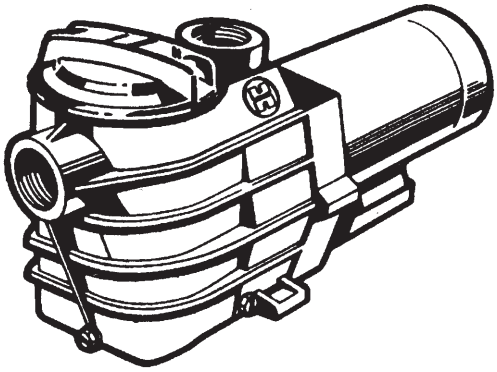
OWNER'S GUIDE



Super II™ Pump

Your Hayward self-priming centrifugal pump has been quality-built and engineered to give you many years of efficient, dependable, corrosion-free service.

The advanced design reduces operation and maintenance to simple, common-sense procedures.

IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following: Failure to follow instructions may result in injury.

READ AND FOLLOW ALL INSTRUCTIONS

1. **WARNING -** To reduce risk of injury, do not permit children to use this product unless they are closely supervised at all times.
2. **CAUTION -** This pump is U.L. listed for permanently installed pools and may also be used with hot tubs and spas if so marked. It is not U.L. listed for storable pools. A permanently installed pool is constructed in or on the ground and cannot be readily disassembled for storage. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity.
3. If installed within an outer enclosure or beneath the skirt of a hot tub or spa, adequate ventilation and free circulation of air must be provided to prevent overheating of the motor.
4. Use motor bonding lug to connect the motor with other bonding parts using a #8 AWG conductor as required by electrical codes. **NOTE:** If your pump is equipped with a 3 ft. (1 m) cord and twist lock plug, items 5 through 8 apply.
5. **WARNING** - Risk of Electric Shock. Connect only to a grounding-type receptacle protected by a ground fault circuit interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.
6. Do not bury cord. Locate cord to minimize abuse from lawn mowers, hedge trimmers, and other equipment.
7. **WARNING** - To reduce the risk of electric shock, replace damaged cord immediately.
8. **WARNING** - To reduce the risk of electric shock, do not use extension cord to connect unit to electric supply; provide a properly located outlet.

SAVE THESE INSTRUCTIONS

GENERAL TIPS ON PUMP INSTALLATION

Locate the pump as close to pool as practical and run suction line as direct as possible. This cuts down on friction loss through pipe and fittings.

Never overtighten pipe connections—use only pipe sealants formulated specifically for plastics, i.e., Teflon tape, Permatex No. 2, etc.

Suction line should have continuous slope from lowest point in line. Make sure suction joints are tight. Suction pipe should be as large or larger than discharge pipe.

Damp, non-ventilated locations should be avoided. Motors require free circulation of air to aid in cooling.

