approximately 1-1/4 Hayward scoops (5/8 lbs. or 0.28 kgs). For more detailed information, consult the manufacturer's recommendations. Note and record the pressure gauge reading after the cellulose filter media has been added. This is the "precoat pressure."

FILTERING

Filtration starts as soon as the filter has been precoated. As the filter removes the dirt and debris from the pool, the accumulated dirt causes a resistance to flow. As a result, the gauge pressure will rise and the flow will decrease. When the pressure rises 7-10 PSI (.49-.70 Bar) above the precoat pressure, regenerate the filter.

REGENERATION (EXTENDING THE CLEANING CYCLE)

Stop the pump. Unlock the piston knob. Move the piston up and down rapidly 6-10 times. When finished, lock the piston knob back in the lower position. Restart the pump and filtration will resume at or near the original flow pressure. You have just "regenerized" your D.E. and extended the cleaning cycle of your filter without backwashing, draining, or cleaning, saving your chemically-treated water, D.E. and time.

After each regeneration, and until the filter is cleaned, there may be a slight increase in the starting pressure. This is the result of dirt accumulating within the filter and is completely normal.

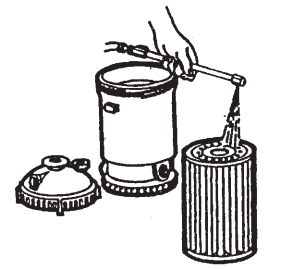
CLEANING/REMOVING GRID ELEMENT

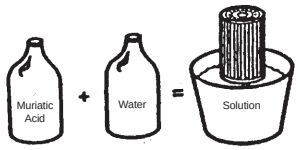
Recommended when the gauge pressure rises more than 10 PSI (0.70 Bar) in less than a 24 hour period.

1. Shut off the pump.
2. If filter is located below water level, close valves or block off discharge line to prevent back flow of water from the pool that may end up on your feet or unnecessarily lower your pool water level!
3. Unlock the piston knob and repeat regeneration process as described in REGENERATION.
4. Open the filter drain and the vent valve located at the top of the filter. This will accelerate the draining process.
5. Allow water and dirt to empty completely.
6. The filter should not have any water in it. Depress safety latch, unscrew and remove Easy-Lok lid (counterclockwise direction).
7. Carefully lift off lid and piston assembly, straight up, to gain access to the grid element.
8. Lift out grid element and clean as in the PREVENTATIVE MAINTENANCE section below.

PREVENTATIVE MAINTENANCE

1. Pressure wash cartridge inside and out with Hayward's Jet-Action Cleaning Wand (EC2024) or a garden hose.
2. Allow to dry and brush pleated surface areas.
3. To remove algae, suntan oil and body oils, soak for one hour in a solution of filter element cleaner. (See your local pool dealer).
4. To remove calcium or mineral deposits, soak in muriatic acid solution.
   *Caution: use a plastic container and take extreme care—harmful to eyes, skin and clothing. After cleaning, flush with water.





REINSTALLING GRID ELEMENT

1. Clean any collected debris from the bottom of the filter body.
2. Carefully replace grid element into the filter body ensuring that the element is even on the collector hub in the bottom of the filter body.
3. Place Easy-Lok lid so it is level on filter body, locating the notch under the lock-ring directly over the drain (See Fig. 1). Then turn clockwise until it engages and is secured by the safety latch.
4. Proceed as in STARTING THE FILTER and PRECOATING.

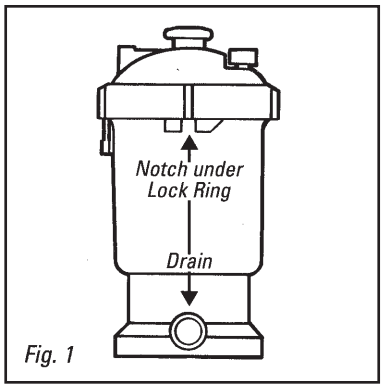


Fig. 1

CAUTION: Use a plastic container and take extreme care when handling cleaning agents as they can be harmful to eyes, skin and clothing. After cleaning, flush with water.

Hawyard grid elements are specially designed and engineered for use in ReGenX filters. For best results, use only genuine Hayward elements in your filter. The Hayward name is your guarantee of quality.

VACUUMING

Vacuuming can be performed directly into the filter whenever needed. For fastest results, regenerate the filter before and after each vacuuming period. For heavy spring clean-ups, we recommended using a Hayward SP0727 diverter valve to bypass the filter and accelerate the clean-up process. Consult your local Hayward dealer for a detailed explanation.

WINTERIZING

In areas where sub-freezing temperatures can be expected, the filter should be drained and/or removed from its operating location and stored indoors. Clean the grid element at the end of the pool season by using your garden hose with a high pressure nozzle or the Hayward EC2024 Jet-Action™ Cleaning Wand. You will then be prepared to enjoy your pool the next spring.

SERVICE AND REPAIRS

Consult your local authorized Hayward dealer or service center. No returns may be made directly to the factory without the expressed written authorization of Hayward Pool Products, Inc.

ALGAE CONTROL

Algae is a form of plant life which can vary in size from a few thousandths of an inch to the size of a small tree. Of the many forms of algae, those most frequently found in swimming pool water are microscopic in size and green in color.

Algae readily grows in sunlight and can, under favorable conditions, quickly overgrow a swimming pool turning it completely green in just a few hours. On the other hand, swimming pool water can be kept unfavorable to algae growth simply by maintaining a chlorine level of at least 1.0 ppm in the water at all times. The chlorine level should be checked at least once a day using a suitable test kit.

If an algae condition develops and the pool water "blooms" green, superchlorination of the pool will be necessary to clear it. Add unstabilized granular chlorine, or liquid chlorine. Follow chemical manufacturer's recommendation for superchlorination. The algae will quickly become inactive and can then be removed by the filter. Live algae on the other hand, multiplies so fast that the filter cannot keep up with its growth rate. In an active algae situation, it may be necessary to regenerate the ReGenX filter as frequently as every 2 to 3 hours.

When correctly used, commercial algaecides are effective against algae, though algaecides should be used in conjunction with, and not as a substitute for regular chlorination or superchlorination.

Maintaining a chlorine level of at least 1.0 ppm in the pool water at all times is the most effective way to prevent algae growth in swimming pools.

POOL CHEMISTRY GUIDELINES

SUGGESTED POOL CHEMISTRY LEVELS		ACTION REQUIRED TO CORRECT POOL CHEMISTRY	
		TO RAISE	TO LOWER
pH	7.2 to 7.6	Add Soda Ash	Add Muriatic Acid or Sodium Bisulphate
TOTAL ALKALINITY	100 to 130 ppm	Add Sodium Bicarbonate	Add Muriatic Acid
CHLORINE (UNSTABILIZED)	0.3 to 1.0 ppm	Add Chlorine Chemical	No action - chlorine will naturally dissipate
CHLORINE (STABILIZED)	1.0 to 3.0 ppm	Add Chlorine Chemical	No action - chlorine will naturally dissipate
CHLORINE STABILIZER (Cyanuric Acid)	40 to 70 ppm	Add Stabilizer	Dilution - partially drain & refill pool with water that has not been treated with Cyanuric Acid.

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