Little GIANT®

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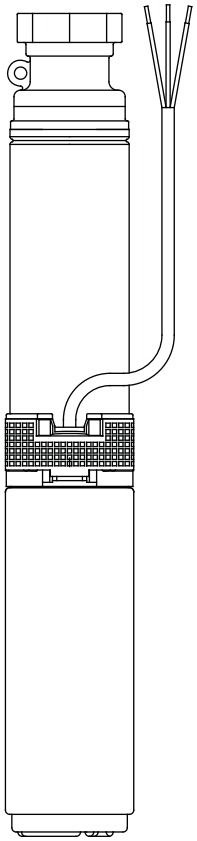
4" HIGH-HEAD FILTERED EFFLUENT PUMP OWNER'S MANUAL



BEFORE INSTALLING PUMP, BE SURE TO READ THIS OWNER'S MANUAL CAREFULLY.

⚠CAUTION Fill the pump with water before starting or the pump will be damaged. The motor on this pump is guaranteed by the manufacturer, and in the event of failure it must be returned to an authorized service station for repairs. The motor warranty is void if repairs are not made by an authorized repair station.

INSPECT THE SHIPMENT

Examine the pump when it is received to be sure there has been no damage in shipping. Should any be evident, report it immediately to the dealer from whom the pump was purchased. Please check the pump package to see that it includes pump, motor, and motor leads (if your pump purchase includes a motor).

Make certain that your available voltage corresponds to that of your motor.

READ AND FOLLOW SAFETY INSTRUCTIONS

⚠ 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 warns about hazards that **will** cause serious personal injury, death, or major property damage if ignored.

⚠WARNING warns about hazards that **can** cause serious personal injury, death, or major property damage if ignored.

⚠CAUTION warns about hazards that **will** or **can** cause minor personal injury or major property damage if ignored.

The label **NOTICE** indicates special instructions, which are important but not related to hazards.

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.

⚠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 Information 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.

ATTENTION!

IMPORTANT INFORMATION FOR INSTALLERS OF THIS EQUIPMENT!

THIS EQUIPMENT IS INTENDED FOR INSTALLATION BY TECHNICALLY-QUALIFIED PERSONNEL. FAILURE TO INSTALL IT IN COMPLIANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES AND WITH FRANKLIN ELECTRIC RECOMMENDATIONS MAY RESULT IN ELECTRICAL SHOCK OR FIRE HAZARD, UNSATISFACTORY PERFORMANCE, AND EQUIPMENT FAILURE. FRANKLIN ELECTRIC INSTALLATION INFORMATION IS AVAILABLE FROM PUMP MANUFACTURERS AND DISTRIBUTORS, AND DIRECTLY FROM FRANKLIN ELECTRIC. CALL FRANKLIN ELECTRIC TOLL FREE AT 800-701-7894 FOR INFORMATION. RETAIN THIS INFORMATION SHEET WITH THE EQUIPMENT FOR FUTURE REFERENCE.

⚠WARNING

SERIOUS OR FATAL ELECTRICAL SHOCK MAY RESULT FROM FAILURE TO CONNECT THE MOTOR, CONTROL ENCLOSURES, METAL PLUMBING, AND ALL OTHER METAL NEAR THE MOTOR OR CABLE TO THE POWER SUPPLY GROUND TERMINAL USING WIRE NO SMALLER THAN MOTOR CABLE WIRES. TO REDUCE RISK OF ELECTRICAL SHOCK, DISCONNECT POWER BEFORE WORKING ON OR AROUND THE WATER SYSTEM. DO NOT USE PUMP IN SWIMMING AREAS.

⚠WARNING

DO NOT INSTALL PUMP IN ANY LOCATION CLASSIFIED AS HAZARDOUS BY NATIONAL OR LOCAL ELECTRICAL CODES.

INSTALLATION RECORDS

It is a good idea to keep an accurate record of your installation. Be sure to record the data below:

Purchased from:			
Date of installation:			
Pump model*:			
Pump date code*:			
Well inside diameter (in/mm):			
Depth of well (ft/m):			
Depth of water (ft/m):			
Pump setting (ft/m):			
Drop pipe size:			
Wire size (pump to control box):			
Wire size (control box to power source):			
Horizontal offset (between well & house):			
Make of motor*			
Amps	**HP**	**Volts**	**Phase**
Make of control box			
HP		**Volts**	
Power supply			
Volts		**HZ**	
Pressure switch limits			
Cut-in (PSI)		**Cut-out (PSI)**	

*This information is on your pump or motor tag. It will help us identify your pump in case of later inquiries.

