

HT-6E-CIA-FS SUBMERSIBLE EFFLUENT PUMP

INTRODUCTION

This instruction sheet provides you with the information required to safely own and operate your product. Retain these instructions for future reference.

The product you have purchased is of the highest quality workmanship and material, and has been engineered to give you long and reliable service. This product has been carefully tested, inspected, and packaged to ensure safe delivery and operation. Please examine your item(s) carefully to ensure that no damage occurred during shipment. If damage has occurred, please contact the place of purchase. They will assist you in replacement or repair, if required.

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE, OR SERVICE YOUR PRODUCT. KNOW THE PRODUCT'S APPLICATION, LIMITATIONS, AND POTENTIAL HAZARDS. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

DESCRIPTION

This is a submersible effluent pump for use in basins or lift stations, and is suitable for pumping effluent, wastewater, and other non-explosive, non-corrosive liquids with up to 1/2" spherical solids and temperatures up to 200°F.

SAFETY GUIDELINES



CAUTION: INTENDED FOR COMMERCIAL AND INDUSTRIAL USE ONLY. READ SAFETY GUIDELINES AND INSTRUCTIONS CAREFULLY.

1. Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in explosive atmospheres or hazardous locations as classified by NEC, ANSI/NFPA. Pump should only be used with liquids compatible with pump component materials.
2. Do not handle pump with wet hands or when standing on a wet or damp surface, or in water.
3. Do not pull the pump out of the water by the power cord when the pump is operating or connected to power source.
4. This pump is supplied with a grounding conductor and/or grounding type attachment plug. To reduce the risk of electric shock, be certain that it is connected to a properly grounded grounding type receptacle.
5. The National Electric Code requires a ground fault circuit interrupter (GFCI) be installed in the branch circuit supplying fountain equipment, pools, etc.
6. In any installations where property damage and/or personal injury might result from an inoperative or leaking pump due to power outages, discharge line blockage, or any other reason, a backup system(s) and/or alarm should be used.
7. Support pump and piping when assembling and when installed, failure to do so may cause piping to break, pump to fail, motor bearing failures, etc.

8. This pump's motor housing is filled with a dielectric oil for motor heat transfer and life-time lubrication of the bearings. This oil is non-toxic to aquatic life, however, suffocation can occur if oil is left on the water surface. If oil escapes the motor housing, it can be removed from the surface quickly by placing newspapers on the water surface to soak up the oil.
9. The pump motor is equipped with an automatic resetting thermal protector and may restart unexpectedly. Protector tripping is an indication of motor overloading as a result of excessively high or low voltage, inadequate wiring, incorrect motor connections, or a defective motor or pump.

ELECTRICAL CONNECTIONS



1. Check the pump label for proper voltage required. Do not connect to voltage other than that shown.
2. If pump is supplied with a 3-prong electrical plug, the third prong is to ground the pump to prevent possible electrical shock hazard. **DO NOT REMOVE** the third prong from the plug. A separate branch circuit is recommended. Do not use an extension cord.
3. If the cord is equipped with stripped lead wires, such as on 230V models, be sure that the lead wires are connected to a power source correctly. The green/yellow wire is the ground, the other two are live.
4. Check local electrical and building codes before installation. The installation must be in accordance with their regulations as well as the most recent National Electrical Code (NEC).
5. To conform to the National Electrical Code, all pumps must be wired with 14 AWG or larger wire. For runs to 250 feet, 14 AWG wire is sufficient. For longer runs, consult a qualified electrician or the factory.
6. Pump should be connected or wired to its own circuit with no other outlets or equipment in the circuit line. Fuses and circuit breaker should be of ample capacity in the electrical circuit.

