

PROTEGE
PUMPS.®



Pool / Spa Pump

User Manual

[Revision 2.0 May 2019]

READ THIS MANUAL CAREFULLY BEFORE USE – FAILURE TO DO SO MAY RESULT IN INJURY, PROPERTY DAMAGE AND MAY VOID WARRANTY. • KEEP THIS MANUAL FOR FUTURE REFERENCE.
• Products covered by this manual may vary in appearance, assembly, inclusions, specifications, description and packaging.

Safety

Safety messages are designed to alert you to possible dangers or hazards that could cause death, injury or equipment or property damage if not understood or followed. Safety messages have the following symbols:

	You WILL be KILLED or SERIOUSLY INJURED if you do not follow instructions.		You CAN be KILLED or SERIOUSLY INJURED if you do not follow instructions.		You CAN be INJURED if you do not follow instructions or equipment damage may occur.
<p>It is vital that you read and understand this user manual before using the product, including safety warnings, and any assembly and operating instructions. Keep the manual for future reference.</p> <p>Safety precautions and recommendations detailed here must be fully understood and followed to reduce the risk of injury, fire, explosion, electrical hazard, and/or property damage.</p> <p>Safety information presented here is generic in nature – some advice may not be applicable to every product. The term "equipment" refers to the product, be it electrical mains powered, battery powered or combustion engine powered.</p> <ul style="list-style-type: none"> Before Use - If you are not familiar with the safe operation/handling of the equipment, or are in any way unsure of any aspect of suitability or correct use for your application, you should complete training conducted by a person or organization qualified in safe use and operation of this equipment, including fuel/electrical handling and safety. Do NOT operate the equipment in flammable or explosive environments, such as in the presence of flammable liquids, gases or dust. The equipment may create sparks or heat that may ignite flammable substances. Keep clear of moving parts. Equipment may be a potential source of electric shock or injury if misused. Do NOT operate the equipment if it is damaged, malfunctioning or is in an excessively worn state. Do NOT allow others to use the equipment unless they have read this manual and are adequately trained. Keep packaging away from children – risk of suffocation! Operators must use the equipment correctly. When using the equipment, consider conditions and pay due care to persons and property. 	<p>General Personal Safety</p> <ul style="list-style-type: none"> Wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect from eye and ear injury, poisoning, burns, cutting and crush injuries. Protective equipment such as safety goggles, respirators, non-slip safety footwear, hard hat, hearing protection etc should be used for appropriate equipment / conditions. Other people nearby should also wear appropriate personal protective equipment. Do not wear loose clothing or jewellery, which can be caught in moving parts. Keep hair and clothing away from the equipment. Stay alert and use common sense when operating the equipment. Do not over-reach. Always maintain secure footing and balance. Do not use the equipment if tired or under the influence of drugs, alcohol or medication. This equipment is not intended for use by persons with reduced physical, sensory or mental capabilities. 	<p>General Equipment Use and Care</p> <ul style="list-style-type: none"> The equipment is designed for domestic use only. Handle the equipment safely and carefully. Before use, inspect the equipment for misalignment or binding of moving parts, loose components, damage or any other condition that may affect its operation. If damaged, have the equipment repaired by an authorised service centre or technician before use. Prevent unintentional starting of the equipment - ensure equipment and power switches are in the OFF position before connecting or moving equipment. Do not carry equipment with hands or fingers touching any controls. Remove any tools or other items that are not a part of the equipment from it before starting or switching on. Do not force the equipment. Use the correct equipment for your application. Equipment will perform better and be safer when used within its design and usage parameters. Use the equipment and accessories etc. in accordance with these instructions, considering working conditions and the work to be performed. Using the equipment for operations different from those intended could result in hazardous situations. Always keep equipment components (engines, hoses, handles, controls, frames, housings, guards etc) and accessories (cutting tools, nozzles, bits etc) properly maintained. Keep the equipment clean and, where applicable, properly lubricated. Store the equipment out of reach of children or untrained persons. To avoid burns or fire hazards, let the equipment cool completely before transporting or storing. Never place or store the equipment near flammable materials, combustible gases or liquids etc. The equipment is not weather-proof, and should not be stored in direct sunlight, at high ambient temperatures or locations that are damp or humid. Do not clean equipment with solvents, flammable liquids or harsh abrasives. For specific equipment safety use and care, see Equipment Safety. 			
<p>General Work Area Safety</p> <ul style="list-style-type: none"> Work areas should be clean and well lit. Do not operate the equipment if bystanders, animals etc are within operating range of the equipment or the general work area. If devices are provided for connecting dust extraction / collection facilities, ensure these are connected and used properly. Dust collection can reduce dust-related hazards. 	<p>General Fuel Safety</p> <ul style="list-style-type: none"> Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources. Do not spill fuel. If you spill fuel, wipe it off the equipment immediately – if fuel gets on your clothing, change clothing. Do NOT smoke near fuel or when refuelling. Always shut off the engine before refuelling. Do NOT refuel a hot engine. Open the fuel cap carefully to allow any pressure build-up in the tank to release slowly. Always refuel in well ventilated areas. Always check for fuel leakage. If fuel leakage is found, do not start or run the engine until all leaks are fixed. 	<p>General Carbon-Monoxide Safety</p> <ul style="list-style-type: none"> Using a combustion engine indoors CAN KILL IN MINUTES. Engine exhaust contains carbon-monoxide – a poison you cannot smell or see. Use combustion engines OUTSIDE only, and far away from windows, doors and vents. 			

