



# HARTELL DRAIN PUMP



## MODEL LTA-1 (802210) AUTOMATIC SINK DRAIN PUMP

### INSTALLATION • OPERATION • MAINTENANCE

#### READ ALL INSTRUCTIONS BEFORE STARTING INSTALLATION

#### ❖ General Information

The **HARTELL LTA-1** model pump is a completely self-contained unit designed to remove wastewater from sinks when a traditional gravity drain line is not available. Popular applications include; wet bar sinks, kitchenettes, utility sinks, and laundry tray sinks. Lightweight and compact, the **LTA** pump mounts directly to the drain tailpiece of your sink, eliminating all traps and inlet piping. The **LTA** design **does not require** any connection to the main stack vent<sup>1</sup> which is common with other types of drain pump systems. The **LTA** pump's rugged construction, automatic operation, and ease of installation provides the best value in a drain pump that will provide many years of trouble free service. Proper installation practices will ensure virtually maintenance free operation, and extend the life of your pump.

**Installation Note:** All pumping and piping systems will fail at some point due to a variety of reasons including power failures, foreign objects, neglect, or "old age". Proper safeguards, and precautions such as alarms, safety switches, drain pans, etc. should be installed with any system when system failure will result in damages to finished living spaces. It is the responsibility of the installer to make appropriate provisions for system failure consistent with each specific installation.

**! WARNING** Risk of electrical shock. This pump is supplied with a grounding type cord and plug. Do not modify cord or plug. Plug pump into a properly grounded, grounding type, GFCI receptacle, following all local codes.

**! WARNING** Risk of electrical shock. Do not handle pump, cord, or plug with wet hands, or when standing in water or on a damp surface, when pump is plugged in. Unplug pump before servicing or performing any maintenance. Do not work with energized electrical equipment in a wet area. Reasonable care and safe practices should be exercised during installation and maintenance.

<sup>1</sup> National Standard Plumbing Code Section 11.7.9

**! CAUTION** Pipe dope and other thread sealing compounds must not be used to aid in the sealing of inlet or discharge threads. Pipe dope will cause cracking of plastic parts. Use Teflon™ tape only to aid in thread sealing. Use of pipe dope will void warranty.

## ❖ Installation

### 1. Attach pump to sink drain tailpiece as follows:

- a) Place fiber gasket over drain threads.
- b) Place rubber o-ring over drain.
- c) Lift pump and engage inlet threads with the sink drain threads. Exercise care so that threads are properly aligned. Mis-alignment will damage threads and may cause leaks.
- d) Rotate the pump until tray adapter flange on pump inlet contacts the foam gasket. Once contact is made, rotate pump until it is firmly secured to the drain and the discharge is in the correct position for your installation.

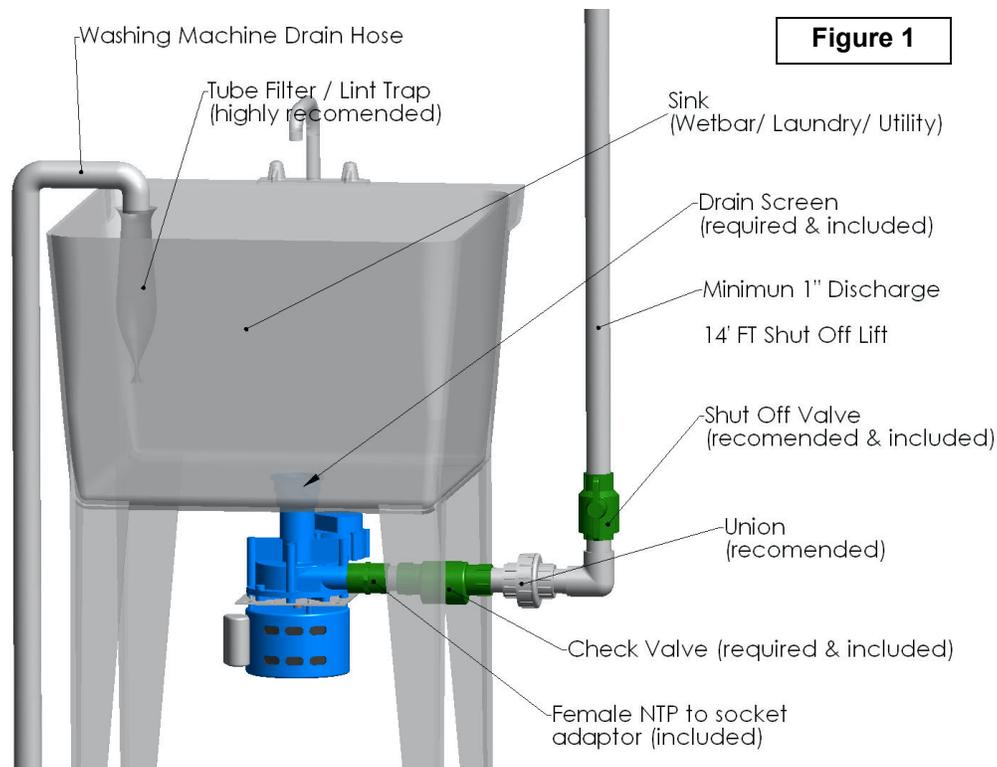
### 2. Install discharge piping as shown in Figure 1.

