



293 Wright Street, Delavan, WI 53115

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INSTALLATION AND OPERATOR'S MANUAL

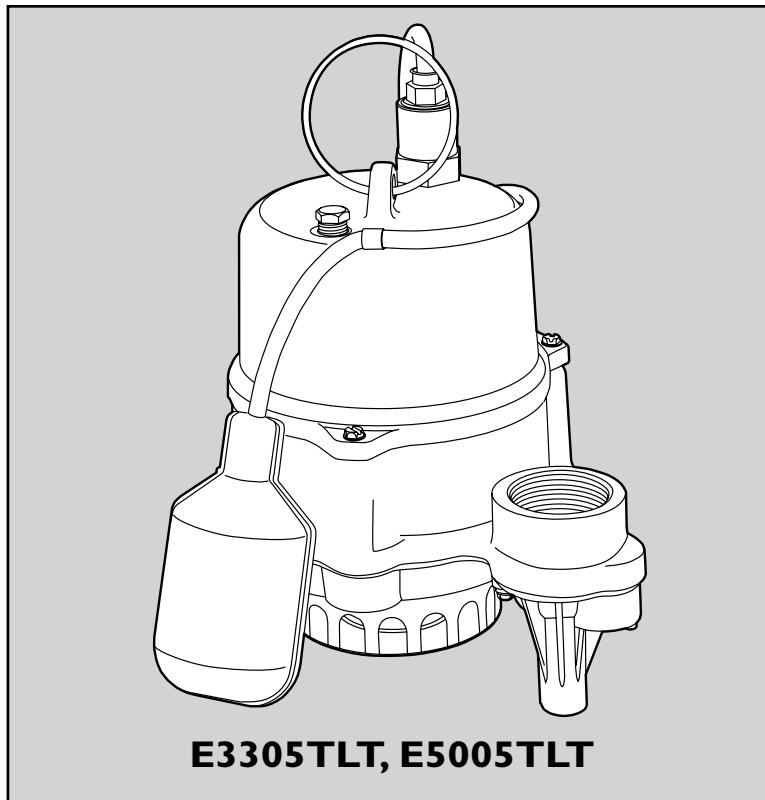
**Submersible Sump/Effluent Pump**

MANUEL D'INSTALLATION ET L'OPÉRATEUR

**Pompes submersibles de puisard et pour effluents**

MANUAL DE INSTALACIÓN Y OPERARIO

**Bombas sumergible de sumidero / efluente**



**Installation/Operation/Parts**

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

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

**English. . . . . Pages 2-8**

**Installation/Fonctionnement/Pièces**

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

**Composer le 1 (800) 365-6832**

**Français. . . . . Pages 9-15**

**Instalación/Operación/Piezas**

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

**Llame al 1-800-365-6832**

**Español . . . . . Paginas 16-22**

**Important Safety Instructions**

**SAVE THESE INSTRUCTIONS** - This manual contains important instructions that should be followed during installation, operation, and maintenance of the product. Save this manual for future reference.

**⚠** 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.

**Description**

These submersible sump pumps are designed for home / residential sumps or effluent applications. The unit is equipped with a 3-prong grounding-type power cord. The shaded-pole motor is oil filled and sealed for cooler running. Upper sleeve/lower ballbearing on the motor shaft never need lubrication. Automatic reset thermal protection.

**NOTICE:** This unit is not designed as a waterfall, pond, or fountain pump, or for applications involving salt water or brine! Use with waterfalls, fountains, salt water or brine will void warranty.

Do not use where water recirculates.

Not designed for use as a swimming pool drainer.

**NOTICE:** Read this Owner's Manual for installation, operation, and safety information.

**Specifications**

Power supply required. . . . . 115V, 60 HZ.

Motor HP

E3305TLT . . . . . 1/3

E5005TLT . . . . . 1/2

Motor Full Load Amps

E3305TLT . . . . . 9.8 A

E5005TLT . . . . . 12.5 A

Individual Branch Circuit Required: . . . . . 15 Amps

Liquid Temp. Range. . . . . 32°F to 130°F (0°-54°C)


Discharge . . . . . 1-1/2" NPT

Cord Length . . . . . 20' (6.1 m)

**Performance**

Model	GPM (LPM) at Total Feet (m)						No flow at height shown below
	5 (1.5)	10 (3)	15 (4.6)	20 (6.1)	25 (7.6)	30 (9.1)	
E3305TLT	48 (182)	40 (151)	29 (110)	15 (57)	-	-	24 Ft. (7.3m)
E5005TLT	62 (235)	53 (201)	46 (174)	38 (144)	29 (110)	13 (49)	32 Ft. (9.8m)

**⚠ WARNING**



**Hazardous voltage.** Can shock, burn, or cause death.  
Ground pump before connecting to power supply. Disconnect power before working on pump, motor or tank.

