# **OWNER'S GUIDE**



Super II™ Pump - SP2600 Series
Super II™ Pump - SP3000 Series
Max-Flo™ Pump - SP2800 Series
INSTALLATION AND
OPERATING INSTRUCTIONS

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**

\*This appliance is not intended for use by young children or infirm persons unless they have been adaquetly supervised by a responsible person to ensure they can use the appliance safely.

\*Young children should be supervised to ensure that they do not play with the appliance.

# **GENERAL TIPS ON PUMP INSTALLATION**

Locate the pump as close to pool as practical and run suction line as direct as possible. Secure pump to base with screws or bolts to reduce vibration and pipe stress.

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 motor's voltage and is 50 HZ, and that wire size is adequate for the KW rating and distance from power source. Motor must always be properly earthed. Electrical circuits must be supplied through a Residual Current Device - RCD (safety switch), with a rated residual operating current of 30mA. All electrical wiring must be performed by qualified electrical contractor, and must conform to electrical regulations and AS3000 wiring rules.

# 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.

# Notice for Solar Applications

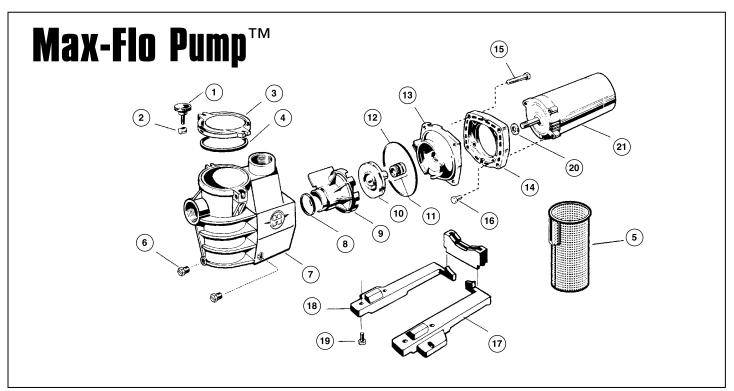
A check valve must be fitted to the discharge of the pump when installed with solar system.

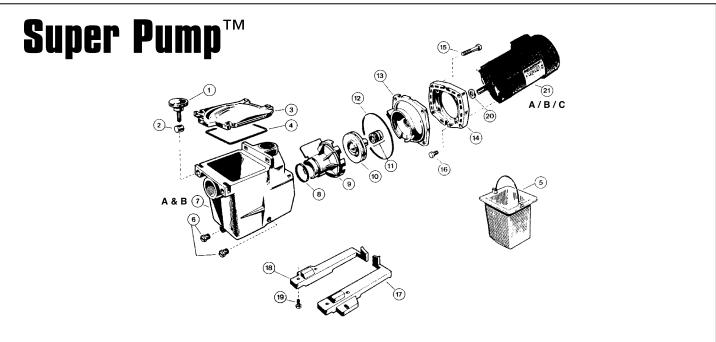
# Special Notice for 415 V. 3 Phase Models

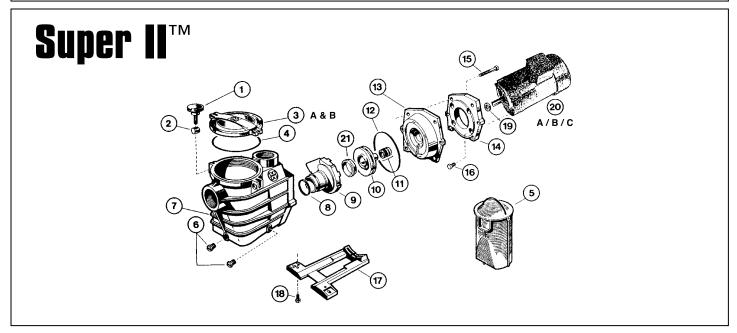
Only a qualified electrician may connect or disconnect this pump to/from a power supply.

The motor must be connected by means of fixed wiring so that the IP rating is maintained when doing so. Electrician must check direction of rotation at time of installation.

