

HAYWARD® SUPER STAR ♦ CLEAR™ CARTRIDGE FILTER

MODELS C2000, C3000, C4000, C5000

Hayward Super Star-Clear filters are high performance swimming pool filters with filtration ratings to 9000 gallons (34 KL) per hour. Manufactured from durable, corrosion-proof materials, they are designed for continuous or intermittent operation, for installation above or below the pool water line, for fresh or salt water swimming pools or spas. Star-Clear filters utilize multiple reusable, reinforced polyester filter cartridge elements to provide a high degree of water clarity and long filter cycles with absolute minimum care.

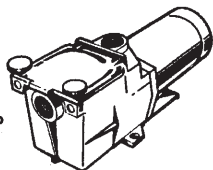
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PUMP SELECTION AND LOCATION

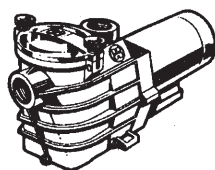
To power your filter, select a continuous duty pump designed for swimming pool or spa service.

It is important to first determine where your pump and filter will be located. If above the water line, a self-priming pump must be used. Self-priming pumps (such as Hayward Super Pump®, Super II™ or Max-Flo™) have the ability to lift water from a lower level and prime automatically.

Select a pump with an average output range suitable for the filter's capacity. Other considerations are operation of hydrotherapy fittings, automatic cleaners, etc. Your dealer will help you select the proper size pump for your system.



SUPER PUMP



SUPER II

FILTER LOCATION

1. Since plumbing fittings offer a resistance to water flow, position the filter as close to the swimming pool as practical. Keep the number of fittings to a minimum. Select a well-drained area, one that will not flood when it rains.
2. The filter should be placed on a *level* concrete slab, very firm ground, or equivalent, as recommended by your pool dealer. Allow a top clearance for cartridge removal of 18" (457 mm) for C2000, C3000 and C4000, 22" (559 mm) for C5000. Be sure filter, pump, drain and pressure gauge are accessible for convenient operation.
3. Position filter so the tank can drain by gravity.
4. If practical, place pump and filter in the shade to shield it from continuous, direct heat from the sun.

PLUMBING

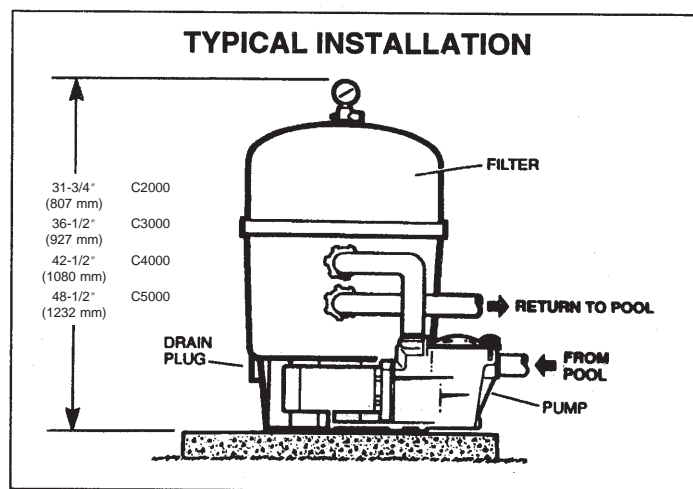
1. Use 1-1/2" or 2" piping. Connections are 1-1/2" socket (solvent weld) or 2" male slip. We suggest unions be provided for easy servicing.
2. Refer to the diagram for typical installation. Ball valves are recommended where needed. While all systems vary, the main consideration is to provide the desired control of water flow from the pool to the pump and filter and back to the pool. When the filter is located below the water level, provide valves to prevent back flow of water to the filter during cleaning and routine servicing.

3. Connect the pool suction plumbing between the skimmer, pool outlet, etc., and the pump.
4. Install the pool return plumbing.
5. If pressure gauge is not installed, apply Teflon tape to the gauge threads, and *carefully* screw the gauge into the gauge adapter assembly.
6. A filter drain 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 bleeding off unwanted air when starting the filter. The auto air relief provides air removal during operation.
7. All electrical connections should be made in accordance with local codes.
8. Check for joint leaks before operating.
9. Refer to pump instruction booklet for pump information.

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.

BEFORE STARTING THE FILTER

Superchlorinate the pool water by adding unstabilized granular or liquid chlorine. Stabilized forms of chlorine are recommended for normal daily use after the initial clean up of the water. Follow chemical manufacturer's recommendations for superchlorination and daily use.



NOTE: If rigid piping is used, installation of a piping union is recommended for ease of future servicing.

IMPORTANT SAFETY INSTRUCTIONS.