- ⚠ Wire motor for correct voltage.** See "Electrical" section of this manual and motor nameplate.
- ⚠ Ground motor before connecting to power supply.**
- ⚠ Meet National Electrical Code, Canadian Electrical Code, and local codes for all wiring.**
- ⚠ Follow wiring instructions in this manual when connecting motor to power lines.**

**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 1-800-365-6832.

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
FPOF360AC, FPOFDC	90 days
FPOS1775A, FPOS1790PCA, FPOS2400A, FPOS2450A, FPOS4100X, FP2800DCC, FPCP-20ULST, FPPSS3000, FPPSS5000, FPSC2150A, FPSC3150A, FPSC3350A	2 Years
4” Submersible Well Pumps, FPOS3200A, FPOS3250A, FPOS6000A, FPSC1725X, FPSC2200A, FPSC2250A, FPSE3601A	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.

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## 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 dealer about installing a secondary sump pump, a DC backup sump pump, and/or a high water alarm. See *Troubleshooting* in this manual for information about common sump pump problems and remedies. For more information, see your dealer or call customer service at 1-800-365-6832.

1. Know the pump application, limitations, and potential hazards.
2. Disconnect the power before servicing.
3. Release all pressure within the system before servicing any component.
4. Drain all water from the system before servicing.
5. Secure the discharge line before starting the pump. An unsecured discharge line will whip, possibly causing personal injury and/or property damage.
6. Check the hoses for a weak or worn condition before each use. Make certain all connections are secure.
7. Periodically inspect the sump, pump and system components. Keep free of debris and foreign objects. Perform routine maintenance as required.
8. Provide a means of pressure relief for pumps whose discharge line can be shut-off or obstructed.
9. Personal Safety:
  - a. Wear safety glasses at all times when working with pumps.
  - b. Keep the 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 the workshop child-proof – with padlocks, master switches, and by removing starter keys.
10. When wiring an electrically driven pump, follow all electrical and safety codes that apply.
11. **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 Electrical shock hazard.** Can burn or kill. To reduce risk of electric shock, pull plug before servicing. 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 a properly grounded 3-prong receptacle installed in accordance with codes and ordinances that apply.
12. All wiring should be performed by a qualified electrician.
13. Make certain the power source conforms to the requirements of your equipment.
14. Protect the electrical cord from sharp objects, hot surfaces, oil, and chemicals. Avoid kinking the cord. Replace or repair damaged or worn cords immediately.
15. Do not touch an operating motor. Modern motors are designed to operate at high temperatures.
16. Do not handle the pump or pump motor with wet hands or when standing on wet or damp surface, or in water.


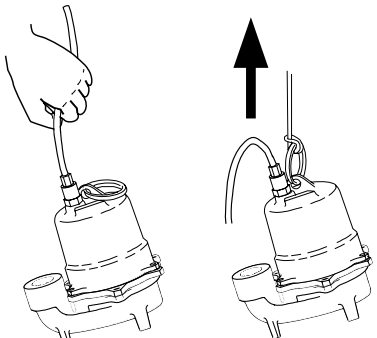
**▲WARNING Electrical shock hazard.** Can burn or kill. If your basement has water or moisture on floor, do not walk on wet area until all power has been turned off. If shut-off box is in basement, call electric company or hydro authority to shut-off service to house, or call your local fire department for instructions. Remove pump and repair or replace. Failure to follow this warning can result in fatal electrical shock.
17. Do not install the pump in any location classified as hazardous by the National Electric Code, ANSI/NFPA 70-1984 or the Canadian Electrical Code.

