

evoflow[®]

HIGH PERFORMANCE PUMPS

EVOFLOW

POOL AND SPA PUMPS



Installation and Operation Manual for **EVOFLOW POOL AND SPA PUMPS**

TUF | TUF ECO-V | STREAM

⚠ WARNING

This equipment must be installed and serviced by a qualified technician. Improper installation can create electrical hazards which could result in property damage, serious injury or death. Improper installation will void the warranty.

✂ NOTICE TO INSTALLER

This manual contains important information about the installation, operation and safe use of this product. Once the product has been installed this manual must be given to the owner/operator of this equipment.

1.0 FOREWORD

- 1.1 Congratulations on your recent purchase of an Evolution Evoflow Pump. Please take a moment to read through the entire manual before using the pump. The pump must be installed and operated as specified.

2.0 ELECTRICAL SAFETY NOTICE

- 2.1 The electrical installation is to be done by a licensed electrician.
- 2.2 Each pump requires a circuit breaker to separate the pump from the electrical supply.
- 2.3 The contact separation has to provide full disconnection in all poles under over voltage category III conditions.
- 2.4 If the pump is to be installed on a swimming pool or pond situation it is mandatory that an earth leakage circuit breaker with a rated tripping current not exceeding 30mA be installed.
- 2.5 Check the pumps nameplate for the following: Voltage, Amp draw and Cycle.
- 2.6 The power cord, including the ground wire shall have a quality of 60245 IEC 66 (H07RN-F) for models greater than 1kW power input.
- 2.7 For models less than 1kW input the quality shall be of 60245 IEC 57 (H05RN-F).
- 2.8 All installations must comply with local codes, based on IEC 60364-7-702 requirements.

3.0 ELECTRICAL CONNECTION

- 3.1 Check that the information on the nameplate corresponds to the power supply.
- 3.2 Employ a competent electrician to ensure wiring installation is made in accordance with any local/national rules in the country where the pump is installed. The national wiring rules in Australia & New Zealand is AS/NZS 3000.
- 3.3 Install and set the safety devices according to the current stated in the nameplate.
- 3.4 Single phase motors have a built in thermal overload switch.

4.0 SAFETY

- 4.1 The equipment mentioned in the manual is specially designed for the filtering and recirculation of water in swimming pools.
- 4.2 They are designed to work with clean water at temperatures not exceeding 45°C (113°F).
- 4.3 The user should make sure that assembly and maintenance tasks are carried out by qualified authorised persons and that these persons have first carefully read the instructions for service and installation.
- 4.4 The installation should be carried out in accordance to the safety instructions of swimming pools, especially Standard HD 60364-7-702, and the specific instructions for each facility.
- 4.5 Follow any general safety rules or guidelines and any safety legislation and directives given by local, state or national authorities.
- 4.6 Any modification of the pump requires the prior consent of the manufacturer. Original replacement parts and accessories authorised by the manufacturer ensure a high level of safety. The manufacturer of the pump assumes no liability for the damage and injuries caused by unauthorised replacement parts and accessories.
- 4.7 During operation, some parts of the pump are subject to dangerous electric voltage. Work may only be performed on the pump or on the equipment connected to it after disconnection from power sources and after disconnecting the starting device.
- 4.8 The operating safety of the pump is only guaranteed if the installation and service instructions are correctly followed.
- 4.9 The limit values stated in the technical table should not be exceeded under any condition.
- 4.10 In the event of defective operation or fault, contact the manufacturer's technical support department or its nearest authorised agents.
- 4.11 If the supply cord is damaged, it must be replaced by an authorised service agent.
- 4.12 This appliance is not intended for use by children or persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.

5.0 GENERAL INSTALLATION

- 5.1 The pump must be located as close as practical to the pool. The pump must also be in a position that enables easy access for periodic servicing.
- 5.2 Care must also be taken to position the pump in an area that is free from flooding in a well-ventilated and dry location.
- 5.3 The pump motor cooling fan must have a minimum clearance of 150mm (6").
- 5.4 The pump suction line should be not smaller than 40mm (1.5").
- 5.5 The suction line is to have as few bends or elbows as possible. There must not be an air trap on the suction line.
- 5.6 Use only the pump barrel unions supplied with the pump.
- 5.7 Ensure the pump is securely fastened to a level surface in the required position to prevent movement.
- 5.8 The pump electrical cable must be wired for the proper voltage and rotation in accordance with the wiring instructions.
- 5.9 All wiring and electrical work must be carried out by licensed electricians and installed in accordance with applicable local codes.
- 5.10 The motor must be grounded.
- 5.11 The weight of the plumbing and fittings is to be independently supported and not carried by the pump.

