

OPERATION

Priming

Never run the pump dry. To prime, fully submerge the pump and its discharge connection under water prior to starting the pump's motor.

⚠ WARNING

HAZARDOUS PRESSURE: Do not run pumps against a closed discharge, or at a system operating pressure above what is mentioned by the pump manufacturer.

Starting

Close all system outlets, then slightly crack one system outlet to allow excess air to bleed out of the system. Start the pump. Immediately upon starting, slowly begin opening the discharge valve until half open. If after a few minutes of running you do not get water, repeat priming process (the pump may be locked by excess air that is trapped in the unit). Once the pump is operating, fully open the discharge valve and a system outlet, letting the pump operate until the water is running clear. No further priming should be needed unless the pump is drained or there is a leak in the suction plumbing.

Process To Ensure Pump Is Receiving Enough Water To Meet Demand

1. Install a shut-off valve in the plumbing near the discharge of the pump.
2. Close the valve, but make sure that the supply water is allowed to freely flow into the pump without restriction.
3. Turn on the pump, and begin opening the discharge's shut-off valve.
4. Continue opening the discharge valve until a very distinct noise is heard coming from the pump. This noise is called Cavitation (which can destroy the pump over time), and will sound like there is gravel inside the pump. STOP opening the discharge valve once cavitation is heard.
5. Slowly close the discharge valve until the cavitation is no longer heard.
6. The pump is now adjusted so that the system demand will not exceed what can be supplied.

To ensure that the system is never run dry, it may be necessary to set up a float switch system. The float switch should be adjusted to allow the pump to remove the most water possible, but not so much that the water level goes below the pumps suction screen. If the water goes below the suction screen, air will be drawn into the pump. Pumping air for an extended period of time could damage or destroy the pumping system

Lubrication

The pump requires only water for lubrication and must never be run dry.

⚠ WARNING

Before disconnecting pump, be sure fuse box leads are disconnected or power is turned off. After reassembling the pump, refer to priming instructions before running.

⚠ WARNING

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

pumps for outdoor fountains, garden ponds and similar places have to be supplied through a RCD (operating current ≤ 30 mA) (IEC 60335-2-41).

Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

Replacement cord instructions, type Y attachment.

Instructions for fixed appliances stating how the appliance is to be fixed.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

pollution of the liquid could occur due to leakage of lubricants.



Meaning of crossed-out wheeled dustbin:

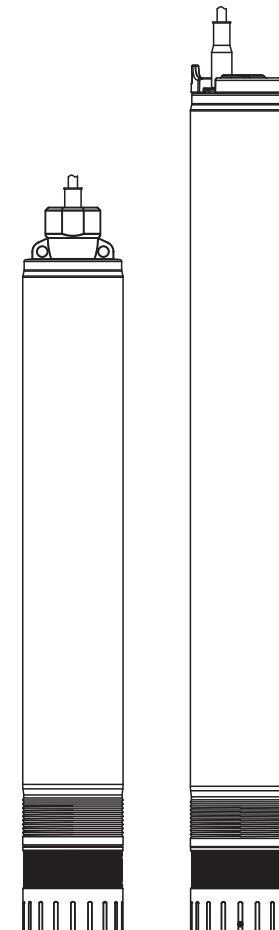
Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being. When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposals at least free of charge.



LDW-SERIES High Pressure Submersible Pump Instruction Manual



BEFORE YOU START


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


REFER TO PRODUCT DATA PLATE(S) FOR ADDITIONAL OPERATING INSTRUCTIONS AND SPECIFICATIONS.


CAUTION


- Keep work area clean, well-lit and uncluttered.
- Keep safety labels clean and in good condition.
- Wear safety glasses while installing or performing maintenance on pump.
- Most water system problems result from improper installation. It is suggested that you read this manual carefully before installing your pump.
- Check and make available all the tools you will need to install your pump. Required tooling may include wrenches, pipe sealant, pipe fittings and nipples, screwdriver, etc. Be sure to have available proper and adequate wiring material to complete the installation correctly.

READ AND FOLLOW SAFETY INSTRUCTIONS

 This is the safety alert symbol. When you see this symbol on your pump or in the 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.

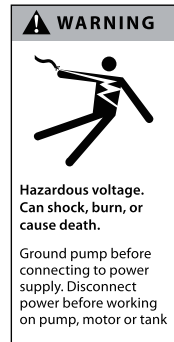



 **WARNING** **HAZARDOUS PRESSURE.** Do not run pump against closed discharge. Release all system pressure before working on any component. Under certain conditions, submersible pumps can develop extremely high pressure. Install a pressure relief valve, which is capable of draining the pumps max output at the relief valves rated pressure.


Do not run pump dry. Pump must be fully submersed in water prior to starting. If run without water, the pump and motor will be damaged.

Electrical Safety


 **CAUTION** Make sure all **ELECTRICAL POWER IS OFF** before connecting any electrical wires.




 Wire motor for correct voltage. See "Electrical Installation" section of this manual and motor nameplate. The LDW-Series is available to operate on either 230V or 115V input power. Check product nameplate to determine correct input voltage.

 Ground motor before connecting to power supply. Pump is supplied with a copper ground wire. Use only copper wire for pump connection.