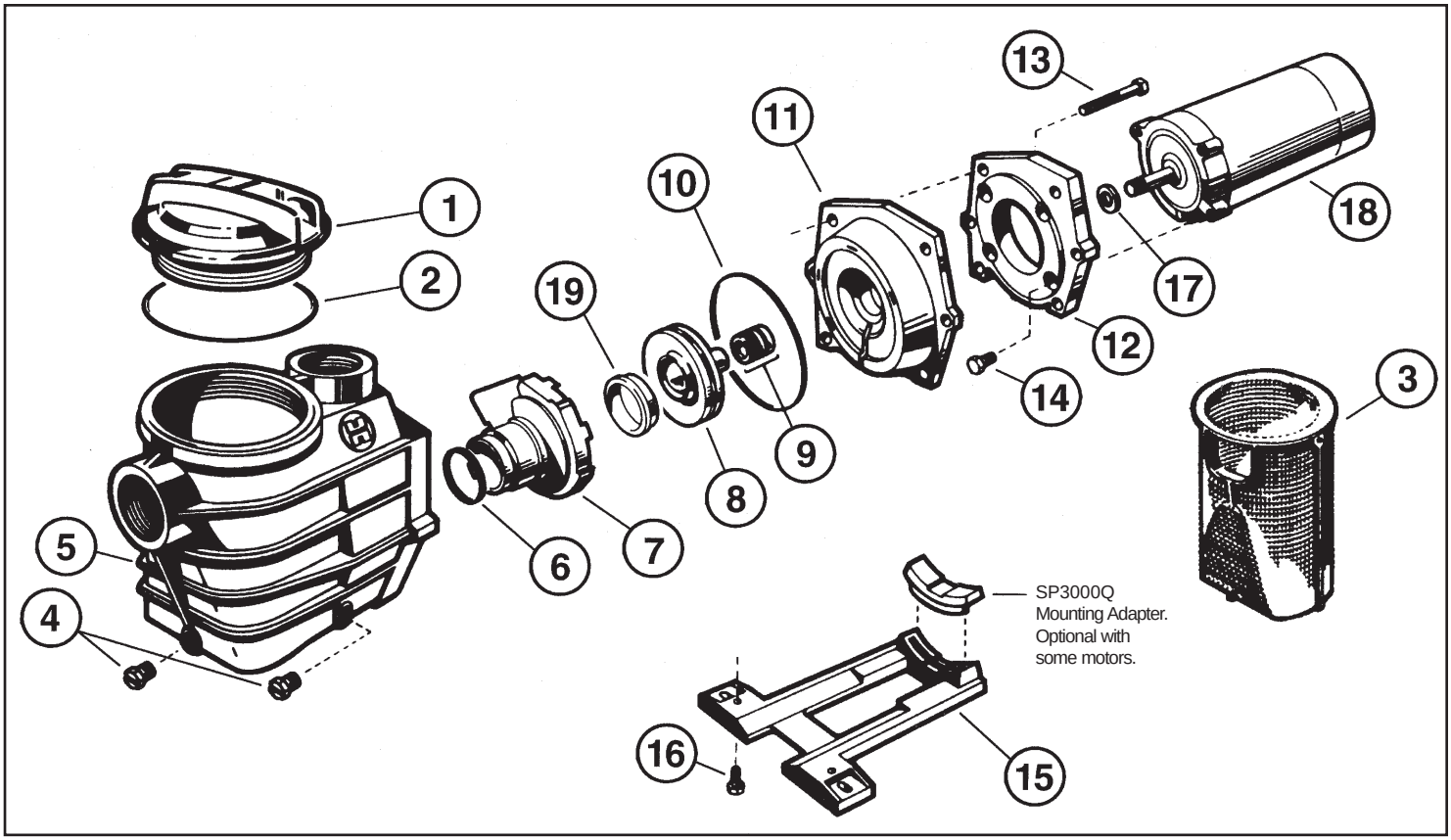
Insure that the electrical supply available agrees with the motor's voltage, phase and cycle, and that wire size is adequate for the HP (KW) rating and distance from power source. Motor must always be properly grounded. If cord connected, use only a properly grounded outlet. Electrical circuits must be protected by proper size ground fault circuit interrupter (GFCI) as required by applicable electrical codes. All electrical wiring must be performed by qualified personnel, and must conform to local codes and regulations.

STARTING AND PRIMING INSTRUCTIONS

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.

Open all suction and discharge lines and valves, as well as air bleed (if available) on filter. (The air that is to be displaced from the suction line must have some place to go.) **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.**

Turn on power and allow a reasonable time for priming. Five minutes is not unreasonable. (Priming time depends on suction lift and horizontal length of suction piping). If the pump will not start, or will not prime, see TROUBLE SHOOTING GUIDE on back page.



REF. NO.	DESCRIPTION	NO. REQ'D.	PART NUMBER					
			MODEL SP3005X7AZ	MODEL SP3007X10AZ	MODEL SP3010X15AZ	MODEL SP3015X20AZ	MODEL SP3020X25AZ	MODEL SP3025X30AZ
1	Strainer Cover	1	SPX3100D	SPX3100D	SPX3100D	SPX3100D	SPX3100D	SPX3100D
2	Strainer Cover O-Ring	1	SPX3000S	SPX3000S	SPX3000S	SPX3000S	SPX3000S	SPX3000S
3	Basket	1	SPX3000M	SPX3000M	SPX3000M	SPX3000M	SPX3000M	SPX3000M
4	Drain Plug w/Gasket	2	SPX1700FG	SPX1700FG	SPX1700FG	SPX1700FG	SPX1700FG	SPX1700FG
5	Pump/Strainer Housing	1	SP3100AAZ	SP3100AAZ	SP3120AAZ	SP3120AAZ	SP3120AAZ	SP3120AAZ
6	Diffuser Gasket	1	SPX1600R	SPX1600R	SPX1600R	SPX1600R	SPX1600R	SPX1600R
7	Diffuser	1	SPX3000BN	SPX3000BN	SPX3000BN	SPX3021B	SPX3021B	SPX3021B
8	Impeller - 60 cycle single phase	1	SPX3005C	SPX3007C	SPX3010C	SPX3016C	SPX3021C	SPX3026C
	Impeller - 50 cycle three phase	1	SPX3007C (SP3005X751)	SPX3010C (SP3007X1051)	SPX3016C (SP3010X1551)	SPX3021C (SP3015X2051)	SPX3026C (SP3020X2551)	SPX3031C (SP302551)
9	Seal Assembly	1	SPX1600Z2	SPX1600Z2	SPX1600Z2	SPX1600Z2	SPX1600Z2	SPX1600Z2
10	Housing Gasket	1	SPX3000T	SPX3000T	SPX3000T	SPX3000T	SPX3000T	SPX3000T
11	Seal Plate	1	SPX3020E	SPX3020E	SPX3020E	SPX3020E	SPX3020E	SPX3020E
12	Motor Mounting Plate	1	SPX3000F	SPX3000F	SPX3000F	SPX3000F	SPX3000F	SPX3000F
13	Housing Cap Screw	6	SPX1600Z4	SPX1600Z4	SPX1600Z4	SPX1600Z4	SPX1600Z-4	SPX1600Z4
14	Motor Cap Screw	4	SPX125Z4	SPX125Z4	SPX125Z4	SPX125Z4	SPX125Z4	SPX125Z4
15	Mounting Bracket	1	SPX3000G	SPX3000G	SPX3000G	SPX3000G	SPX3000G	SPX3000G
16	Mounting Bracket Screw	2	SPX1600Z5	SPX1600Z5	SPX1600Z5	SPX1600Z5	SPX1600Z5	SPX1600Z5
17	Slinger	1	SPX125F	SPX125F	SPX125F	SPX125F	SPX125F	SPX125F
18	Motor — 60 cycle single phase	1	SPX1605Z1M	SPX1607Z1M	SPX1610Z1M	SPX1615Z1M	SPX1620Z1M	SPX1625Z1M
	Motor — 50 cycle single phase	1	SPX0130Z1CM (SP3005X751)	SPX0135Z1CM (SP3007X1051)	SPX0140Z1CM (SP3010X1551)	SPX0150Z1CM (SP3015X2051)	SPX0155Z1CM (SP3020X2551)	SPX0160Z1C (SP302551)
19			For Impeller SPX3005C, SP3007C, SP3010C, USE SPX3005R; For Impeller SPX3016C or above, use SPX3021R.					

