



OWNER'S MANUAL  
**Submersible Sump Pumps**

P.O. Box 342, Delavan, WI 53115

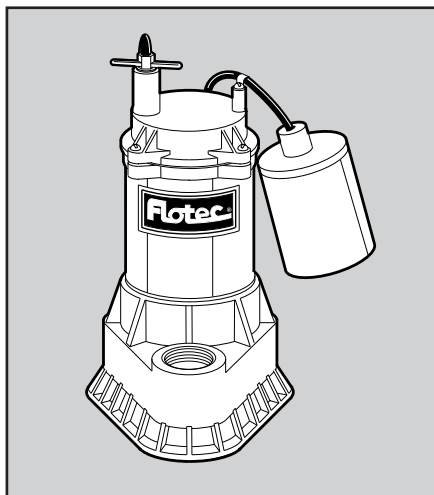
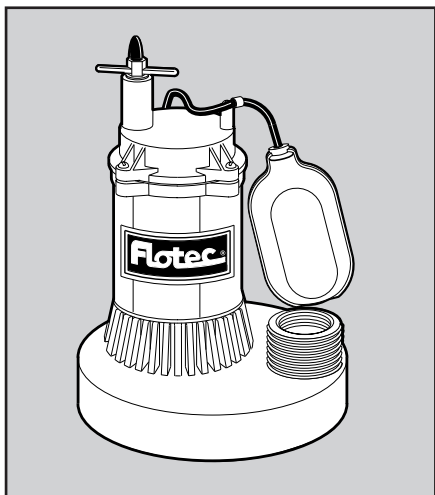
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**Water**  
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**Installation/Operation/Parts**

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

**Call 1-800-365-6832**

**English ..... Pages 2-7**

**DESCRIPTION**

This Submersible Sump Pump is designed for home sumps. Unit is equipped with a 3-prong grounding-type power cord. Shaded-pole motor is oil filled and sealed for cooler running. Sleeve bearings on motor shaft never need lubrication. Automatic reset thermal protection. Not designed for use as a swimming pool drainer.

**SPECIFICATIONS**

Power supply required .....115V, 60 HZ.  
 Liquid Temp. Range .....32°F to 70°F(0°-21°C)  
 Individual Branch Circuit Required (min.) .....15 Amps  
 Discharge:

Plastic Models .....1-1/4" FNPT / 1-1/2" MNPT  
 Cast Iron Models .....1-1/2" FNPT

**NOTICE:** Do not reduce size of discharge pipe or hose below 1-1/4" diameter. If discharge is too small, pump will overheat and fail prematurely.

**NOTICE:** This unit is not designed for applications involving salt water or brine! Use with salt water or brine will void warranty.

Pump water only with this pump.  
 Do not use where water recirculates.

Not designed for use as a swimming pool drainer.

**PERFORMANCE**

GPH (LPH) AT TOTAL FEET (M) OF LIFT					
Series	Motor HP	5 (1.5m)	10 (3m)	15 (4.6m)	No flow at height shown below
CAPACITY GALLONS(L)/HOUR					
FPOS1800A FPOS1800LTS	1/4	2280 (8 631)	1620 (6 132)	660 (2 498)	18 Ft. (5.5M)
FPOS2400A FPOS2450A	1/3	2760 (10 448)	2160 (8 176)	1410 (5 337)	20 Ft. (6.1M)
FPOS3200A FPOS3250A	1/2	3200 (12 113)	2700 (10 220)	2000 (7 571)	24 Ft. (7.3M)
FPSC2200A FPSC2250A	1/3	2800 (10 599)	2200 (8328)	1400 (5299)	20 Ft. (6.1M)

**ELECTRICAL & SWITCH SPECIFICATIONS**

Series	Motor HP	Motor Full Load Amps	Individual Branch Circuit Req.(Amps)	*Switch Setting in inches (mm)	
				On	Off
FPOS1800A	1/4	8.5	15	11 3/4"(298)	4 3/4"(114)
FPOS1800LTS	1/4	8.5	15	6 1/4"(159)	3"(76)
FPOS2400A	1/3	9.0	15	13"(330)	6"(152)
FPOS3200A	1/2	5.5	15	13"(330)	6"(152)
FPSC2200A	1/3	9.0	15	13"(330)	6"(152)
FPOS2450A	1/3	9.0	15	8"(203)	4"(102)
FPOS3250A	1/2	6.0	15	8"(203)	4"(102)
FPSC2250A	1/3	9.0	15	8"(203)	4"(102)

**GENERAL SAFETY INFORMATION**

Electrically powered sump pumps normally give many years of trouble-free service when correctly installed, maintained, and used. However, unusual circumstances (interruption of power to the pump, dirt/debris in the sump, flooding that exceeds the pump's capacity, electrical or mechanical failure in the pump, etc.) may prevent your pump from functioning normally. To prevent possible water damage due to flooding, consult your retailer about a secondary AC sump pump, a DC backup sump pump, and/or a high water alarm. See the "Troubleshooting Chart" in this manual for information about common sump pump problems and remedies. For more information, see your retailer, call Flotec customer service at 1-800-365-6832 or visit our website at [www.flotecwater.com](http://www.flotecwater.com).

