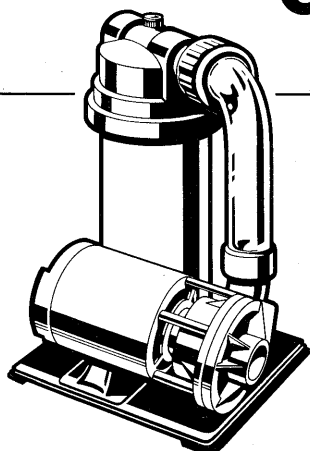


HAYWARD® MICRO STAR★CLEAR™ CARTRIDGE FILTER-SYSTEMS

MODEL C2001540LS SERIES



Your Micro Star-Clear cartridge filter has an output rating of 1400 gallons (5299 L) per hour. The filter and pump are combined on a molded mounting base and are manufactured from durable, corrosion-proof materials. The system is designed for installation below the pool water line.

The Micro Star-Clear filter system utilizes a reusable single element, reinforced polyester filter cartridge to provide a high degree of water clarity with absolute minimum care. Removal of the cartridge for routine cleaning is fast and easy to do.

The SP1540 series Power-Flo LX pump is a non-corrosive centrifugal pump with pressure, flow and operation designed for swimming pool service and may be operated on an intermittent or continuous basis.

SYSTEM LOCATION

1. Though the system 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. Position the system below the swimming pool water line and as close to the pool as possible. Set the mounting platform level. Allow a minimum clearance for cartridge removal. Be sure the pipe connections, drain, etc., are accessible for convenient operation and cartridge removal.

TO ASSEMBLE THE SYSTEM

1. Place pump and motor on mounting base. Align holes in motor base with holes in mounting base and secure with two screws and washers provided.
2. Securely thread sweep elbow, with 3-4 wraps of Teflon pipe tape, into outlet of pump. Position so that large thread end points back toward the motor, at an angle, toward corner of base.
3. Thread the ball end of union, with union nut, into filter connection marked "IN." Use Teflon tape (3-4 wraps on thread) and screw in as far as possible hand tight, then one additional turn with a wrench.
4. Adjust ball and socket and join by hand tightening union nut. Do not overtighten.
5. All plumbing connections on the system are 1-1/2" N.P.T. When making connections, use plastic male-end adapters and flexible hose. Apply three turns of Teflon tape or plastic pipe sealant to the male threads. Screw the fitting into the thread hand tight; then using a wrench, tighten one more full turn. Additional tightening is unnecessary and could result in damage to components.

NOTE: For extra convenience, you may wish to install valves on the inlet and discharge of the system to prevent back flow of water when removing cartridge. See dealer for further information.

6. Connect the pool suction plumbing between the skimmer pool outlet, and the pump. Connect the pool return (inlet) plumbing.
7. A 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.
8. All electrical connections must be made in accordance with local codes.
9. Check for joint leaks before operating the system.
10. Refer to pump instruction booklet for pump information.

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.

STARTING THE FILTER

Open manual air vent valve a few turns. **CAUTION: All suction and discharge valves must be open when starting the system. Failure to do so could cause severe personal injury and/or property damage.**

Prime and start the pump following the manufacturer's instructions. Air trapped in the system will automatically vent to the pool and out vent valve. Close vent valve as soon as air is vented.

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, pressure will rise and the flow will decrease. When flow decreases below desired rate, clean or replace the filter cartridge.

