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Water
 is Our
Business

OWNER'S MANUAL

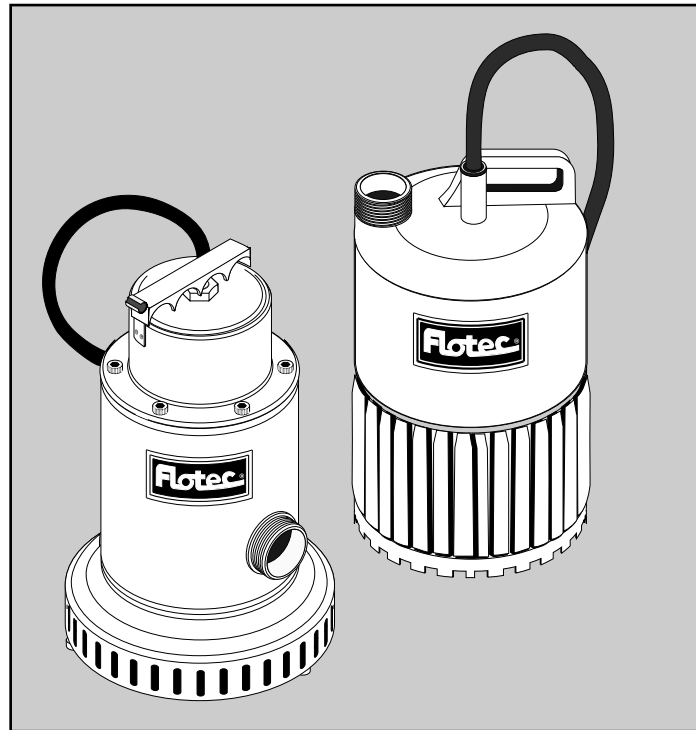
**Submersible
 Waterfall/Utility Pumps**

NOTICE D'UTILISATION

**Pompes submersibles tout
 usage et pour chute d'eau**

MANUAL DEL USUARIO

**Bombas sumergibles
 para cascadas/uso general**



FP0S4100X

FP0S1200X

FP0S2300X

FP0S3000X

Installation/Operation/Parts

*For further operating, installation,
 or maintenance assistance:*

Call 1-800-365-6832

English Pages 2-6

Installation/Fonctionnement/Pièces

*Pour plus de renseignements
 concernant l'utilisation,
 l'installation ou l'entretien,*

Composer le 1 (800) 365-6832

Français Pages 7-11

Instalación/Operación/Piezas

*Para mayor información sobre el
 funcionamiento, instalación o
 mantenimiento de la bomba:*

Llame al 1-800-365-6832

Español Paginas 12-16

READ AND FOLLOW SAFETY INSTRUCTIONS!

⚠ This is the safety alert symbol. When you see this symbol on your pump or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

⚠ DANGER warns about hazards that **will** cause serious personal injury, death or major property damage if ignored.

⚠ WARNING warns about hazards that **can** cause serious personal injury, death or major property damage if ignored.

⚠ CAUTION warns about hazards that **will** or **can** cause minor personal injury or property damage if ignored.

The label **NOTICE** indicates special instructions which are important but not related to hazards.

GENERAL SAFETY

Carefully read and follow all safety instructions in this manual and on pump.

Keep safety labels in good condition.
Replace missing or damaged safety labels.

To avoid serious injury and/or property damage, read and follow these rules and instructions carefully.

⚠ WARNING **Hazardous voltage. Can shock, burn or cause death.** To reduce the risk of electric shock, use only on portable self-contained fountains no larger than 5 feet in any dimension.

1. Pump is designed for use with clean, cold, fresh water. **Do not** use to pump any flammable liquid.
2. **Do not** lift pump by power cord at any time. Attempting to lift or support the pump by the power cord can damage the cord and cord connections, and will void warranty. Always lift the pump by the lifting handle.
3. **Meet National Electrical Code, Canadian Electrical Code, and local codes for all wiring.** The National Electric Code requires installation of a ground fault circuit interrupter (GFCI) in the branch circuit supplying fountain pumps and other pond equipment. Purchase a GFI at your local electrical supply dealer.
4. Installation must comply with all local codes pertaining to outdoor ponds/waterfall/fountains.
5. Know the pump application, limitations, and potential hazards.

