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› Air-Operated Double Diaphragm Pump QBK-25L User Manual

LYNICESHOP QBK-25L

Air-Operated Double Diaphragm Pump QBK-25L User Manual

Model: QBK-25L | Brand: LYNICESHOP

1. INTRODUCTION

This user manual provides essential information for the safe and efficient operation, installation, and maintenance of your LYNICESHOP QBK-25L Air-Operated Double Diaphragm Pump. Please read this manual thoroughly before operating the pump to ensure proper usage and to prevent damage or injury.

2. PRODUCT OVERVIEW & FEATURES

The LYNICESHOP QBK-25L is a robust air-operated double diaphragm pump designed for transferring various low-viscosity fluids. Constructed from durable aluminum alloy, it offers reliable performance in industrial and commercial applications.

Key Features:

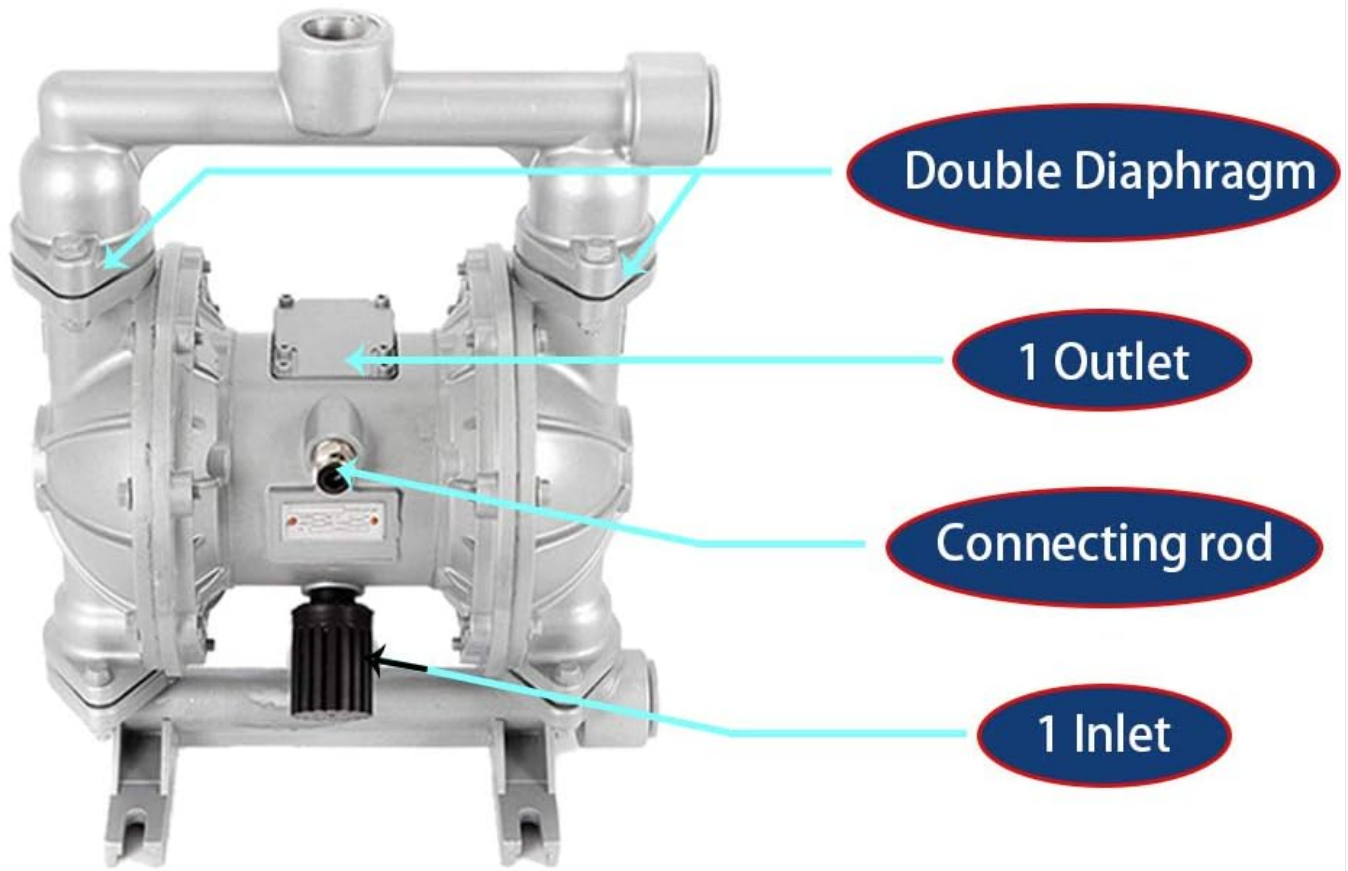
- **Durable Construction:** Made of aluminum alloy, ensuring sturdiness and durability.
- **Operating Pressure:** Functions effectively within a working pressure range of 29 to 115 PSI.
- **High Flow Rate:** Capable of pumping up to 24 gallons per minute.
- **Temperature Range:** Suitable for temperatures up to 80 degrees Fahrenheit.
- **Versatile Fluid Compatibility:** Ideal for water and low viscosity petroleum fluids, including diesel, kerosene, and engine oil.
- **Inlet/Outlet Size:** Equipped with 1-inch inlet and outlet ports.