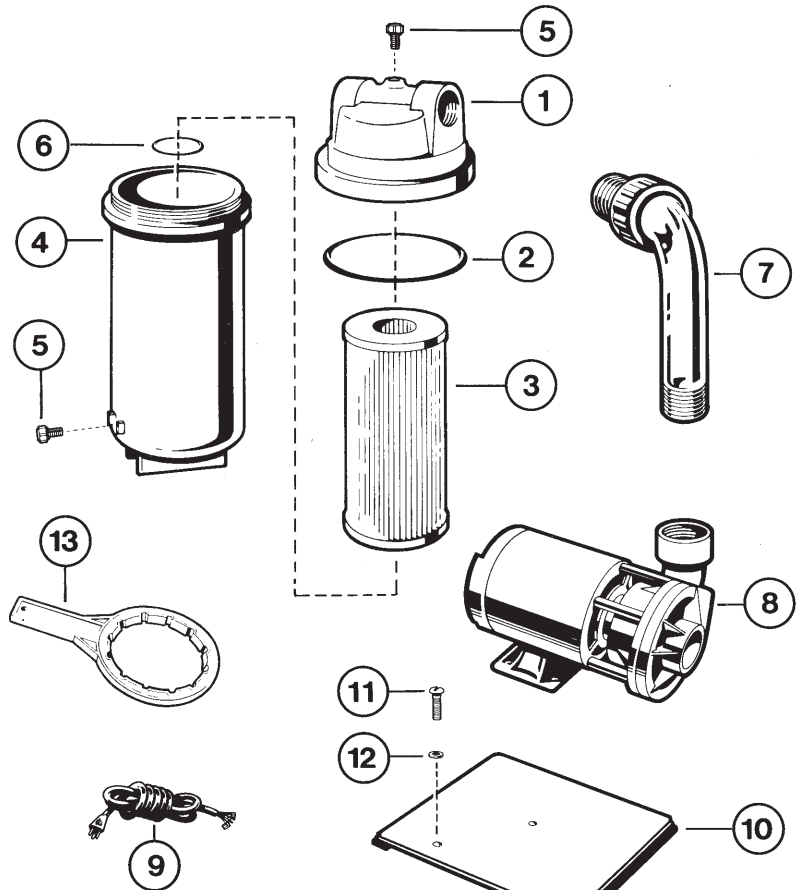
CLEAN/REPLACE CARTRIDGE

Removing Cartridge Element

1. Shut off the pump.
2. Block off suction and discharge lines (close valves if used) to prevent back flow of water from pool.
3. Open top air relief valve and remove drain valve to allow water to drain from filter.
4. Unscrew union nut, freeing filter from rigid union connection.
5. Hold filter head firmly and unscrew filter housing to remove. If difficult to unscrew, apply a lever between the two tab extensions on the bottom of the filter housing and apply a slight pressure to assist in freeing the thread seal. Or, apply optional S200KT wrench (if supplied) to bottom side tabs.
6. Remove cartridge element and clean. Or, replace with clean, spare cartridge. (See Cleaning Cartridge)

PARTS Model C2001540LS

REF. NO	PART NO.	DESCRIPTION	NO. REQ'D.
1	CX120AA	Filter Head	1
2	CX120D	O-Ring	1
3	CX200RE	Cartridge Element - 20 sq. ft.	1
4	CX120B	Filter Body Housing	1
5	ECX1321A	Air Relief Valve with O-Ring	2
6	SPX1485C	Gasket	1
7	SPX14858PAK	Threaded Elbow Union Assembly	1
8	SP1540CLS	Power-Flo LX Pump	1
9	SPX1500WA	6 Ft. Cord Set	1
10	ECX12891	Mounting Base	1
11	ECX1108	Mounting Screw	2
12	ECX1109	Washer	2
13	S200KT	Wrench Tool for Body (optional)	---



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.

Reinstalling Cartridge Element

1. Clean any collected debris from the bottom of the filter housing.
2. Reinstall cartridge in filter housing. Be sure O-ring is in place on threads.
3. Clean O-ring. For ease of future disassembly, apply a very light film of a dilute solution of non-granulated liquid-type soap to O-ring and threads.
4. Screw filter housing with O-ring into filter head. Do not overtighten. Tighten drain valve and top air relief valve.
5. Secure to system with union nut.
6. Proceed as in Starting the Filter.

Cleaning Cartridge

The cartridge filter element can be cleaned by pressure washing inside and out with a garden hose. Rotate cartridge, hosing from top down. (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 available at pool dealer). Follow manufacturer's directions for use

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

and allow an hour for soaking. Hose thoroughly before reinstalling in 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.

VACUUMING

Vacuuming can be performed directly into the filter whenever needed. Clean cartridge 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 cartridge. Reinstall cartridge in filter tank. Tighten cover only a few turns when storing.

SERVICE & REPAIRS

Consult your local and 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.

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.

When correctly used, commercial algacides are effective against algae, though algacides 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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