The motor is not suitable for flex and plug connection as starter/contactor with overload is required and this must be set according to the rated current.







		NO.	PART NUMBER				
REF. NO.	DESCRIPTION		Model	Model	Model		
		REQ'D.	MF167	MF218	MF258		
1	Hand Knob	2	SPX1600-P	SPX1600-P	SPX1600-P		
2	Swivel Nut	2	SPX1600-N	SPX1600-N	SPX1600-N		
3	Strainer Cover	1	SPX1250-LA	SPX1250-LA	SPX1250-LA		
4	Strainer Cover Gasket	1	SPX0125-T	SPX0125-T	SPXo125-T		
5	Basket	1	SPX2800-M	SPX2800-M	SPX2800-M		
6	Drain Plug & Gasket	2	SPX1700-FG	SPX1700-FG	SPX1700-FG		
7	Pump Housing/Strainer	1	SPX2800-A	SPX2800-A	SPX2800-A		
8	Diffuser Gasket	1	SPX1600-R	SPX1600-R	SPX1600-R		
9	Diffuser	1	SPX2800-B	SPX2800-B	SPX2800-B		
10	Impeller	1	SPX2607-C	SPX2610-C	SPX2615-C		
11	Seal Assembly	1	SPX1600-Z-2	SPX1600-Z-2	SPX1600-Z-2		
12	Housing Gasket	1	SPX1600-T	SPX1600-T	SPX1600-T		
13	Seal Plate	1	SPX2600-E	SPX2600-E	SPX2600-E		
14	Motor Mounting Plate	1	SPX1600-F	SPX1600-F	SPX1600-F		
15	Housing Cap Screw	4	SPX1600-Z-4	SPX1600-Z-4	SPX1600-Z-4		
16	Motor Cap Screw	4	SPX125-Z-4	SPX125-Z-4	SPX125-Z-4		
17	Mounting Foot (Left)	1	SPX1600-G	SPX1600-G	SPX1600 <b>-</b> G		
18	Mounting Foot (Right)	1	SPX1600-J	SPX1600-J	SPX1600 J		
19	Mounting Foot Cap Screw	4	SPX1600-Z-5	SPX1600-Z 5	SPX1600-Z-5		
20	Slinger	1	SPX125 <b>-</b> F	SPX125-F	SPX125-F		
21	Motor–240V, 50 HZ Single Phase	1	SPX2807AQM	SPX2810AQM	SPX2815AQM		

