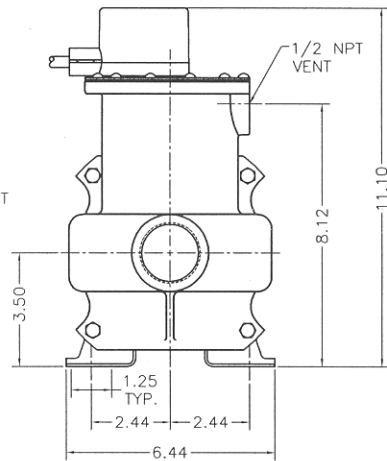
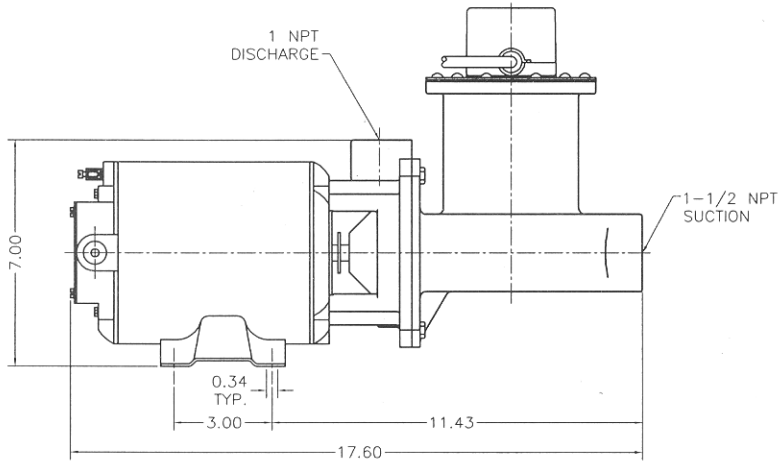
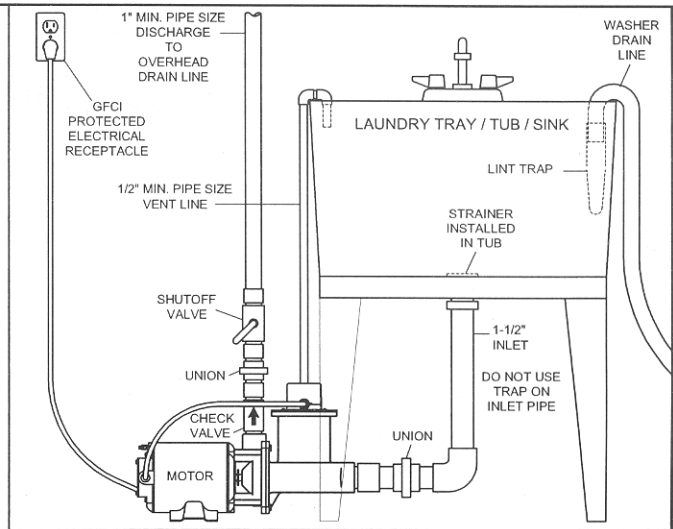
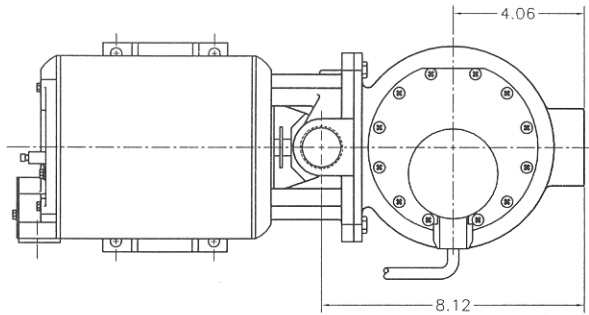