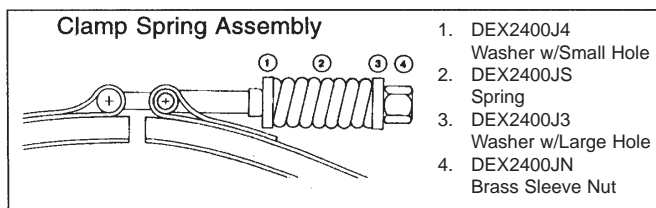
READ AND FOLLOW ALL INSTRUCTIONS.

When installing and using this equipment, basic safety precautions must always be followed. This filter operates under high pressure. Failure to follow instructions may result in serious injury.

- REMOVE CLAMP TAPE. DO NOT LEAVE TAPE EXPOSED TO SUN.
- MAKE SURE CLAMP IS LOCATED AND CENTERED PROPERLY OVER THE FILTER FLANGE.
- BOTH SIDES OF THE CLAMP MUST BE TIGHTENED FIRMLY AND EVENLY UNTIL SPRING COILS TOUCH EACH OTHER (SEE ILLUSTRATION BELOW).
- FINAL SPACE BETWEEN BOTH *CLAMP HALVES* SHOULD BE EQUAL.

CAUTION: All suction and discharge valves must be open when starting the system. Failure to do so could result in severe personal injury and/or property damage.

The following clamp spring assembly, which includes a spring, two washers (small and large hole) and a sleeve nut, provides a visual means of ensuring that the clamp is tight.



STARTING THE FILTER

BE SURE CENTER CLAMP IS SECURE. Be sure filter drain plug is closed. Open Air Relief Valve at top of filter a few turns. Open suction and return valves (when used). Stand clear of filter and prime and start the pump, following the manufacturer's instructions. Air trapped in the system will automatically vent to the pool and out the Air Relief Valve. Close Air Relief Valve when a steady stream of water emerges.

FILTERING

Filtration starts as soon as flow is steady through the filter. As the filter cartridge removes dirt from the pool water, 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-.69 Bar) above the starting pressure, or when flow decreases below desired rate, clean or replace the filter cartridges.

CLEAN/REPLACE CARTRIDGES

Removing Cartridge Elements

1. Shut off the pump.
2. If filter is located below water level, close valves (or block off suction and discharge lines) to prevent backflow of water from pool.
3. Unscrew and remove drain plug and allow water to drain from filter. Close drain plug. (Note: To assist draining process, open air vent a few turns.)
4. Disassembly:
 - a. Using a 9/16" wrench, alternately loosen both clamp sleeve nuts. Remove one clamp sleeve nut assembly (spring, two washers and sleeve nut) and carefully remove clamp.
 - b. To remove Filter Head, tap it on the side to break seal at center of tank OR insert a blunt screwdriver into one of the notches located behind Connector Fittings, or 90° to the *left* of the Connector Fittings, and twist to lift filter head slightly. DO NOT grasp gauge assembly when removing filter head—breakage will result.
5. To Remove Cartridges:
 - a. Lift off top closure plate.
 - b. Remove cartridges from bottom collector manifold by using a slight rocking motion and lifting up.
 - c. Clean cartridge. (see Cleaning Cartridges)

Reinstalling Cartridges

1. Flush and drain any dirt or debris from the bottom of the filter tank.
2. Carefully replace cartridges over hubs on bottom manifold. Place top closure plate securely into top of cartridges.
3. Clean and lightly lubricate Tank O-ring and carefully place over Filter Body lip.
4. Clean Filter Head flange sealing surface, and place over Tank O-ring, pressing down firmly and evenly to seat the Filter Head in place.
5. Replace Clamp Assembly. Make sure clamp is located and centered properly over the filter flange. If Clamp is tight, tap Clamp with rubber mallet or block of wood to help seat it. Insert threaded stud through retainer and secure with Clamp Spring Assembly (be sure to position small and large hole washers properly—see illustration in IMPORTANT SAFETY INSTRUCTIONS).

In some cases it may be necessary to use the two-part filter clamp to assist in assembling the filter cover to the filter base. With one nut, spring and washer assembly already removed, loosen the remaining clamp nut to maximize clamp opening. If Clamp is tight, tap Clamp with rubber mallet or block of wood to help seat it as you are tightening nuts. If the two (2) clamp springs (DEX2400JS) are temporarily removed in order to fully extend the clamp bolts, the clamp springs and washers **MUST** be reassembled as shown in the CLAMP SPRING ASSEMBLY diagram in IMPORTANT SAFETY INSTRUCTIONS. Tighten sleeve nuts alternately to secure Clamp firmly and evenly to form a good seal (be sure spring coils touch each other and final space between Clamp halves is even—see illustration in IMPORTANT SAFETY INSTRUCTIONS).
6. Install Drain Plug, open pool suction and return valves and proceed as in STARTING THE FILTER.