TEST RUNNING

If test running pump before installation:

1. Ensure that the power supply corresponds with that shown on the nameplate of the motor.
2. Install pump and components appropriate for the test.
3. Make sure power supply is turned off and circuit breaker or disconnect switch is open. Make electrical connections appropriate to your motor as shown in Figure 2.
4. Run pump and motor unit for a few seconds to ensure that it is in working order.

SUITABILITY OF WATER SOURCE

Water from an undeveloped source often contains an excessive amount of sand, dirt, and abrasives which can damage the pump. Make arrangements to ensure an adequate flow of water over the motor for cooling purposes. Determine the correct pump setting by taking into account the static water level and the drawdown at the proposed pumping rate.

DROP PIPE

Galvanized pipe is recommended for suspending submersible pumps. Plastic pipe may be used only when observing the manufacturer's recommendations of depth and pressure. Consider installing a safety cable to prevent losing the pump if the pipe should break.

Schedule 40 galvanized pipe is a suitable drop pipe.

Take great care to keep pipes clean and free from pebbles, scale, and thread chips. Make sound, air-tight connections at all fittings. Pipe sealant is recommended.

CHECK VALVES

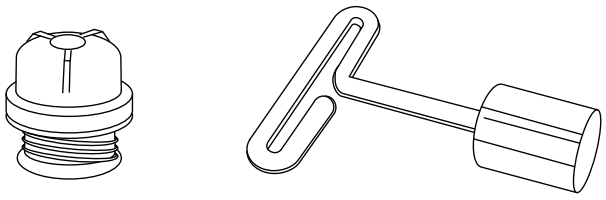
Many pumps have a built-in or externally supplied check valve. For a pump without one, install a check valve immediately above the pump. Install an additional check valve above the ground.

REMOVABLE POPPET CHECK VALVE

4" submersible pumps with a 1-1/4" discharge are supplied with a spring-loaded, removable poppet check valve assembly (Figure 1). This check valve can be removed from the pump discharge when drain back is desired.

⚠WARNING Fluid draining back through the pump can cause the pump to rotate backwards. If pump/motor starts during this time, damage to the pump can occur.

The check valve can be removed using a T-handle poppet wrench (purchased separately), or with standard needle-nosed pliers. The poppet assembly is left-hand threaded and is removed by turning clockwise. When reinstalling a poppet check valve assembly, tighten it to 15 inch-pounds.



Poppet Assembly T-Handle Poppet Wrench

Figure 1

ELECTRICAL INFORMATION

1. Employ a licensed electrician to perform the wiring. All wiring must be done in accordance with applicable national and local electrical codes.
2. Check that the power supply corresponds with the electrical rating of the submersible motor and the control box (if required). Make sure that the control box electrical rating matches the motor electrical rating.
3. Every installation requires a fused disconnect switch or circuit breaker.
4. Every installation must be grounded. There must be a reliable ground connection between the pump and the distribution panel. The motor lead incorporates a green grounding conductor.
5. Lightning arrestors are recommended for every installation. All stainless steel, single phase motors through 5HP have built-in lightning arrestors. 3-phase motors require a separate lightning arrestor installed as close to the installation as possible. Install the arrestor in accordance with manufacturer's recommendations. Lightning arrestors

provide protection against only induced voltage surges on secondary power lines; they are not effective against direct hits.

6. Mount the control box in an area protected from rain, snow, direct sunlight, or other high temperatures as this may cause tripping of the overload protector. Also protect the control box from extreme cold (below 25°F/-32°C) as this may have adverse effects on the starting capacitor.
7. A two-wire pump does not require a motor control box; all electrical components are built inside the motor. Figure 2 shows a typical wiring diagram for a two-wire installation.
8. Use an ohm meter to make continuity and insulation checks after the installation is completed.
9. Place the additional pump nameplate onto the submersible label and place both onto disconnect switch or circuit breaker box for future reference.