General Electrical Safety	General Electrical Safety	General Service Information
<ul style="list-style-type: none">Inspect electrical equipment, extension cords, power bars, and electrical fittings for damage or wear before each use. Repair or replace damaged equipment immediately.Ensure all power sources conform to equipment voltage requirements and are disconnected before connecting or disconnecting equipment.When wiring electrically powered equipment, follow all electrical and safety codes.Wherever possible, use a residual current device (RCD).High voltage / high current power lines may be present. Use extreme caution to avoid contact or interference with power lines. Electrical shock can be fatal.	<ul style="list-style-type: none">Electrically grounded equipment must have an approved cord and plug and be connected to a grounded electrical outlet.Do NOT bypass the ON/OFF switch and operate equipment by connecting and disconnecting the electrical cord.Do NOT use equipment that has exposed wiring, damaged switches, covers or guards.Do NOT use electrical equipment in wet conditions or in damp locations.Do NOT use electrical cords to lift, move or carry equipment.Do NOT coil or knot electrical cords, and ensure electrical cords are not trip hazards.	<ul style="list-style-type: none">The equipment must be serviced or repaired at authorised service centres by qualified personnel only.Replacement parts must be original equipment manufacturer (OEM) to ensure equipment safety is maintained.Do NOT attempt any maintenance or repair work not described in this manual.After use, the equipment and components may still be hot – allow the equipment to cool and disconnect spark plugs and/or electrical power sources and/or batteries from it before making adjustments, changing accessories or performing repair or maintenance.Do NOT make adjustments while the equipment is running.Perform service related activities in suitable conditions, such as a workshop.Replace worn, damaged or missing warning/safety labels immediately.

Safety Symbols

The product may have safety warning labels attached to it, explained below. Understand the symbols on your product and their meanings. If any stickers become unreadable, unattached etc, replace them.