1. Know the pump application, limitations, and potential hazards.
2. **Do not use in water with fish present.**
3. Disconnect power before servicing.
4. Release all pressure within system before servicing any component.
5. Drain all water from system before servicing.
6. Secure discharge line before starting pump. An unsecured discharge line will whip, possibly causing personal injury and/or property damage.
7. Check hoses for weak or worn condition before each use, making certain that all connections are secure.
8. Periodically inspect sump, pump and system components. Keep free of debris and foreign objects. Perform routine maintenance as required.
9. Provide means of pressure relief for pumps whose discharge line can be shut-off or obstructed.
10. 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.
11. When wiring an electrically driven pump, follow all electrical and safety codes that apply.
12. **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** 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 a properly grounded grounding-type receptacle.

Where a 2-prong wall receptacle is encountered, it must be replaced with properly grounded 3-prong receptacle installed in accordance with codes and ordinances that apply.

13. All wiring should be performed by a qualified electrician.
14. Make certain power source conforms to requirements of your equipment.
15. Protect 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 can 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.

**⚠ WARNING** Hazardous voltage can shock, burn or kill. If your basement has water or moisture on floor, do not walk on wet area until all power has been turned off. If shut-off box is in basement, call electric company or hydro authority to shut-off service to house, or call your local fire department for instructions. Remove pump and repair or replace. Failure to follow this warning can result in fatal electrical shock.

Do not lift pump by power cord.

## FLOAT SWITCH INSTALLATION

Models equipped with vertical switches require some assembly. See the Switch Assembly instructions on Page 4. Models with tethered float switches are ready for use.

## INSTALLATION

1. Install pump in sump pit with minimum diameter of 10" (254mm) for models equipped with vertical switches and 14" (356mm) for tethered float switch models. Sump depth should be 16" (406mm) for tethered models and 10" (254mm) for vertically switched models. Construct sump pit of tile, concrete, steel or plastic. Check local codes for approved materials and for proper installation.
2. Install pump in pit so that switch operating mechanism has maximum possible clearance.
3. Pump should not be installed on clay, earth or sand surfaces. Clean sump pit of small stones and gravel which could clog pump. Keep pump inlet screen clear.

**NOTICE:** Do not use ordinary pipe joint compound on plastic pipe. Pipe joint compound can attack plastics.

4. Install discharge plumbing. Use rigid plastic pipe and wrap threads with Teflon™ tape. Screw pipe into pump hand tight plus 1-1/2 turns.

**⚠ CAUTION** Risk of flooding. If a flexible discharge hose is used, make sure pump is secured in sump to prevent movement. Failure to secure pump may allow pump movement, switch interference and prevent pump from starting or stopping.

5. To reduce motor noise and vibrations, a short length of rubber hose (1-7/8" (47.6mm) I.D., e.g. radiator hose) can be connected into discharge line near pump using suitable clamps.
6. Install an in-line check valve (Flotec No. FP0026-10D) or an in-pump check valve (Flotec No. FP0026-6D) to prevent flow backwards through pump when pump shuts off.

**NOTICE:** If your check valve is not equipped with an air bleed hole to prevent airlocking pump, drill a 1/8" (3.2 mm) hole in discharge pipe just above where the discharge pipe screws into the pump discharge. Be sure the hole is below the waterline and the check valve to prevent air locks.

7. Power Supply: Pump is designed for 115 V., 60 Hz., operation and requires a minimum 15 amp individual branch circuit. Both pump and switch are supplied with 3-wire cord sets with grounding-type plugs. Switch plug is inserted directly into outlet and pump plug inserts into opposite end of switch plug.

**⚠ WARNING** Pump should always be electrically grounded to a suitable electrical ground such as a grounded water pipe or a properly grounded metallic raceway, or ground wire system. Do not cut off round ground pin.

8. If pump discharge line is exposed to outside sub-freezing atmosphere, portion of line exposed must be installed so any water remaining in pipe will drain to the outfall by gravity. Failure to do this can cause water trapped in discharge to freeze which could result in damage to pump.
9. After piping, check valve and float switch have been installed, the unit is ready for operation.
10. Check the pump operation by filling sump with water and observing pump operation through one complete cycle. For switch settings see the Electrical and Switch Specifications chart on Page 2.

