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OWNER'S MANUAL

**INSTALLATION AND
OPERATION INSTRUCTIONS FOR
SUBMERSIBLE SUMP/EFFLUENT PUMP**

Model:

PAN92581, PAN92571

PAN92731, PAN92751

PAN92181, PAN92151



Safety Guidelines

Carefully read, understand and follow all safety instructions in this manual.

 This is the safety alert symbol. When you see this symbol, look for one of the following signal words.

 **DANGER** Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **CAUTION** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **WARNING** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Safety Information

Read these warnings carefully. Know the application and limitations of this pump. Failure to follow these warnings could result in serious bodily injury and/or property damage.

 **DANGER** RISK OF ELECTRICAL SHOCK. Disconnect and lockout power supply before removing old pump or installing or servicing this pump.

 **DANGER** RISK OF ELECTRICAL SHOCK. This pump is supplied with a grounding conductor and grounding type attachment plug. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding type receptacle. For added safety, it is highly recommended to connect this pump to a GFCI (Ground Fault Circuit Interrupter) outlet. Connect only to a receptacle that is adequately rated for the voltage and amperage of this pump

 **WARNING** The installation of this pump must be in accordance with the National Electric Code (NEC), Uniform Plumbing Code (UPC), International Plumbing Code (IPC) as well as all applicable local codes and ordinances.

 **CAUTION** Do not install this pump in any location classified as hazardous by the National Electrical Code, ANSI/NFPA70.

 **CAUTION** Do not use this pump to pump flammable or explosive fluids such as gasoline, kerosene, etc. Do not use this pump in flammable or explosive environments. Use only with liquids compatible with pump component materials.

 **WARNING** RISK OF ELECTRICAL SHOCK. This pump has not been investigated for use in swimming pool or marine areas.

 **WARNING** RISK OF ELECTRICAL SHOCK. **DO NOT** use the power cord to remove or lower the pump into the basin. The cord may pull apart exposing bare wires which could cause a fire or electrical shock. Use the handle supplied with the pump for installing and removing the pump from the basin.

 **WARNING** Do not run the pump dry. This pump relies on water for cooling. Running the pump dry can cause the pump to overheat and the possibility of burns to anyone that handles the pump. Running the pump dry will void the warranty.

 **WARNING** Don't expose pump to freezing temperatures. Discharge lines exposed to freezing temperatures should be positioned with a downward slope to prevent freezing.

Safety Information (continued)

⚠ WARNING Do not use this pump for potable/drinking water. Use only in applications for which the pump is designed for.

⚠ WARNING According to the state of California (Prop 65), this product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

⚠ WARNING DO NOT UNDER ANY CIRCUMSTANCES REMOVE THE GROUND PIN. The 3-prong plug must be inserted into a mating 3-prong grounded receptacle. If the installation does not have such a receptacle, it must be changed to the proper type, wired and grounded in accordance with the National Electrical Code and all applicable local codes and ordinances.

⚠ WARNING All wiring must be performed by a qualified electrician.

⚠ WARNING Keep hands clear of suction & discharge openings. To prevent injury, never insert fingers into pump while it is plugged in.

⚠ WARNING Sump basins must be vented according to local plumbing codes.

⚠ CAUTION Do not handle this pump with wet hands or while standing on wet or damp surfaces or in water.

⚠ WARNING If a flexible discharge hose is used, make sure the pump is secured in the basin to prevent movement. Failure to secure the pump could result in flooding from switch malfunction.

⚠ CAUTION This pump motor is equipped with an automatic resetting thermal protector and may restart unexpectedly.

USE AND INSTALLATION



WARNING Always disconnect the power source before attempting to install, service or perform maintenance on the pump. Failure to do so may result in fatal electrical shock. Always disconnect the power source before servicing pump.

Your pump is designed and built to give you reliable performance and long life. It will pump water automatically for years when properly installed in the right environment.