	SPX125-F	SPX125-F	SPX125 <b>-</b> F	1	Slinger	20				
	SPX2815AQM	SPX2810AQM	SPX2807AQM	1	Motor–240V, 50 HZ Single Phase	21				
PART NUMBER										
MODEL	MODEL	MODEL	MODEL	NO. REQ'D.	DESCRIPTION	REF. NO.				
SP312	SP274	SP240	SP200							
SPX1600-P	SPX1600-P	SPX1600-P	SPX1600-P	2	Hand Knob	1				
SPX1600-N	SPX1600-N	SPX1600-N	SPX1600-N	2	Swivel Nut	2				
SPX1600-D	SPX1600-D	SPX1600-D	SPX1600-D	1	Strainer Cover	3				
SPX1600-S	SPX1600-S	SPX1600-S	SPX1600-S	1	Strainer Cover Gasket	4				
SPX1600-M	SPX1600-M	SPX1600-M	SPX1600-M	1	Basket	5				
SPX1700 <b>-</b> FG	SPX1700-FG	SPX1700-FG	SPX1700-FG	2	Drain Plug & Gasket	6				
SPX1620-A	SPX1620-A	SPX1620-A	SPX1620-A	1	Pump Housing/Strainer	7				
SPX1600-R	SPX1600-R	SPX1600-R	SPX1600-R	1	Diffuser Gasket	8				
SPX1616-B	SPX2600-B	SPX2600 <b>-</b> B	SPX2600-B	1	Diffuser	9				
SPX1621-C	SPX2615-C	SPX2610-C	SPX2607-C	1	Impeller	10				
SPX1600-Z-2	SPX1600-Z-2	SPX1600-Z-2	SPX1600-Z-2	1	Seal Assembly	11				
SPX1600-T	SPX1600-T	SPX1600-T	SPX1600-T	1	Housing Gasket	12				
SPX1611-E	SPX2600-E	SPX2600-E	SPX2600-E	1	Seal Plate	13				
SPX1600-F	SPX1600-F	SPX1600-F	SPX1600-F	1	Motor Mounting Plate	14				
SPX1600-Z-4	SPX1600-Z-4	SPX1600-Z-4	SPX1600-Z-4	4	Housing Cap Screw	15				
SPX125 <b>-</b> Z-4	SPX125-Z-4	SPX125-Z-4	SPX125-Z-4	4	Motor Cap Screw	16				
SPX1600-G	SPX1600-G	SPX1600-G	SPX1600-G	1	Mounting Foot (Left)	17				
SPX1600 J	SPX1600 J	SPX1600-J	SPX1600-J	1	Mounting Foot (Right)	18				
SPX1600-Z-5	SPX1600-Z-5	SPX1600-Z 5	SPX1600-Z-5	4	Mounting Foot Cap Screw	19				
SPX125-F	SPX125-F	SPX125-F	SPX125-F	1	Slinger	20				
SPX1621AQM	SPX2615AQM	SPX2610AQM	SPX2607AQM	1	Motor – 240V, 50 HZ, Single Phase	21				
SPX1621ADMTF	SPX2615ADMTR	SPX2610ADMTR	SPX2607ADMTR	1	Motor—50 HZ Single Phase (AD)	21a				
N/A	SPX2615MAMTR	SPX2610MAMTR	SPX2607HDMTR	1	Motor—50 HZ Single Phase (MA)	21b				
SPX1621HDMTF	SPX2615HDMTR	SPX2610HDMTR	SPX2607HDMTR	1	Motor—50 HZ Single Phase (HD)	210				