6. Disconnect the power before servicing.
7. Release all pressure within the system before servicing any component.
8. Drain all water from the system before servicing.
9. Secure the discharge line before starting pump. An unsecured discharge line will whip, possibly causing personal injury and/or property damage.
10. Check hoses for weak or worn condition before each use, making certain that all connections are secure.
11. Periodically inspect the pump and system components. Keep the screen free of debris and foreign objects. Perform routine maintenance as required.
12. Personal Safety:
 - a. Wear safety glasses at all times when working with pumps.
 - b. Keep work area clean, uncluttered and properly lighted – replace all unused tools and equipment.
 - c. Keep visitors at a safe distance from work area.
 - d. Make workshop child-proof – with padlocks, master switches, and by removing starter keys.
13. This equipment is only for use on 115 volt (single phase) and is equipped with an approved 3-conductor cord and 3-prong, grounding-type plug.

⚠ WARNING **Hazardous voltage. Can shock, burn or cause death.** To reduce risk of electric shock, pull plug before servicing. This pump has not been investigated for use in swimming pool areas. Pump is supplied with a grounding conductor and grounding-type attachment plug. Be sure it is connected only to an individual branch circuit with a properly grounded grounding-type receptacle. Where a 2-prong wall receptacle is encountered, it must be replaced with a properly grounded 3-prong receptacle installed in accordance with codes and ordinances that apply.

14. Make certain power source conforms to requirements of your equipment.
15. Protect the electrical cord from sharp objects, hot surfaces, oil, and chemicals. Avoid kinking cord. Replace or repair damaged or worn cords immediately.
16. Do not touch an operating motor. Modern motors are designed to operate at high temperatures.
17. Do not handle pump or pump motor with wet hands or when standing on wet or damp surface, or in water.

Thank you for purchasing a top quality, factory tested pump.

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ATTACH ORIGINAL RECEIPT HERE FOR WARRANTY CONSIDERATION.

Flotec Limited Warranty

FLOTEC warrants to the original consumer purchaser ("Purchaser") of its products that they are free from defects in material or workmanship.

If within twelve (12) months from the date of the original consumer purchase any such product shall prove to be defective, it shall be repaired or replaced at FLOTEC's option, subject to the terms and conditions set forth below. Your original receipt of purchase is required to determine warranty eligibility.

Exceptions to the Twelve (12) Month Warranty

Ninety (90) Day Warranty:

If within ninety (90) days from original consumer purchase any Drill Pump, Pitcher Pump, or In-Line Water Filter Cartridge shall prove to be defective, it shall be replaced, subject to the terms set forth below.

Two (2) Year Warranty:

If within two (2) years from original consumer purchase any 1/3 HP Submersible Sump Pump shall prove to be defective, it shall be repaired or replaced at FLOTEC's option, subject to the terms and conditions set forth below.

Three (3) Year Warranty:

If within three (3) years from original consumer purchase any 4" Submersible Well Pump, or 1/2 HP Submersible Sump Pump, shall prove to be defective, it shall be repaired or replaced at FLOTEC's option, subject to the terms and conditions set forth below.

Four (4) Year Warranty:

If within four (4) years from original consumer purchase any FLOODMATE 7000™ Submersible Sump Pump shall prove to be defective, it shall be repaired or replaced at FLOTEC's option, subject to the terms and conditions set forth below.

Five (5) Year Warranty:

If within five (5) years from original consumer purchase any Pre-Charge water system tank shall prove to be defective, it shall be repaired or replaced at FLOTEC's option, subject to the terms and conditions set forth below.

