LACO TECHNOLOGIES

CREATING VACUUM AND LEAK TESTING SOLUTIONS

# UN-150V
# DRY PISTON PUMP

## OPERATION AND MAINTENANCE MANUAL

Product Name: UN-150V Dry Piston Pump
Product Group: UN Series Dry Piston Pumps
Part Numbers:  UN-150V
Manual Rev Number: SMT-09-1011-A1

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About LACO
LACO Technologies, Inc. is a leading manufacturer of vacuum and leak testing systems. Driven by innovation, service, and quality, we strive to be the best provider of standard and custom vacuum and leak testing solutions. Established in 1975, LACO Technologies is located in Salt Lake City, Utah, and serves customers across the United States and internationally. Owned by engineers, LACO is uniquely situated to provide innovative solutions for vacuum and leak testing applications. We work with diverse customer applications and are dedicated to Engineering Solutions You Can Trust.

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# 1. Alert Symbols

This is the hazard alert symbol. It is used to alert you that personal injury or property damage is possible.

**DANGER: Severe personal injury or death will occur if hazard is ignored**

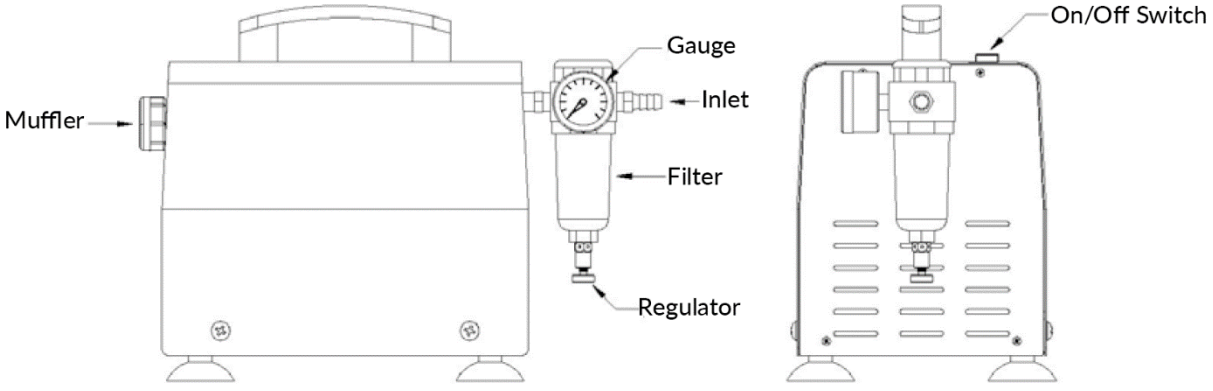
**WARNING: Severe personal injury or deal can occur if hazard is ignored**

**CAUTION: Minor injury or property damage can occur if hazard is ignored.**

# 2. Specifications

| Model | Max. vacuum | Max. pressure | Open flow | Watt | Weight |
|---|---|---|---|---|---|
| UN-150V | 720 mmHG | X | 45 l/min | 85W | 6.8 Kg |

# 3. Dimensions



# 4. General Information

This unit is designed to be used for the purpose of pumping air. This pump should not be used for the pumping of fluids, particles, solids, or any combustible substances likely to cause explosions.

**DANGER:**

Do not pump flammable or explosive gases or operate the unit in an atmosphere containing them.

**CAUTION:**

The unit is designed for pumping air. Do not allow corrosive gases or particulate material to enter the pump. Water, oil-based contaminants, or other liquids must be filtered out.

**CAUTION:**

The normal ambient temperature should not exceed 40 °C (104 °F). This is particularly important when the unit is installed in a confined space where heat may build up during operation.

**WARNING:**

UN-150V units are oil-less design. Never lubricate these oil-less units. Most components are made of aluminum and the valves are stainless steel.

# 5. Installation

**WARNING:**

To avoid risk of electrocution, do not use this product in an area where it could come in contact with water or other liquids. If exposed to the elements, it must be weather protected.

**CAUTION:**

Do not block the flow of cooling air over the unit in any way.

**CAUTION:**

Be sure that the available electric power matches specifications marked on the unit. Serious damage may occur to the unit if connected to an improper voltage.

# 6. Operation

**CAUTION:**

This pump is designed to start against atmospheric pressure only, not under load (pressure or vacuum). Care must be taken to eliminate load when pump is turned off for any reason.

**CAUTION:**

Do not operate units above recommended pressures or vacuum duties. To do so will damage unit.

**CAUTION:**

After use, disconnect plumbing and let the unit run open for about 5 minutes in air before switching it off to purge out droplets of liquid that may have formed on the inside of the unit. This prevents crystallization and/or absorption of liquids.

**WARNING:**

This unit is thermally protected and will automatically restart unexpectedly when the overload device resets. Do not pump flammable or explosive gases or operate this unit in an atmosphere containing flammable or explosive gases.

# 7. Maintenance

Intake filter and mufflers require periodic inspection and replacement. Initial inspection is suggested at 500 hours, then the user should determine the frequency thereafter. Most problems can be prevented by keeping filters and mufflers clean. Dirty filters and mufflers decrease unit performance and can decrease unit life.

# 8. Service

Unit Disassembly

**WARNING:**

You must disconnect the unit from electrical power before servicing it. Failure to do so can result in severe personal injury or death. Vent all air lines to the pump to remove pressure.

**WARNING:**

You must vent all air lines to the unit to remove pressure before servicing the pump. Failure to do so can result in severe personal injury.

NOTE: LACO Technologies will not guarantee the performance of a field rebuilt unit. You can return the unit to LACO Technologies or an LACO Technologies authorized distributor.

# 9. Troubleshooting

| Problem | Low Pressure | High Pressure | Low Vacuum | Excessive Noise | Overheating | Won't Start |
|---|---|---|---|---|---|---|
| Dirty filter | x | | | | x | |
| Dirty muffler | x | | x | | x | x |
| Dirty valves | | | x | | | |
| Damaged valves | x | | x | | | x |
| Worn or damaged cup | x | | x | x | | |
| Leaky hose | x | | x | | | |
| Plugged vacuum or pressure line | x | x | x | | x | x |
| Low voltage | x | | x | | x | x |
| Leaky relief valve | x | | x | | | |