**⚠ WARNING** Failure to make this operational check may lead to improper operation, premature failure, and flooding.

™ E.I. DuPont De Nemours and Company Corporation, Delaware.

**OPERATION**

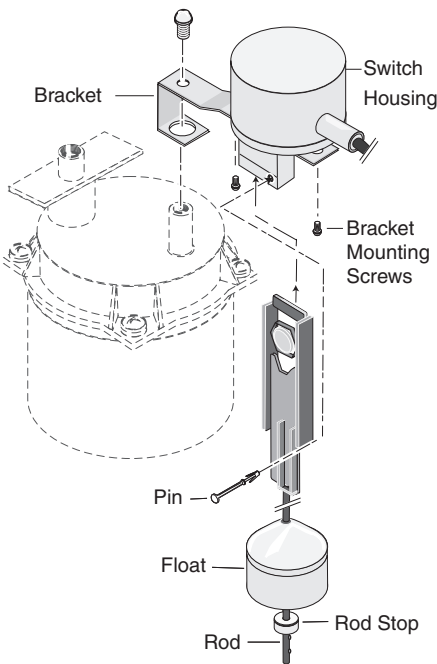
**⚠ WARNING Risk of electric shock. Do not handle a pump or pump motor with wet hands or when standing on wet or damp surface, or in water.**

1. Shaft seal depends on water for lubrication. Do not operate pump unless it is submerged in water as seal may be damaged if allowed to run dry.
2. Motor is equipped with automatic reset thermal protector. If temperature in motor should rise unduly, switch will cut off all power before damage can be done to motor. When motor has cooled sufficiently, switch will reset automatically and restart motor. If protector trips repeatedly, pump should be removed and checked as to cause of difficulty. Low voltage, long extension cords, clogged impeller, very low head or lift, or a plugged or frozen discharge pipe, etc., could cause cycling.

3. Pump will not remove all water. If operating a pump manually, 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.

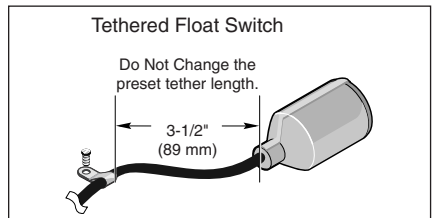
**⚠ WARNING Risk of electric shock. Before attempting to check why unit has stopped operating, disconnect power from unit.**

**Vertical Switch Assembly**



- ① Mount the bracket onto the switch housing.
- ② Slip the float and then the rod stop onto the rod past the second nib.
- ③ Insert the rod assembly up into the switch housing and lock into place with the pin.  
**NOTICE:** Be sure the pin holds the rod into the switch housing or the pump will not shut off.
- ④ Attach the switch to the pump as shown.

**Tethered Float Switch**



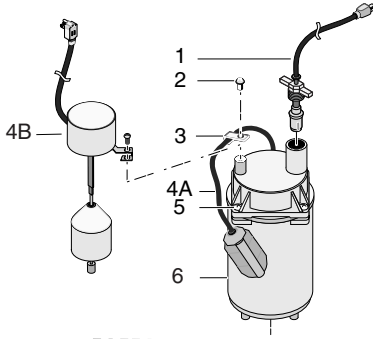
**NOTICE:** For Model FPOS1800LTS, see instructions included with replacement switch, Part Number FPS17-66.

## PLASTIC SERIES

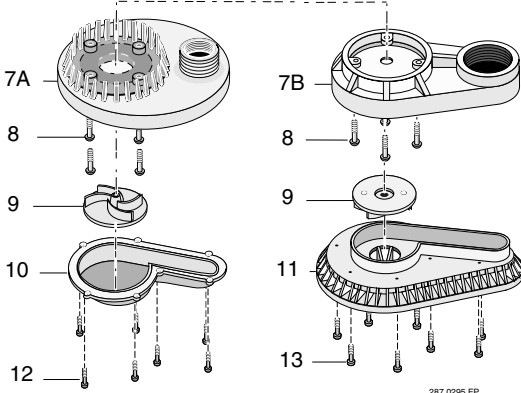
FP0S1800A, FP0S1800LTS  
 FP0S2400A, FP0S3200A  
 FP0S2450A, FP0S3250A

## CAST IRON SERIES

FPSC2200A  
 FPSC2250A



Model	Impeller	Power Cord
FP0S1800A	RP0000917	PS117-54-TSU
FP0S1800LTS	RP0000917	PS117-54-TSU
FP0S2400A	RP0000918A	PS117-54-TSU
FP0S2450A	RP0000918A	PS117-54-TSU
FP0S3200A	RP0000911A	PS117-54-TSU
FP0S3250A	RP0000911A	PS117-54-TSU
FPSC2200A	PS5-19P	PS117-54-TSU
FPSC2250A	PS5-19P	PS117-54-TSU