## Installation

1. Install the pump in a sump pit with a minimum diameter of 14" (356mm). The sump depth should be 15" minimum (381mm). Construct the sump pit of tile, concrete, steel or plastic. Check local codes for approved materials.
2. The pump should not be installed on clay, earth or sand surfaces. Clean the sump pit of small stones and gravel which could clog the pump. Keep the pump inlet screen clear.
3. Install the pump in the pit so that the switch operating mechanism has maximum possible clearance. Do not lift the pump by the power cord. See the *Cord Lift Warning*.
4. Install the discharge plumbing. When using rigid pipe, use plastic pipe. Wrap the threads with PTFE pipe thread sealant tape. Screw the pipe into the pump hand tight +1 – 1-1/2 turns.  
**NOTICE:** Do not use ordinary pipe joint compound on plastic pipe. Pipe joint compound can attack plastics.  
**CAUTION Risk of flooding.** If a flexible discharge hose is used, make sure the pump is secure in the sump to prevent movement. Failure to secure the pump may allow pump movement, switch interference and prevent the pump from starting or stopping.
5. To reduce motor noise and vibrations, a short length of rubber hose (e.g. radiator hose) can be connected into the discharge line near the pump using suitable clamps.

6. Install an in-line check valve to prevent backward flow through the pump when the pump shuts off.
7. Power Supply: **The pump is designed for 115 V., 60 Hz., operation and requires a minimum 15 or 20 amp individual branch circuit** (refer to *Specifications*.) Both the pump and switch are supplied with 3-wire cord sets with grounding-type plugs. The switch plug is inserted directly into the outlet and the pump plug inserts into the opposite end of the switch plug.  
**WARNING Hazardous voltage.** Can shock, burn or kill. The 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 modify the cord or plug or cut off the round ground pin.**
8. If the pump discharge line is exposed to an outside sub-freezing atmosphere, the portion of the line exposed must be installed so any water remaining in the pipe will drain to the outfall by gravity. Failure to do this can cause the water trapped in the discharge to freeze which could result in damage to the pump.
9. After the piping and check valve have been installed, the unit is ready for operation.
10. Check the operation by filling the sump with water and observing pump operation through one complete cycle.  
**CAUTION Risk of flooding.** Failure to make this operational check may lead to improper operation, premature failure, and flooding.

### Cord Lift Warning

<p><b>WARNING</b></p>  <p><b>Risk of electrical shock. Can burn or kill. Do not lift pump by power cord.</b></p>		<p><b>Risk of electrical shock and fire.</b></p> <ol style="list-style-type: none"> <li>1. Attempting to lift or support the pump by the power cord can damage cord and cord connections, expose bare wires, and cause a fire or electrical shock.</li> <li>2. Use lifting ring or handle on top of pump for all lifting or lowering of pump. Disconnect the power to the pump before doing any work on it or attempting to remove it from the pit.</li> <li>3. Lifting or supporting the pump by the power cord will void the warranty.</li> </ol>
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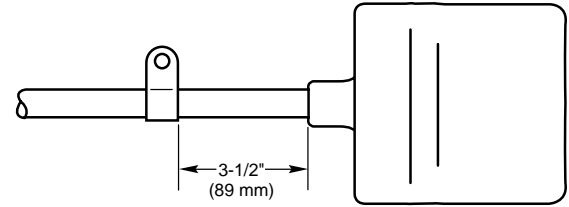
## Operation

**⚠ WARNING Electrical shock hazard.** Can 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.

Before attempting to check why unit has stopped operating, disconnect power from unit.

**⚠ WARNING Risk of fire and explosion.** Can cause severe injury, property damage or death. Do not use in explosive atmospheres. Pump water only with this pump.

1. The shaft seal depends on water for lubrication and cooling. Do not operate the pump unless it is submerged 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, the pump should be removed and checked as to cause of difficulty. Low voltage, clogged impeller, very low head or lift, etc., could cause cycling. Do not use extension cords.
3. The pump will not remove all water. If a manually operated pump is operating and suddenly no water comes out of the discharge hose, shut the unit off immediately. The water level is probably very low and the unit has broken prime.