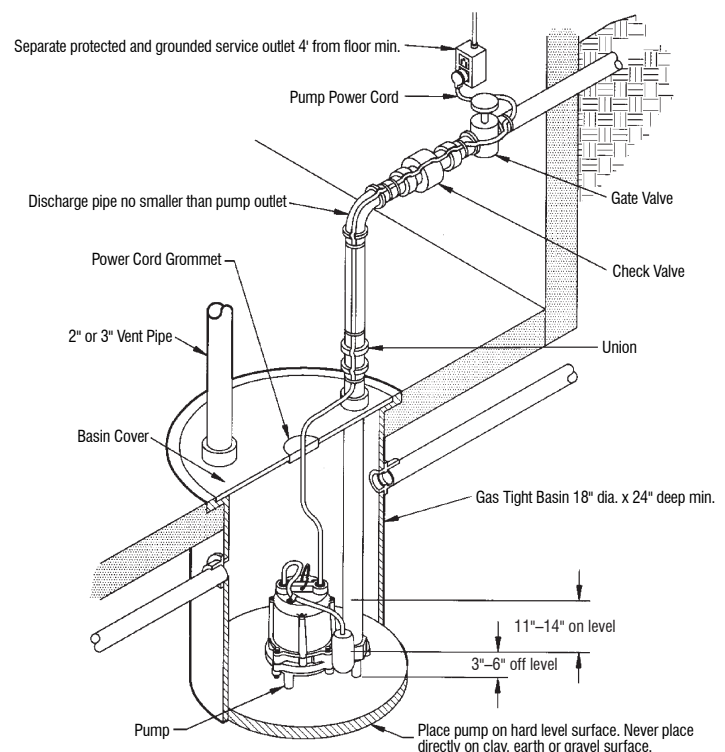


Figure 1

- The flexible PVC jacketed cord assembly mounted to the pump must not be modified in any way, with the exception of shortening the cord to fit into a control panel. Any splice between the pump and the control panel must be made within a junction box and mounted outside of the basin and comply with the National Electrical Code.

OPERATION



- Pump should be installed in a suitable basin which is at least 18" in diameter and 24" deep, in accordance with local plumbing codes.
- When a pump is in a basin, etc. do not touch motor, pipes or water until unit is unplugged. If your installation has water or moisture present, do not touch wet area until all power has been turned off.
- Pump features a 1-1/2" female NPT discharge.
- Pump must be placed on a hard level surface. Never place pump directly on clay, earth or gravel surfaces.
- A check valve must be used in the discharge line to prevent back flow of liquid into the basin. The check valve should be a free flow valve that will easily pass solids.

CAUTION: For best performance of check valves, when handling solids install in a horizontal position or at an angle of no more than 45 degrees. Do not install check valve in a vertical position as solids may settle in valve and prevent opening on start-up.

- Do not attempt to restrict the intake side of these pumps. Restricting the intake may cause damage to the seal and may starve the pump. If you require reduced flow rates, then place a

valve on the discharge side of the pump or if flexible vinyl tubing is used, a clamp can be used on the tubing to restrict the flow.

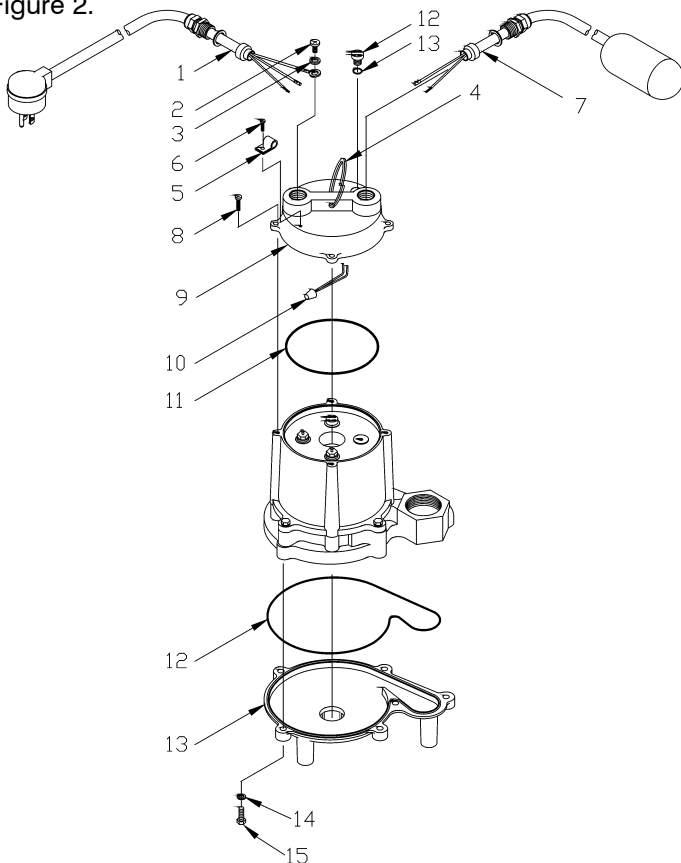
- Do not let the unit operate dry. It is designed to be cooled by pumping fluid. You may damage the seal and the motor may fail if the pump is allowed to run dry.
- If the unit is going to be idle for a period of time, follow the cleaning instructions outlined in the next section. Do not let the unit freeze in the wintertime. This may cause cracking or distortion that may destroy the unit.

