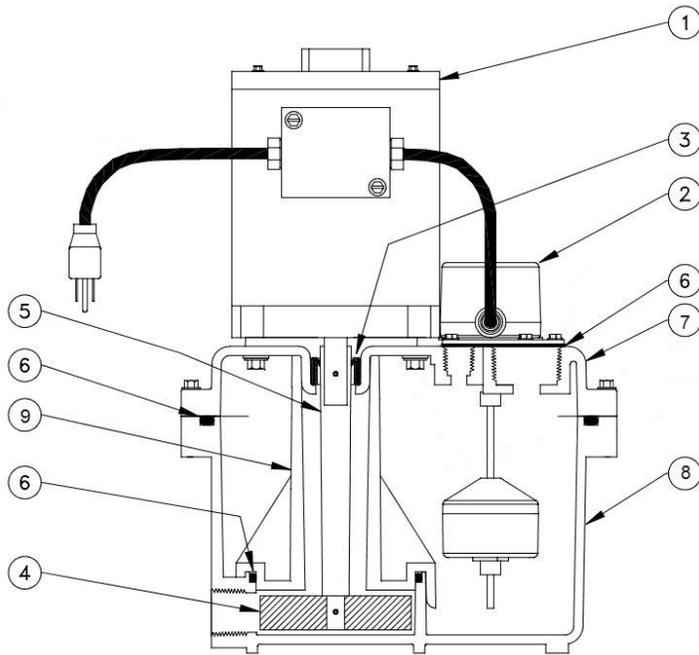




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MODEL LTP-1 801284 & LTS-1 801285 WASTE WATER REMOVAL PUMP

INSTALLATION • OPERATION • MAINTENANCE



INTRODUCTION

HARTELL LTS and LTP are general-purpose reservoir pumps developed for laundry and wet bar applications. These models are utilized to pump wastewater from an area with no floor drains to an overhead or remote drain line. The pump must be installed in conjunction with a (laundry) tub/sink. This pump has been carefully engineered to provide long, trouble free service and is of the highest quality workmanship and materials.

These pumps have been thoroughly inspected and tested, then carefully packaged to insure safe delivery and operation. When you receive your pump, examine it carefully to determine that there are no damaged or broken parts. If damage is detected, notify the firm from where the pump was purchased. They will assist with a repair or replacement.

See the precautions listed below before continuing.

CAUTION: READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION

- Pump should only be used with liquids compatible with pump component materials. Do not use to pump flammable or explosive fluids. Do not use in explosive atmospheres.
- The pump is supplied with a grounding type plug. To reduce the risk of electrical shock be certain that it is connected to a properly grounded, grounding receptacle.
- Do not handle pump with wet hands or when standing on a wet or damp surface, or in water.
- Shut off the electrical power at the fuse box before making any connections. All wiring must comply with local codes.
- A strainer must be installed in the tub to prevent foreign objects, (buttons, screws, etc.), from entering and damaging the pump. In laundry applications a lint trap must be installed to prevent an excessive build-up of lint that could interfere with proper float/switch and impeller operation. A nylon stocking works well as a lint trap.
- Applying heat directly to the tank with a torch, or indirectly by heat transfer through copper tubing can melt the tank. This will void the warranty. Solder fittings and tubing first, allow to cool, and then assemble to the tank. The use of some pipe dopes will soften and/or crack the plastic used in this pump. This will void the warranty. Use only Teflon tape when installing threaded fittings to the tank.

ONE YEAR LIMITED WARRANTY

HARTELL LTP and LTS waste water pumps are guaranteed to be free from defects in workmanship or materials and to function satisfactorily, when properly installed, for a period of ONE (1) year from date of installation. HARTELL will replace, without charge, any HARTELL product found to be defective upon examination at our factory if returned within the guarantee period, transportation charges prepaid.

This guarantee does not apply if the product has been misapplied or mechanically damaged, HARTELL assumes no liability for resultant damages of any kind arising out of the use of its products.