			PART NUMBER						
REF.	DESCRIPTION		MODEL	MODEL	MODEL	MODEL	MODEL	MODEL	
NO.			S2P213	S2P263	S2P316	S2P411	S2P453	S2P263E	
1	Hand Knob	2	SPX1600P	SPX1600P	SPX1600P	SPX1600P	SPX1600P	SPX1600P	
2	Swivel Nut	2	SPX1600N	SPX1600N	SPX1600N	SPX1600N	SPX1600N	SPX1600N	
за	Strainer Cover - Swing Aside Lid	1	SPX3000D	SPX3000D	SPX3000D	SPX3000D	SPX3000D	SPX3000D	
3b	Strainer Cover - Screw In	1	SPX3100D	SPX3100D	SPX3100D	SPX3100D	SPX3100D	SPX3100D	
4	Stainer Cover O'Ring	1	SPX3000S	SPX3000S	SPX3000S	SPX3000S	SPX3000S	SPX3000S	
5	Strainer Basket	1	SPX3000N	SPX3000N	SPX3000N	SPX3000N	SPX3000N	SPX3000N	
6	Drain Plug and Gasket	2	SPX1700FG	SPX1700FG	SPX1700FG	SPX1700FG	SPX1700FG	SPX1700FG	
7a	Pump Housing - Swing Aside Lid/Integrated Union Body	1	SPX3020AUH	SPX3020AUH	SPX3020AUH	SPX3020AUH	SPX3020AUH	SPX3020AUH	
7b	Pump Housing - Swing Aside Lid / No Integrated Union	1	SPX3020AA	SPX3020AA	SPX3020AA	SPX3020AA	SPX3020AA	SPX3020AA	
7C	Pump Housing - Screw in Lid	1	SPX3120AA	SPX3120AA	SPX3120AA	SPX3120AA	SPX3120AA	SPX3120AA	
8	Diffuser Gasket	1	SPX1600R	SPX1600R	SPX1600R	SPX1600R	SPX16ooR	SPX1600R	
9	Diffuser	1	SPX3000BN	SPX3000BN	SPX3021B	SPX3021B	SPX3021B	SPX3000BN	
10	Impeller	1	SPX3007C	SPX3010C	SPX3016C	SPX3021C	SPX3026C	SPX3010C	
11	Mechanical Seal Assembly	1	SPX1600Z2	SPX1600Z2	SPX1600Z2	SPX1600Z2	SPX1600Z2	SPX1600Z2	
12	Housing Gasket	1	SPX3000T	SPX3000T	SPX3000T	SPX3000T	SPX3000T	SPX3000T	
13	Seal Plate	1	SPX3020E	SPX3020E	SPX3020E	SPX3020E	SPX3020E	SPX3020E	
14	Motor Mounting Plate	1	SPX3000F	SPX3000F	SPX3000F	SPX3000F	SPX3000F	SPX3000F	
15	Housing Cap Screw	6	SPX1600Z4	SPX1600Z4	SPX1600Z4	SPX1600Z4	SPX1600Z4	SPX1600Z4	
16	Motor Cap Screw	4	SPX125Z4	SPX125Z4	SPX125Z4	SPX125Z4	SPX125Z4	SPX125Z4	
17	Pump Leg	1	SPX3000G	SPX3000G	SPX3000G	SPX3000G	SPX3000G	SPX3000G	
18	Pump Leg Screw	2	SPX1600Z5	SPX1600Z5	SPX1600Z5	SPX1600Z5	SPX1600Z5	SPX1600Z5	
19	Slinger	1	SPX125F	SPX125F	SPX125F	SPX125F	SPX125F	SPX125F	
20	Motor - 50HZ Single Phase	1	SPX3007AQM	SPX3010AQM	SPX3016AQM	SPX3021AQM	SPX3026AQM	N/A	
20	Motor - 50HZ Single Phase - 3 Speed	1	N/A	N/A	N/A	N/A	N/A	SPX3010ADEM	
21	Impeller Ring	1	SPX3005R	SPX3005R	SPX3021R	SPX3021R	SPX3021R	SPX3005R	
N/A	Union Kit - Integrated Union Body	1	SPXRS750JKM	SPXRS750JKM	SPXRS750JKM	SPXRS750JKM	SPXRS750JKM	SPXRS750JKM	
N/A	Union Kit - Suits Body w/o Integrated Union	1	UN5050	UN5050	UN5050	UN5050	UN5050	N/A	



# 3 SPEED OPERATION

# **WORLD LEADING 7 STAR ENERGY EFFICIENCY**

Hayward 3 Speed Pumps incorporate Superior Wet End Design characteristics, providing Industry Leading Performance and Energy Savings that allow Hayward Pumps to out perform and out last most competitors with ease.

# REDUCES ENERGY CONSUMPTION AND OPERATING COST

By reducing the speed of the pump motor, and in turn the flow rate of water through the plumbing and filtation system, friction losses are minimized resulting in a need for much less expensive energy to circulate and filter the water. In Fact a reduction of 50% in Pump Speed will reduce power consumption by UP TO 75%!

# **IMPROVED WATER QUALITY**

In addition to lower operating costs, a reduction in flow rate has the potential to improve the water quality in most installtions. At reduced flow rates the capacity of media such as Sand, Glass and Zeolite, will actually improve allowing it to trap and retain finer particals than at higher flow rates.

# **FLEXIBILTY OF 3 SPEEDS**

Hayward 3 Speed Pumps have been designed to provide an appropriate setting to suit various functions and installation requirements. For most private pools of up to 50,000 litres low speed will provide sufficent pefformance to meet daily filtation needs. Higher speed may be selected In times of abnormal or increased demand ensuring optimum performance at all times, as well as for backwashing, or media filters, or operation of water features.

# SELECTING THE CORRECT SPEED SETTING

To maximise efficiency and peformance it is important to select the approporiate speed setting for your specific requirements. Following is an operation guide, please consult a pool professional for correct sizing, model selection, and installation advice.