REMOVING OLD PUMP. (If necessary)

1. Make sure power supply is disconnected.
2. After the power is off, remove the old pump. There are many different possible types of installations. It is best to remove all old piping and start over with new piping. Be sure to clean all debris and dirt out of the sump basin before installing your new pump. Be sure to have a grounded 120V AC outlet mounted within 6 ft. of your sump basin. Again, it is highly recommended that a GFCI (ground fault circuit interrupter) outlet be installed in the receptacle box.

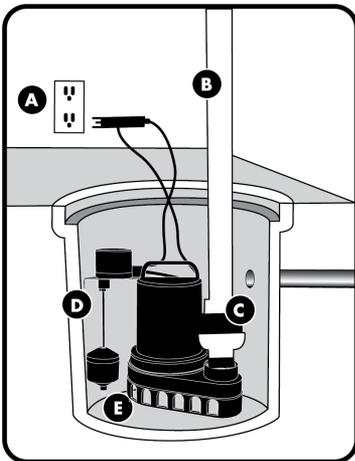


NOTICE !

A qualified electrician must perform all wiring.

INSTALLATION (New Pump)

1. Set your new pump in the bottom of the sump basin off to one side. The pump should be placed on a solid foundation. Do not place the pump directly on the ground or sandy or rocky surfaces. Sand and small stones may clog or cause damage to your pump.
2. Make sure the float switch will swing freely from the bottom to top without coming in contact with the side of the sump basin. Contact with the side of the sump basin may cause the switch to malfunction. See figure below.
3. It is highly recommended to install a full flow, swing type check valve (not included) as close to the discharge outlet on the pump as possible. A new check valve will greatly increase the life of your pump. The check valve should be the same size as the pump discharge.



- A. Grounded Outlet. A GFCI outlet is strongly recommended.
- B. Discharge Pipe
- C. Full-flow swing type check valve
- D. Sump Basin
- E. Position pump so the float switch operates freely without touching the sides of the basin.

4. Connect the pump and check valve together using schedule 40 PVC pipe and fittings. You can also use DWV or ABS pipe, as this is not a pressure installation. Corrugated drain hose is intended for temporary use and should not be used in a permanent installation. Although there are many types of pipe that work adequately for this installation, PVC is recommended.
5. Test your installation after you have completed setting up the pump. Plug the cord from the pump into the piggyback plug of the float switch, then plug that into your grounded outlet. The pump should not run at this point. If the pump runs, the switch is stuck in the upright position or the pump is plugged directly into the outlet and not through the piggyback switch plug. Fill the sump basin with water using buckets or a hose. When the switch floats to the upright position, the pump will turn on. The switch will turn off the pump when it reaches the down position. You may adjust the switch to meet your particular needs. Remember the switch must swing freely without touching the sides of the sump basin.

NOTE: This pump has a built in anti-airlock device. Leakage is normal from this device.

TROUBLESHOOTING		
PROBLEM	POSSIBLE CAUSES	HOW TO CORRECT
If the pump does not start or run	Pump is not plugged in, switch or breaker is off	Plug pump in or turn on switch/breaker
	Check for blown fuses or tripped circuit breakers or tripped GFCI outlets	Replace fuse, reset breaker, reset GFCI outlet
	Float switch is defective	Check and replace if necessary
	Motor thermal protector tripped	Allow pump to cool. Pump will reset
	Float switch is stuck or obstructed	Remove obstruction or position pump so it will not become stuck
The pump starts and stops too often	Backflow of water from discharge hose/pipe	Install or replace check valve
	Float switch is defective	Replace float switch
If the pump runs but moves little or no water	Clogged intake screen	Clean or replace screen
	Clogged discharge hose/pipe	Remove clog
	Frozen discharge hose/pipe	Allow hose/pipe to thaw
	Pump is air locked	Clean out airlock hole with a paper clip or pipe cleaner
	Low line voltage	Check wire size and increase if necessary
	Check valve is stuck in the closed position	Inspect, repair or replace if necessary
	Check valve is installed backwards	Make sure valve is installed in the correct direction of flow
	Worn, damaged or clogged pump parts	Inspect for wear, damage or clog and clean or replace if necessary
	Discharge head exceeds pump capacity	If pumping height is over 25', the pump will not move water. See performance chart
Pump does not shut off	Float switch is obstructed or stuck	Remove obstruction
	Defective Float Switch	Replace switch