General Terms and Conditions

Purchaser must pay all labor and shipping charges necessary to replace product covered by this warranty. This warranty shall not apply to acts of God, nor shall it apply to products which, in the sole judgement of FLOTEC, have been subject to negligence, abuse, accident, misapplication, tampering, alteration; nor due to improper installation, operation, maintenance or storage; nor to other than normal application, use or service, including but not limited to, operational failures caused by corrosion, rust or other foreign materials in the system, or operation at pressures in excess of recommended maximums.

Requests for service under this warranty shall be made by returning the defective product to the Retail outlet or to FLOTEC as soon as possible after the discovery of any alleged defect. FLOTEC will subsequently take corrective action as promptly as reasonably possible. No requests for service under this warranty will be accepted if received more than 30 days after the term of the warranty.

This warranty sets forth FLOTEC's sole obligation and purchaser's exclusive remedy for defective products.

FLOTEC SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR CONTINGENT DAMAGES WHATSOEVER.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE DURATION OF THE APPLICABLE EXPRESS WARRANTIES PROVIDED HEREIN.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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DESCRIPTION

These submersible pumps are designed for use in waterfall/ fountain applications or as a utility pump. The units are equipped with a 3-prong grounding-type power cord. Ball bearings on motor shafts never need lubrication. Automatic reset thermal protection.

SPECIFICATIONS

Power supply required.....115V, 60 HZ.
 Motor duty.....continuous*
 Liquid Temp. Range32°F to 100°F (0°-38°C)
 Individual Branch Circuit Requirement (minimum).....15 Amps
 Discharge Fittings:
1/2", 3/4", and 1" Barbed Hose Adapter
1-1/4" x 1" FNPT Reducer
Garden Hose Adapter

NOTICE: Not designed for applications involving salt water or brine! Use with salt water or brine will void warranty.

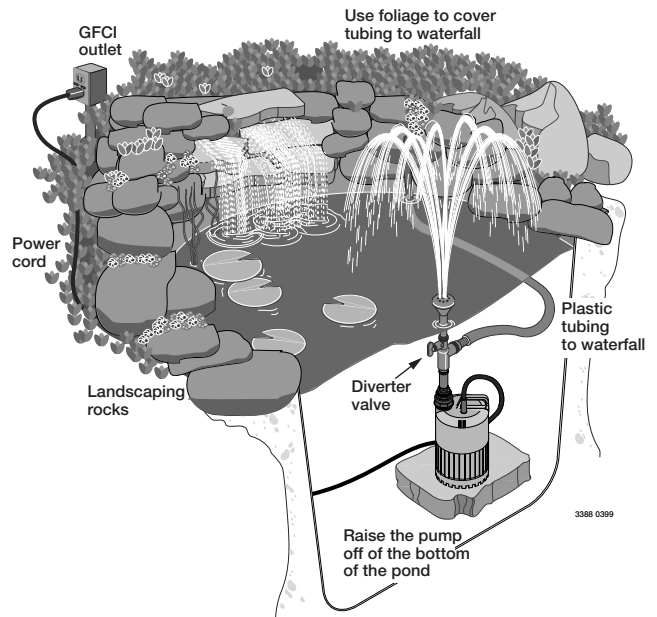


Figure 1: Typical Garden Pond and Waterfall Installation.

ELECTRICAL SPECIFICATIONS

Model	Motor H.P.	Motor Full Load Amps	Minimum Circuit Req. (Amps)	Pumps Down To
FPOS1200X	1/6	1.5	15	7/16" (11mm)
FPOS2300X	3/10	2.6	15	7/16" (11mm)
FPOS3000X	4/10	3.0	15	7/16" (11mm)
FPOS4100X	1/2	7.2	15	1-3/8" (35mm)

1. Install the pump on a hard level surface. Make sure that the pump cannot pick up rocks, mud and debris, etc. If necessary, put a block under the pump to raise it slightly. If used with a fountain jet, position the pump so that the fountain jet is above the surface of the water.
2. **Protect the power cord from damage.** Uncovered cords should be routinely inspected for damage or deterioration. **DO NOT** operate the pump if the cord is damaged.
3. If used in a garden pond, adjust the diverter valve to control the fountain spray height and flow over the waterfall. **Do not** restrict pump suction to adjust flows. Restricting the suction will starve the pump for water and can damage the pump.
4. If the pump is connected to a pond filter, adjust the diverter valve to provide adequate flow to the filter. Refer to the filter instruction manual to determine flow requirements of filter.

