PowerFlo Matrix® Pump

Owner's Manual

Contents

The Hayward PowerFlo Matrix Pump Series is specifically engineered for the demanding requirements of today's above-ground swimming pools. The advanced design reduces maintenance requirements while providing superior performance.

IMPORTANT SAFETY INSTRUCTIONS

Basic safety precautions should always be followed, including the following: Failure to follow instructions can cause severe injury and/or death.

⚠ This is the safety-alert symbol. When you see this symbol on your equipment or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

⚠ WARNING warns about hazards that **could** cause serious personal injury, death or major property damage and if ignored presents a potential hazard.

⚠ CAUTION warns about hazards that **will** or **can** cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe.

The NOTICE label indicates special instructions that are important but not related to hazards.

Hayward Pool Products
620 Division Street, Elizabeth, NJ 07207
Phone: (908) 355-7995
www.hayward.com

HAYWARD®

⚠ WARNING - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

⚠ WARNING – Suction Entrapment Hazard.

Suction in suction outlets and/or suction outlet covers which are, damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:

Hair Entrapment- Hair can become entangled in suction outlet cover.

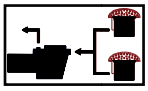
Limb Entrapment- A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.

Body Suction Entrapment- A negative pressure applied to a large portion of the body or limbs can result in an entrapment.

Evisceration/ Disembowelment - A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/ disembowelment.

Mechanical Entrapment- There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.

⚠ WARNING - To Reduce the risk of Entrapment Hazards:



- When outlets are small enough to be blocked by a person, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of three feet (3') [1 meter] apart, as measured from near point to near point.
- Dual suction fittings shall be placed in such locations and distances to avoid "dual blockage" by a user.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum system flow rate shall not exceed the flow rating of as listed on Table 1.
- Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- In addition two or more suction outlets per pump installed in accordance with latest ASME, APSP Standards and CPSC guidelines, follow all National, State, and Local codes applicable.
- Installation of a vacuum release or vent system, which relieves entrapping suction, is recommended.

⚠ WARNING – Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.

⚠ WARNING – Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.

⚠ WARNING – Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every seven years or if found to be damaged, broken, cracked, missing, or not securely attached.

⚠ CAUTION – Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children. To reduce risk of injury, do not permit children to use or climb on this product. Closely supervise children at all times. Components such as the filtration system, pumps, and heaters must be positioned to prevent children from using them as a means of access to the pool.

⚠ WARNING – Hazardous Pressure. Pool and spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during pump start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp due to pressure in the system, which could cause property damage, severe personal injury, or death. Before servicing pool and spa water circulation system, all system and pump controls must be in off position and filter manual air relief valve must be in open position. Before starting system pump, all system valves must be set in a position to allow system water to return back to the pool. Do not change filter control valve position while system pump is running. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air or air and water) is discharged.

⚠ WARNING – Separation Hazard. Failure to follow safety and operation instructions could result in violent separation of pump and/or filter components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, filters manual air relief valve must be in open position. Do not operate pool and spa circulation system if a system component is not assembled properly, damaged, or missing. Do not operate pool and spa circulation system unless filter manual air relief valve body is in locked position in filter upper body. **Never operate or test the circulation system at more than 50 PSI. Do not purge the system with compressed air**. Purging the system with compressed air can cause components to explode, with risk of severe injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.

HAYWARD®

⚠ WARNING – **Risk of Electric Shock.** All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

⚠ WARNING – **Risk of Electric Shock** Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard. Electrical ground all electrical equipment before connecting to electrical power supply.

⚠ WARNING – **Risk of Electric Shock** Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

Notes to electrician: Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG (8.4 mm^2) [No. 6 AWG (13.3 mm^2) for Canada] solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub.
IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

⚠ WARNING – **Risk of Electric Shock** . The electrical equipment must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the electrical equipment without the test button being pushed, a ground current is flowing, indicating the possibility of an electrical shock. Do not use this electrical equipment. Disconnect the electrical equipment and have the problem corrected by a qualified service representative before using.