NOTICE ! Height and/or piping restriction will reduce the pump output performance. See the performance chart below to insure you have the proper pump for your application. Whenever possible use the same size or larger pipe as the pump discharge for optimum performance. Reducing the pipe size will not harm your pump; it will just reduce the output.

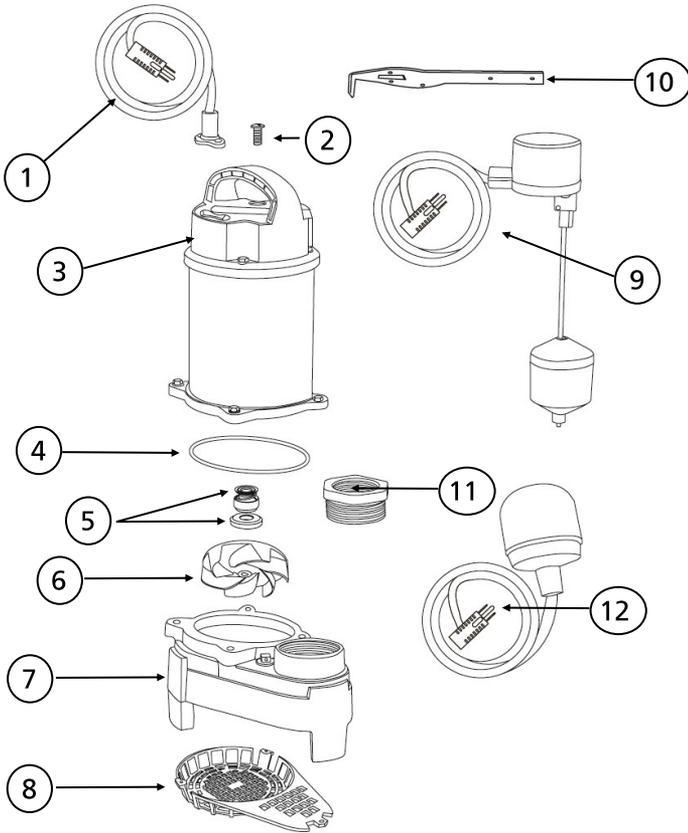
PERFORMANCES

Model #	Output in gallons per minute at listed discharge									
	Height above pumping level									
	0'	5'	10'	15'	20'	25'	30'	35'	40'	45'
PAN92581 PAN92571	75	70	64	57	49	40	31	21	11	0
PAN92731 PAN92751	80	75	69	61	55	45	38	25	16	2
PAN92181 PAN92151	86	81	75	68	61	52	43	31	20	3

SPECIFICATIONS

- Power supply requirements 120V, 60 Hz
- 92581, 92571 Motor 1/2 HP, Continuous Duty,
Split Capacitor
- 92731, 92751 Motor 3/4 HP, Continuous Duty,
Split Capacitor
Thermally Protected
- 92181, 92151 Motor 1 HP, Continuous Duty,
Split Capacitor
Thermally Protected
- Amps 7.5
- Liquid Temperature Range 32° F - 120° F (0° C - 49° C)
- Circuit Requirements 15 amp minimum
- Solids Handling 1/2"
- Discharge Size 2" NPT
- Warranty 3 Years

REPLACEMENT PARTS
To order replacement parts call



Ref#	Description	Part #
1	Power Cord	99102
2	Oil Fill Plug with O-ring	99056
3	Pump Housing Cover	99166
4	Gasket	99162
5	Shaft Seal	99157
6	Impeller	99152
7	Volute/Base	99165
8	Intake Screen	99163
9	Vertical Float Switch	92010
10	Vertical Float Switch Bracket	99104
11	2" MNPT x 1-1/2" MNPT Adapter	99250
12	Tethered Float Switch	92000

