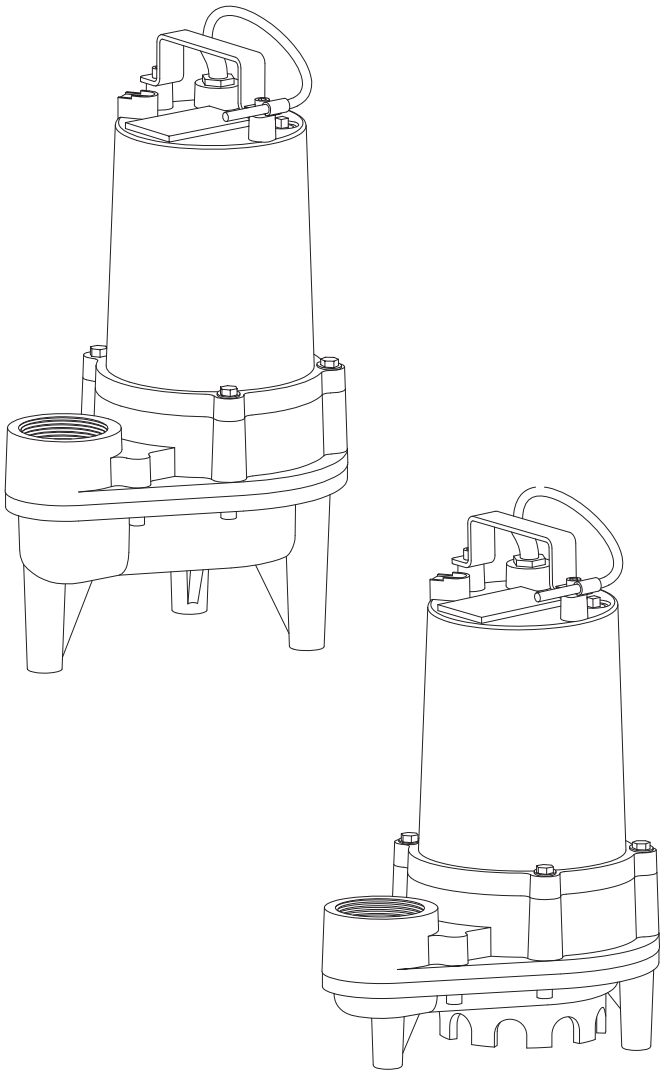
INSTALLATION, SERVICE & PARTS MANUAL



Series:
PFV512, PFV512A, PFV512VF

PFEV512, PFEV512A, PFEV512VF

1/2HP • 3450 RPM • 60 Hz Submersible Effluent & Sewage Pumps

Power-Flo Pumps & Systems

a Power-Flo Technologies company

877-24PUMPS • www.powerflopumps.com

ISP No: PFV-PFEV - 1/2021

General Safety Information

Before installation, read the following instructions carefully. Failure to follow instruction and Safety information could cause serious bodily injury, death and/or property damage. Each Power-Flo pump is individually factory tested to insure proper performance. Closely following these instructions will eliminate potential operating problems, assuring years of trouble-free service.

⚠ DANGER ***"Danger" indicates an imminenty hazardous situation which, if not avoided, WILL result in death or serious injury.***

⚠WARNING ***"Warning" indicates an imminenty hazardous situation which, if not avoided, MAY result in death or serious injury.***

⚠ CAUTION ***"Caution" indicates an potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.***

IMPORTANT - Power-Flo Pumps and Systems is not responsible for losses, injury or death resulting from failure to observe these safety precautions, misuse, abuse or misapplication of pumps or equipment.

ALL RETURNED PRODUCTS MUST BE CLEANED, SANITIZED, OR DECONTAMINATED PRIOR TO SHIPMENT, TO INSURE EMPLOYEES WILL NOT BE EXPOSED TO HEALTH HAZARDS IN HANDLING SAID MATERIAL. ALL APPLICABLE LAWS AND REGULATIONS SHALL APPLY.

⚠WARNING Installation, wiring, and junction connections must be in accordance with the National Electric Code and all applicable state and local codes. Requirements may vary depending on usage and location.

⚠WARNING Installation and servicing is to be conducted by qualified personnel only.

⚠ DANGER ***Rotating machinery, Amputation or severe lacerations can result.*** Keep clear of suction and discharge openings. **Do not** insert fingers in pump with power connected.

⚠WARNING Always wear eye protection when working on pumps. Do not wear loose clothing that may become entangled in moving parts

⚠ DANGER Pumps build up heat and pressure during operation. Allow time for pumps to cool before handling or servicing.

⚠ DANGER This pump is ***not*** intended for use in swimming pools or water installations where human contact with pumped fluid. Pumps when used as a decorative water fountain pump **MUST** be used in circuit protected by a Ground Fault Interrupter.

⚠ DANGER Risk of electric shock. To reduce risk of electric shock, always disconnect pump from power source before handling. ***Lock out power & tag.***

⚠WARNING **Do not** us these pumps in water over 77˚F. **Do not** exceed manufactures recommended maximum performance, as this could cause the motor to overheat.

⚠ DANGER **Do not** lift, carry or hang pump by the electrical cables. Damage to the electrical cables can cause shock, burnes or death. **Never** handle connected power cords with wet hands. Use appropriate lifting device.

⚠WARNING Sump and sewage pumps often handle materials which could cause illness or disease. wear adequate protective clothing when working on a used pump or piping. Never enter a basin after it has been used.

⚠ DANGER Failure to permanently ground the pump, motor and controls before connecting to power can cause shock, burns or death.