Figure 2.1: Front view of the QBK-25L pump, highlighting its robust aluminum alloy construction.

Component Identification:

FEATURES



Air-Operated Double Diaphragm Pump
QBK-25L

Figure 2.2: Key components of the QBK-25L Air-Operated Double Diaphragm Pump, including the double diaphragm, inlet, outlet, and connecting rod.

3. TECHNICAL SPECIFICATIONS

The following table details the technical specifications for the QBK-25L pump:

Specification	Value
Model	QBK-25L
Manufacturer	LYNICESHOP
Material	Aluminum Alloy
Item Weight	28.7 pounds (13 kg)
Product Dimensions	17.7 x 11.8 x 22.04 inches (45 x 30 x 56 cm)
Inlet Port Size	1 inch
Outlet Port Size	1 inch
Working Pressure	29 to 115 PSI
Flow Rate	Up to 24 Gallons Per Minute
Max Fluid Temperature	80 degrees Fahrenheit (26.7 degrees Celsius)
Power Source	Air-Operated (Pneumatic)

SPECIFICATION



Air-Operated Double Diaphragm Pump

Model	QBK-25L
Inlet Port	1 Inch
Outlet Port	1 Inch
Suction	0-5 m (0-16.4 ft)
Max Fluid Temp	80° F
Weight	16 kg (35.27 lbs)
Dimension	14 x 9 x 18 Inch

Figure 3.1: Visual representation of key specifications for the QBK-25L pump.

4. SAFETY INFORMATION

Adhering to safety guidelines is crucial for preventing accidents and ensuring the longevity of your pump. Always follow local safety regulations and best practices.

General Safety Precautions:

- **Read the Manual:** Always read and understand this entire manual before installation, operation, or maintenance.
- **Personal Protective Equipment (PPE):** Wear appropriate PPE, including safety glasses, gloves, and protective clothing, when operating or servicing the pump.
- **Fluid Compatibility:** Ensure the fluid being pumped is compatible with the pump's materials (aluminum alloy, diaphragms). **Note: This pump cannot be used for corrosive liquids.**
- **Ventilation:** Operate the pump in a well-ventilated area, especially when pumping flammable or hazardous fluids.
- **Pressure Relief:** Always relieve system pressure before performing any maintenance or disconnection.
- **Secure Connections:** Ensure all air and fluid connections are secure and leak-free before operation.
- **Stable Mounting:** Mount the pump securely on a stable surface to prevent movement or vibration during operation.
- **Emergency Stop:** Know the location of the emergency shut-off for the air supply and fluid lines.

5. SETUP

5.1 Unpacking

1. Carefully remove the pump and all components from the packaging.
2. Inspect the pump for any visible damage that may have occurred during shipping. Report any damage to your supplier immediately.
3. Verify that all included components are present: 1 x Air-Operated Double Diaphragm Pump, 1 x Product Manual.