LIMITED WARRANTY - SUMP PUMPS:

Manufacturer warrants the products specified in this warranty to be free from defects in material or workmanship for five (5) years from date of purchase. During the time period and subject to the terms and conditions, the manufacturer will repair or replace to the original user or consumer any portion of this product which proves to be defective due to materials or workmanship. At all times the manufacturer shall have and possess the sole right and option to determine whether to repair or replace defective equipment, parts, or components. The manufacturer has the option to inspect any product returned under warranty to confirm that the warranty applies before repair or replacement under warranty is approved. This warranty sets forth the manufacturer's sole obligation and purchaser's exclusive remedy for defective product. Return defective product to the place of purchase for warranty consideration.

WARRANTY PERIOD - PRODUCTS:

If, within the duration of product use by the original user, this product proves to be defective due to materials or workmanship, the product shall be repaired or replaced at the manufacturer's option, subject to the terms and conditions set forth in this warranty statement. Proof of purchase is required for warranty consideration. In the absence of suitable proof of the purchase date, the effective period of this warranty is 12 months from the product's date of manufacture.

LABOR, ETC. COSTS:

The manufacturer shall IN NO EVENT be responsible or liable for the cost of field labor or other charges incurred by any customer in removing and/or affixing any product, part, or component thereof.

PRODUCT IMPROVEMENTS:

The manufacturer reserves the right to change or improve its products or any portions thereof without being obligated to provide such a change or improvement for units sold and/or shipped prior to such change or improvement.

GENERAL TERMS AND CONDITIONS:

This warranty shall not apply to damage due to acts of God, normal wear and tear, normal maintenance services and the parts used in connection with such service, lightning or conditions beyond the control of the manufacturer, nor shall it apply to products which, in the sole judgment of the manufacturer, have been subject to negligence, abuse, accident, misapplication, tampering, alteration; nor due to improper installation, operation, maintenance or storage; nor to excess of recommended maximums as set forth in the instructions. Warranty will be VOID if any of the following conditions are found:

1. Product is used for purposes other than those for which it was designed and manufactured
2. Product not installed in accordance with applicable codes, ordinances, and good trade practices
3. Product connected to voltage other than indicated on nameplate or labels
4. Pump exposed to but not limited to the following: sand, gravel, cement, grease, plaster, mud, tar, oil, gasoline, solvents or other abrasive or corrosive substances
5. Pump has been used for pumping liquids above 120°F
6. Pump allowed to operate dry (liquid supply cut off)

DISCLAIMER:

Any oral statements about the product made by the seller, the manufacturer, the representatives, or any other parties do not constitute warranties, shall not be relied upon by the user, and are not part of the contract for sale. Seller's and the manufacturers only obligation, and buyer's only remedy, shall be the replacement and/or repair by the manufacturer of the product as described above. NEITHER SELLER NOR THE MANUFACTURER SHALL BE LIABLE FOR ANY INJURY, LOSS OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS), ARISING OUT OF THE USE OR THE INABILITY TO USE THE PRODUCT, AND THE USER AGREES THAT NO OTHER REMEDY SHALL BE AVAILABLE TO IT. Before using, the user shall determine the suitability of the product for his/her intended use, and user assumes all risk and liability whatsoever in connection therewith.

THE WARRANTY AND REMEDY DESCRIBED IN THIS LIMITED WARRANTY IS AN EXCLUSIVE WARRANTY AND REMEDY AND IS IN LIEU OF ANY OTHER WARRANTY OR REMEDY, EXPRESSED OR IMPLIED, WHICH OTHER WARRANTIES AND REMEDIES ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT EITHER APPLIES TO A PRODUCT SHALL BE LIMITED IN DURATION TO THE PERIODS OF THE EXPRESSED WARRANTIES GIVEN ABOVE.

Some states and countries do not allow the exclusion or limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitations 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.