⚠WARNING These pumps are **NOT** to be installed in locations classified as hazardous in accordance with the National Electric Code, ANSI/NFPA 70.

⚠ CAUTION The Uniform Plumbing Code (UPC) states that sewage systems shall have an audio and visual alarm that signals a malfunction of the systems that is required to reduce the potential for property damage.

WARNING:
CANCER AND REPRODUCTIVE HARM-
WWW.P65WARNINGS.CA.GOV

IMPORTANT!
Prior to installation, record Model Number, MFG Date, Amps, Voltage, Phase and HP, from pump name plate for future reference. Also record the Voltage and Current Readings at Startup:

1 Phase Models	
Amps:	Volts:

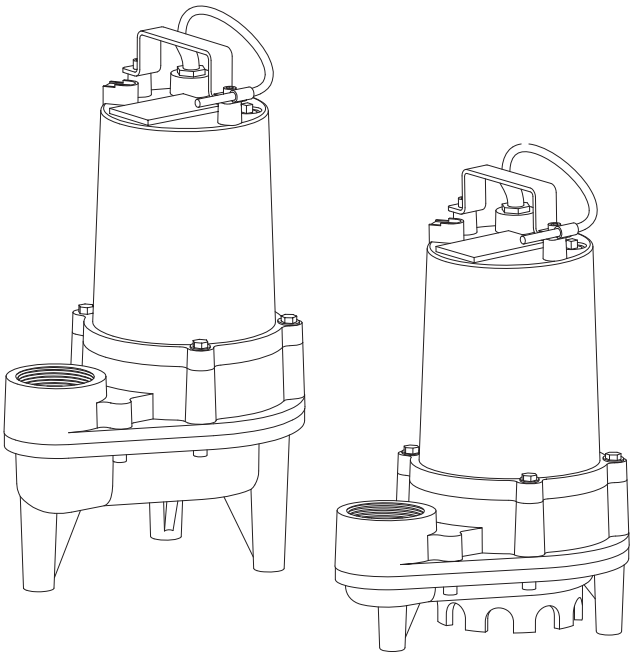
Model Number: _____

MFG Date: _____

PHASE: _____ HP: _____

POWER-FLO *Pumps & Systems*
Model Number
MFG Date
AMPS VOLTAGE
PHASE
60 Hz HP
POWER-FLO *Pumps & Systems*
877-24 PUMPS
www.powerflopumps.com

 4/08, 6/08, 7/08, 8/08, 4/09, 6/09, 8/09, 11/09, 4/10, 3/11, 8/11, 6/13, 4/15, 9/2020, 1/2021



Specifications

DISCHARGE	2" NPT, Female, Vertical
LIQUID TEMPERATURE	77°F Continuous
MOTOR HOUSING	Cast Iron, Class 30
VOLUTE	Cast Iron, Class 30
IMPELLER	Multi-Vane, Vortex Material: Cast Iron, Class 30
SHAFT	Stainless Steel
O-RINGS	Buna-N
HARDWARE	Stainless Steel
PAINT	Powder Coated - Industrial Grade
SEAL	Single Mechanical, Oil Filled Reservoir Material: Carbon/Ceramic/Buna-N
POWER CORD	20 Ft. Cord with plug and pressure grommet for sealing and strain relief
UPPER BEARING	Sleeve, Oil Lubricated
LOWER BEARING	Single Row, Ball, Oil Lubricated
MOTOR	Oil Filled, Class B Insulation
SINGLE PHASE	Permanent Split Capacitor (PSC), Includes Overload Protection in Motor: Trip Off Temp. 248° F (120° C)
LEVEL CONTROLS	A: Wide Angle, Mechanical, 20Ft. Cord VF: Vertical Float, 20Ft. Cord

Series: PFEV512, PFEV512A, PFEV512VF

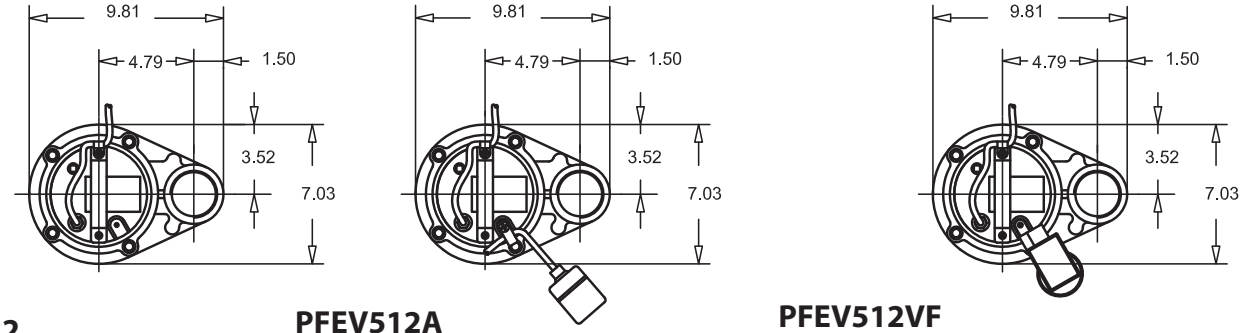
PFV512, PFV512A, PFV512VF

1/2HP, 3450 RPM, 60 Hz Submersible Effluent & Sewage Pumps

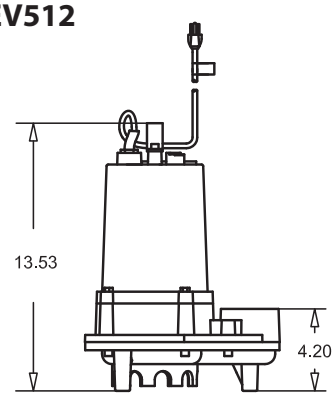
Description

Pump is designed for handling sewage effluent in typical septic tank/effluent applications.