Cleaning Cartridges

The cartridge filter element can be cleaned by pressure washing inside and out with a garden hose. (The cartridge is easier to clean when dry.) After hosing the cartridge, for best results, allow cartridge to dry and carefully brush pleated surface areas to remove fine particles.

Algae, suntan oil and body oils can form a coating on the cartridge pleats which may not be thoroughly removed by hosing. To remove such materials, soak the cartridge in a solution of filter element cleaner (various brands are available at pool dealer). Follow manufacturer's directions for use and allow an hour for soaking. Hose thoroughly before reinstalling the filter.

If calcium or mineral deposits are excessive, the cartridge may be restored to "like new" condition by soaking in muriatic acid. Use commercially available 20% muriatic acid added to water in 1 to 1 ratio. 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.

A spare cartridge filter element is an excellent investment. It provides convenience and ensures that your filter will always be ready to operate at peak efficiency.

Hayward cartridges are specifically designed and engineered for use in Star-Clear filters. For best results, use only genuine Hayward Star-Clear cartridges in your filter. Order *Model No. CX470XRE, CX570XRE, CX870XRE or CX1260RE* from your dealer. The Hayward name is your guarantee of quality.

VACUUMING

Vacuuming can be performed directly into the filter whenever needed. Clean cartridges after vacuuming, if required.

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. Remove and clean cartridges. Reinstall cartridges in filter tank.

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 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

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.

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.

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.

PLEASE REALIZE . . .

Pure, clear swimming pool water is a combination of two factors—adequate filtration and proper water chemistry balance. One without the other will not give the clean, clear water you desire.

Your filter system is designed for continuous operation. However, this is not necessary for most swimming pools. You can determine your filter operation schedule based on your pool size and usage. Be sure to operate your filtration system

long enough each day to obtain at least one complete turnover of your pool water.

To properly sanitize your pool, maintain a free chlorine level of 1 to 3 ppm and a pH range of 7.2 and 7.6. Insufficient chlorine or an out of balance pH level will permit algae and bacteria to grow in your pool and make it difficult for your filter to properly clean the pool water.

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.



HAYWARD POOL PRODUCTS, INC.

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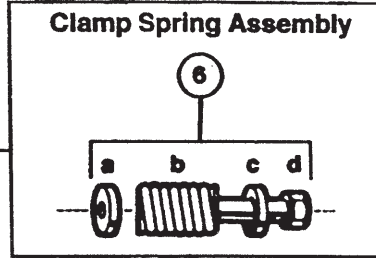
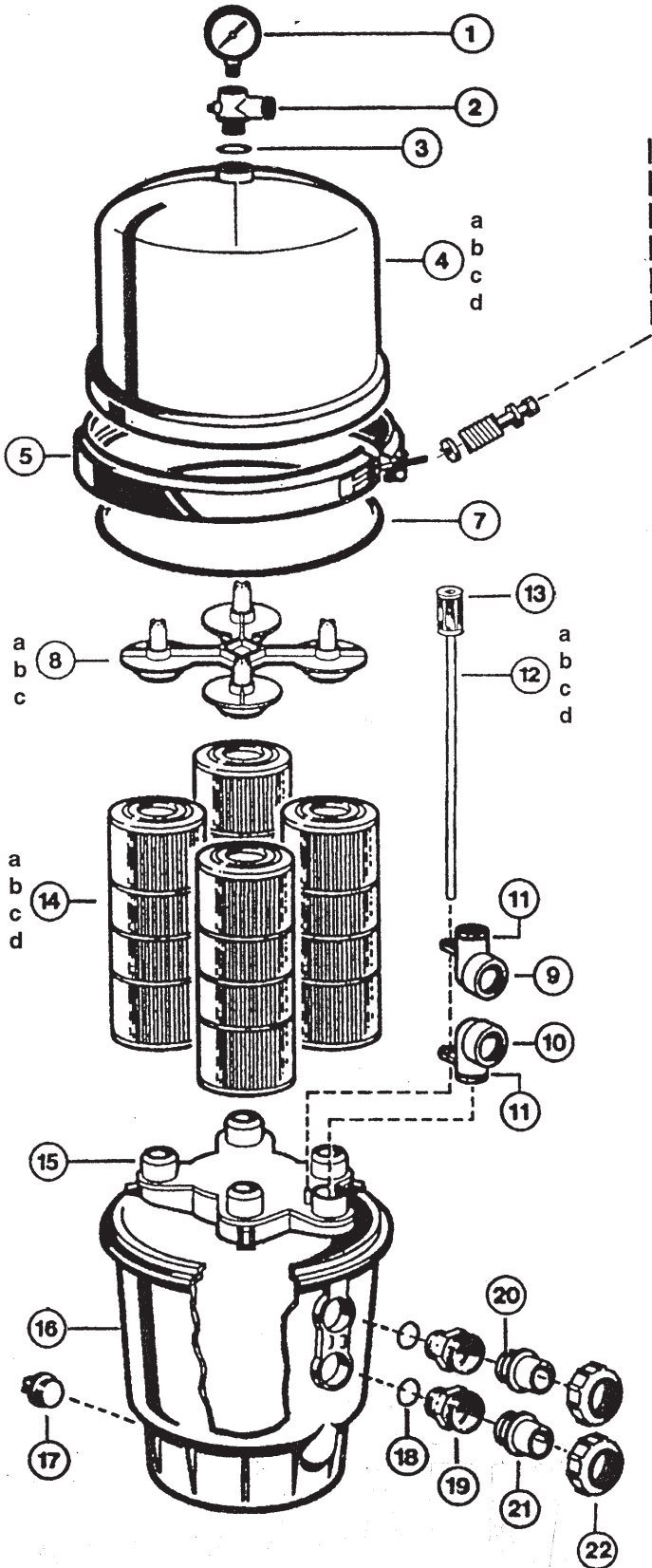
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SUPER STAR-CLEAR SPECIFICATIONS