⚠ CAUTION – HAYWARD® pumps are intended for use with permanently-installed pools and may be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

⚠ WARNING – **Risk of Hyperthermia.** To avoid hyperthermia the following "Safety Rules for Hot Tubs" are recommended by the U.S. Consumer Product Safety Commission.

1. Spa or hot tub water temperatures should never exceed 104°F [40°C]. A temperature of 100°F [38°C] is considered safe for a healthy adult. Special caution is suggested for young children. Prolonged immersion in hot water can induce hyperthermia.
2. Drinking of alcoholic beverages before or during spa or hot tub use can cause drowsiness, which could lead to unconsciousness and subsequently result in drowning.
3. Pregnant women beware! Soaking in water above 100°F [38°C] can cause fetal damage during the first three months of pregnancy (resulting in the birth of a brain-damaged or deformed child). Pregnant women should adhere to the 100°F [38°C] maximum rule.
4. Before entering the spa or hot tub, users should check the water temperature with an accurate thermometer; spa or hot tub thermostats may err in regulating water temperatures by as much as 4°F (2.2°C).
5. Persons taking medications, which induce drowsiness, such as tranquilizers, antihistamines or anticoagulants, should not use spas or hot tubs.
6. If the pool/spa is used for therapy, it should be done with the advice of a physician. Always stir pool/ spa water before entering the pool/spa to mix in any hot surface layer of water that might exceed healthful temperature limits and cause injury. Do not tamper with controls, because scalding can result if safety controls are not in proper working order.
7. Persons with a medical history of heart disease, circulatory problems, diabetes or blood pressure problems should obtain a physicians' advice before using spas or hot tubs.
8. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above normal body temperature of 98.6°F [37°C]. The symptoms of Hyperthermia include: drowsiness, lethargy, dizziness, fainting, and an increase in the internal temperature of the body.

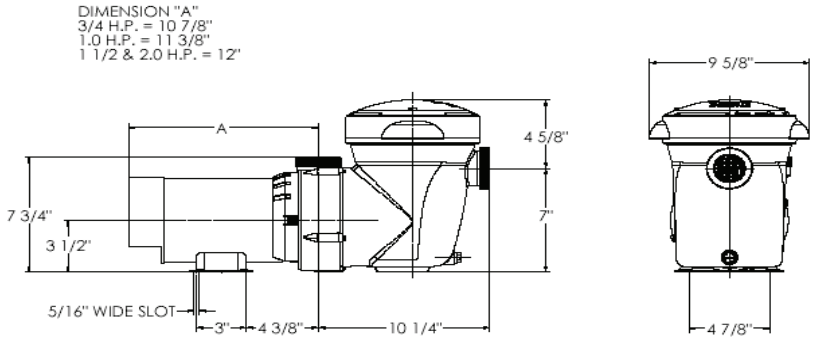
The effects of Hyperthermia include:

1. Unawareness of impending danger.
2. Failure to perceive heat.
3. Failure to recognize the need to leave the spa.
4. Physical inability to exit the spa.
5. Fetal damage in pregnant women.
6. Unconsciousness resulting in danger of drowning.

SAVE THESE INSTRUCTIONS

Product Specifications

Dimensions



General Information

Introduction

This manual contains information for the proper installation and operation of the Hayward PowerFlo Matrix® pump.

⚠ WARNING - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

Product Features

- The above-ground industry's largest above-ground strainer basket for large debris collection with minimal maintenance.
- Horizontal/Vertical Discharge Feature – Simply converts from horizontal to vertical discharge orientation with the press of a button.
- Quick connect intake and discharge pipe connection.
- 'C' clip connector allows for easy disengagement of strainer housing in a matter of seconds for hassle-free maintenance.
- Heavy duty, high performance motor with integrated automatic thermal overload protector for years of operation.
- High quality impeller with wide openings to prevent clogging by leaves and large debris.
- Durable, corrosion-proof housing for years of dependable service and all-weather performance.
- Heat resistant, double-sized mechanical pump seal for long, lasting efficiency.
- Energy-efficient, protected rear-mounted switch.
- Integral drain plug for easy winterization of pump