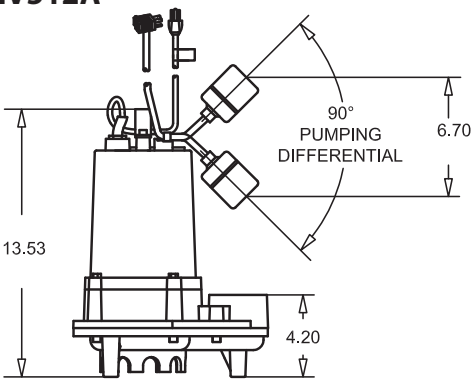
Dimensions & Performance



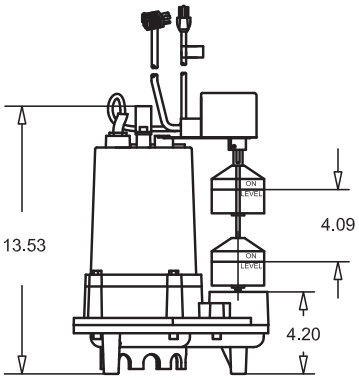
PFEV512



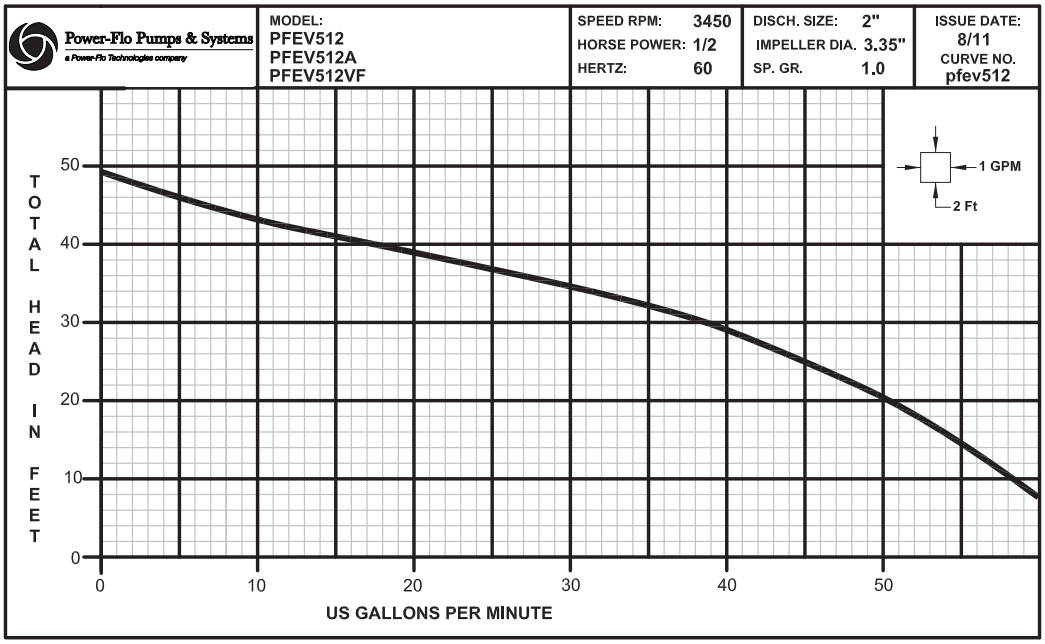
PFEV512A



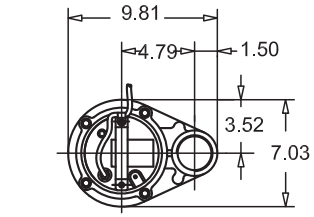
PFEV512VF



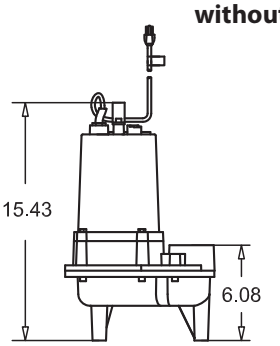
MODEL	HP	Hz	Volts/Ph	RPM	Full Load Amps	NEMA Start Code	Winding Resistance MAIN-START	Cord Type	Cord Size	Cord Length
PFEV512	0.5	60	115/1	3450	11	H	1.7 -- 10.5	SJTW	16/3	20Ft
PFEV512A	0.5	60	115/1	3450	11	H	1.7 -- 10.5	SJTW	16/3	20Ft
PFEV512VF	0.5	60	115/1	3450	11	H	1.7 -- 10.5	SJTW	16/3	20Ft

