Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

TABODD QBY-15PP

TABODD QBY-15PP Air-Operated Double Diaphragm Pump User Manual

Model: QBY-15PP

1. Introduction

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your TABODD QBY-15PP Air-Operated Double Diaphragm Pump. Please read this manual thoroughly before operating the pump to ensure proper usage and to prevent damage or injury.

A diaphragm pump, also known as a membrane pump, is a positive displacement pump that utilizes the reciprocating action of a flexible diaphragm (rubber, thermoplastic, or Teflon) and suitable valves (check valves, butterfly valves, flap valves, or other shut-off valves) to transfer fluids. This design allows for the handling of various liquids, including those with suspended solids.

2. Product Overview



Figure 2.1: Front view of the QBY-15PP pump, showing its compact design and polypropylene construction.



Figure 2.2: Key dimensions and specifications including 1/2 inch inlet/outlet ports and 1/4 inch FNPT air inlet.

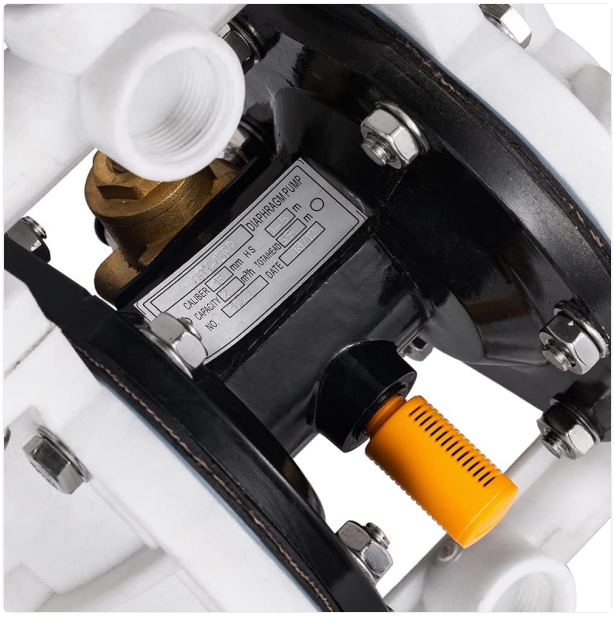


Figure 2.3: Detailed view of the pump's identification label, showing model and capacity information.

2.1 Package Contents

- 1 x Air-Operated Double Diaphragm Pump QBY-15PP
- 1 x Product Manual (this document)

3. Technical Specifications

Specification	Value
Product Type	Diaphragm Pump
Operation Type	Air-Operated
Model	QBY-15PP
Body Material	Polypropylene (PP)
Inlet Port Size	1/2 inch (12.7 mm)
Outlet Port Size	1/2 inch (12.7 mm)
Air Inlet Size	FNPT 1/4 inch (6.35 mm)
Max Flow Rate	2 m^3/h (13 GPM)
Suction Lift	0-5 m (0-16.4 ft)
Max Suspended Solids	2.38 mm (3/32 inch)
Max Head	69 m (226.4 ft)
Max Operating Pressure	100 PSI
Temperature Rating	-20°C ~ 150°C (-4°F ~ 302°F)
Self-Priming Dry	3 m (10 ft)

Self-Priming Wet	4.6 m (15 ft)
Valve Type	Ball
Ball Material	Santoprene®
Check Seat Material	Polypropylene
Diaphragm Material	Santoprene®
Manifold Connection	Multiport
Application	Industrial
Product Dimensions (L x W x H)	11.42 x 9.84 x 7.48 inches
Gross Weight	4.14 kg (9.13 lbs)
Item Weight	3.75 kg (8.27 lbs)
Voltage (as per specifications)	479 Volts

4. Safety Instructions

Always observe the following safety precautions to prevent personal injury or damage to the pump.

- Ensure the pump is installed in a well-ventilated area.
- Verify that all connections (fluid and air) are secure before operation to prevent leaks.
- Do not exceed the maximum operating pressure of 100 PSI.
- Wear appropriate personal protective equipment (PPE) such as gloves and eye protection when handling fluids, especially chemicals or waste oil.
- Ensure the air supply is clean and dry to prevent damage to the air motor.
- Do not use the pump with strong acids or alkalis, as specified in the product description.
- Disconnect air supply before performing any maintenance or repairs.
- Keep children and unauthorized personnel away from the pump during operation.

5. Setup and Installation

Proper setup is crucial for the pump's performance and longevity.

5.1 Mounting the Pump

The pump should be mounted on a stable, level surface capable of supporting its weight and the weight of the fluid being pumped. Use appropriate fasteners to secure the pump through its mounting feet.

5.2 Connecting Fluid Lines

1. Connect the fluid inlet line to the 1/2 inch (12.7 mm) inlet port. Ensure the line is free of kinks and obstructions.
2. Connect the fluid outlet line to the 1/2 inch (12.7 mm) outlet port.
3. Use appropriate thread sealant on all fluid connections to prevent leaks.
4. For optimal performance, keep suction lines as short and straight as possible.

5.3 Connecting Air Supply

1. Connect a clean, dry compressed air supply to the FNPT 1/4 inch (6.35 mm) air inlet port.
2. An air filter, regulator, and lubricator (FRL unit) are recommended for optimal pump life and performance. The air regulator should be set to the desired operating pressure, not exceeding 100 PSI.
3. Ensure the air supply line is securely connected and free of leaks.