Installation Instructions

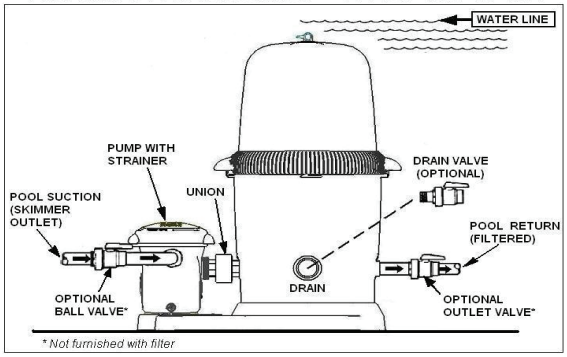
Pump Location

Locate the system below the pool water line, for best pump performance.

Install pump on a firm, level base or pad to meet all local and national codes. The field supplied base or pad must be level.

Though the pump is designed for outdoor use, it is strongly advised to protect the electrical components from the weather. Select a well-drained area, one that will not flood when it rains. Pump motors require free circulation of air for cooling. Do not install pump in a damp or non-ventilated location.

PREFERRED FILTER LOCATION — **BELOW** WATER LINE



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.

Pump Mounting

Fasten pump to base or pad with screws or bolts to reduce vibration and stress on pipe or hose joints.

Hayward recommends a minimum clearance around the pad of 18" to allow adequate access for servicing pump and piping.

Plumbing

Installing union connections at the suction and outlet ports is recommended, to facilitate servicing of pump and to allow for indoor storage during the winter months,.

Use **Teflon tape** to seal threaded connections on molded plastic components. All plastic fittings must be new or thoroughly cleaned before use. **NOTE: Do NOT use Plumber's Pipe Dope as it may cause cracking of the plastic components.**

When applying **Teflon tape** to plastic threads, wrap the entire threaded portion of the male fitting with one to two layers of tape. Wind the tape clockwise as you face the open end of the fitting, beginning at the end of the fitting.

The pump suction and outlet ports have molded-in thread stops. Do **NOT** attempt to force hose connector fitting past this stop. It is only necessary to tighten fittings enough to prevent leakage. Tighten fitting by hand and then use a tool to engage fitting an additional 1 ½ turns. Use care when using Teflon tape as friction is reduced considerably; **do NOT over-tighten** fitting or you may cause damage. If leaks occur, remove connector, clean off old Teflon tape, re-wrap with one to two additional layers of Teflon tape, and re-install connector.

Electrical

⚠ WARNING – **Risk of Electric Shock.** All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). **All electrical wiring should be performed by a qualified professional.** Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

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Insure that the electrical supply available agrees with the motor's voltage, phase, and cycle, and that the wire size is adequate for the H.P. (KW) rating and distance from the power source.

Voltage

Voltage at motor **MUST NOT** be more than 10% above or below motor name plate rated voltage, or motor may overheat, causing overload tripping and reduced component life. If voltage is less than 90% or more than 110% of rated voltage when motor is running at full load, consult power company.

Grounding/Bonding

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Notes to electrician: Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG (8.4 mm^2) [No. 6 AWG (13.3 mm^2) for Canada] solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub.
IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

Permanently ground motor. Use green ground terminal provided under motor canopy or access place; use size and type wire required by code. Connect motor ground terminal to electrical service ground.

Wiring

If other lights or appliances are also on the same circuit, be sure to add their amp loads before figuring wire and circuit breaker sizes. (NOTE: If unsure how to do this or if this is confusing, consult a licensed electrician). Use the load circuit breaker as the Master On-Off switch.

NOTE: If you do not use conduit when wiring motor, be sure to seal wire opening on end of motor to prevent dirt, bugs, etc., from entering.

New Installation – Start-Up & Operation

Selecting Pump's Discharge Position (4 Steps)

Your Hayward Power-Flo Matrix™ pump can be easily positioned for horizontal or vertical water discharge.

Step 1: Remove **ALL** plumbing attached to pump. Remove pump from base (if applicable).

Step 2: Remove strainer housing.

- Disengage and lift off strainer cover.
- Remove strainer basket.
- Lift up on strainer 'C' clip and remove. (See Fig. 1)
- Slide strainer housing forward and remove.