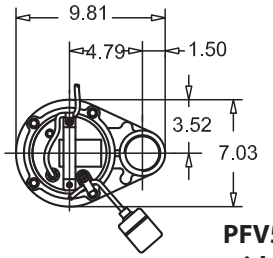


Dimensions & Performance

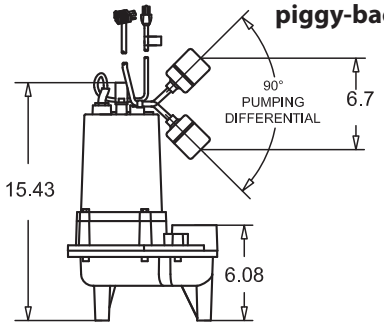


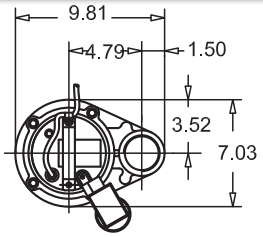
PFV512
without float



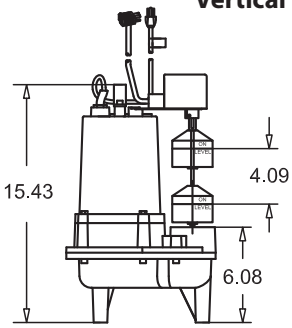


PFV512A
wide angle float with
piggy-back plug



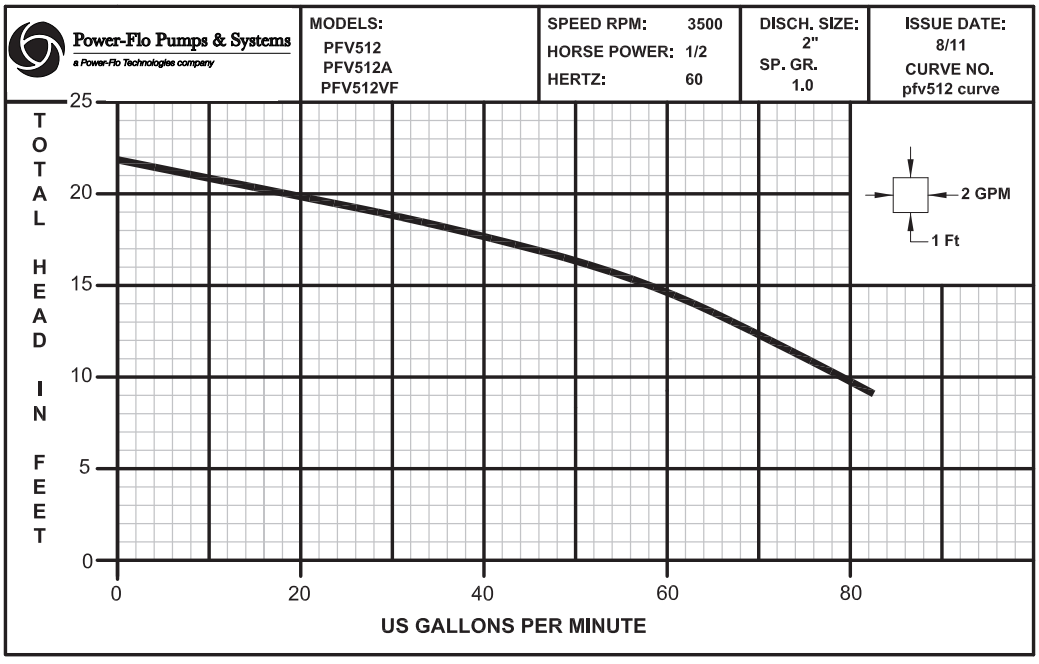


PFV512 with
Vertical Float



MODEL	HP	VOLTS	PHASE	HZ	RPM	FULL LOAD AMPS	NEMA START CODE	WINDING RESISTANCE MAIN -- START	CORD SIZE	CORD TYPE
PFV512	0.5	115	1	60	3450	10.5	H	1.7 -- 10.5	16/3	SJTW
PFV512A	0.5	115	1	60	3450	10.5	H	1.7 -- 10.5	16/3	SJTW
PFV512VF	0.5	115	1	60	3450	10.5	H	1.7 -- 10.5	16/3	SJTW

Mechanical Switch on "A" cord is 16/2, SJOW, Piggy-Back Plug.
Vertical Float on "VF", cord 16/2, SJOW, Piggy-Back Plug



Receiving & Installation

Receiving Inspection
Upon receiving the pump, it should be inspected for damage or shortages. If damage has occurred, file a claim immediately with the company that delivered the pump. If the manual is removed from the packaging, do not lose or misplace.

Storage
Any product that is stored for a period longer than six (6) months from the date of purchase should be bench tested prior to installation. A bench test consists of, checking the impeller to assure it is free turning and a run test to assure the motor (and switch if provided) operate properly. Do not pump out of liquid.

Controls
Manual models require a separate approved pump control device or panel for automatic operation. Be sure the electrical specification of the control selected properly match the electrical specifications of the pump.

Submergence
The pump should always be operated in the submerged condition. The minimum sump liquid level should never be less than above the pump's volute (See Figure 1).

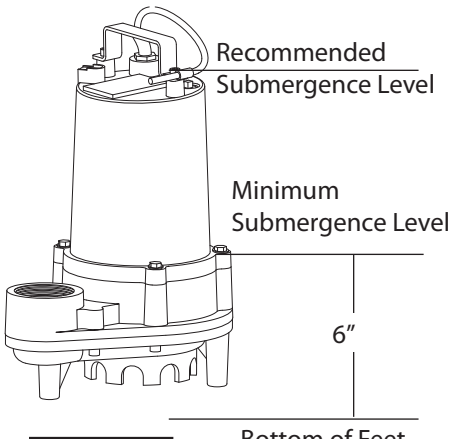


Figure 1

Liquid Level Controls
Typical Discharge Pipe Mounted:
Refer to Figure 2 below which shows a typical installation of a 1 phase 115 volt pump using a level control mounted to the discharge piping with a piggy-back plug. The level control should have adequate clearance so it cannot hang up in it's swing and that the pump is completely submerged when the level control is in the "Off" mode. By adjusting the cord tether the control level can be changed.