MODELS X99A33 & X99A50 AUTOMATIC OPERATION

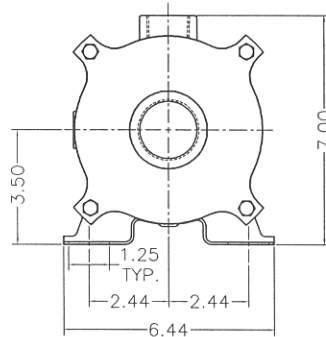
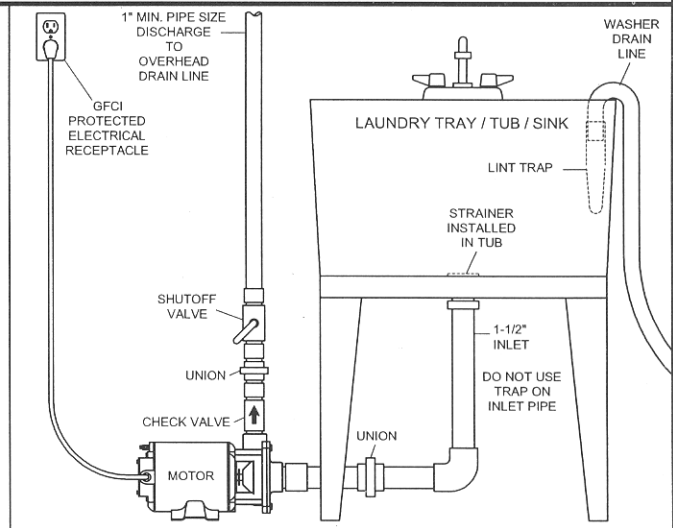
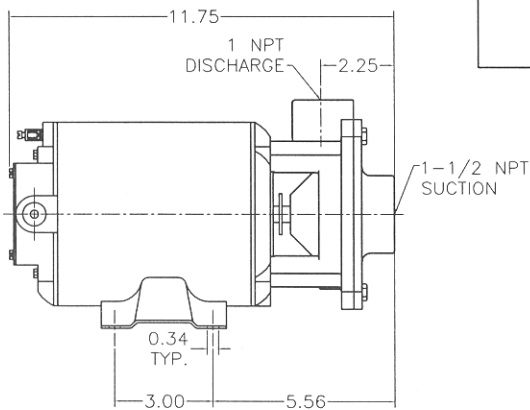
GENERAL NOTES FOR ESTIMATING ONLY
ALL DIMENSIONS ARE IN INCHES



MODELS X99M33 & X99M50 MANUAL OPERATION

MANUAL OPERATION MODELS DO NOT COME SUPPLIED
WITH ANY TYPE OF SWITCH OR CONTROL DEVICE
TO TURN PUMPS ON OR OFF

GENERAL NOTES FOR ESTIMATING ONLY
ALL DIMENSIONS ARE IN INCHES



LANCASTER PUMP A DIVISION OF C-B TOOL COMPANY

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INSTALLATION • OPERATION • MAINTENANCE

LANCASTER MODELS X99M33 & X99M50

MANUAL LAUNDRY TRAY WASTE WATER PUMPS

INTRODUCTION

LANCASTER models X99M33 & X99M50 pumps are designed for gravity-feed pumping applications. These pumps can be located below the laundry tray/tub/sink and will pump clean or waste water to an overhead or remote drain line. These pumps are manual operation models, **no controls are supplied**. These pumps do not come supplied with any type of switch or control device to turn pumps on or off.

PREINSTALLATION CHECKLIST & PRECAUTIONS

1. **Inspect your unit.** Occasionally, products are damaged during shipment. If the unit is damaged, contact your dealer before using.
2. **Carefully read the literature provided** to familiarize yourself with specific details regarding installation and use. These materials should be retained for future reference.
3. **To reduce the risk of electrical shock**, a properly grounded receptacle of grounding type should be installed and protected by a ground fault circuit interrupter (GFCI) and in accordance with National Electrical Code and local codes.

WARNING: FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING. Single phase pumps are supplied with a 3-prong grounded plug to help protect you against the possibility of electrical shock. **DO NOT UNDER ANY CIRCUMSTANCES REMOVE THE GROUND PIN.**

4. Make certain that the electrical receptacle is within the reach of the pump's power supply cord. **DO NOT USE AN EXTENSION CORD.** Extension cords that are too long or too light do not deliver sufficient voltage to the pump motor. But more important, they could present a safety hazard if the insulation would become damaged or the connection end would fall into the laundry tray.
5. Check to be sure your power source is adequate for the voltage requirements of the motor.
6. **Make sure the pump electrical supply circuit is equipped with fuses or circuit breakers of proper capacity.** A separate branch circuit is recommended sized according to the National Electrical Code for the current shown on the motor name plate.

CAUTION: Check valve must be installed to prevent back-drainage. Spring loaded type check valve *not* recommended.

CAUTION: To prevent foreign matter from entering pump, a strainer must be installed in the laundry tray/tub/sink. In laundry applications, a lint trap must be installed to prevent an excessive build-up of lint in the pump that could interfere with impeller operation.