MODEL NO.	EFFECTIVE FILTRATION AREA		DESIGN FLOW RATE				PRESSURE LOSS AT DESIGN FLOW RATE				MAXIMUM WORKING PRESSURE		REQUIRED CLEARANCE			
			RESIDENTIAL		PUBLIC		RESIDENTIAL		PUBLIC				SIDE		ABOVE	
	FT ²	M ²	GPM	LPM	GPM	LPM	PSI	BAR	PSI	BAR	PSI	BAR	IN	CM	IN	CM
C2000	200	19	75	284	75	284	2.1	0.15	2.1	0.15	50	3.45	18	46	18	46
C3000	300	28	112	424	112	424	5.1	0.36	5.1	0.36	50	3.45	18	46	18	46
C4000	400	37	150	568	150	568	6.8	0.47	6.8	0.47	50	3.45	18	46	18	46
C5000	500	47	150	568	150	568	6.8	0.47	6.8	0.47	50	3.45	18	46	22	56



PARTS Super Star-Clear Models C2000, C3000, C4000, C5000

REF. NO.	MODEL NUMBER	DESCRIPTION	NO. REQ'D.
1	ECX270861	Pressure Gauge	1
2	DEX2400S	Relief Valve/Gauge Adapter Assy.	1
---	DEX2400Z3A	O-Ring for Relief Valve Stem (Set 3)	1
3	SX200Z5	Relief Valve Assembly O-Ring	1
4a	DEX2400BT	Filter Head (C2000)	1
4b	DEX3600BT	Filter Head (C3000)	1
4c	DEX4800BT	Filter head (C4000)	1
4d	DEX6000BT	Filter Head (C5000)	1
5	DEX2400J	Clamp Assembly	1
6a	DEX2400J4	Washer w/Small Hole	2
6b	DEX2400JS	Spring	2
6c	DEX2400J3	Washer w/Large Hole	2
6d	DEX2400JN	Brass Sleeve Nut	2
7	DEX2400K	Filter Tank O-Ring	1
8a	CX2000DA	Top Closure Plate (C2000)	1
8b	CX3000DA	Top Closure Plate (C3000, C4000)	1
8c	CX5000DA	Top Closure Plate (C5000)	1
9	CX3000F1B	Inlet Elbow	1
10	CX3000FB	Outlet Elbow	1
11	DEX360M	O-Ring	1
12a	CX800Z4	Air Relief Tube	1
12b	CX3000Z3	Air Relief Tube	1
12c	CX4000Z3	Air Relief Tube	1
12d	CX5000Z3	Air Relief Tube	1
13	CX3000J	Air Tube Screen	1
14a	CX470XRE	Cartridge Element (C2000)	4
14b	CX570XRE	Cartridge Element (C3000)	4
14c	CX870XRE	Cartridge Element (C4000)	4
14d	CX1260RE	Cartridge Element (C5000)	4
15	CX3000C	Bottom Collector Manifold	1
16	DEX2400A1T	Filter Body	1
17	SPX1022C	1-1/2" Drain Plug w/O-Ring	1
18	SX360Z1	O-Ring	2
19	DEX360FB	Bulkhead Fitting	2
20	SX200Z4	O-Ring	2
21	SX240F	1-1/2" SKT. x 2" SLIP Connector	2
22	SX200R	Locknut	2

IMPORTANT: For winterizing, in addition to removing the drain plug at the bottom of the filter, please also make sure to remove the two screws at the bottom of the manifold so that the filter and the manifold can be drained thoroughly.

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