 **DO NOT GROUND PUMP TO A GAS SUPPLY LINE.**

 Meet National Electrical Code (NEC).

 Follow all pump wiring instructions provided in this manual.

WARNING

SERIOUS OR FATAL ELECTRICAL SHOCK MAY RESULT FROM FAILURE TO CONNECT THE INLINE SYSTEM, METAL PLUMBING, AND ALL OTHER METAL NEAR THE LDW-SERIES SYSTEM 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 LDW-SERIES SYSTEM IN SWIMMING AREAS.

General Safety

LDW-Series cistern pumping system is designed and approved for use in effluent pumping applications. Do not allow pump or any system plumbing to freeze. To do so will void the warranty.

This pump has been evaluated for pumping water only. Pumping liquids other than water may void warranty. Periodically inspect pump and system components.

LDW-Series KEY FEATURES

Pump Features:

- Automatic ON/OFF
- Dry running protection
- Available in both 115V and 230V options
- Pump housing made of rust-proof high-grade steel
- Integrated non-return valve
- Motor protected thermally by a built in overload
- High-quality mechanical seal for a long service life
- Removable 5" base for secure and reliable mounting

INSPECT YOUR SHIPMENT

LDW-Series are carefully tested, inspected, and packaged to insure their arrival in perfect condition. When the pump is received, examine it closely to make sure there is no damage that may have occurred in shipping. If damage is evident, report this immediately to your shipping carrier and product dealer. The shipping carrier assumes full responsibility for the shipment's safe arrival. Any claim for damage to the shipment, either visible or concealed, must be made through the shipping carrier first.


INSTALLATION


Location Of The LDW-Series Pump


The LDW-Series is designed to be installed in a cistern clean water /deep wells(Max. submersion depth 19m). The pump should be protected to prevent possible freezing.


If a sewage tank is near or a part of the system where the LDW-Series pump is installed, proper ventilation is required to meet all local and national codes.


NOTICE: READ AND FOLLOW ALL INSTRUCTIONS!


 Disconnect power at electrical panel before making any electrical connections.

 Adhere to the guidelines of national, state and local plumbing codes when installing this product. Check with the appropriate agencies or water systems professional for additional information.

 Supply voltage must be +/- 10% of motor nameplate voltage. Low or high voltage can damage the motor and will void the warranty.

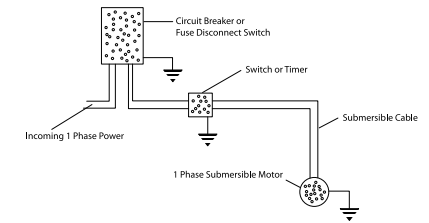
 If possible, connect pump to dedicated branch circuit with no other appliances on it.

 Do not operate pump unless pump is grounded.

 Solder and tape all spliced connections carefully. A fused disconnect switch or circuit breaker should be placed at or near the pump.

ELECTRICAL INSTALLATION

1. All wiring must be done in accordance with applicable national and local electrical codes.
2. Disconnect electrical power at the main breaker.
3. Check that the power supply corresponds with the electrical rating of the submersible motor.
4. Every installation requires a fused disconnect switch or circuit breaker.
5. 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.
6. LDW-Series has two power supply wires and one ground wire, and does not require a motor control box, since all electrical components are built inside the motor.
7. Use an ohmmeter to make continuity and insulation checks after the installation is completed.



Plumbing, Piping, And Hoses

In general, keep the discharge line as large as possible. Avoid using bends, elbows and fittings whenever possible. All discharge connections must be airtight, the use of pipe compound/or Teflon tape is recommended for all threaded joints.

Water Supply Requirement

The LDW-Series is designed to be installed in a cistern clean water/deep wells(Max. submersion depth 19m). The unit should be kept completely full of water at all times. The system should not be run dry, without water, for even short periods of time, as this will cause damage to the pump and the pumping system.

Horizontal Offset Suction Piping

When the pump is offset a long distance from the end point of fluid discharge, the horizontal offset suction piping may have to be increased in diameter to reduce friction loss. The friction loss in a system increases:

1. As the flow rate increases.
2. As the piping size decreases.

PUMP INSTALLATION PROCEDURE

1. Disconnect electrical power at the main breaker.
2. A qualified professional installer should be used to install the pump system and any associated control devices.
3. Pump is not to be installed in a hazardous environment.
4. LDW-Series pumps are designed for permanent installations only. All power connections should use approved connection box strain reliefs to ensure that undue stress is not put upon the units power cord.
5. The products electrical lead/cord is not intended to be used to transport or install the unit. If the unit must be lowered into its place of operation, do so by way of threading a fixed pipe into the pumps discharge. DO NOT lower the unit by the factory installed electrical cord.
6. To facilitate priming and starting of the pump, it is recommended that a valve be placed in the discharge plumbing. This valve is critical if the unit will be operated on a regular basis at near maximum discharge. To use the valve to assist in the pumps priming and start up, first close the valve completely. Fill the pump and plumbing completely with water. Next, crack the valve open to allow any air in the system to bleed off once the system is turned on. Start the pump. As water begins to flow, slowly open the valve the rest of the way until the desired flow rate is achieved.