Typical Installation with Wide Angle Level Control

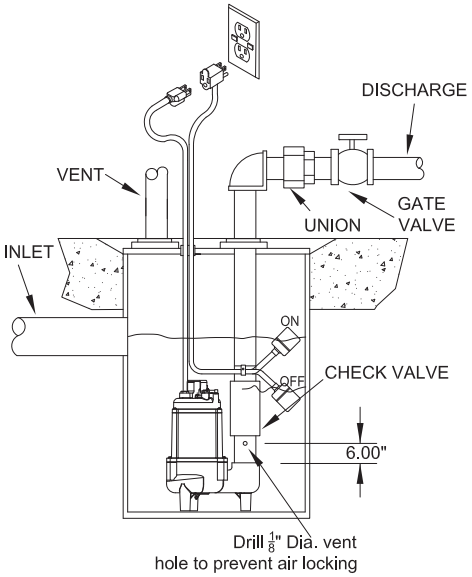


Figure 2

Level Control Basic Instructions:
Plug the level control plug into the GFI receptacle, then plug the pump into the piggy-back plug (See Figure 3). One cycle of operation should be observed, so that any potential problems can be corrected.

It is recommended that the level control float should be set to insure that the liquid in the sump never drops below the top of the motor housing or a minimum level of 6 inches above the basin floor.

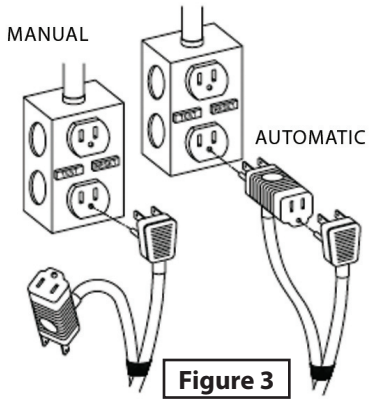


Figure 3

Automatic: Plug float cord into GFI outlet, then plug pump cord into float cord.
Manual: Plug pump cord directly into GFI outlet.

Installation
These pumps are recommended for use in a sump or basin. The sump or basin shall be sealed and vented in accordance with local plumbing codes. ***This pump is designed to pump effluent or wastewater, nonexplosive and noncorrosive liquids and shall NOT be installed in locations classified as hazardous in accordance with the National Electrical Code (NEC) ANSI/ NFPA 70 or Canadian Electric Code (CEC).*** The pump should never be installed in a trench, ditch, or hole with a dirt bottom. The legs will sink into the dirt and the suction will become plugged.

The installation should be at a sufficient depth to ensure that all plumbing is below the frost line. If this is not feasible, remove the check valve and size the basin to accommodate the additional backflow volume.

Discharge Piping
Discharge piping should be as short as possible and sized no smaller than the pump discharge. **Do not reduce the discharge pipe size below that which is provided on the pump.**

Both a check valve and a shut-off valve are recommended for each pump. The check valve is used to prevent backflow into the sump. The shut-off valve is used to manually stop system flow during pump servicing.

Electrical Connections

The power cable mounted to the pump must not be modified in any way. This pump is provided with a 3 wire cord and 3 prong grounded plug that must be connected into a 3 wire grounded Ground Fault receptacle. Do not bypass grounding wires or remove ground prongs from plug. This pump requires separate, properly fused and grounded branch circuit. Use of a ground fault circuit interrupter (GFCI) is strongly recommended.

The electrical outlet or panel shall be within the length limitations of the pump power cord, and at least 4 feet above floor level to minimize possible hazards from flood conditions. Do Not use an extension cord.

IF USED with Control Panel - Any splice between the pump and the control panel must be made in accordance with the electric codes. It is recommended that a junction box, if used, be mounted outside the sump or be of at a minimum Nema 4 construction if located within the wet well. **DO NOT USE THE POWER CABLE TO LIFT PUMP.** Always rely upon a Certified Electrician for installation.

Overload Protection:
Single Phase - The stator in-winding overload protector used is referred to as an inherent overheating protector and operates on the combined effect of temperature and current. This means that the overload protector will trip out and shut the pump off if the windings become too hot, or the load current passing through them becomes too high.

IMPORTANT ! - The overload will then automatically reset and start the pump up after the motor cools to a safe temperature. In the event of an overload, the source of this condition should be determined and corrected immediately.

WARNING! - DO NOT LET THE PUMP CYCLE OR RUN IF AN OVERLOAD CONDITION OCCURS !

If current through the temperature sensor exceeds the values listed, an intermediate control circuit relay must be used to reduce the current or the sensor will not work properly.

TEMPERATURE SENSOR ELECTRICAL RATINGS		
Volts	Continuous Amperes	Inrush Amperes
110-120	3.00	30.0
220-240	1.50	15.0

Wire Size:
If longer power cable is required consult a qualified electrician for proper wire size.

Pre-Operation

1. Check Voltage and Phase Compare the voltage and phase information stamped on the pump name plate.

2. **Check Pump Rotation** - Improper motor rotation can result in poor pump performance and can damage the motor and/or pump. Incorrect rotation for Single-Phase pumps is unlikely. If the rotation is incorrect contact factory.

3. **Name Plate** - Record the information from the pump name plate to drawing in front of manual for future reference.

4. **Insulation Test** - An insulation (megger) test should be performed on the motor. Before the pump is put into service. The resistance values (ohms) as well as the voltage (volts) and current (amps) should be recorded.

5. **Pump-Down Test** - Be sure pump has been properly wired, lowered into the basin, sump or lift station, check the system by filling with liquid and allowing the pump to operate through its pumping cycle. The time needed to empty the system, or pump-down time along with the volume of water, should be recorded.

