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› Baomain 4V210-08 4-Station Solenoid Valve Manifold Instruction Manual

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Baomain 4V210-08 4-Station Solenoid Valve Manifold Instruction Manual

Model: 4V210-08 | Brand: Baomain

1. PRODUCT OVERVIEW

The Baomain 4V210-08 is a 4-station solenoid valve manifold designed for pneumatic control systems. This unit integrates four individual 5-way, 2-position pneumatic air valves onto a single base, simplifying installation and optimizing space. It operates on 12V DC and features quick-connect fittings for efficient setup.



Figure 1: Baomain 4V210-08 4-Station Solenoid Valve Manifold.

Key Features:

- **4-Station Integrated Manifold:** Combines four valves on a single base for streamlined installation and space efficiency.
- **Quick-Connect Fittings:** Equipped with 8mm base ports and 6mm exhaust ports for tool-free assembly.
- **2-Position, 5-Way Pneumatic Design:** Provides essential control for double-acting cylinders in various automated machinery.
- **12V DC Operation:** Features energy-efficient pure copper coils for reduced heat buildup and reliable performance.
- **Durable Aluminum Body:** Constructed from aluminum alloy, offering a lightweight, strong, and corrosion-resistant valve body.

Product Structure Breakdown

High-Precision Pilot Head & Aluminum Piston for versatility across applications



Figure 2: Product structure breakdown highlighting the high-precision pilot head and aluminum piston.

