

User Manual

Single Speed Pump



SELF-PRIMING SWIMMING POOL PUMP INSTALLATION AND OPERATING INSTRUCTION MANUAL

Your Theralux 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 unless they have been adequately supervised by a responsible person to ensure they can use the appliance. 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 specially 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.
- Ensure 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

1. 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.
2. 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.

3. 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.

SHAFT SEAL CHANGE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS- PLEASE READ AND FOLLOW ALL INSTRUCTIONS

When servicing electrical equipment, basic safety precautions should always be observed including the following. Failure to follow the instructions may result in injury.

- Disconnect the pump motor power cord from the power outlet before beginning the shaft seal replacement.
- Only qualified personnel should attempt to replace the shaft seal. Contact your local Authorised Theralux Service Centre if you have any questions.
- Exercise extreme care in handling both the rotating and stationary sections of the two-part replacement seal. Foreign matter or improper handling will easily scratch the graphite and ceramic sealing surfaces.
- See the “Parts Diagram” on page 7 for the pump component locations.

Removing the Motor Assembly

1. Remove the six (6) 3/8” x 2” hex head bolts (item 14), which hold the motor assembly to the pump/strainer housing (item 1), using a 1/2” AF spanner or socket.
2. Slide the motor assembly out of the pump/strainer housing (item 1), exposing the diffuser (item 6). Pull the diffuser off of the seal plate (item 10), exposing the impeller. (The diffuser may remain in the pump/strainer housing. To remove, pull it straight out of the pump/strainer housing.)

Removing the Impeller

1. To prevent the motor shaft from turning, insert a flat blade screwdriver through the centre hole in the fan cowling and into the slot on the end of the motor shaft and hold it.
2. Remove the impeller (item 8) by rotating it counter- clockwise. The spring portion of the seal assembly is now exposed.

Note: Carefully the position of the spring seal and remove it. Also remove the impeller ring (item 7) from the impeller and note the way it was installed.

Removing the Ceramic Seat

1. Remove the seal plate (item 10) from the motor mounting plate (item 13).
2. Press the ceramic seat with rubber cup out of the seal plate (item 10). If tight, use a small screwdriver to tap the seal out from the back side of the seal plate.

IMPORTANT - Clean all recesses and parts to be reassembled. Inspect gaskets and replace if necessary.

SEAL, IMPELLER AND DIFFUSER INSTALLATION

1. Clean and lightly lubricate the motor shaft and seal recess in the seal plate (item 10) with a dilute solution of non-granulated liquid type soap. Gently wipe the polished face of the ceramic seal with a soft, lint free cotton cloth. Lubricate the rubber cup on the ceramic seat and press it firmly into the recess of the seal plate (item 10), with the polished ceramic surface facing towards you. Ensure the motor shaft slinger (item 12) is slid all the way down the shaft.
2. Place the seal plate (item 10) onto the motor mounting plate (item 13), align the tabs on the seal plate with the grooves on the motor mounting plate. The outside profile of the two parts should be the same.
3. Gently wipe the black, polished surface of the carbon spring seal assembly (item 9) with a soft, lint free cotton cloth.
4. Clean and lubricate the impeller (item 8) and press the carbon spring seal assembly (item 9) onto the impeller hub with the black, polished surface facing away from the impeller.
5. Screw the impeller (item 8) onto the motor shaft in a clockwise direction and tighten snugly by holding the motor shaft with the flat blade screwdriver as explained earlier. Place the impeller ring (item 7) back onto the impeller (item 8), with its flange facing towards the diffuser (item 6)
6. Place the diffuser (item 6) over the impeller (item 8) and onto the seal plate (item 10), aligning the word "TOP" and the arrow to the top of the motor, or, the top ridge of the seal plate. Give it a tap with the heel of your hand to make it seat into position on the seal plate. Ensure the diffuser gasket is fitted to the diffuser to the outside of the diffuser inlet
7. Replace the motor assembly into the pump/strainer housing in the reverse order of the removal steps. Ensure the housing gasket (item 5) is lubricated and tighten the housing bolts (item 14) in a cross pattern and evenly.

