

Flotec®

Water is Our Business®

293 Wright Street, Delavan, WI 53115

Phone: 800-365-6832

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www.flotecwater.com

OWNER'S MANUAL

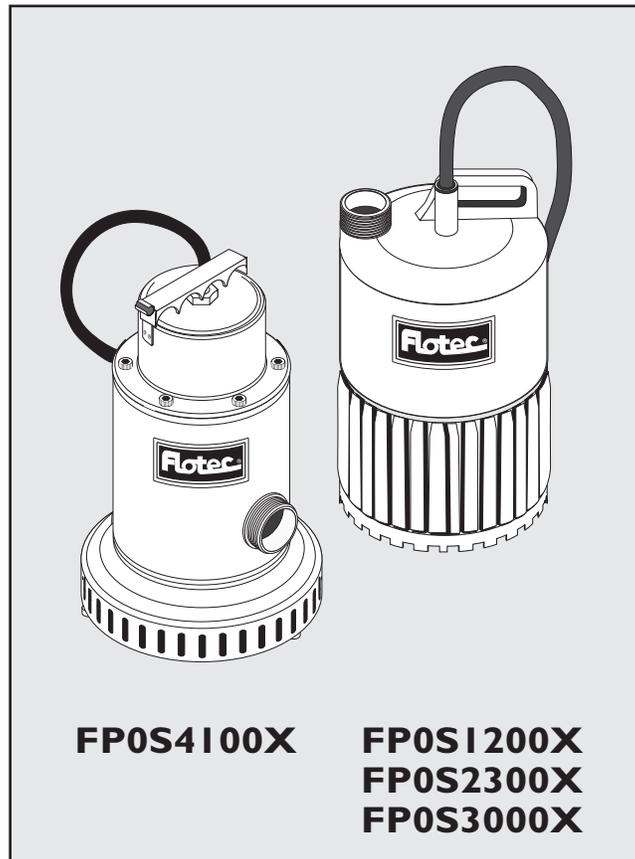
Submersible Waterfall / Utility Pumps

NOTICE D'UTILISATION

Pompes submersibles tout usage et pour chute d'eau

MANUAL DEL USUARIO

Bombas sumergibles para cascadas/uso general



Installation/Operation/Parts

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

Call 800-365-6832

English. Pages 2-6

Installation/Fonctionnement/Pièces

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

Composer le (800) 365-6832

Français. Pages 7-11

Instalación/Operación/Piezas

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

Llame al 800-365-6832

Español Páginas 12-16

Important Safety Instructions

SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during installation, operation, and maintenance of the product.

▲ 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 indicates a hazard which, if not avoided, *will* result in death or serious injury.

▲ WARNING indicates a hazard which, if not avoided, *could* result in death or serious injury.

▲ CAUTION indicates a hazard which, if not avoided, *could* result in minor or moderate injury.

NOTICE addresses practices not related to personal injury.

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.

California Proposition 65 Warning

▲ WARNING This product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

General Safety

▲ WARNING Risk of electric shock. Can shock, burn or kill. 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 Risk of electric shock. Can shock, burn or kill. 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.

Retain Original Receipt For Warranty Eligibility

Limited Warranty

This Limited Warranty is effective June 1, 2011 and replaces all undated warranties and warranties dated before June 1, 2011. FLOTEC warrants to the original consumer purchaser (“Purchaser” or “You”) that its products are free from defects in material and workmanship for a period of twelve (12) months from the date of the original consumer purchase. If, within twelve (12) months from 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 herein. Note that this limited warranty applies to manufacturing defects only and not to ordinary wear and tear. All mechanical devices need periodic parts and service to perform well. This limited warranty does not cover repair when normal use has exhausted the life of a part or the equipment.

The original purchase receipt and product warranty information label are required to determine warranty eligibility. Eligibility is based on purchase date of original product – not the date of replacement under warranty. The warranty is limited to repair or replacement of original purchased product only, not replacement product (i.e. one warranty replacement allowed per purchase). Purchaser pays all removal, installation, labor, shipping, and incidental charges.

For parts or troubleshooting assistance, DO NOT return product to your retail store - contact FLOTEC Customer Service at 800-365-6832.

Claims made under this warranty shall be made by returning the product (except sewage pumps, see below) to the retail outlet where it was purchased or to the factory immediately after the discovery of any alleged defect. FLOTEC will subsequently take corrective action as promptly as reasonably possible. No requests for service will be accepted if received more than 30 days after the warranty expires. Warranty is not transferable and does not apply to products used in commercial/rental applications.

Sewage Pumps

DO NOT return a sewage pump (that has been installed) to your retail store. Contact FLOTEC Customer Service. Sewage pumps that have seen service and been removed carry a contamination hazard with them.

If your sewage pump has failed:

- Wear rubber gloves when handling the pump;
- For warranty purposes, return the pump’s cord tag and original receipt of purchase to the retail store;
- Dispose of the pump according to local disposal ordinances.