**Filter (Low Speed)** - This speed will meet the daily requirements for most private use pools up to 50,000 litres and will reduce your filtration operation cost over an 8 hour period by around 75% compared to a normal single speed pump. Average will provide a turnover rate of 1.24 times the entire pool volume in an average days operation.

**Boost (Medium Speed)** - This speed can be used for operation of Automatic Pool Cleaners or to increase flow, to the equivilant of a larger pump, for operation of pool accessories other than filtration.

**Turbo (High Speed)** - Designed for backwashing and operation of accessories that may require extra flow for specific functions, such as Spa Jets and Water Features.

Boost and Turbo could also be selected for periods of increased pool usage and filtration demand or for when used to filter larger volumes of water.

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MAXIMUM TOTAL HEAD - IMPORTANT INSTALLATION INFORMATION								
Model	Max Total Metres Head	Max Pressure KPa	Model	Max Total Metres Head	Max Pressure KPa			
SP200	13.2	129	S2P213	16.3	159			
SP240	14.9	146	S2P263	16.5	161			
SP274	16.2	159	S2P316	18.3	179			
SP312	20.8	204	S2P411	19.7	193			
			S2P453	22.1	217			
MF167	12.9	126						
MF218	14.2	139	S2P263-E Tur	bo 16.5	161			
MF258	16.2	159	Вос	ost 10.8	106			
			Filt	er 4.7	46			

### **MAINTENANCE**

- 1. Clean strainer basket regularly. Do not strike basket to clean.
- 2. Inspect strainer cover O-ring regularly and replace as necessary. Keep cover O-ring lubricated.
- 3. Hayward pumps have self-lubricating motor bearings and shaft seals. No lubrication is necessary.
- 4. Keep motor clean. Insure air vents are free from obstruction.

NB Do not use petroleum based lubricants on gaskets, O-rings or plastic components. Use only silicone based lubricants.

### A. MOTOR WON'T START

- Check open switches or relays, blown circuit breakers or fuses.
- 2. Ensure power cord is plugged in and power is switched on, (240v Models Only).
- 3. Refer to Authorised Service Agent or other qualified person.

# **B MOTOR CUTS OUT**

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

If motor fails to restart switch power off and contact an authorised Hayward Pump Service Technician or other qualified service company.

# C. MOTOR HUMS, BUT DOES NOT START

If motor fails to start switch power off and contact an authorised Hayward Pump Service Technician or other qualified service company.

# D. PUMP WON'T PRIME

 Make sure pump/strainer is filled with water, and that cover gasket is clean and properly seated. Tighten hand nuts. Make sure all suction and discharge valves are open and unobstructed, and that pool water level is above all suction openings.

# E. LOW FLOW-Generally, check for:

- 1. Clogged or restricted strainer or suction line;
- 2. Plugged or restricted discharge line of filter (high discharge gauße reading).
- 3. Air leak in suction (bubbles issuing from return fittings).

# F. NOISY PUMP—Check for:

- 1. Air leak in suction causing rumbling in pump.
- 2. Cavitation due to restricted or undersized suction line and restricted discharge lines.
- 3. Vibration due to improper mounting, etc.
- 4. Foreign matter in pump housing.
- Motor bearings made unserviceable by wear, rust, or continual overheating. Refer to authorised service agent.
- G. If the Supply Cord is damaged, it must be replaced by the manufacture, its service agent or similarly qualified persons in order to avoid a hazard.

# **SERVICE & REPAIRS**

Consult your local authorised Hayward dealer or service center. No pumps or motors may be returned directly to the factory without the expressed written authorisation of Hayward Pool Products (Australia) Pty Ltd.

# Warning

The Pump Motor is an electrical device and as such should not be disassembled or serviced by anyone other than an authorised Hayward Service Technician or qualified Electrical Service Company. An experienced Pool Service Technician should attend to any other problems that cannot be corrected by routine maintenance.



# **Rainbow Pool Products**

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