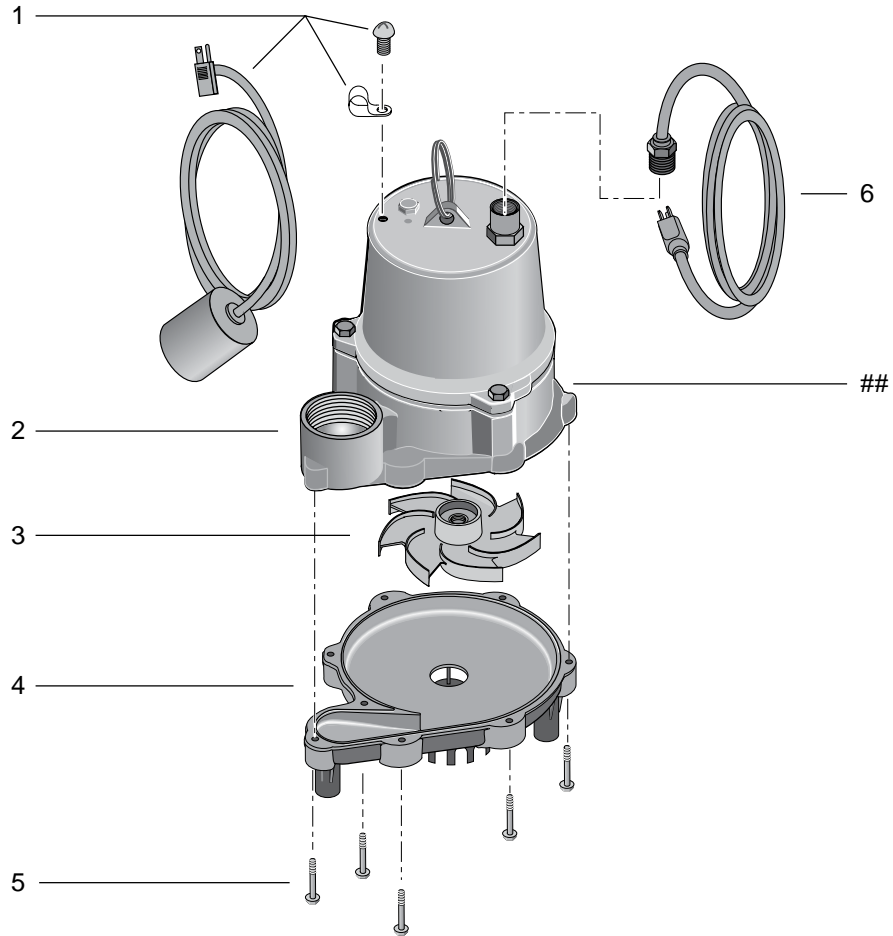
**Figure 1 – Float Switch Tether Length**

**NOTICE:** Do not change the tether length of the float switch (see Figure 1). The float must be able to swing through its complete arc without interference.

### Airlocks

When a pump airlocks, it runs but does not move any water. An airlock will cause the pump to overheat and fail. This pump has a built-in anti-airlock hole. See *Repair Parts* for the location of the hole. Leakage from the anti-airlock hole is 'normal.'

If you suspect an airlock, unplug the pump, clean out the anti-airlock hole with a paper clip or a piece of wire, and restart the pump.



Ref.	Description	Qty.	Part Number
1	Automatic Float Switch	1	PS217-64
2	Motor / Upper Volute	1	*
3	Impeller - E3305TLT	1	PS5-26P
	Impeller - E5005TLT		PS5-29P
4	Lower Volute	1	PS1-34P
5	Screw #10-32x1" Hex Washer, self-tapping	7	U30-966SS
6	Power cord	1	PW117-122-TSU

\* If the Motor fails replace the entire pump.

## Anti-airlock hole

**⚠ WARNING Sudden Starts.** If the power is on to the pump when thermal overload resets, the pump may start without warning. If you are working on the pump, you may get an electrical shock or the impeller may catch fingers or tools. Disconnect the power before servicing the pump.

Symptom	Probable Cause(s)	Corrective Action
Pump won't start or run.	Blown fuse or circuit breaker tripped.	If blown, replace with a fuse of proper size. If tripped, reset circuit breaker.
	Low line voltage.	If the voltage is under the recommended minimum, check the size of the wiring from the main switch on the property. If OK, contact power company or hydro authority.
	Defective motor.	Replace the pump.
	Defective float switch.	Replace the float switch.
	Impeller.	If the impeller won't turn, remove the lower pump body and locate the source of the binding.
	Float is obstructed.	Remove the obstruction.
Pump starts and stops too often.	Backflow of water from piping.	Install or replace the check-valve.
	Faulty float switch.	Replace the float switch.
Pump won't shut off.	Defective float switch.	Replace the float switch.
	Restricted discharge (obstacle in piping).	Remove the pump and clean the pump and piping.
	Float obstructed.	Remove the obstruction.
Pump operates but delivers little or no water.	Low line voltage.	If the voltage is under the recommended minimum, check the size of the wiring from the main switch on the property. If OK, contact power company or hydro authority.
	Something is caught in impeller.	Clean out the impeller.
	Vent hole is plugged.	Clean out the vent hole.