Step 3: Press positioning button located on pump housing and rotate discharge port to desired position.
(NOTE: Discharge port will only rotate ¼ turn.)

Step 4: Assemble the pump by following the above directions in the reverse manner.

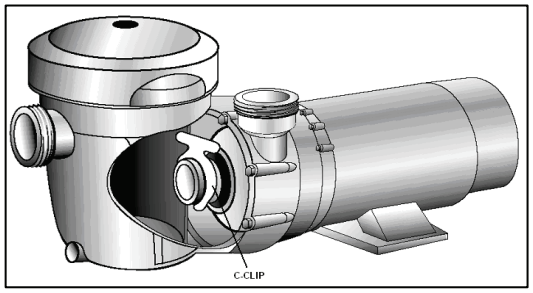


Figure 1

Prior to Start-Up

Fill strainer housing with water to suction pipe level. **NEVER operate the pump without water**. Water acts as a coolant and lubricant for the mechanical shaft seal.

⚠ **WARNING** – NEVER run pump dry. Running pump dry may damage seals, causing leakage and flooding. Fill strainer housing with water before starting motor.

⚠ **CAUTION** – Do NOT add chemicals to pool/spa system directly in front of pump suction. Adding undiluted chemicals may damage pump and voids warranty.

⚠ **CAUTION** – Before removing strainer cover:

1. **STOP PUMP** before proceeding.
2. CLOSE VALVES in suction and outlet pipes.
3. RELEASE ALL PRESSURE from pump and piping system.

⚠ **WARNING** – If pump is being pressure tested, be sure pressure has been released before removing strainer cover.

Priming Pump

- Clean and lubricate strainer cover O-ring with "Jack's 327" each time it is removed.
- Clean and inspect O-ring; re-install on strainer cover.
- Replace strainer cover on strainer housing; turn clockwise to tighten cover.
  NOTE: Tighten strainer cover by hand only (no wrenches) ¼ turn.
- Open all valves before starting system.
- Release all air from filter and piping system. **See filter owner's manual.**
- With suction and outlet valves open and water source higher than the pump and flowing, pump will prime itself.

If pump does NOT prime within ten minutes, stop motor and determine cause. Be sure all suction and discharge valves are open when pump is running. See Troubleshooting Guide.

Storage/Winterization

⚠ WARNING – Explosion Hazard. Purging the system with compressed air can cause components to explode, with risk of severe injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.

⚠ CAUTION – Allowing the pump to freeze will void the warranty.

⚠ CAUTION – Do NOT use anti-freeze solutions (except propylene glycol) in your pool/spa system. Propylene glycol is non-toxic and will not damage plastic system components; other anti-freezes are highly toxic and may damage plastic components in the system.

Gravity drain system as far as possible.

Storing Pump for Winterization

⚠ WARNING – **ELECTRICAL HAZARD,** To avoid dangerous or fatal electrical shock hazard, turn OFF power to motor before draining pump.

Drain all water from pump and piping when expecting freezing temperatures or when storing pump.

1. Drain water level below all inlets to the pool.
2. Remove drain plug from bottom of strainer body.
3. Disconnect pump from base.
4. Once the pump is drained of water, re-install the strainer lid and strainer plug.
5. Store pump in a dry enclosure. Keep motor dry and covered during storage. To avoid condensation/corrosion problems, do NOT cover or wrap pump with plastic film or bags.

Start-Up for Winterized Equipment

1. Securely mount pump to base.
2. Install all intake and output fittings and piping.
3. Refill pool to proper water level.
4. Prime pump according to instructions.

Shaft Seal Change Instructions

⚠ CAUTION -Only qualified personnel should attempt rotary seal replacement. Contact your local authorized Hayward Dealer or service center if you have any questions.

⚠ WARNING - Read and follow all instructions . **Failure to follow instructions can cause severe injury and/or death**.

⚠ WARNING – **Risk of Electric Shock** Failure to turn off power can cause serious or fatal electrical shock hazard. Disconnect all electrical power service to pump before beginning shaft seal replacement.

Exercise extreme care in handling both the rotating and the stationary sections of the two-part replacement seal. Foreign matter or improper handling will easily scratch the graphite and ceramic sealing surfaces.