 <p>Flammable Material Hazard Flammable liquids, gases or substances etc may present. Avoid ignition sources and open flames. Danger of fire.</p>	 <p>Read User Manual Read and fully understand product safety warnings, operation, procedures etc before using the product.</p>	 <p>Use Hand Protection Wear appropriate hand protection and take due care as the product or use of the product may present hand hazards.</p>	 <p>WARNING EXHAUST FUMES Carbon-Monoxide Hazard Do not use the product in confined areas or without adequate ventilation. Carbon-monoxide poisoning can be fatal.</p>
 <p>Electrocution / Electrical Shock Hazard High voltage or high current electricity may be present or required by the product. Take due care when handling electrical products, cables, plugs and leads. Electrical shock can be fatal.</p>	 <p>Toxic Fumes / Dust Hazard Using the product or by-products from use may produce fumes, smoke or particles that could be harmful if inhaled. Wear appropriate breathing protection and have adequate ventilation.</p>	 <p>Explosive Material Hazard Combustible liquids, gases or substances etc may be present. Avoid ignition sources and open flames. Danger of explosion.</p>	 <p>Cutting / Amputation Hazard The product may have blades, edges or mechanical devices that can cause severe cut injury to fingers, limbs etc. Take due care when handling and using the product.</p>
 <p>Crush Hazard The product may have blades, edges or mechanical devices that can cause severe crush injury to fingers, limbs etc. Take due care when handling and using the product.</p>	 <p>Single Operator Only The product must be operated by a single person only. More than one person operating the product may introduce additional hazards.</p>	 <p>Use Face Protection Wear appropriate full-face protection and take due care as the product or use of the product may present face and eye hazards.</p>	 <p>Use Foot Protection Wear appropriate foot protection and take due care as the product or use of the product may present foot hazards.</p>
 <p>Use Eye / Ear / Head Protection Wear appropriate eye and / or ear and / or head protection and take due care as the product or use of the product may present eye, hearing and head hazards.</p>	 <p>Running Hazard Do not run on or near the product as doing so may present a fall hazard.</p>	 <p>Diving Hazard Do not dive into the product as doing so may present a neck / head injury hazard.</p>	 <p>Adult Supervision Required Always supervise children and other users of a product to prevent drowning or injury.</p>
 <p>Skin Penetration / Puncture Hazard The product may produce pressure, emit liquids or objects that can cause severe injury to fingers, limbs, blood etc. Take due care when handling and using the product.</p>	 <p>Hot Surface Hazard Be aware that the product may produce high temperatures and hot surfaces that can cause burn injuries.</p>	 <p>Flying Debris Hazard Be aware that the product or use of the product may present hazards produced by flying debris. Wear appropriate clothing and protective devices.</p>	 <p>Moving Parts Hazard Be aware that the product contains or uses mechanical devices that move or rotate. Always wait for moving parts to stop fully before handling the product, adjusting, maintenance etc.</p>

			
Carbon-Monoxide Hazard Do not use the product in confined areas or without adequate ventilation. Carbon-monoxide poisoning can be fatal.	Pull Hazard Be aware that the product contains or uses mechanical devices that can pull in objects and can cause severe injury to fingers, limbs etc. Take due care when handling and using the product.	Slope / Fall Injury Hazard Be aware that using the product on sloping surfaces or in slippery conditions may present additional dangers from falls and contact with blades, moving parts, hot surfaces etc.	"Slam Dunk" Warning Do NOT attempt "slam dunk" manoeuvres as this may result in severe injury due to falling, product breakage or collapse etc.
			
Electrocution / Electrical Shock Hazard - Outdoor High voltage or high current electricity may be present or required by the product. Do NOT use in rain, damp or wet conditions. Electrical shock can be fatal.	Electrocution / Electrical Shock Hazard - Disconnect High voltage or high current electricity may be present or required by the product. Always disconnect the product from the electrical supply before handling the product, adjusting, maintenance etc.	Power Line Electrocution Hazard High voltage / high current power lines may be present. Use extreme caution to avoid contact or interference with power lines. Electrical shock can be fatal.	"Kick-Back" Hazard High level of "kick-back" hazard that can cause the machine to suddenly rotate towards operator. Kick-back injury can be fatal.
			
Winch Operator Position Hazard Do NOT stand between winch and load. Do NOT use winch to move people.	Winch Lift Hazard Do NOT LIFT load vertically. Use machine to PULL only.	Cable Hazard Ensure that load bearing cable is not kinked or knotted.	Winch Cable Hazard Ensure that there is a minimum number of cable coils on winching mechanism.
			
Winch Hook Hazard Carry hook to load – do NOT throw or run.	Flash / Blinding Hazard Wear appropriate eye protection for welding. Direct exposure to weld arcs may cause permanent eye injury.	Laser Hazard Laser may be in use – do NOT look directly at laser, or allow others to.	Corrosive Substance Hazard The product may contain corrosive substances that can harm or otherwise cause damage. Take due care when handling and using the product.
			