Maintenance

No lubrication or maintenance is required. Perform the following checks when pump is removed from operation or when pump performance deteriorates:

a). Inspect motor chamber for oil level and contamination.
b). Inspect impeller and body for excessive build-up or clogging.
c). Inspect motor and bearings.
d). Inspect seal for wear or leakage.

Servicing

NOTE: Item numbers in ( ) refer to Figure 4

Cooling Oil - Anytime the pump is removed from operation, the cooling oil in the motor housing should be checked visually for oil level and contamination. To check oil, set unit upright. Remove pipe plug from housing. With a flashlight, visually inspect the oil in the housing to make sure it is clean and clear, light amber in color and free from suspended particles. Milky white oil indicates the presence of water. Oil level should be just above the motor when pump is in vertical position.

Service

Oil Testing

- Drain oil into a clean, dry container by placing pump on it's side, remove pipe plug, from housing.
- Check oil for contamination using an oil tester with a range to 30 Kilovolts breakdown.
- If oil is found to be clean and uncontaminated (measuring above 15 KV. breakdown), refill the housing.
- If oil is found to be dirty or contaminated (or measures below 15 KV. breakdown), the pump must be carefully inspected for leaks at the shaft seal, cable assembly, square ring and pipe plug, before refilling with oil. To locate the leak.

After leak is repaired, dispose of old oil properly, and refill with new oil.

Cooling Oil Recommended Supplier/Grade	
BP	Enerpar SE100
Conoco	Pale Paraffin 22
Mobile	D.T.E. Oil Light
Shell Canada	Transformer-10
Texaco	Diala-Oil-AX

Disassembly

Impeller and Volute:

1. Disconnect power.

2. Remove cap screws (36), volute (1) and gasket (2).

3. Clean and examine impeller (37), for cracks or breakage and replace if required. To remove impeller (37), place a flat screwdriver in the slot of the end of the shaft to hold the shaft stationary while unscrewing.

4. Check v-ring (35) and remove if damaged.

Power Cord & Motor:

5. Remove pipe plug (20) and drain oil from housing.

6. Remove gland nut (18), washer (17) and nylon housing (15) from motor housing (24). Pull cord through and disconnect the wires from the terminals on power cord (19).

7. Remove screws (32) and washers (33) and lift motor housing (24) and stator (7) from seal plate (3).

8. Remove o-ring (4), replace if damaged,

9. Check motor capacitor (8) with an Ohm meter by first grounding the capacitor by placing a screwdriver across both terminals and then removing screwdriver. Connect Ohm meter (set on high scale) to terminals. If needle moves to infinity (∞) then drifts back, the capacitor is good. If needle does not move or moves to infinity (∞) and does not drift back, replace capacitor (11).

10. Inspect motor winding for shorts and check resistance values. Check rotor for wear. If rotor or the stator windings are defective, the complete motor must be replaced.

Shaft Seal:

11. Remove snap ring (30) from seal plate (3). Remove shaft and motor rotor from seal plate (3).

12. Remove seal's (34) rotating member, spring and retaining ring from seal plate. Examine all seal parts, if seal faces show signs of wear, uneven wear pattern, chips or scratches replace entire seal. **DO NOT interchange seal components, replace the entire shaft seal (33)**. If replacing seal, remove stationary by prying out with flat screwdrive.

Bearings:

13. Examine lower bearing (31), and upper bearing (28), if replacement is required, remove by using a wheel puller.

Reassembly

Bearings:

1. Press bearings (31) and (28) onto shaft.

IMPORTANT! - All parts must be clean before reassembly. Handle seal parts with extreme care. DO NOT damage lapped surfaces.

Shaft Seal:

2. Clean seal cavity in seal plate (3) and oil. Press seal's (34) stationary member firmly into seal plate (3), use a seal tool or pipe. Nothing should come in contact with the seal face except the seal tool. Be sure the stationary is in straight.
3. Place seal's retaining ring, spring onto shaft. Lightly oil **(Do not use grease)** shaft and inner surface of bellows.

4. With lapped surface of seal's rotating member facing outward, slide over shaft using a seal tool, being carefull not to damage seal face. Make sure spring is seated in retaining ring and spring is lined up on rotating member and not cocked or resting on bellows tail.

Motor:

5. Slide rotor/shaft with bearings and seal parts (34) into seal plate (3) until bearing seats into seal plate. Install snap ring (30) into seal plate (3).

6. Lower housing (24) while stringing motor leads through the cord entry bore, with motor stator onto seal plate (3).

7. Place screws (32) with washers (33) through housing (24) into seal plate (3) and torque to 60 in-lbs.

Service

Power Cord:
8. Check power cord (19) for cracks or damage and replace if required. Reconnect motor leads.

9. Place power cord (19) with nylon housing (15), ring (16), washer (17) and gland nut (18) into housing (24) and tighten gland nut to 17.5 ft/lbs.

Impeller, V-ring and Volute:
10. Position v-ring (35) into seal plate (3) until seated.

11. Clean the threads with thread locking compound cleaner. Apply removable Loctite® 242 or equivalent to shaft threads. Screw impeller (37) onto the shaft hand tight while using a screwdriver in the slot at the end of the shaft to hold it stationary. Rotate impeller to check for binding.

12. Position gasket (2) on volute flange and position impeller and motor housing assembly on volute (1).

13. Place screws (36 into volute (1) and torque to 11 ft/lbs. Check for free rotation of impeller.

14. Refill with cooling oil.

Trouble Shooting Chart

Risk of electric shock. Always disconnect the pump from the power source before handling inspections or repairs.