TESTING PUMP OPERATION

NOTE: BE CERTAIN PUMP IS SECURE IN BASIN AND FLOAT MOVES UNOBSTRUCTED WITHOUT TOUCHING THE BASIN WALLS OR PLUMBING.

- These pumps are equipped with a float operated switch. When these pumps are installed in a basin with a sealed cover, switch operation cannot be observed. The sump cover usually will have a spare hole that is plugged with a rubber plug. This plug can be removed and switch operation can be observed.
- Plug power cord into a grounded receptacle with voltage consistent with pump voltage as indicated on pump nameplate.
- Run water into basin until pump starts.
- Be sure gate valve in discharge line is open.
- Allow pump to operate through several on-off cycles.
- If pump does not operate properly, consult the Troubleshooting table. If trouble cannot be located with these steps shown, consult your pump dealer or take pump to a Little Giant authorized service center.

Figure 2.



REPLACEMENT PARTS

ITEM	PART NO.	DESCRIPTION	QTY.
1	951600	Wiring Harness, 15'	1
2	902437	Screw, #8-32 x 1/4	1
3	921059	Washer, Lock, #8	1
4	114100	Handle, Wire	1
5	927027	Clamp, Loop	1
6	901424	Screw, #8-32 x 1/2	1
7	950225	Switch Assembly	1
8	909022	Screw/Washer, #10-24 x 5/8	4
9	106669	Cover, Automatic	1
10	950400	Wire Nut, 14-18 AWG	1
11	928008	Seal Ring, 4.718 x .078	1
12	928040	Seal Ring, 7.928 x .063	1
13	106378	Screen/Base	1
14	921103	Washer, Lock, 1/4	6
15	903725	Screw, Cap, 1/4-20 x 7/8	6

MAINTENANCE



WARNING: DISCONNECT THE PUMP FROM THE POWER SOURCE BEFORE ATTEMPTING TO SERVICE OR REMOVE ANY COMPONENT!

1. This unit is permanently lubricated. Oiling is not required. Do not, in any case, open the sealed portion of the unit or remove housing screws.
2. Periodic cleaning of the pump parts will prolong the LIFE and EFFICIENCY of the pump.
3. Remove screws that hold base to volute and clean impeller and volute passage. Do not use strong solvents on impeller.
4. Be sure impeller turns freely after cleaning.
5. **CAUTION:** DO NOT REMOVE IMPELLER. THIS REQUIRES SPECIAL TOOLS AND IS TO BE DONE ONLY BY AN AUTHORIZED SERVICE CENTER. DO NOT REMOVE MOTOR HOUSING COVER. WARRANTY IS VOID IF MOTOR HOUSING COVER, IMPELLER OR SEALS HAVE BEEN REMOVED. ANY REPAIR ON MOTOR MUST BE DONE BY AN AUTHORIZED LITTLE GIANT SERVICE CENTER.
6. Be certain power cord is in good condition and contains no nicks or cuts.

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSES	CORRECTIVE ACTION
Pump does not turn on.	Pump not plugged in.	Plug in pump.
	Circuit breaker shut off or fuse removed.	Turn on circuit breaker or replace fuse.
	Accumulation of trash on float.	Clean float.
	Float obstruction.	Check float path and provide clearance.
	Defective switch.	Have pump serviced by authorized service center.
	Defective motor.	Have pump serviced by authorized service center.
Pump will not shut off.	Float or float rod obstruction.	Check float and float rod path and provide clearance.
	Pump is air locked.	Shut power off for approximately 1 minute, then restart. Repeat several times to clear air from pump.
	Liquid inflow matches pump capacity.	Larger pump required.
	Defective switch.	Disconnect switch, check w/ohmmeter, Open-infinite resistance, closed-zero.
Pump runs but does not discharge liquid.	Check valve installed backwards.	Check flow indicating arrow on check valve body to ensure it is installed properly.
	Check valve stuck or plugged.	Remove check valve and inspect for proper operation.
	Lift too high for pump.	Check rating table.
	Inlet to impeller plugged.	Pull pump and clean.
	Pump is air locked.	(See corrective action above.)
Pump does not deliver rated capacity.	Lift too high for pump.	Check rated pump performance.
	Low voltage, speed too slow.	Check for proper supply voltage to make certain it corresponds to nameplate voltage.
	Impeller or discharge pipe is clogged.	Pull pump and clean. Check pipe for scale or corrosion.
	Impeller wear due to abrasives.	Replace worn impeller.
Pump cycles continually.	No check valve in long discharge pipe allowing liquid to drain back into basin.	Install a check valve in discharge line.
	Check valve leaking.	Inspect check valve for correct operation.
	Basin too small for inflow.	Install larger basin.