Explosion Hazard The product may contain substances that can explode under certain conditions or misuse. Take due care when handling and using the product.			

Equipment Safety



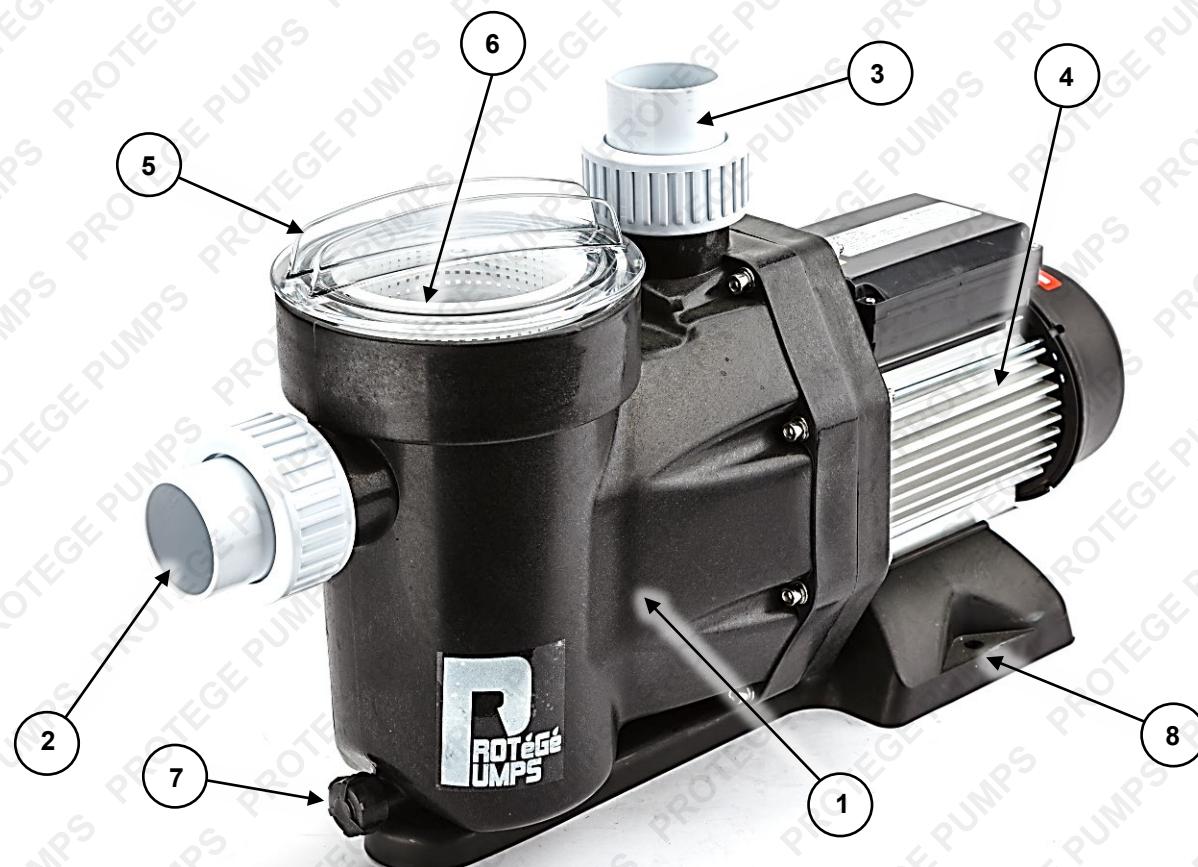
Electric water pumps can cause serious or fatal injury if not used correctly or without taking proper safety precautions. **It is extremely important that you read and fully understand the information in this section and all other safety warnings / recommendations and usage instructions before using the equipment.**