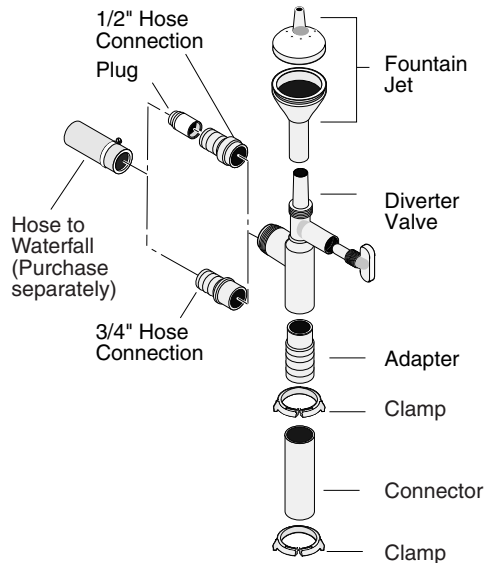
INSTALLATION

See Figure 1 for typical installation connections to pump (**NOTE:** Fountain accessories not included with pump).

PERFORMANCE

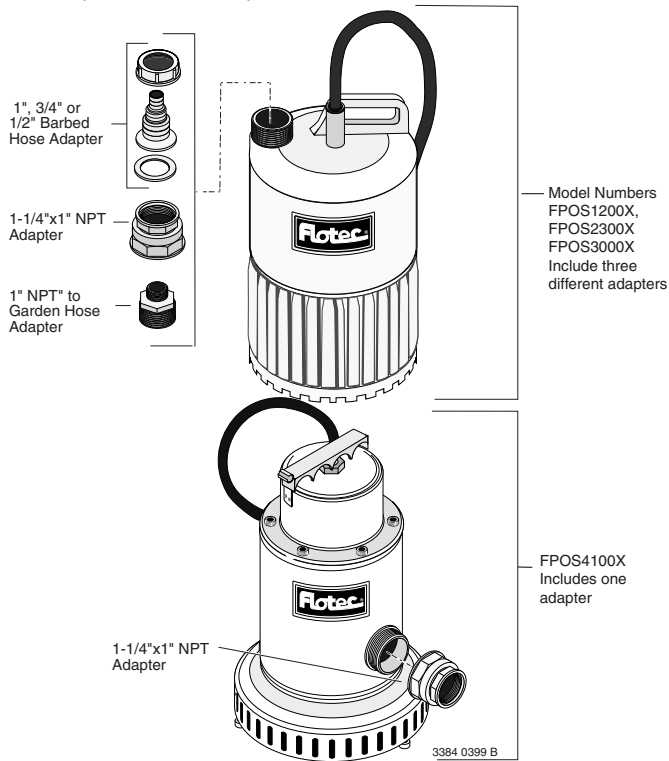
Model	Motor HP	GPH (LPH) AT TOTAL FEET (M)						No Flow At Height Shown Below
		1 (.3 M)	5 (1.5 M)	10 (3 M)	15 (4.6 M)	20 (6.1 M)	25 (7.6 M)	
FPOS1200X	1/6	1,200 (4,542)	1,000 (3,785)	675 (2,555)	400 (1,514)	–	–	20' (6.1 M)
FPOS2300X	3/10	2,300 (8,858)	1,975 (7,476)	1,425 (5,394)	850 (3,218)	300 (1,136)	–	22' (6.7 M)
FPOS3000X	4/10	3,000 (11,356)	2,500 (9,464)	1,900 (7,192)	1,320 (4,997)	750 (2,839)	–	25' (7.6 M)
FPOS4100X	1/2	4,100 (15,520)	3,600 (13,627)	3,000 (11,356)	2,400 (9,085)	1,625 (6,151)	920 (3,483)	30' (9.1 M)

Accessory Kit FPWG-A68
For use with the 1200, 2300
and 3000 Series Pumps
(Purchase Separately)



3384 0399 A

Pumps include the adapters below.