Symptom	Possible Cause(s)	Corrective Action
Pump will not run	1. Blown fuse or other interruption of power; improper voltage. 2. Switch is unable to move to the "turn ON" position due to interference with the side of basin or other obstruction 3. Insufficient liquid level 4. Defective level control	1. Check that the unit is securely plugged in. Have an electrican check all wiring for proper connections and adequate voltage and capacity. 2. Position the pump or switch so that it has adequate clearance for free operation. 3. Make sure the liquid level is allowed to rise enough to activate level control(s). 4. Remove and replace level controls
Pump will not turn off	1. Discharge is blocked or restricted 2. Check valve is stuck closed or installed backwards 3. Gate or ball valve is closed 4. Total lift is beyond pump's capability 5. Pump impeller is jammed or volute casing is pluged	1. Check the discharge line for foreign material, including ice if discharge line passes through or into cold areas 2. Remove check valve(s) and examine for freedom of operation and proper installation 3. Open gate or ball valve 4. Try to route piping to a lower level. If not possible, a larger pump may be required. Consult the factory 5. Disconnect unit electrically. Remove the pump from the basin. Detach the pump base and clean the area around the impeller. Rotate impeller by hand. Reassemble and reinstall
Pump will not turn off	1. Level control(s) unable to move to the "turn OFF" position due to interference with the side of basin or other obstacle 2. Defective level control	1. Posistion the pump or level control so that it has adequate clearance for free operation 2. Remove and replace level control
Pump runs periodically when fixtures are not in use	1. Check valve is stuck open or is leaking 2. Fixtures are leaking	1. Remove check valve(s) and examine for freedom of operation and proper installation 2. Repair fixtures as required to eliminate leakage
Pump operates noisily	1. Debris in the impeller cavity 2. Damaged impeller 3. Worn bearings 4. Piping attachments to building are too rigid	1. Remove the pump from the basin. Detach the pump base and clean the area around the impeller. Reassemble and reinstall 2. Consult the factory for information regarding replacement of impeller 3. Return pump to the factory or authorized repair station for repair 4. Replace a portion of the discharge line with rubber hose or connector

NOTE: Power-Flo Pumps & Systems assumes no responsibility for damage or injury due to disassembly in the field. Disassembly of the pumps or supplied accessories other than at Power-Flo Pumps & Systems or its authorized service centers, automatically voids warranty.

Repair Parts

For Repair Part Please supply: Model Number and MFG Date as shown on Name Plate, and Part Description and Part Number as shown on Parts List.