- a) **1" piping and valves** are recommended; however 3/4" piping and valves may be substituted in installations where lift requirements are less than six (6) feet, or approximately one half of the pump's maximum lift.
- b) **A check valve or back flow preventer (included)** is required to ensure the proper operation of the pump. A soft-seat, swing check valve is included; however, a ball or spring type check valve may be used if the force required to open them is no more than 3 feet of lift, or less than 1 psi. and does not affect the required pump flow.
- c) **A discharge line shut-off or balancing valve (included)** is required to regulate the discharge flow to match the sink drain flow. This will minimize cycling of the pump and allow cleaning and servicing of the check valve without draining the discharge line.

### 3. Plug pump into a properly grounded, grounding type receptacle.

Follow all local codes. GFIC is recommended.

**! CAUTION** A strainer must be installed in the sink drain to prevent debris and foreign objects from entering and becoming lodged in the pump chamber, preventing proper pump operation. If used with a washing machine a lint trap or tube filter should be used on the washing machine discharge hose.



**! NOTE** Sinks will only allow 5-6 gallons-per-minute (GPM) of water to pass through the drain into the pump. When the pump is lifting water to a height of 8 feet, the LTA pump will remove 23 GPM. This causes the pump to turn on and off frequently, or “cycle”. The shut off or balancing valve acts to adjust or “balance” the discharge flow to match the inlet flow being let into the pump from the sink, and reduces pump cycling. Adjust pumps as follows to minimize cycling:

#### 4. System check and final adjustment.

- a) **Turn on faucets or water supply.** Pump will turn on automatically as water collects in the pump. Once the pump has started, check all piping and connections for leaks.
- b) **Adjust shut-off valve to minimize pump cycling.** Place a stopper in the sink and allow the water level to build up several inches above the drain. With the shut off valve fully open remove the stopper and allow the water to flow into the pump. Close the shut off valve slowly until the pump runs continuously while the sink is draining. Check this adjustment by running the faucets. The pump will cycle at partial water flow, but should run continuously when the faucets are fully open, and the maximum amount of water is draining from the sink.
- c) **If the water level in the sink increases with full faucet water flow, open the balancing valve slightly.** Note: Washing machines will discharge more water than will drain from the sink. Use faucet water flow **only** to calibrate pump flow!

## ❖ Troubleshooting

Condition	Probable Cause
Pump does not run when water is added to the sink.	-Check that pump is plugged in. -Check power to outlet or circuit. -Pump plugged into a switched outlet. -Fuse/breaker blown or tripped. -Foreign object lodged in pump chamber.
Pump runs but does not empty sink.	-Sink drain screen clogged. -Sink stopper inserted in drain. -Clogged check valve. -Clogged discharge line. -Shut-off (balancing) valve closed or not adjusted properly. -"System" lift too high or piping run too long.
Pump turns on and off ("cycles") when no water is in the sink.	-Check valve or back flow preventer not installed in discharge line. -Dirt in check valve is allowing water to flow back into pump from drain line.
Pump turns on and off ("cycles") rapidly when sink is full or at maximum water flow.	-Balancing / shut-off valve not installed in drain line. -Balancing valve not adjusted properly.

(Pump will cycle with faucets partially on. This is normal and will not harm pump.)

## ❖ Service and Maintenance

The LTA pump is designed to be virtually maintenance free when used in accordance with the installation guidelines specified in these instructions. Installation and preservation of an inlet screen will prevent excessive accumulation of material in the pump chamber and possible obstruction of the impeller by foreign objects such as stones, string, buttons, etc. Before returning the unit for replacement, the pump housing should be removed and the impeller chamber checked for obstructions. To check impeller, Unplug pump and remove from sink. Remove four (4) 1/4" hex head screws from the "fins" of the housing as shown in figure 2. Separate housing from motor base plate and inspect for obstructions. After clearing any debris, replace housing on the base plate making sure that the rubber "o" ring is in place around the "step" in the base plate. Re-install pump following all instructions.

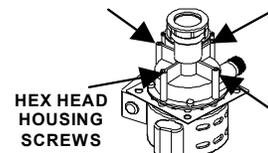


FIGURE 2

## ❖ Warranty

HARTELL products are warranted to be free from manufacturing defects, for a period of twelve (12) months past the date of installation. Within the warranty period, HARTELL will replace or repair any products determined to be defective by the Factory or an authorized Representative. Purchaser must pay all labor and shipping charges necessary to replace product covered by this warranty. HARTELL shall not be held liable for resultant damages, caused by products that have failed. Installer must consider the safeguards necessary to protect the surrounding areas from possible water damage should the pump or piping system fail. Warranty will be voided if product has been subject to abuse, tampering, altering, negligence, improper installation, or mis-application. Requests for service under this warranty shall be made by returning the product to the original place of purchase along with dated sales receipt. Additional details of this warranty can be obtained by contacting HARTELL.