- The equipment is designed for domestic use only.
- Do not block pump suction with any part of your body, as this can cause severe injury or death.
- The equipment MUST be connected to a properly earthed mains electrical socket, and be used in conjunction with a residual current device (RCD) or ground fault circuit interrupter (GFCI).
- Do not use the equipment for purposes it is not designed for, such as pumping liquid chemicals.
- Do not start or run the pump dry. Running the pump dry for any length of time will cause severe damage and will void the warranty.
- The pump is for use with permanently installed pools and may also be used with hot tubs and spas, if so marked.
- Do not use the pump for wading pools, shallow pools, or spas containing bottom drains, unless the pump is connected to at least two (2) functioning suction outlets.
- To reduce the risk of injury, do not permit children to use this product.
- Incorrectly installed equipment may fail, causing severe injury or property damage.
- The pump is for fixed installations only and to be used in conjunction with swimming pool equipment.
- Do not store pool chemicals near your pump / filter equipment.
- Do not use with storables 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 storables pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity.

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Parts Identification



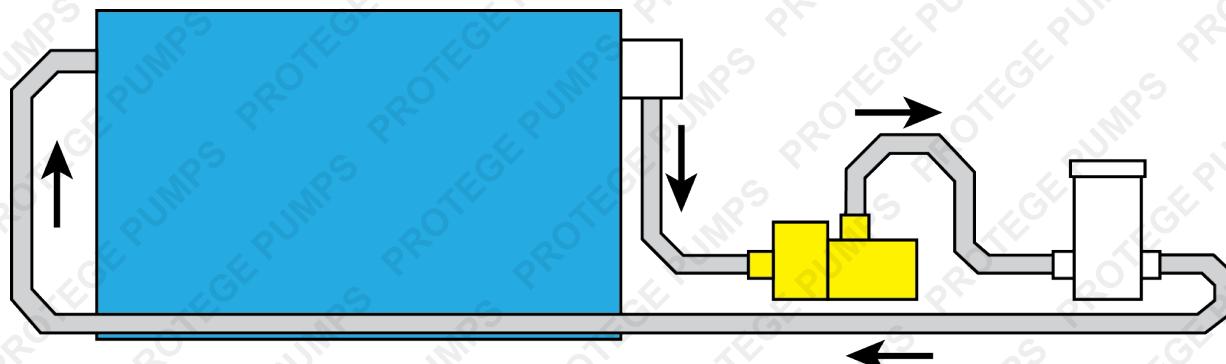
No.	Name	No.	Name
1	Pump Body	5	Lid
2	Inlet Port	6	Strainer Basket (under lid)
3	Outlet Port	7	Drain Plug
4	Motor	8	Base (includes mounting holes)

Set-Up and Operation



To achieve better pump self-priming, install the pump *below* the water level of the pool. • It is recommended that Teflon tape is used on all threads and plumbing. • It is recommended to have the pump and any pool plumbing installed by a suitably qualified person.

- If the pump is located below water level, isolation valves must be installed on both the suction and return plumbing to prevent back flow of pool water during pump servicing.
- Mount the pump on a solid, flat and level surface that will not vibrate. To further reduce vibration, bolt the pump to the surface or place a rubber mat between the surface and pump.
- Protect the pump from the elements. It is recommended to install the pump in a weather-proof enclosure.
- Proper ventilation is required for the pump to operate normally. The motor generates heat that must dissipate through adequate ventilation. A minimum 150mm (6") clearance at the rear of the pump is recommended to ensure adequate ventilation and accessibility for the motor.
- The pump may feature a pressure overload sensor that will automatically stop the pump if the pressure is too much (for example, if the attached filter is blocked).
- The pump must be turned off at the mains electrical supply to fully shut down. Ensure the power switch to the pump is easily accessible.
- Be aware of water draining from the pump (for example, when performing maintenance) and ensure that the pump is located where water can easily drain away, and is clear of electrical items or objects that may be damaged by water.
- Install pump plumbing using suitable rigid tubing and joint adhesive. Do not use flexible tube as this can collapse under suction created by the pump. The following image shows a typical, simple pool pump (yellow) and filter arrangement. The image shows the pump inlet plumbing from the pool skimmer box, then from pump outlet to filter inlet, then from the filter outlet back to the pool.



Priming the Pump



Priming is generally required after initial set-up, or after maintenance, where the pump or plumbing has been drained. Once the pump has been used and the plumbing system is free of any air, manual priming of the pump should not be required.