Smooth Power, Lasting Reliability

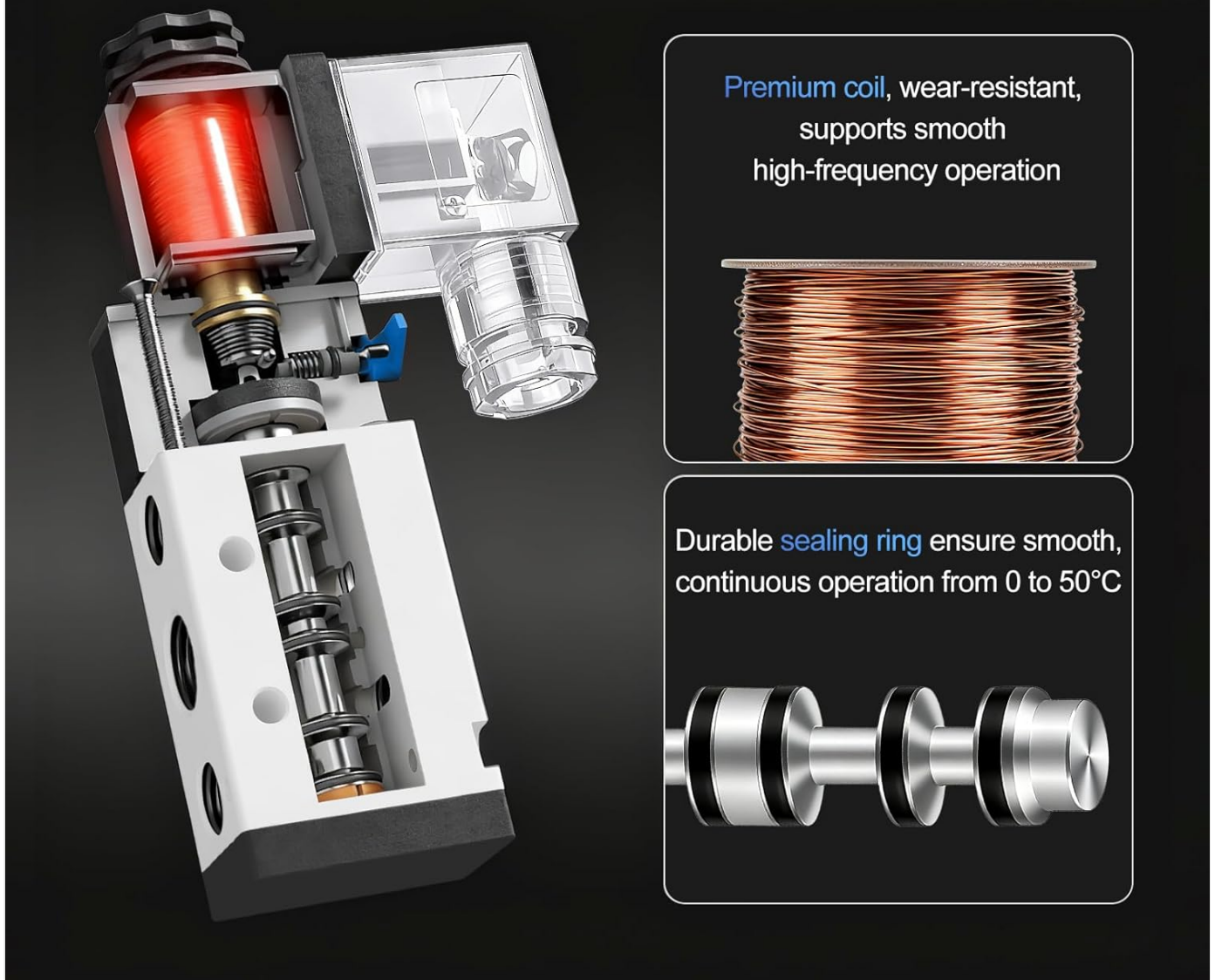


Figure 3: Illustration of the premium coil for high-frequency operation and durable sealing rings for continuous operation.

2. PRODUCT COMPONENTS

The Baomain 4V210-08 4-Station Valve Kit includes the following components:

Products & Accessories



A 4 x 4V210-08 (Electric Solenoid Valve)

E 2 x Mufflers 1/4 PT

B 1 x Valve Base (with Accessories)

F 3 x Head Pipe Plug 1/4PT

C 8 x PC6-02 (1/4 PT Fittings)

G 1 x Teflon Tape

D 1 x PC8-02 (1/4 PT Fittings)

Figure 4: Included components of the 4-Station Valve Kit.

- 4 x 4V210-08 Electric Solenoid Valves
- 1 x Valve Base (with accessories)
- 8 x PC6-02 (1/4 PT Fittings)
- 1 x PC8-02 (1/4 PT Fittings)
- 2 x Mufflers 1/4 PT
- 3 x Head Pipe Plug 1/4PT
- 1 x Teflon Tape

3. SETUP AND INSTALLATION

Follow these steps for proper installation of your solenoid valve manifold:

3.1 Safety Precautions

- Ensure the power supply is disconnected before installation or maintenance.
- Verify that the pneumatic system is depressurized before connecting or disconnecting air lines.

- Wear appropriate personal protective equipment (PPE).

3.2 Mounting the Manifold

Securely mount the valve base to a stable surface using appropriate fasteners. Ensure there is adequate space for connecting air lines and electrical wiring.

3.3 Pneumatic Connections

The manifold features 8mm base ports for air input and 6mm exhaust ports. Use the provided quick-connect fittings for simplified, tool-free installation of pneumatic tubing.