CAUTION: Do not use to pump flammable or explosive liquids or liquids with solids, strong acids or caustics. Do not use in explosive atmospheres. **Max. water temperature 130° F.**

INSTALLATION

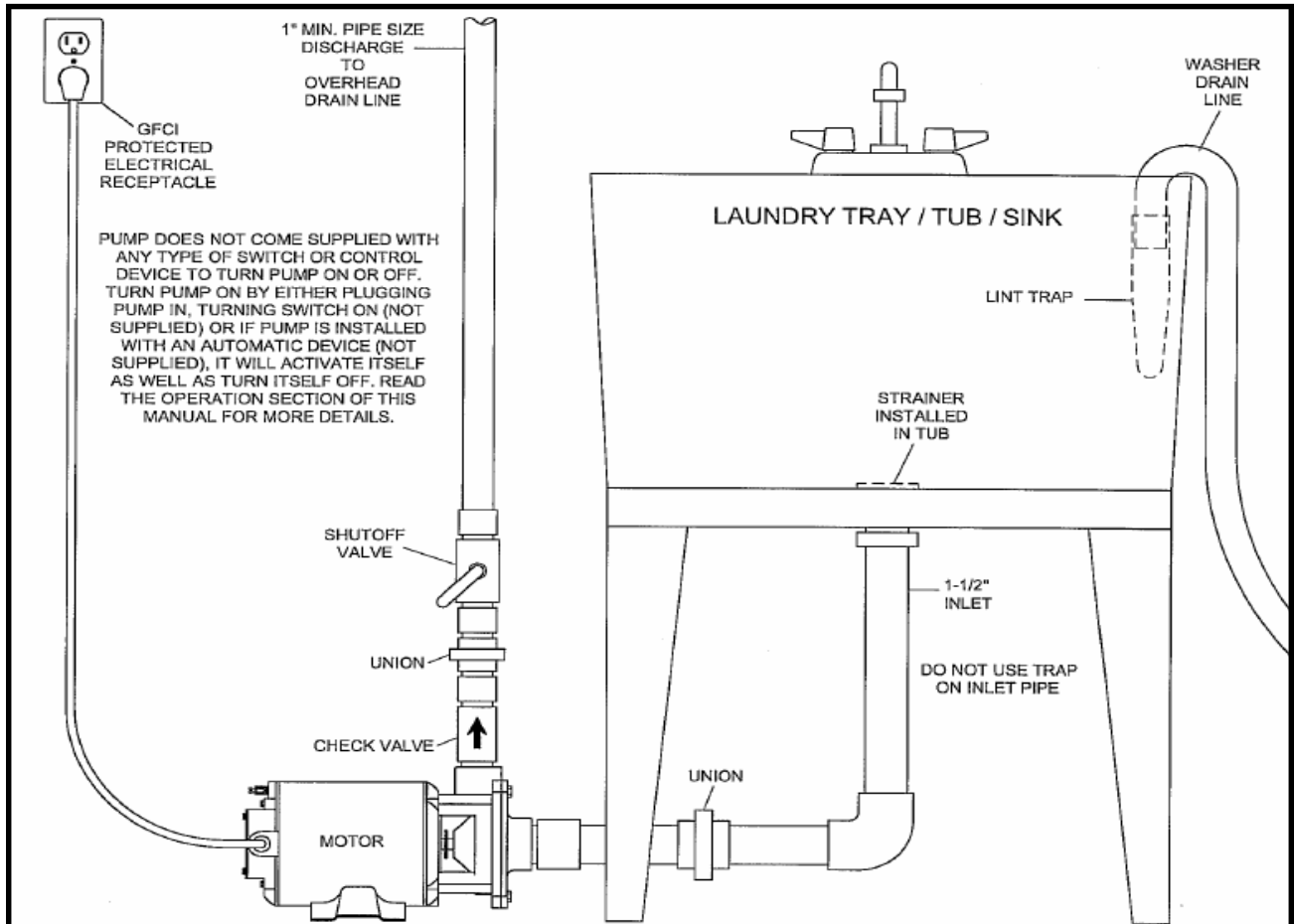
The diagram shows the various connections which must be made for proper operation.

1. Location. The pump must be installed using a **laundry tray/ tub/ sink** to drain water into it. The pump must be installed in a level horizontal position, fully supported from the base. It should never be hung on the inlet or discharge line. Place the pump in the desired location as close to under the tub/sink as possible.