1. Once the plumbing and pump have been installed, check that the pump drain plug is correctly installed, then remove (rotate left) the clear lid from the top of the pump.
2. Fill the pump with pool water. If the pump is installed below water level, it should fill through gravity.
3. Ensure that the lid and any seals are totally clean and free of any particles, then re-install the lid and firmly tighten (rotate right) by hand. It is recommended to lubricate any seals with suitable lubricant.
4. Check for any leaks and repair them before switching the pump ON.

Operation

- Once the plumbing and pump have been installed and the pump is primed, switch the pump ON at the mains electrical supply.
- It is recommended to use an electrical timer to automate switching the pump ON and OFF during the day / night.

Maintenance and Troubleshooting



Disconnect the pump from the electrical supply before performing any maintenance. • The pump should be cool enough to touch before performing maintenance activities. • Stop any water flow to the pump from the pool on both inlet and outlet side before performing any maintenance activities. • Some maintenance activities described may be beyond the scope of some users. For procedures that you are not comfortable with or have the knowledge, tools or experience for, have the unit serviced by a service centre or qualified technician.

- The pump strainer basket should be inspected and cleaned at regular intervals. Remove the pump lid (rotate left), then remove the basket and clean it. Re-install the strainer basket. Ensure that the lid and any seals are totally clean and free of any particles, then re-install the lid and firmly tighten (rotate right) by hand. It is recommended to lubricate any seals with suitable lubricant.
- If your pool is deactivated for an extended period, stop any water flow to the pump from the pool on both inlet and outlet side, then remove the drain plug at the bottom of the pump to drain it. Do not replace the drain plug, but store it in the strainer basket until the pump is required again. An alternative is to remove the pump and store it indoors in a dry location. If the pump is used with salt water, it is necessary to flush it with clean water. It is also recommended that the seals be replaced before next use.

Troubleshooting

Symptoms	Probable Causes	Recommended Actions
Pump will not prime.	Air leak in inlet side.	<ul style="list-style-type: none"> Ensure the pool water level is high enough. Ensure that the pump lid and drain plug are installed correctly and not leaking. Ensure that all plumbing and connections are air-tight. Replace the pump seal.
	No water in the pump.	<ul style="list-style-type: none"> Make sure that the pump tank is filled with water.
	Closed valves or blocked lines.	<ul style="list-style-type: none"> Ensure all valves in the system are fully open. Clean the skimmer and pump strainer baskets. Check the pump for any obstructions.
Pump motor not running.	No electrical power.	<ul style="list-style-type: none"> Ensure that the electrical supply is within specification, switched ON, and that power is reaching the pump. Ensure that the fuse or circuit breaker is properly set. Ensure that any timer is properly set and operating correctly. Check the motor wiring at the terminals.
	Pump is jammed.	<ul style="list-style-type: none"> Check pump and remove any obstructions to the impellor.