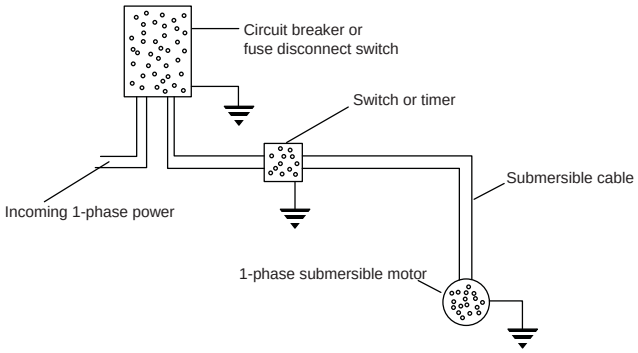


FIGURE 2
2-wire, 1-phase, 1/2 through 1-1/2 HP
Pump Wiring Diagram

INSTALLATION IN LAKE OR STREAM

A submersible pump is usually isolated at the bottom of a well, where electrical leakage from its motor and cable presents no hazard to life. This natural protection is lost when it is installed it in a lake, pond, stream, or fountain because there is no way to stop people and animals from entering or touching the surrounding water. It is recommended that such an installation be done by a licensed electrician in conformance with all applicable national and local electrical codes. Grounding as described in this manual is a minimum requirement, and a ground fault circuit interrupter (GFCI) is advisable. But in the absence of explicit national or local regulations, ask the local electric utility for guidance. In any case, support the pump from the shore or bottom at a 15° slant to assure proper motor bearing lubrication. Shield the pump from direct physical contact by people and animals. Protect and screen the pump intake to prevent blockage by leaves and weeds, but remember the need for adequate flow over the motor for cooling purposes. In addition, protect the entire underwater installation from water currents, ice, boats, anchors, debris, vandalism, and other hazards.

⚠CAUTION Never run the pump unless it is completely submerged in water. If run without water, the pump and motor could be damaged. Note also that air drawn into the pump can cause an airlock under certain conditions.

TROUBLESHOOTING

1. PUMP FAILS TO START

a) Electrical trouble - call dealer or electrician

b) Drawdown protection device has pump turned off

c) Overload tripped

d) Reset low pressure cutoff switch (if installed)

2. PUMP FAILS TO DELIVER WATER

a) Air lock in pump

b) Clogged intake screen

c) Insufficient application yield

3. PUMP GIVES REDUCED OUTPUT

a) Insufficient application yield

b) Worn pump

c) Clogged intake screen

d) Low voltage

e) Incorrect rotation (3-phase only)

4. PUMP CYCLES TOO FREQUENTLY (if installed with pressure switch)

a) Excessive pressure drop between pressure switch and pressure tank

b) Cut-in pressure at pressure tank too high

c) Cut-out pressure at pressure tank too low

d) Waterlogged pressure tank

e) Start and stop electrodes of floatless liquid level control set too close together

f) Tank sized too small to meet system requirements

5. OVERLOADS TRIP

a) Electrical trouble - call dealer or electrician

6. PRESSURE SWITCH CYCLES RAPIDLY WHEN PUMP STARTS (if installed with pressure switch)

a) Pressure switch too far from pressure tank

b) Improper air charge of tank - adjust to manufacturer's recommendations

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U.S. LIMITED WARRANTY

Franklin Electric Company, Inc.

Franklin Electric Company, Inc. warrants its new products to be free of defects in material and workmanship for a period of 1 year from date of installation or 2 years from date of manufacture, whichever comes first. Warranty does not cover applications pumping saltwater or other corrosive liquids. Consult and adhere to local codes for all applications. Franklin Electric also provides additional warranty coverage on specific products as specified herein.

Franklin Electric's warranty obligation with regard to equipment not of its own manufacture is limited to the warranty actually extended to Franklin Electric by its suppliers.

This warranty extends only to the original retail purchaser and only during the time in which the original retail purchaser occupies the site where the product was originally installed.

Requests for service under this warranty shall be made by contacting the installing Franklin Electric dealer (point of purchase) as soon as possible after the discovery of any alleged defect. Franklin Electric will subsequently take corrective action as promptly as reasonably possible.

Franklin Electric, at its discretion, may replace or repair any product that fails under this warranty after inspection by an authorized company representative or after Franklin Electric has received the product at our factory. Replacement or repair cannot be made until after the product is inspected. All charges or expenses for freight to and from the factory, removal and reinstallation of the product, or installation of a replacement product are the responsibility of the purchaser.

THIS WARRANTY SUPERSEDES ANY WARRANTY NOT DATED OR BEARING AN EARLIER DATE. ANY IMPLIED WARRANTIES WHICH THE PURCHASER MAY HAVE, INCLUDING MERCHANT ABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIOD. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. IN NO EVENT SHALL FRANKLIN ELECTRIC BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

This warranty does not apply to any product which has been subjected to negligence, alteration, accident, abuse, misuse, improper installation, vandalism, civil disturbances, or acts of God. The only warranties authorized by Franklin Electric are those set forth herein. Franklin Electric does not authorize other persons to extend any warranties with respect to its products, nor will Franklin Electric assume liability for any unauthorized warranties made in connection with the sale of its products.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

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