TROUBLE SHOOTING GUIDE

A. MOTOR WON'T START

1. Check for improper or loose connections, open switches or relays, blown circuit breakers or fuses.
2. Manually check rotation of motor shaft for free movement and lack of obstruction.

B. MOTOR CUTS OUT—Check for:

1. Wiring, loose connections, etc.
2. Low voltage at motor (frequently caused by undersized wiring).

   Binding and overload. (Amperage reading)

NOTE: **Your Hayward pump motor is equipped with Automatic Thermal Overload Protection. The motor will automatically shut off, under normal conditions, before heat damage build-up, due to an improper operating condition, can occur. The motor will auto-restart when safer heat level is reached.**

C. MOTOR HUMS, BUT DOES NOT START—Check for:

1. Governor stuck in open position. (Not applicable to 3 HP motor).
2. Open capacitor. (Not applicable to 3 HP motor).

D. PUMP WON'T PRIME

1. Make sure pump/strainer housing is filled with water and that cover gasket is clean and properly seated. Tighten hand nuts.
2. Make sure all suction and discharge valves are open and unobstructed, and that pool water level is above all suction openings.
3. Block off suction as close to pump as possible and determine if pump will develop a vacuum.
   a. If pump does not develop a vacuum and pump has sufficient "priming water":
      1. Tighten all bolts and fittings on suction side.
      2. Check voltage to make sure pump is up to speed.
      3. Open pump and check for clogging or obstruction.
      4. Remove and replace shaft seal.

   b. If pump develops a vacuum, check for blocked suction line or strainer, or air leak in suction piping.

E. LOW FLOW—Generally, check for:

1. Clogged or restricted strainer or suction line; undersized pool piping.
2. Plugged or restricted discharge line of filter (high discharge gauge reading).
3. Air leak in suction (bubbles issuing from return fittings).
4. Pump operating underspeed (low voltage).
5. Plugged or restricted impeller.

F. NOISY PUMP—Check for:

1. Air leak in suction causing rumbling in pump.
2. Cavitation due to restricted or undersized suction line and unrestricted discharge lines. Correct suction condition or throttle discharge lines, if practical.
3. Vibration due to improper mounting, etc.
4. Foreign matter in pump housing.
5. Motor bearings made unserviceable by wear, rust, or continual overheating.

SERVICE & REPAIRS

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

ELECTRICAL GUIDE

MOTOR		VOLTS			CIRCUIT BREAKER RATINGS-AMPS			RECOMMENDED WIRE SIZE 0-50'		
KW	HP	50 CYCLE 1 PHASE	50 CYCLE 3 PHASE	60 CYCLE 1 PHASE	50 CYCLE 1 PHASE	50 CYCLE 3 PHASE	60 CYCLE 1 PHASE	50 CYCLE 1 PHASE	50 CYCLE 3 PHASE	60 CYCLE 1 PHASE
3/4	0.55	110/220	---	115/230	15/10	---	15/10	14/14	---	14/14
1	0.75	110/220	---	115/230	20/10	---	20/10	12/14	---	12/14
1-1/2	1.10	110/220	220-240/380-415	115/230	30/15	10/10	30/15	10/14	14/14	10/14
2	1.55	220	220-240/380-415	115/230	---	10/10	30/15	---	14/14	10/14
2-1/2	1.88	---	---	230	---	---	15	---	---	14
3	2.20	---	220-240/380-415	230	---	15/10	20	---	14/14	12

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