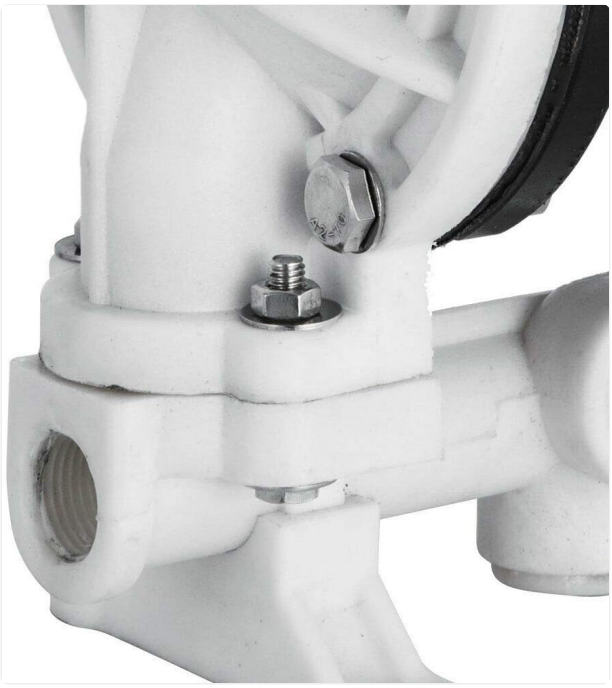


Figure 5.1: Detail of the fluid connection point, highlighting the robust construction.



Figure 5.2: Side view illustrating the air inlet port and overall pump dimensions.

6. Operating Instructions

6.1 Principle of Operation

The QBY-15PP pump operates with two symmetrical working chambers, each equipped with a diaphragm. These diaphragms are integrated into a single unit via a center link. Compressed air enters the pump's inlet valve and is directed to one chamber, causing its diaphragm to move. Simultaneously, air from the other chamber is expelled. Upon reaching the end of its stroke, the air distribution mechanism automatically redirects compressed air to the opposite chamber, pushing its diaphragm in the reverse direction. This continuous, synchronized back-and-forth movement of the two diaphragms facilitates the pumping action.

6.2 Starting the Pump

1. Ensure all fluid lines are properly connected and submerged in the fluid to be pumped (if self-priming from a container).
2. Slowly open the air supply valve to the pump. The pump will begin to cycle.
3. Adjust the air pressure using the air regulator to achieve the desired flow rate and discharge pressure, ensuring not to exceed 100 PSI.

6.3 Stopping the Pump

1. Slowly close the air supply valve to the pump.
2. Once the pump stops cycling, close any isolation valves on the fluid lines.

7. Maintenance

Regular maintenance ensures the longevity and reliable performance of your pump.

7.1 General Inspection

- Periodically inspect all fluid and air connections for leaks. Tighten as necessary.
- Check the pump body for any signs of damage or wear.
- Ensure the air supply is clean and dry. Drain any moisture from the air filter regularly.

7.2 Diaphragm and Valve Ball Replacement

The diaphragms and valve balls are wear items and will require replacement over time. The frequency depends on the type of fluid pumped and operating conditions. The bolted construction allows for easy access to ball checks and fluid caps for maintenance and repairs.

1. **Disconnect Air Supply:** Always disconnect the compressed air supply and relieve any residual pressure before beginning maintenance.
2. **Drain Fluid:** Drain any fluid from the pump and lines.
3. **Disassembly:** Carefully disassemble the pump according to the manufacturer's service manual (if available, otherwise proceed cautiously). Pay attention to the order of components.
4. **Inspect Components:** Inspect diaphragms, valve balls, and valve seats for wear, cracks, or damage. Replace any worn components with genuine replacement parts.
5. **Reassembly:** Reassemble the pump in reverse order, ensuring all bolts are tightened evenly to prevent leaks.
6. **Test:** Reconnect air and fluid lines and test the pump for proper operation and leaks.

8. Troubleshooting

This section provides solutions to common operational issues.

Problem	Possible Cause	Solution
Pump not cycling or slow cycling	Insufficient air pressure Air valve malfunction Clogged air muffler Worn diaphragms or valve balls Fluid viscosity too high	Increase air pressure (within limits) Inspect/clean air valve Clean or replace air muffler Inspect and replace worn components Ensure fluid is within pump's capabilities
Low flow or pressure	Air leak in supply line or pump Fluid leak in suction or discharge line Worn diaphragms or valve balls Clogged fluid lines or inlet screen Excessive suction lift	Check and tighten all air connections Check and tighten all fluid connections Inspect and replace worn components Clear any blockages Reduce suction lift if possible
Fluid in air exhaust	Damaged diaphragm	Inspect and replace diaphragm

Pump making unusual noise	Cavitation (insufficient fluid supply) Loose components Air motor issues	Ensure adequate fluid supply Check and tighten all bolts Inspect air motor for wear

9. Warranty and Support

9.1 Warranty Information

Specific warranty details for the TABODD QBY-15PP pump are typically provided at the point of purchase or within separate documentation. Please refer to your purchase receipt or contact the seller for precise warranty terms and conditions. Generally, warranties cover defects in materials and workmanship under normal use.

9.2 Customer Support

For technical assistance, replacement parts, or any questions regarding your TABODD QBY-15PP pump, please contact your original retailer or the manufacturer directly. When contacting support, please have your product model (QBY-15PP) and purchase information readily available.
You may also visit the TABODD brand page on Amazon for more information or to find contact details.

© 2024 TABODD. All rights reserved.
This manual is subject to change without notice.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B0BD48KMBG

More documents and user manuals: **https://manuals.plus/**