MAINTENANCE

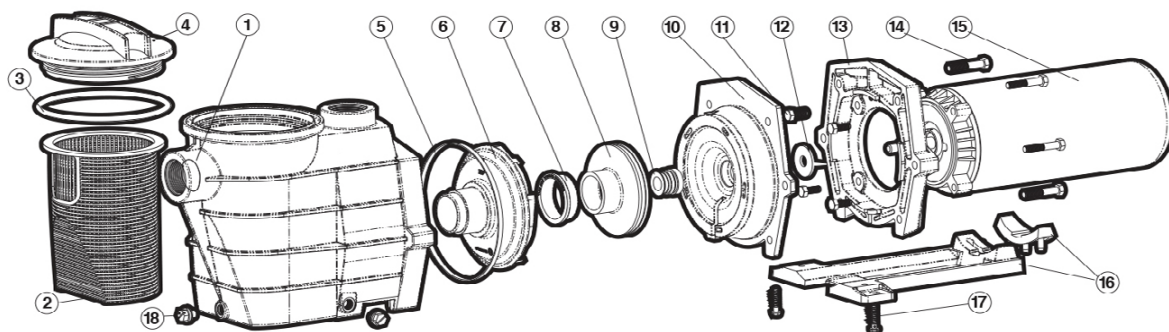
1. Clean strainer basket regularly. Do not strike basket to clean.
2. Inspect strainer cover O-ring regularly and replace as necessary. Keep cover O-ring lubricated.
3. This pump has self-lubricating motor bearings and shaft seals. No lubrication is necessary.
4. Keep motor clean. Ensure air vents are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

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

MAXIMUM TOTAL HEAD - IMPORTANT INSTALLATION INFORMATION

MODEL	MAX TOTAL METRES HEAD	MAX PRES-SURE kPA	MODEL	MAX TOTAL METRES HEAD	MAX PRESSURE kPA
0.75hp	16.3	159	1.5hp	19.7	193
1hp	16.5	161	2hp	22.1	217
1.25hp	18.3	179			

REPLACEMENT PARTS



REF NO.	PART NO.	DESCRIPTION
1	THERAF4301	Pump Housing/Strainer - 50mm, w/Drain Plugs, threaded style
2	THERAF4302	Basket
3	THERAF4303	Strainer Cover O-Ring
4	THERAF4304	Strainer Cover, Hand- Knob Style, Clear
5	THERAF4305	Housing Gasket
6	THERAF4306A	Diffuser (suit 0.75hp, 1hp)
	THERAF4306B	Diffuser (suit 1.5hp, 2hp)
	THERAF4323	Diffuser Gasket - not shown
7	THERAF4307A	Impeller Ring (suit 0.75hp, 1hp)
	THERAF4307B	Impeller Ring (suit 1.5hp, 2hp)
8	THERAF4308A	Impeller (suit 0.75hp)
	THERAF4308B	Impeller (suit 1hp)
	THERAF4308D	Impeller (suit 1.5hp)
	THERAF4308E	Impeller (suit 2hp)
9	THERAF4309	Seal Assembly
10	THERAF4310	Seal Plate
11	THERAF4311	Motor Cap Screw
12	THERAF4312	Slinger
13	THERAF4313	Motor Mounting Plate
14	THERAF4314	Housing Cap Screw
15	THERAF4315A	Motor (suit 0.75hp)
	THERAF4315B	Motor (suit 1hp)
	THERAF4315D	Motor (suit 1.5hp)
	THERAF4315E	Motor (suit 2hp)
16	THERAF4316	Mounting Bracket with Adaptor and 2 Cap Screws
17	THERAF4317	Mounting Foot Cap Screws (set of 2)
18	THERAF4318	Drain Plug with O-Ring
	THERAF4320	Hand Knob Kit for Strainer Cover (inc Hand Knob & Swivel Nut)- not shown
	THERAF4321	Union Kit (2) 40mm - 50mm - not shown
	THERAF4322	Union Gasket (T-Seal) - not shown

TROUBLESHOOTING

A. MOTOR WON'T START

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

B. MOTOR CUTS OUT

NOTE: Your Single Speed pump motor is equipped with Automatic Thermal Overload Protection. Under normal conditions, the motor will shut down to protect from heat damage. The motor will auto-restart when a safe heat level is reached. If the motor fails to restart, switch power off and contact an Authorised Theralux Service Technician or service company.

C. MOTOR HUMS, BUT DOES NOT START

If the motor fails to start, switch power off and contact an Authorised Theralux Service Technician or other qualified service company.

D. PUMP WON'T PRIME

1. Make sure pump/strainer 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.

E. LOW FLOW

Generally, check for:

1. Clogged or restricted strainer or suction line.
2. Plugged or restricted discharge line of filter (high discharge gauge 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.
5. Motor bearings made unserviceable by wear, rust, or continual overheating.

Refer to Authorised Theralux Service Agent.

G. If SUPPLY CORD IS DAMAGED, it must be replaced by the manufacture, its service agent, or similarly qualified persons to avoid a hazard.

WARNING

The Pump Motor is an electrical device and as such, should not be disassembled or serviced by anyone other than an Authorised Theralux Service Technician or qualified Electrical Service company. An experienced Pool Service Technician should attend to all problems that routine maintenance cannot correct

INSTALLATION NOTES:



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 **theralux**
POOL WATER AT ITS BEST™