6.0 PRIMING

- 6.1 The pump will prime and reprime providing the hair and lint pot bowl is full of water and there is sufficient supply from the suction point.
- 6.2 If you lose water from the hair and lint pot bowl, it will be necessary to refill it before starting.
- 6.3 Remove the clear lid and fill the hair and lint pot bowl with water. Replace the lid, ensuring the o-ring is correctly located.
- 6.4 Ensure all suction and discharge valves are open before you start the pump. Operating the pump with these valves shut can damage the pump.
- 6.5 Start the pump.
- 6.6 Allow a few minutes (maximum) for the pump to start delivering water.
- 6.7 **⚠WARNING:** High suction lift or long suction lines will require additional time to prime and can severely affect the performance of the pump. If the pump will not prime or produce flowing water, repeat the steps above.
- 6.8 **⚠WARNING:** If allowed to run dry, mechanical seals can be damaged rapidly and may need to be replaced.
- 6.9 Ensure that there is always adequate water in the hair and lint pot bowl before starting the pump.
- 6.10 If you are unable to prime the pump see *8.0 Troubleshooting*.

7.0 MAINTENANCE

7.1 The hair and lint pot should be inspected and cleaned at regular intervals. The procedure for inspection and cleaning is as follows:

1. Remove the lid and lift out the hair and lint pot.
2. Remove debris and hose off with clean water if necessary.
3. Inspect the lid gasket, lubricate with silicon-based grease only if needed. If it is damaged, replace.
4. Replace the hair and lint pot.
5. Reprime the hair and lint pot bowl.
6. Correctly locate the o-ring.
7. Replace the lid, hand tight only.
8. Switch on pump.

7.2 In climates where the pump may be exposed to frost or freezing, care must be taken to ensure the pump is protected from damage. It is recommended that if the pump is not used during this winter period, it should be drained completely. Drain plugs can be supplied for this purpose. The winterising procedure is as follows:

1. Drain the pump.
2. Do not replace the drain plug. Store it in a safe place until you require the use of the pump. An example would be within the hair and lint pot bowl basket.
3. If possible, remove the pump and store it in a dry location during this period.
4. When you reactivate the pump, ensure all seals and o-rings are in operational condition and replace them if necessary—Regrease o-rings and gaskets with silicon-based grease on refitting.
5. Check that the motor shaft moves freely before reactivation.
6. Reprime pump as per *6.0 Priming*.

8.0 TROUBLESHOOTING

Fault/Problem	Possible Cause	Remedy
Pump will not prime	Suction air leak.	Make sure water level is correct through suction points. Ensure baskets and strainers are free of debris. Tighten all fittings/unions on the suction side of the pump, remove and replace mechanical seal.
	No water in the pump.	Make sure hair and lint pot is full of water.
	Closed valves or blocked lines.	Open all valves in system, clean skimmer and pump basket, check pump impeller for blockage.
Motor will not run	No power to motor.	Check that all electrical switches are on. Ensure the circuit breakers are properly set. Check if timer is set properly. Check motor wiring at terminals.
	Pump jammed.	With power switched off, turn pump shaft (should spin freely). If not contact electrician or Evolution for service.
Low flow	Dirty filter.	Backwash filter or clean/replace cartridge filter element.
	Dirty skimmer and pump strainer.	Clean skimmer and pump strainer.
	Suction air leak.	Refer to <i>Pump will not prime</i> .
	Closed valve or blocked line.	Refer to <i>Pump will not prime</i> .
Motor runs hot	Be aware some heat from motors is normal. Do not touch hot motors. Thermal overload protector will deactivate pump if there is an overload or high temperature problem.	
	Low or incorrect voltage.	Supply to be corrected by electrician.
	Cooling fan clearance.	The pump motor cooling fan must have a minimum clearance of 150mm.
	Installed in direct sunlight.	Shield from the weather.
	Poor ventilation.	Do not tightly cover or enclose motor.
Noisy pump operation	Bad bearing.	Have electrician replace.
	Air leak in suction.	Refer to <i>Pump will not prime</i> .
	Suction blockage.	Locate and clear blockage.
	Foreign matter in impeller.	Dismantle pump and remove foreign matter and debris from around impeller.
	Cavitations.	Improve suction, reduce suction lift, reduce number of fittings, increase pipe size, increase discharge pressure and reduce flow by throttling discharge valve
Motor overload cut outs	Motor not connected properly.	Have electrician check wiring.
	Low incoming voltage.	Have electrician check voltage, ensure pump is not running on an extension cord. Report low supply to authorities.
	Overload due to binding in pump or wrong size impeller.	Contact Evolution for service.

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WATER & LIGHTING SOLUTIONS

Evolution Water and Lighting Solutions

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