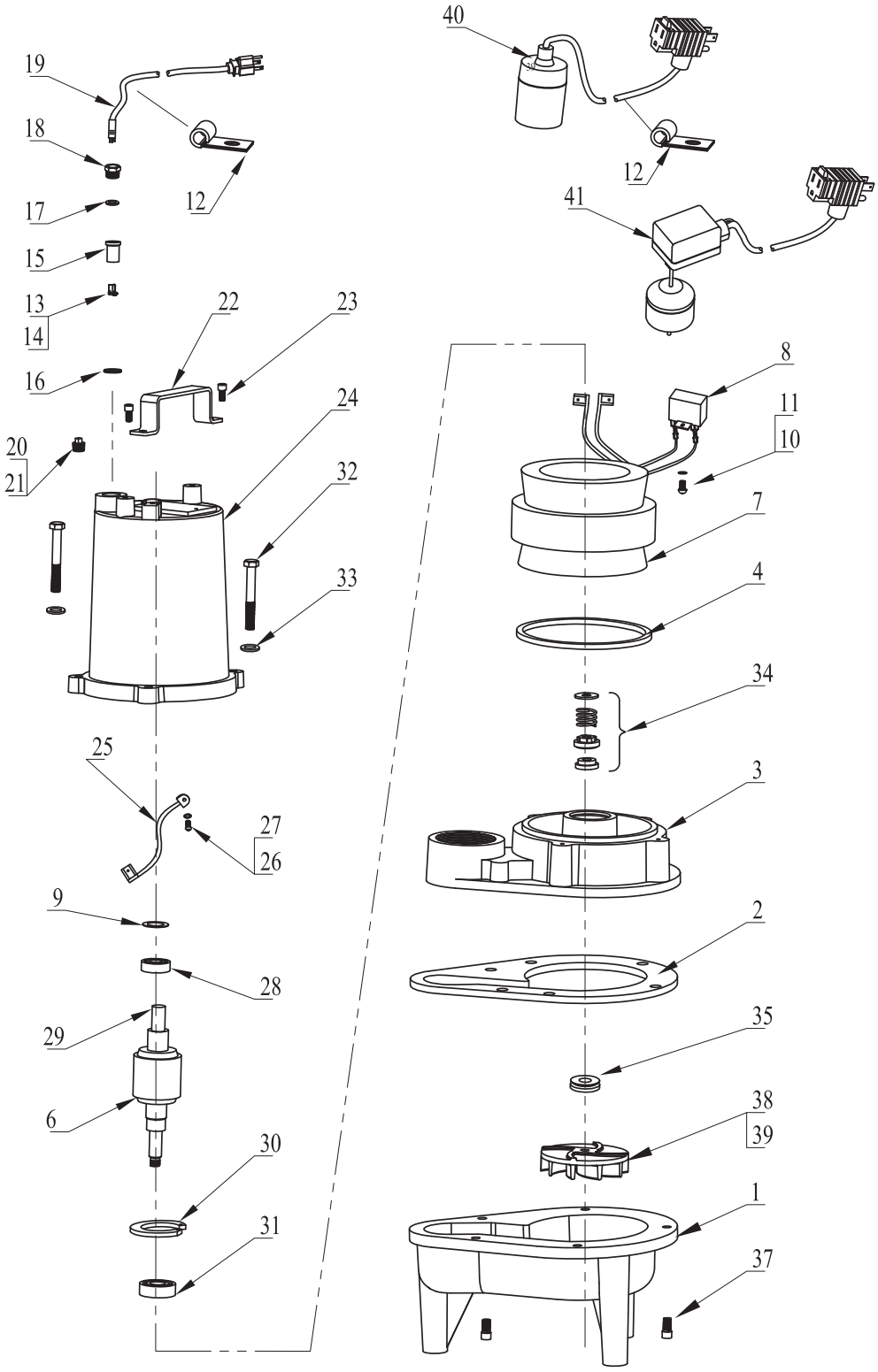


Figure 4

For Repair Part Please supply: Model Number and MFG Date as shown on Name Plate, and Part Description and Part Number as shown on Parts List.

Repair Parts

ITEM	QTY		DESCRIPTION	PFV512 PART No.	PFEV512 PART No.
1	1		Volute	PF512001	PF512043
2	1	♦	Gasket	PF512002	PF512002
3	1		Seal Plate	PF512003	PF512003
4	1	♦	O-ring	PF512004	PF512004
5	1.2Kg		Oil	See Chart on Page 8	
6	1		Rotor Assy	PF512006	PF512006
7	1		Stator Assy	PF512007	PF512007
8	1	♦	Capacitor 20mfd/250v	PF512008	PF512008
9	1	♦	Spring Washer	PF512017	PF512017
10	2		Screw #10-32 x 3/8	♦	♦
11	2		Lockwasher #10	♦	♦
12	1		Tubing Clamp	PF512012	PF512012
13	1	♦	Terminal Pin Holder	PF512013	PF512013
14	A/R		Epoxy	♦	♦
15	1	♦	Nylon/GF Housing	PF512015	PF512015
16	1		Ring	PF512016	PF512016
17	1		Washer, Brass	♦	♦
18	1	♦	Nut, Brass	♦	♦
19	1		Power Cord, 20Ft	PF512019	PF512019
20	1		Pipe Plug 1/4 NPT	♦	♦
21	A/R		LOCTITE® 598	♦	♦
22	1		Handle	PF512022	PF512022
23	2		Screw 1/4-20	♦	♦
24	1		Motor Housing	PF512024	PF512024
25	1		Ground Line	PF512025	PF512025
26	1		Screw #10-32	♦	♦
27	1		Lock Washer #10	♦	♦
28	1	♦	Bearing	PF512028	PF512028
29	1		Shaft	PF512029	PF512029
30	1		Retaining Ring	PF512030	PF512030
31	1	♦	Bearing	PF17414	PF17414
32	4		Screw 1/4-20 x 1"	♦	♦
33	4		Washer 1/4	♦	♦
34	1	♦	Shaft Seal Type 21 -0.5	PF512034	PF512034
35	1	♦	V-ring	PF512035	PF512035
37	6		Screw 1/4-20 x 1"	♦	♦
38	1		Impeller 3.35" Dia.	PF512038	PF512042
39	A/R		LOCTITE 242	♦	♦
40	1	☆	Wide Angle Mechanical Float w/Piggy-Back Plug - 20 Ft	PF512040	PF512040
41	1	☆	Vertical Float, VF - 20 Ft	PF512041	PF512041
Repair Kits					
♦	**OVERHAUL KIT -** To include items: 2, 4, 8, 9, 13, 15, 18, 28, 31, 34, 35				PFVEV512-OHK

♦ = Aquire standard hardware locally.
☆ = Supplied as individual items
♦ = Overhaul kit

2 YEAR WARRANTY

Manufacturer warrants, to the purchaser and subsequent owner during the warranty period, new pump product to be free from defects in material and workmanship under normal use and service, when properly used and maintained, for a period of 2 years from date of sale. The date of sale shall be determined by a dated sales receipt noting the model and serial number of the pump. The dated sales receipt must accompany the returned pump if the date of the return is more than 2 years from the date of manufacturer. Product will be repaired, replaced or remanufactured at Manufacturer's option. No allowance will be made for shipping charges, damages, labor or other charges that may occur due to product failure, repair or replacement. This warranty does not apply to and there shall be no warranty for any material or product that has been disassembled without prior approval of Manufacturer, subjected to misuse, misapplication, neglect, alteration, accident or act of God; that has not been installed, operated or maintained in accordance with Manufacturer's installation instructions; that has been exposed to outside substances including but not limited to the following: sand, gravel, cement, mud, tar, hydrocarbons, hydrocarbon derivatives (oil, gasoline, solvents, etc.), or other abrasive or corrosive substances, wash towels or feminine sanitary products, etc. in all pumping applications. The warranty set out in the paragraph above is in lieu of all other warranties expressed or implied; and we do not authorize any representative or other person to assume for us any other liability in connection with our products.

Contact Manufacturer at: 1-877-24PUMPS or www.powerflopumps.com, Attention: Customer Service Department, to obtain any needed repair or replacement of part(s) or additional information pertaining to our warranty. MANUFACTURER EXPRESSLY DISCLAIMS LIABILITY FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES OR BREACH OF EXPRESSED OR IMPLIED WARRANTY; AND ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND OF MERCHANTABILITY SHALL BE LIMITED TO THE DURATION OF THE EXPRESSED WARRANTY.

Some states do not allow limitations on the duration of an implied warranty, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or con sequential damages, so the above limitation or exclusion 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.