1. Shut off water flow to pump by closing appropriate valves or by plugging both the skimmer outlet port and return port to pool. Disconnect piping or hoses from the motor/pump assembly.
2. Remove the strainer by disengaging and removing the strainer cover. Remove the basket. Lift up on strainer 'C' clip and remove. Finally, slide strainer housing forward and remove.
3. Unscrew eight (8) screws and remove pump cover, exposing the impeller.
4. Remove the canopy or the shaft cover plate from the end of motor opposite the impeller.
5. Hold the motor shaft securely by either inserting a screwdriver in slot at end of shaft or by using an open-end wrench to engage the flat surfaces provided near end of motor shaft. Rotate the impeller in a counterclockwise direction and remove it from the motor shaft.
6. Note how the steel spring section of the old seal is positioned on impeller hub and remove it by pulling from the impeller.
7. Loosen four (4) motor through bolts from the back of motor and remove pump housing/shroud from the front of the motor.
8. Remove the ceramic stationary portion of the old seal by pressing the white ceramic seat out of the pump housing recess. If assembly is tight, tap lightly from the "motor" side.
9. Clean and lubricate the impeller stem and the pump housing recess with a dilute solution of non-granulated liquid-type soap. Do not use petroleum or silicone lubricants as these can contribute to seal leakage.
10. Press the new rotating portion of the seal assembly onto the impeller stem with the polished black graphite surface facing away from the impeller.
11. Carefully press the stationary ceramic portion of the seal into the recess of the pump housing/shroud, with the polished flat surface facing out.
12. Carefully insert the motor shaft through the pump housing/shroud and align with white ceramic stationary seal assembly in place and secure the motor to pump housing/shroud with four (4) motor through bolts removed in step #7. Be sure motor base and pump discharge port are positioned properly. Alternately tighten the motor through bolts until the pump housing is secure. Make certain motor shaft turns freely before proceeding.
13. Screw the impeller (clockwise) with the rotating portion of seal in place onto the motor shaft. Hand-tighten the impeller in place.
14. Clean (replace if necessary) the O-ring and replace on pump cover. Assemble the pump cover to the pump housing/shroud with the eight (8) screws removed in step #3. Tighten screws alternately and evenly.
15. Re-assemble strainer by sliding strainer housing onto pump cover. Install strainer 'C' clip by pushing clip down onto grooved pump cover coupling. Insert basket and fasten strainer cover.
16. Reconnect pump to the piping or hoses provided. Open all valves and make sure that the pump strainer housing is full of water before restarting the pump.

Troubleshooting

Motor Will NOT Start – Check For:

1. Improper or loose wiring connections; open switches or relays; tripped circuit breakers, GFCI's, or blown fuses.
2. Manually check rotation of motor shaft for free movement and lack of obstruction. (See steps 4 & 5 of "Shaft Seal Change Instructions" in this manual.)
3. If you have a timer, be certain it is working properly. Bypass it if necessary.

Motor Shuts OFF – Check For:

1. Undersized wiring; loose connections; etc.
2. Low voltage at motor or power drop (frequently caused by undersized wiring or extension cord use).
3. Mechanical binding and electrical overload.

NOTE: Your Hayward pump motor is equipped with an "automatic thermal overload protector." The motor will automatically shut off if power supply drops before heat damage can build up causing windings to burn out. The "thermal overload protector" will allow the motor to automatically restart once the motor has cooled, provided the power source is again up to proper levels. It will continue to cut On/Off until the problem is corrected. **Be sure to correct cause of overheating.**

Motor Hums, But Does NOT Start – Check For:

1. Centrifugal switch stuck in OPEN position.
2. Binding of motor shaft.

Pump Won't Prime

1. Make sure pump/strainer housing is filled with water and the cover O-ring is clean, also be sure it is properly seated in the cover O-ring groove. Make sure strainer cover is locked firmly in position and lubricated with "Jack's 327."
2. Make sure all suction and discharge valves are fully open and not blocked, that pool water level is at proper level, and that skimmer weir is not hung up or stuck on skimmer wall.
3. Block off to determine if pump will develop a vacuum. You should have 5"-6" of vacuum at the strainer cover **(Only your pool dealer can confirm this with a vacuum gauge)**. You may be able to check by removing the skimmer basket and holding your hand over the bottom port with skimmer full and pump running. If no suction is felt, check for line blockage.
    a. If pump develops a vacuum, check for blocked suction line or dirty strainer basket, an air leak in the suction piping may be the cause.
    b. If pump does not develop a vacuum and pump has sufficient "priming water":
        i. Re-check strainer housing cover and all threaded connections for suction leaks. Check if all hose clamps are tight.
        ii. Check voltage to ensure that the motor is rotating at full RPM's.
        iii. Open housing cover and check for clogging or obstruction in suction. Check impeller for debris.
        iv. Remove and replace shaft seal only if it is leaking.

Low Flow – Generally, Check For:

1. Clogged or restricted strainer or suction line; undersized pool piping.
2. Plugged or restricted discharge line of filter, valve partially closed (high gauge reading).
    How to correct: Sand filters – backwash as per manufacturer's instructions; D.E. filters – backwash as per manufacturer's instructions; Cartridge filters – clean or replace cartridge.
3. Air leak in suction (bubbles issuing from return fittings). Re-tighten using Teflon tape.
4. Plugged or restricted impeller or impeller sheared off. Replace including new seal assembly.

Troubleshooting Continued:

Noisy Pump – Check For:

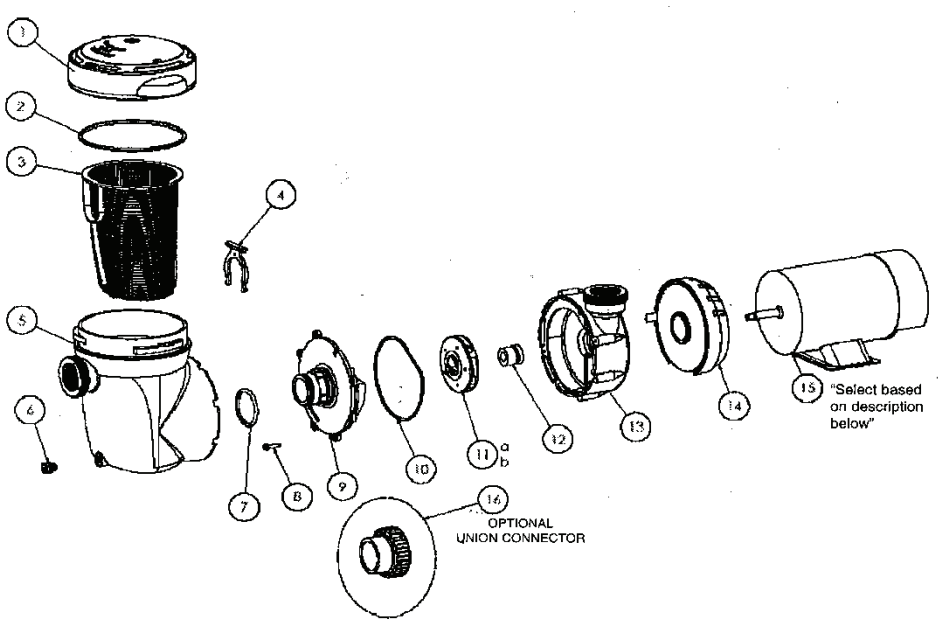
1. Air leak in suction piping causing rumbling in pump.
2. Cavitation due to restricted or undersized suction line or leak at any joint, low water level in pool, and unrestricted discharge return lines. Correct suction condition or throttle return lines, if practical. Holding hand over return fitting will sometimes prove this point or putting in a smaller eyeball fitting.
3. Vibration due to improper mounting, etc. Put a rubber pad under metal mounting feet.
4. Foreign matter in pump housing. Loose stones/debris hitting impeller could be cause, remove any of the above.
5. Motor bearings noisy from normal wear, rust, overheating, or concentration of chemicals causing seal damage which will allow chlorinated water to seep into bearings wiping out the grease causing bearing to whine. All seal leaks should be replaced at once.
6. Equipment base vibrating.