2. Laundry Tray/Tub/ Sink. A **strainer** must be installed in the tub to prevent foreign objects (small buttons, pebbles, etc.) from entering pump and causing internal damage. In laundry applications, a **lint trap** must be installed to prevent an excessive buildup of lint in the pump that could interfere with impeller operation. A lint trap slips onto the end of the washing machine drain line (discharge hose), secured with a cable tie. Lint traps are available in the retail market. Replace lint traps before half full. (Note: a nylon stocking works well as a lint trap.)

3. Inlet. Install the necessary **1½"** piping to connect the laundry tray/tub/sink drain fitting to the pump inlet. Pitch the piping from tub/sink drain to pump inlet to avoid air traps. Do not use a trap on inlet piping. A **union** is recommended to facilitate removal if necessary for cleaning or service.

4. Discharge. Do not restrict to sizes below **1"**. Install a **check valve** below level of bottom of tub, as close to the pump discharge as possible. The check valve prevents drain-back. Spring loaded type check valve **NOT** recommended. A spring loaded check valve is permissible **IF** the application's discharge height is one half of the pump shut off head (max. feet at 0 gpm) **AND** the spring pressure is equal to, or less than one (1) psi. Install a **union** or other means of separating the discharge line to facilitate removal if necessary for cleaning or service. Install a **shutoff valve** in the discharge line. The shutoff valve can be used to reduce the pump discharge flow rate, if necessary, to more closely match the inlet flow in low head installations. Also, the shutoff valve can be used to service the check valve or pump without draining the discharge line. Install additional **1"** piping to connect the discharge to the building's gravity drain line.



5. Electrical Connections. It is strongly recommended that the pump is plugged into a properly grounded electrical receptacle protected by a ground fault circuit interrupter (GFCI) and in accordance with the National Electrical Code and local codes. If the pump is to be controlled by an on and off switch, install at this time.

OPERATION

The pump does not come supplied with any type of switch or control device to turn pump on or off. Turn the pump on by either plugging pump in, turning switch on (not supplied) or if pump is installed with an automatic device (not supplied), it will activate itself as well as turn itself off. Using the pump without an automatic device, it is necessary to manually turn off pump when water has been completely pumped out of the tub. If water stops draining out of the tub (last couple of inches) while the pump is running, the pump has become air bound. Turn off pump. **Wait** a few seconds, turn on pump again. The pump may have to be turned on and off a few times to completely drain tub. When water has been completely pumped out of the tub, turn off pump immediately. If necessary, the shutoff valve in the discharge line can be used to reduce the pump discharge flow rate to more closely match the inlet flow in low head installations.

MAINTENANCE

Routine maintenance is not required on the pump, but the associated connections may require occasional attention. Keep foreign objects and lint out of the inlet by using a strainer and lint trap. **Replace lint traps before half full.** The check valve on the discharge line should be checked for accumulation and freedom of operation. Tub/ sink use, water conditions, soap and cleaning agents will impact the frequency of maintenance needed.

TROUBLESHOOTING

WARNING: ELECTRICAL PRECAUTIONS. Before servicing a pump, always shut off the main power breaker and then unplug the pump— making sure you are not standing in water and are wearing insulated protective sole shoes. Under flooded conditions, contact your local electric company or a qualified licensed electrician for disconnecting electrical service prior to pump removal.

Read the **OPERATION** section of this manual **again**, to be sure you are familiar with how the pump works. The following chart (see next page) may be of assistance in correcting possible operating problems.

TROUBLESHOOTING CHART

Problem	Cause	Correction
Pump will not turn on.	A. Blown fuse/tripped breaker or other interruption of power to the pump.	A. Check that the unit is securely plugged in. Have an electrician check all wiring for proper connections and adequate voltage.
Unit runs or hums but does not pump.	B. Discharge is restricted. C. Check valve is stuck closed or installed backwards. D. Discharge head exceeds pump capacity. E. Pump impeller is jammed. F. Tub/sink strainer or inlet piping is clogged.	B. Check the discharge line for blockage, including ice if the line passes through or into cold areas. C. Remove and examine for freedom of operation and proper installation. D. Try to route piping to lower level. If not possible, another pumping station will be required at a level of roughly half the total lift. Do not use spring loaded type check valve.
Unit operates noisily, vibrates excessively.	E. Foreign objects in the impeller cavity or broken impeller. G. Worn motor bearings. H. Piping to house structure is too rigid.	E. Have an authorized installer service or replace impeller. Disassembly of pump by persons other than Lancaster Pump authorized installers or Lancaster Pump may void the warranty. F. Check the strainer and inlet piping for restrictions. G. Return the complete assembly to the factory for repair. H. Replace a portion of the discharge piping with rubber hose.

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