Symptoms	Probable Causes	Recommended Actions
Weak water flow.	Skimmer basket or filter is dirty.	<ul style="list-style-type: none"> ▪ Clean the skimmer basket, pool strainer basket, and filter.
	Air leak in inlet side.	<ul style="list-style-type: none"> ▪ Ensure the pool water level is high enough. ▪ Ensure that the pump lid and drain plug are installed correctly and not leaking. ▪ Ensure that all plumbing and connections are air-tight. ▪ Replace the pump seal.
	Closed valves or blocked lines.	<ul style="list-style-type: none"> ▪ Open all valves in the system. ▪ Clean the skimmer and pump strainer basket. ▪ Check pump and remove any obstructions to the impellor.
Motor becomes excessively hot.	<ul style="list-style-type: none"> ▪ Low or incorrect voltage. ▪ Exposure to the sun. ▪ Poor ventilation. 	<ul style="list-style-type: none"> ▪ Ensure that the electrical supply is within specification. Wiring should be corrected by a qualified technician. ▪ Enclose the pump. ▪ Improve ventilation around the pump.
Motor is noisy.	Worn bearings.	<ul style="list-style-type: none"> ▪ Replace the motor bearings.
Pump / water flow is noisy.	Air leak in inlet side.	<ul style="list-style-type: none"> ▪ Ensure the pool water level is high enough. ▪ Ensure that the pump lid and drain plug are installed correctly and not leaking. ▪ Ensure that all plumbing and connections are air-tight. ▪ Replace the pump seal.
	Inlet blockage (indicated by a high vacuum reading at the pump suction).	<ul style="list-style-type: none"> ▪ Open all valves in the system. ▪ Clean the skimmer and pump strainer basket. ▪ Check pump and remove any obstructions to the impellor.
	Foreign matter lodged in pump impeller.	<ul style="list-style-type: none"> ▪ Check pump and remove any obstructions to the impellor.
Motor overload protection trips.	Cavitation.	<ul style="list-style-type: none"> ▪ Improve suction conditions (reduce lift and/or number of fittings, increase pipe size). ▪ Reduce outlet flow by throttling the discharge valve.
	The motor is connected improperly.	<ul style="list-style-type: none"> ▪ Have a qualified technician check the wiring diagram on the motor.
	Low voltage due to undersized wire or low, incoming voltage reading.	<ul style="list-style-type: none"> ▪ Have a qualified technician check the electrical supply to the pump.
Pump is leaking.	Pump not sealed correctly.	<ul style="list-style-type: none"> ▪ Ensure that the pump lid and drain plug are installed correctly and not leaking. ▪ Ensure that all plumbing and connections are air-tight.
	Seals are worn.	<ul style="list-style-type: none"> ▪ Replace seals. This is likely to happen more frequently with salt water.

Specifications

PS07

Electrical Requirements	240VAC / 50Hz 2.2A
Maximum Flow	240l/min
Maximum Water Temperature	50°C
Maximum Lift (Head)	14m
Noise	< 65dB
Plumbing Size	Internal: 48mm / external: 55mm

PS20

Electrical Requirements	240VAC / 50Hz 2.2A
Maximum Flow	240l/min
Maximum Water Temperature	50°C
Maximum Lift (Head)	14m
Noise	< 65dB
Plumbing Size	Internal: 48mm / external: 55mm

PS16

Electrical Requirements	240VAC / 50Hz 5A
Maximum Flow	405l/min
Maximum Water Temperature	50°C
Maximum Lift (Head)	17m
Noise	< 65dB
Plumbing Size	Internal: 48mm / external: 55mm

PS20

Electrical Requirements	240VAC / 50Hz 8A
Maximum Flow	560l/min
Maximum Water Temperature	50°C
Maximum Lift (Head)	18m
Noise	< 65dB
Plumbing Size	Internal: 48mm / external: 55mm



Some experts believe the incorrect or prolonged use of almost any product could cause serious injury or death. For information that may reduce your risk of serious injury or death, consult the points below and additionally, the information available at www.datastreamserver.com/safety

- Consult all documentation, packaging and product labelling before use. Note that some products feature online documentation which should be printed and kept with the product.
- Check product for loose / broken / damaged / missing parts, wear or leaks (if applicable) before each use. Never use a product with loose / broken / damaged / missing parts, wear or leaks (if applicable).
- Products must be inspected and serviced (if applicable) by a qualified specialist every 6 months assuming average residential use by a person of average weight and strength, above average technical aptitude, on a property matching average metropolitan specification. Intended use outside these guidelines could indicate the product is not suitable for intended use or may require more regular inspection or servicing.
- Ensure all possible users of the product have completed an industry recognized training course before being given access to the product.
- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or your description of the application. Be sure to attain third-party approval for your application from a qualified specialist before use regardless of prior assurances by the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (take an automobile, aircraft, computer or ball point pen for example), there is always a small chance of technical issues that needs to be repaired or may require replacement of the product or a part. If the possibility of such failure and the associated time it takes to rectify could in any situation inconvenience the user, business or employee then the product is not suitable for your requirements. This product is not for use where incorrect operation or a failure of any kind, including but not limited to a condition requiring product return, replacement, service by a technician or replacement of parts could cause a financial loss, loss of employee time or an inconvenience requiring compensation.
- If this item has been purchased in error after considering the points above, simply contact the retailer directly for details of their returns policy, if required.



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