**LIMITED WARRANTY
SUMP, EFFLUENT & RESIDENTIAL SEWAGE**

Little Giant #HT-10E and #HT-6E Series Submersible Effluent Pumps are recommended for use in sumps, basins or lift stations and suitable for pumping basement drainage water, effluent, wastewater and other non-explosive, non-corrosive, non-abrasive liquids not above 200°F with up to 3/4" spherical solids (1/2" on 6E models) handling ability. (NOT TO BE USED FOR SEWAGE WATER EXCEPT TO PUMP SEPTIC TANK EFFLUENT.)

The above noted Little Giant product is guaranteed to be in perfect condition when it leaves our factory. During the time periods and subject to the conditions hereinafter set forth, LITTLE GIANT PUMP COMPANY, subsidiary of Franklin Electric Company, Inc., will repair or replace to the original user or consumer any portion of your new LITTLE GIANT product which proves defective due to materials or workmanship of LITTLE GIANT. Contact your nearest authorized Little Giant Dealer for warranty service. At all times LITTLE GIANT shall have and possess the sole right and option to determine whether to repair or replace defective equipment, parts, or components. Damage due to lightning or conditions beyond the control of LITTLE GIANT is NOT COVERED BY THIS WARRANTY.

WARRANTY PERIOD

PUMPS: 24 months from date of purchase or 30 months from date of manufacture, whichever occurs first.

LABOR, ETC. COSTS: LITTLE GIANT 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 LITTLE GIANT product, part or component thereof.

THIS WARRANTY WILL NOT APPLY:

1. to defects or malfunctions resulting from failure to properly install, operate, or maintain the unit in accordance with printed instructions provided
2. to failures resulting from abuse, accident or negligence
3. to normal maintenance services and the parts used in connection with such service
4. to units which are not installed in accordance with applicable local codes, ordinances and good trade practices
5. unit is used for purposes other than for what it was designed and manufactured
6. if pump exposed to but not limited to the following: sand, gravel, cement, grease, plaster, mud, tar, hydrocarbons, or hydrocarbon derivatives (oil, gasoline, solvents, etc.) or other abrasive or corrosive substances.

7. if pump has been used for continuous pumping of suitable liquids above 200F°
8. if power cord has been cut to less than 3' length.
9. if pump has been dismantled by customer. (Dealer only can dismantle pump for field service.)

RETURN OR REPLACED COMPONENTS: Any item to be replaced under the Warranty must be returned to LITTLE GIANT at Oklahoma City, OK or such other place as LITTLE GIANT may designate, freight prepaid.

PRODUCT IMPROVEMENTS: LITTLE GIANT 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 to such change or improvement.

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 manufacturer's 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 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**. Some states do not allow the exclusion or limitation of incidental or consequential 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.

In the absence of other suitable proof of the purchase date, the effective date of this warranty will be based upon the date of manufacture plus two years. Direct all notices, etc., to: Service Department, LITTLE GIANT PUMP COMPANY, 301 N. MacARTHUR BLVD., OKLAHOMA CITY, OK 73127.

DETERMINATION OF UNIT DATE OF MANUFACTURE: (9-87) month and year stamped on pump and/or serial number on pump nameplate coded to indicate year of manufacture.

For parts or repair, please contact1-888-572-9933
For technical assistance, please contact1-888-956-0000

Pour des parties ou la réparation,
entrez s'il vous plaît en contact1-888-572-9933
Pour l'aide technique, entrez s'il vous plaît en contact1-888-956-0000

Para partes o la reparación,
por favor póngase en contacto1-888-572-9933
Para la ayuda técnica, por favor póngase en contacto1-888-956-0000

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