287 0295 FP

Key No.	Part Description	Qty.	FP0S2400A FP0S1800A FP0S3200A	FP0S1800LTS FP0S2450A FP0S3250A	FPSC2200A	FPSC2250A
1	Power Cord Assembly	1	See Chart	See Chart	See Chart	See Chart
2	Cord Clamp Screw	1	U30-955PS	-	U30-955PS	-
3	Float Switch Cord Clamp	1	CC0030-13	-	CC0030-13	-
4A	Tethered Float Switch Assembly	1	FP18-15BD	-	FP18-15BD	-
4B	Vertical Float Switch Assembly	1	-	FPS17-66	-	FPS17-66
5	Screw, #8-32x7/8" Hex Head	4	U30-951PS	-	U30-951PS	U30-951PS
6	Motor	1	**	**	**	**
7A	Volute (Upper)*	1	PS1-31P	PS1-31p	-	-
7B	Volute (Upper)	1	-	-	PS1-24B	PS1-24B
8	Screw, #8-32x5/8" Phillips Pan Head	4	U30-912PS	U30-912PS	U30-912PS	U30-912PS
9	Impeller	1	See Chart	See Chart	See Chart	See Chart
10	Volute (Lower)	1	PS1-30P	PS1-30P	-	-
11	Baseplate	1	-	-	PS4-18P	PS4-18P
12	Screw, #8-16x1/2" Lg. Pan Head	7	U30-956ZP	U30-956ZP	-	-
13	Screws, #8-32 x 1/2" Pan Head	8	-	-	U30-571BT	U30-571BT

\*\*If motor fails, replace entire pump.

\* Pump Model Series Numbers FP0S1800 take Upper Volute P/N PS1-32P (Not Illustrated).

**TROUBLESHOOTING CHART**

<b>SYMPTOM</b>	<b>PROBABLE CAUSE(S)</b>	<b>CORRECTIVE ACTION</b>
Pump won't start or run.	<p>Pump is not plugged in. Blown fuse. Low line voltage.</p> <p>Defective motor. Defective float switch. Impeller.</p> <p>Float obstructed.</p>	<p>Check and see if pump is plugged in to a proper outlet. 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. Replace float switch. If impeller won't turn, remove lower pump body and locate source of binding. Remove obstruction.</p>
Pump starts and stops too often.	<p>Backflow of water from piping. Faulty float switch.</p>	<p>Install or replace check-valve. Replace float switch.</p>
Pump won't shut off.	<p>Defective float switch. Restricted discharge (obstacle or ice in piping). Float obstructed. Restricted intake screen.</p>	<p>Replace float switch. Remove pump and clean pump and piping.</p> <p>Remove obstruction. Remove the pump and clean the intake screen and the impeller.</p>
Pump operates but delivers little or no water.	<p>Low line voltage.</p> <p>Something caught in impeller. Worn or defective parts or plugged impeller. Check valve installed without vent hole.</p> <p>Restricted intake screen. Check valve is installed either backward or upside down.</p>	<p>If voltage under recommended minimum, check size of wiring from main switch on property. If OK, contact power company or hydro authority. Remove the pump and clean out the impeller. Clean impeller if plugged; otherwise replace pump.</p> <p>Drill a 1/16" - 1/8" (1.6mm - 3.2mm) dia. hole between pump discharge &amp; check valve (1-2" above where the discharge pipe screws into the pump discharge and below the waterline). Remove the pump and clean out the intake screen. Be sure check valve is installed correctly.</p>

## ATTACH ORIGINAL RECEIPT HERE FOR WARRANTY CONSIDERATION.

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

Product	Warranty Period
Drill Pump, Pitcher Pump, In-line Water Filter Cartridge	90 days
1/3 HP Submersible Sump Pumps INTELLIPUMP (Model FP0S1775A) Back-up Sump Pump System (Model FP2800DCC)	2 Years
4" Submersible Well Pumps 1/2 HP Submersible Sump Pumps Models FPSC2200A-10 and FPSC2250A-10	3 Years
Pre-Charge Water System Tank Models FPSC3200A-10 and FPSC3250A-10	5 Years
Floodmate® 7000 (Model FP0S6000A) Ironmate® (Model FPSC4550A) Sewage Ejector (Model FPSE3601A) Pedestal Sump Pump (Model FPPSS5000) Utility Pump (Model FPSC1725X) Submersible Sump Pump (Model FPSC4550A-10)	Lifetime

### 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.

**FLOTEC • P.O. Box 342 • Delavan, WI U.S.A. 53115**

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