Maintenance

- Clean strainer basket regularly. Do NOT strike basket to clean. Inspect strainer cover gasket regularly and replace as necessary.
- Hayward pumps have self-lubricating motor bearings and shaft seals. No lubrication is necessary.
- Keep motor clean. Insure air vents are free from obstruction.
- Occasionally, shaft seals must be replaced, due to wear or damage. See “Shaft Seal Change Instructions” in this manual on Page 8.

Replacement Parts

Parts Diagram



Parts Listing

Ref. No.	Part No.	Description	Ctn. Qty.	No. Req'd
1	SPX5500D	Strainer Cover with Lock Ring & 'O' Ring	10	1
2	SPX5500H	Strainer Cover 'O' Ring	10	1
3	SPX5500F	Strainer Basket	10	1
4	SPX5500G	Strainer Retainer/ 'C' Clip	10	1
5	SPX5500C	Strainer Housing	1	1
6	SPX1700FG	Drain Plug w/ Gasket	10	1
7	SPX5500K	Strainer 'O' Ring	10	1
8	SPX0714Z48	Screw, #14 x 1/4" Type B Pan Head	80	8
9	SPX5500B	Pump Cover	4	1
10	SPX0710XZ5	Housing 'O' Ring	10	1
11	----	Impeller (Refer to Part No. on Original Equipment)	*	1
12	SPX1500KA	Shaft Seal Assembly	10	1
13	SPX5500A	Pump Housing	4	1
14	SPX5500E	Shroud Assembly	4	1
15	SPX1510Z1E	¾ HP Single Speed Motor with Switch, Flex-48	1	1
15	SPX1510Z1XE	1 HP Single Speed Motor with Switch, Flex 48	1	1
15	SPX1515Z1E	1 ½ HP Single Speed Motor with Switch, Flex-48	1	1
15	SPX1520Z1ESC	2 HP Single Speed Motor with Switch, Flex-48	1	1
15	SPX1524Z1ESC	2 ½ HP Single Speed Motor with Switch, Flex-48	1	1
15	SPX1510Z24XE	1 HP Two Speed Motor with Switch, Flex48	1	1
15	SPX1515Z2WS	1 ½ HP Two Speed Motor with Switch, Flex-48	1	1
16	SP1500UNPAK2	Union Connector Assembly	50	2

HAYWARD®

HAYWARD® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products warrants its products to be free from defects in materials and workmanship for a period of ONE (1) year from the date of purchase, when used in single family residential applications.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care or any Acts of God. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option, within 90 days of the receipt of defective product, barring unforeseen delays, without charge.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center please visit us at www.hayward.com.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its' pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

***Supersedes all previous publications.**

Hayward Pool Products
620 Division Street
Elizabeth, NJ 07207

DETACH HERE: Fill out bottom portion completely and mail within 10 days of purchase/installation or register online.

PowerFlo Matrix® Pump Series Warranty Card Registration

Register online at www.hayward.com

Please Print Clearly:

First Name_____ **Last Name**_____

Street Address_____

City_____ **State**_____ **Zip**_____

Phone Number_____ **Purchase Date**_____

E-Mail Address_____

Serial Number

Model Number_____

Pool Capacity_____(U.S. Gallons)

If your product contains components that have individual serial numbers, it is not necessary to complete warranty registration for those individual components. Instead, complete warranty registration only for the overall product, using the serial number that is located on the outside of the product packaging.

Please include me on all e-mail communications regarding Hayward® Equipment or promotions.

Mail to: Hayward Pool Products, 620 Division Street, Elizabeth, NJ 07207

Attn: Warranty Dept

Or REGISTER YOUR WARRANTY ON-LINE AT WWW.HAYWARD.COM

Years Pool has been in service

‹ 1 year 1-3 4-5 6-10 11-15 ›15

Purchased from_____

Builder Retailer Pool Service Internet/Catalog

Company Name_____

Address_____

City_____ State_____ Zip_____

Phone_____

Type of Pool:

Concrete/Gunite Vinyl Fiberglass

Other_____

New Installation Replacement

Installation for:

In Ground Above Ground Spa