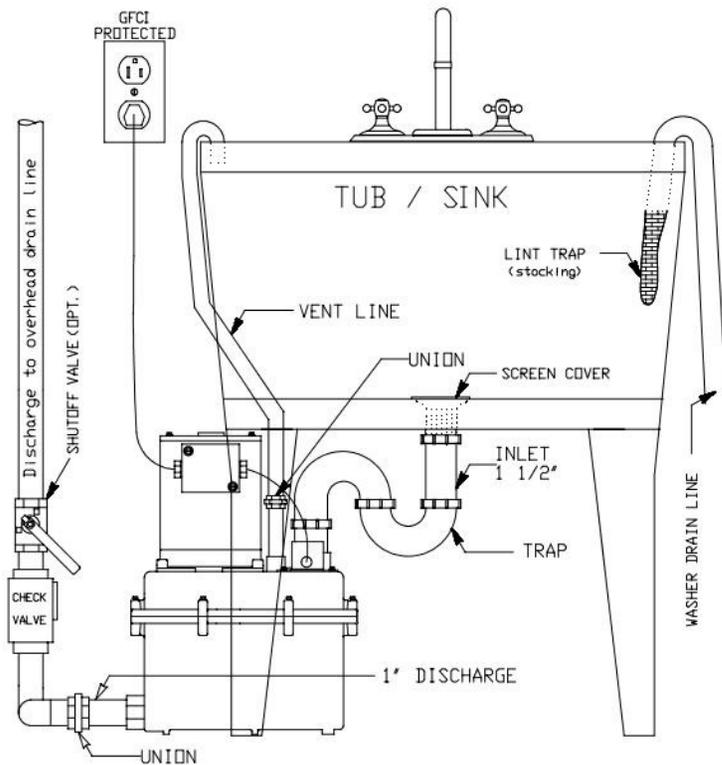
Item	Qty	Part #	Description
1	1	630092	Motor LTS-1, 115 VAC, 1/3 hp
		630090	Motor LTP-1, 115 VAC, 1/4 hp
2	1	620172 L-2115	SJE Switch Float Assembly w/Gasket (2000 to present)
3	1	640087 P-107	Impeller Shaft Seal
4	1	630057 PS-103	Impeller with Set Screw, LTS
		650030 PA-103	Impeller with Set Screw, LTP
5	1	640089 PS-106	Impeller Shaft with Sleeve
		640069 PA-106	Impeller Shaft with Sleeve
6	1	620155 P115	Gasket Set (Perimeter Seal, Switch & Impeller Seals)
7	1	640095 P-100	Tank Cover
8	1	640096 P-112	Tank
9	1	200500 P-104	Impeller Chamber Cover

Keep these sheets with the pump. They may be valuable if service is needed under the terms of the warranty.

Model #: _____ Date of installation: _____

Installer: _____ Date Code: _____

Dealer: _____



INSTALLATION

1. Place the pump in the desired location under the tub/sink.
2. Install the piping necessary to connect the drain to the 1 1/2" inlet. A trap is recommended. The use of unions or slip fittings is also recommended to encourage proper pump maintenance. Install the vent line and run it over the top and into the tub/sink. This allows proper venting of the tank and the discharge of soap foam back into the tub/sink in laundry applications.
3. A check valve is required and should be of a soft seat swing check design. A spring loaded ball check is permissible if the lift is one half of the pump shut off level and the spring pressure is equal to, or less than one (1) psi.
4. The installation of a shutoff valve is recommended in the discharge line. This will allow the discharge flow rate to be modified, if required to match inlet flow and prevent short cycling of the pump in low lift installations. In addition, it will allow service to the check valve or the pump without draining the discharge line.

ELECTRICAL CONNECTIONS

Plug the pump into a properly grounded electrical receptacle. A ground fault style receptacle or breaker is recommended. Alternatively, the power cord can be removed and the pump hard wired into an existing circuit. Be sure to follow all applicable electrical codes.

OPERATION

The LTS & LTP pumps operate automatically. Water from the tub/sink drains into the tank where it raises the float to a pre-set power on point. The water is pumped out the discharge and through the check valve to the drain line. The float drops with the water level to a pre-set power off point. The check valve keeps the water from draining back to the tank.

MAINTENANCE

The majority of maintenance is preventative. Keep foreign objects out of the inlet and tank by using an inlet screen and lint trap. Be aware that the vent line, check valve, and discharge piping contribute to system performance. Turn off power to the pump before performing any maintenance or tests.

To inspect the tank interior and float/switch, remove the five (5) switch screws that attach it to the tank. Inspect and clean the float as required. If the tank requires cleaning the pump must be removed from the plumbing lines first. Remove the eight (8) perimeter screws and lift the motor and top portion of the tank as a single unit from the tank bottom. Inspect and clean as required including O-ring of impeller chamber cover and tank perimeter seal. Reverse the above procedure to assemble. Be sure all seals, gaskets and O-rings are in place and not pinched. Replace if worn or not sealing.

Tub/sink use, water conditions, soap and cleaning agents will impact the frequency of maintenance required. Establish a maintenance procedure and follow it to prevent system-related problems.

TROUBLESHOOTING

Problem	Probable Cause
Pump does not run when water is poured into the sink/tub.	- check that pump is plugged in - check power to outlet or circuit - fuse/breaker blown or tripped - pump plugged into a switched outlet
Pump runs when plugged in with no water in tub/sink.	- damaged float/switch - float "hanging-up" on tank wall due to buildup of soap scum or debris - check valve leaking back to tank
Pump runs but doesn't empty sink/tub	- clogged discharge line - ball check valve spring pressure too high - lift too high and/or run is too long (shutoff @ 13' LTP & 16.5' LTS) - broken impeller/shaft
Pump leaks around motor and/or float/switch	- damaged float/switch - discharge too high - discharge clogged
Pump doesn't run, but has water standing in sink/tub.	- clogged vent line - float "hanging-up" on tank wall due to buildup of soap scum or debris - damaged float/switch