5.2 Installation

1. **Mounting:** Securely mount the pump to a rigid, level surface using appropriate fasteners. Ensure there is adequate space around the pump for maintenance and ventilation.
2. **Air Supply Connection:** Connect a clean, dry, regulated air supply line to the pump's air inlet port (typically NPT 1/4 inch, though not explicitly stated for this model, standard for AODD pumps). An air filter/regulator/lubricator (FRL) unit is recommended for optimal performance and pump longevity.
3. **Fluid Inlet Connection:** Connect the fluid suction line to the 1-inch inlet port. Ensure the suction line is properly sized and free of kinks or obstructions. For best performance, keep the suction lift as short as possible.
4. **Fluid Outlet Connection:** Connect the fluid discharge line to the 1-inch outlet port. Ensure the discharge line is properly sized and routed to the destination.
5. **Grounding:** If pumping flammable fluids, ensure the pump and all associated piping are properly grounded to prevent static electricity buildup.



Figure 5.1: Illustration of typical connection points for an air-operated double diaphragm pump.

6. OPERATING INSTRUCTIONS

6.1 Initial Start-up

1. Before starting, ensure all connections are tight and there are no leaks.
2. Ensure the fluid lines are properly primed if necessary, especially for suction lift applications.
3. Slowly open the air supply valve to the pump. The pump will begin to cycle.
4. Adjust the air pressure regulator to achieve the desired flow rate and discharge pressure, staying within the 29-115 PSI operating range.

6.2 Normal Operation

- Monitor the pump for unusual noises, vibrations, or leaks during operation.
- Maintain the air supply pressure within the recommended range for consistent performance.
- Avoid running the pump dry for extended periods, as this can cause premature wear to diaphragms and check valves.

6.3 Shut-down Procedure

1. Close the air supply valve to the pump.
2. Allow the pump to complete its last cycle and come to a stop.
3. If necessary, close isolation valves on the fluid inlet and outlet lines.
4. Relieve any residual pressure in the fluid lines before disconnecting or servicing.

7. MAINTENANCE

Regular maintenance is essential to ensure the long-term reliability and performance of your QBK-25L pump.

7.1 Routine Maintenance

- **Daily/Before Use:** Inspect the pump for any visible leaks, loose connections, or unusual wear. Check the air supply for condensation and drain the air filter if applicable.
- **Weekly/Monthly:** Check the tightness of all fasteners. Inspect diaphragms and check balls for signs of wear or damage. Clean the exterior of the pump.
- **Air Supply Quality:** Ensure your air supply is clean, dry, and regulated. Contaminants in the air can damage the air motor.

7.2 Diaphragm and Check Valve Replacement

Over time, diaphragms and check valves (balls and seats) will wear out and require replacement. The frequency depends on the fluid being pumped, operating conditions, and hours of use. Refer to the pump's exploded view diagram (if available in a separate service manual) for detailed replacement procedures. Always use genuine LYNICESHOP replacement parts.

7.3 Storage

- If storing the pump for an extended period, flush it thoroughly with a compatible cleaning solution or water, depending on the fluid previously pumped.
- Drain all fluid from the pump.
- Store the pump in a clean, dry environment, protected from extreme temperatures and direct sunlight.

8. TROUBLESHOOTING

This section provides solutions to common issues you may encounter with your QBK-25L pump. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
Pump not cycling or slow cycling	Insufficient air pressure Air valve clogged Diaphragm rupture Inlet/outlet clogged	Increase air pressure to recommended range Inspect and clean air valve Inspect and replace diaphragms Clear fluid lines
Low flow or no fluid discharge	Air leak in suction line Clogged inlet filter/line Worn check valves Excessive discharge head	Check suction line for leaks Clean inlet filter/line Inspect and replace check valves Reduce discharge head or increase air pressure
Fluid leaking from air exhaust	Diaphragm rupture	Inspect and replace diaphragms
Excessive noise or vibration	Loose mounting Cavitation (insufficient fluid supply) Worn internal components	Tighten mounting bolts Ensure adequate fluid supply to inlet Inspect and replace worn parts

9. WARRANTY AND SUPPORT

9.1 Warranty Information

The LYNICESHOP QBK-25L Air-Operated Double Diaphragm Pump comes with a **2-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and service. It does not cover damage resulting from improper installation, misuse, neglect, unauthorized repairs, or use with incompatible fluids.

9.2 Customer Support

For technical assistance, warranty claims, or to order replacement parts, please contact LYNICESHOP customer support through the retailer where you purchased the product or visit the official LYNICESHOP store page on Amazon: LYNICESHOP Amazon Store.