3384 0399 B

Figure 2: Typical Installation Setup. Models FPOS1200X, FPOS2300X, and FPOS3000X include 3 adapters shown. Model FPOS4100X includes 1-1/4" x 1" NPT adapter only.

OPERATION

⚠ WARNING Hazardous voltage. Can shock, burn or cause death. Do not handle a pump or pump motor with wet hands or when standing on a wet or damp surface, or in water.

1. Shaft seal depends on water for lubrication. Do not operate the pump unless it is in water as the seal may be damaged if allowed to run dry.
2. The motor is equipped with an automatic reset thermal protector. If the temperature in the motor should rise unduly, the switch will cut off all power before damage can be done to the motor. When the motor has cooled sufficiently, the switch will reset automatically and restart the motor. If the protector trips repeatedly, remove the pump and check it as to the cause of difficulty. Low voltage, long extension cords, clogged impeller, very low head or lift, etc., could cause cycling.
3. The pump will not remove all water. If the pump is operating and suddenly no water comes out of the discharge hose, shut off the unit immediately. The water level is probably very low and the unit has broken prime.

NOTICE: For continuous operation, water must flow through pump to prevent motor overheating. The pump is cooled by the water flow through the housing.

4. This pump is designed to pump cold water only. Pumping heated liquids can overheat the motor and cause the thermal overload to trip.
5. Pump can run in water that doesn't completely cover the motor housing, but the inlet must be completely submerged or it will break suction and will not move any water.
6. Keep the inlet screen clean at all times. If the bottom surface of the pond or waterfall is dirty, raise the pump slightly to reduce the amount of debris pulled into the pump inlet.
7. If you need to reduce the flow, restrict the discharge. Do not restrict the intake. Doing so will starve the pump for water and can cause overheating.

MAINTENANCE

⚠ WARNING Risk of electric shock. Can burn or cause death. Disconnect the power before servicing, repairing, or working on pump.

The pump's motor is completely sealed in the motor housing and does not require any service. Disassembly of the motor housing or modification or removal of the power cord voids the warranty. The power cord is non-replaceable.

Never run the pump dry! Running the pump dry can damage the seal, causing leakage. This pump is a submersible type and must be in water at all times for proper operation and cooling.

Periodically clean the suction screen. Make sure that impeller rotation is not being hampered by any debris.

***Thank you for purchasing
Flotec Products.***

Troubleshooting

NOTICE: This pump has no serviceable parts inside the case. Opening the case will ruin the pump. If obstructions or blockages of the impeller cannot be cleaned out from the outside (for instance, by washing out with a garden hose), replace the pump.

⚠ WARNING Hazardous voltage; can shock, burn or kill. Unplug the pump before attempting to clean or work on the pump.

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Pump won't start or run	Blown fuse Low line voltage Defective motor Impeller	If blown, replace with fuse of proper size If voltage under recommended minimum, check size of wiring from main switch on property. If OK, contact power company or hydro authority Replace pump If impeller won't turn, locate source of binding and clean out with hose or remove obstruction. Do not open case
Pump operates but delivers little or no water	Low line voltage Something caught in impeller Worn or defective parts or plugged impeller Check valve installed without vent hole	If voltage under recommended minimum, check size of wiring from main switch on property. If OK, contact power company or hydro authority. Clean out impeller or replace pump Clean impeller if plugged; otherwise replace pump Drill a 1/16" - 1/8" (1.6mm - 3.2mm) dia. hole between pump discharge & check valve
Intermittent running or pump stopped automatically	Thermal overload tripped	Protect the installation from the sun Pump cooler water Check for clogged impeller; clean if necessary from outside of case Pump has run dry; add water