Exceptions to the Twelve (12) Month Limited Warranty

Product	Warranty Period
FP0F360AC, FP0FDC	90 days
FP0S1775A, FP0S1790PCA, FP0S2400A, FP0S2450A, FP0S4100X, FP2800DCC, FPCP-20ULST, FPPSS3000, FPSC2150A, FPSC3150A, FPSC3350A	2 Years
4” Submersible Well Pumps, FP0S3200A, FP0S3250A, FP0S6000A, FPSC1725X, FPSC2200A, FPSC2250A, FPSE3601A, FPPSS5000	3 Years
FP7100 Series Pressure Tanks, E100ELT, E3305TLT, E3375TLT, E5005TLTT, E50TLT, E50VLT, E75STVT, E75VLT, FPSC3200A, FPSC3250A, FPSC4550A	5 Years

General Terms and Conditions; Limitation of Remedies

You must pay all labor and shipping charges necessary to replace product covered by this warranty. This warranty does not apply to the following: (1) acts of God; (2) products which, in FLOTEC’s sole judgment, have been subject to negligence, abuse, accident, misapplication, tampering, or alteration; (3) failures due to improper installation, operation, maintenance or storage; (4) atypical or unapproved application, use or service; (5) failures caused by corrosion, rust or other foreign materials in the system, or operation at pressures in excess of recommended maximums.

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

FLOTEC • 293 Wright Street • Delavan, WI U.S.A. 53115
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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.

Pump water only with this pump.

Specifications

Power supply required. 115V, 60 HZ.
 Motor duty continuous
 Liquid Temp. Range. 32°F to 100°F (0°-38°C)
 Individual Branch Circuit Requirement (minimum) 15 Amps
 Discharge Fittings See Figure 2

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

Electrical Specifications

Model	Motor HP	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		
FPOS3000X	4/10	3.0		
FPOS4100X	1/2	7.2		1-3/8" (35mm)

Installation

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

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.

Performance

Model	Motor HP	GPH (LPH) At Total Feet (M)						No Flow At Height Shown Below
		1 (.3)	5 (1.5)	10 (3)	15 (4.6)	20 (6.1)	25 (7.6)	
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)	1,650 (6,246)	900 (3,407)	30' (9.1 M)

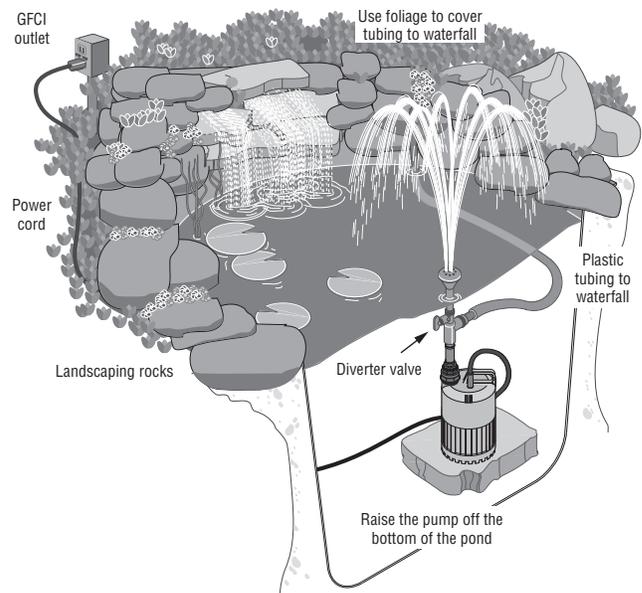


Figure 1 - Typical Garden Pond and Waterfall Installation.

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.

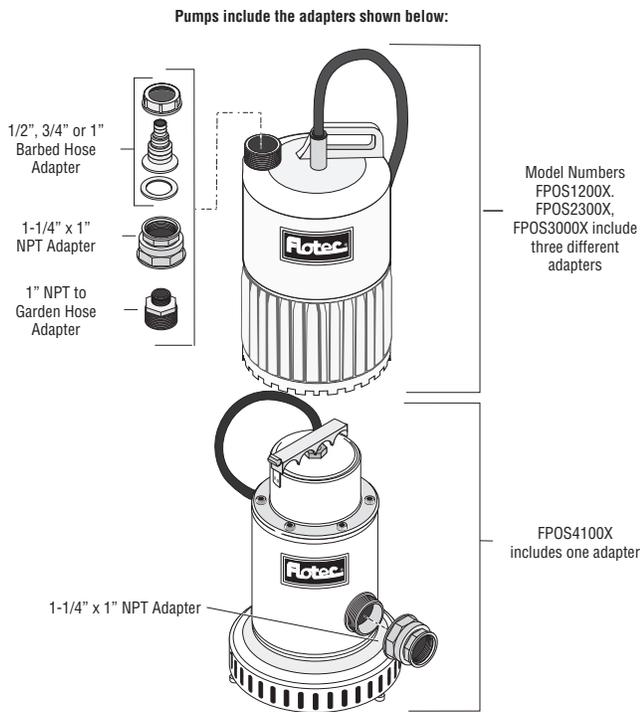


Figure 2 - Adapters

Operation

⚠ WARNING Risk of electric shock. Can shock, burn or kill. 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 shock, burn or kill. 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 not 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.

Troubleshooting

⚠ WARNING Risk of electric shock. Can shock, burn or kill. Unplug the pump before attempting to clean or work on the pump.

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.

Symptom	Possible Cause(s)	Corrective Action
Pump won't start or run.	Blown fuse or tripped breaker.	If blown, replace with fuse of proper size. If tripped, reset breaker.
	Low line voltage	If voltage under recommended minimum, check size of wiring from main switch on property. If OK, contact power company or hydro authority.
	Defective motor.	Replace pump.
	Impeller	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.	If voltage under recommended minimum, check size of wiring from main switch on property. If OK, contact power company or hydro authority.
	Something caught in impeller.	Clean out impeller or replace pump.
	Worn or defective parts or plugged impeller.	Clean impeller if plugged; otherwise replace pump.
	Check valve installed without vent hole.	Drill a 1/16" - 1/8" (1.6mm - 3.2mm) dia. hole between pump discharge and 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