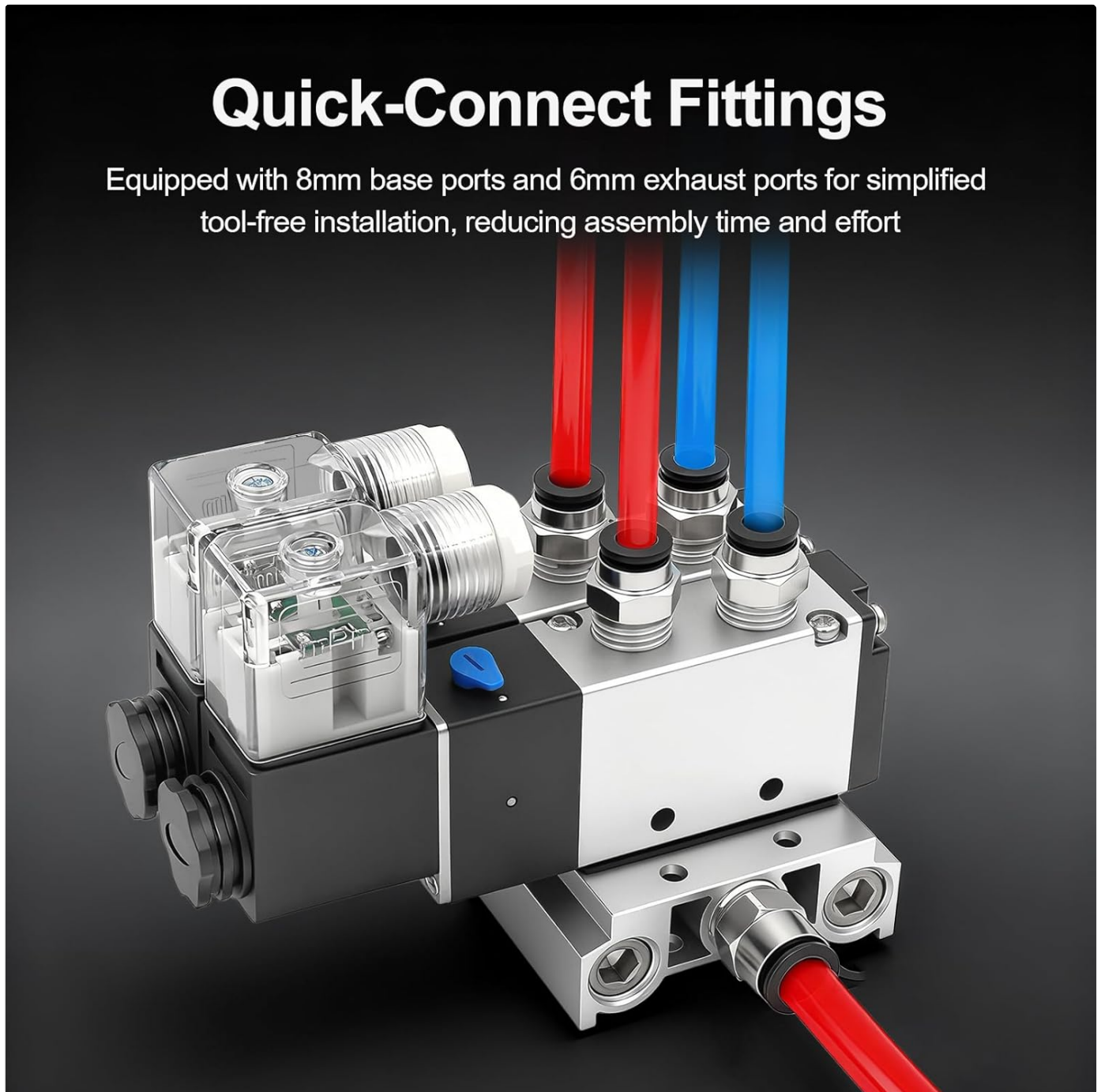


Figure 5: Quick-connect fittings for easy pneumatic tube connection.

For threaded connections, apply the included Teflon tape to ensure a tight seal and prevent air leakage. Confirm that all accessory seals are properly seated and that the pneumatic tubing is suitable for the application before installation.

Precision Threads, Unlocking Superior Sealing



Figure 6: Precision threads designed to improve sealing and prevent air pressure leakage.

Connect the main air supply to the 'P' port. Connect the output lines to the 'A' and 'B' ports for controlling double-acting cylinders. The 'R' and 'S' ports are for exhaust, where mufflers can be installed to reduce noise.

2-Position, 5-Way Pneumatic Design



* NOTE: Check the accessory seal, and confirm the tube is usable before installation.

Figure 7: Schematic of the 2-position, 5-way pneumatic design, illustrating air flow paths.

3.4 Electrical Connections

Connect the 12V DC power supply to the solenoid valve terminals. Ensure correct polarity. Each solenoid valve typically has two terminals for power input. Refer to the wiring diagram on the solenoid coil for specific connections.

4. OPERATING INSTRUCTIONS

Once installed and connected, the solenoid valve manifold is ready for operation.

4.1 Basic Operation

- Apply 12V DC power to the desired solenoid coil to actuate the corresponding valve.
- The 5-way, 2-position design allows for control of double-acting pneumatic cylinders, directing air pressure to one side of the cylinder while exhausting from the other.
- A minimum operating pressure of approximately 22 PSI is required for proper valve function.

4.2 Manual Override

Each solenoid valve is equipped with a manual push-button override. Pressing this button manually actuates the valve, switching the output from port A to port B (or vice-versa), which can be useful for testing or emergency situations.

5. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your solenoid valve manifold.

- **Cleaning:** Periodically clean the exterior of the manifold and valves to prevent dust and debris buildup.
- **Lubrication:** Ensure proper lubrication within the pneumatic system as recommended for your specific application to maintain smooth operation.
- **Leak Checks:** Regularly inspect all pneumatic connections for air leaks. Tighten fittings or reapply Teflon tape as needed.
- **Seal Inspection:** Check the condition of all seals and O-rings. Replace any worn or damaged seals to prevent internal leakage.

6. TROUBLESHOOTING

If you encounter issues with your solenoid valve manifold, consider the following troubleshooting steps:

Problem	Possible Cause	Solution
Valve does not actuate electrically.	No power, incorrect voltage, faulty coil, or stuck pilot.	Check 12V DC power supply. Verify wiring. Test coil continuity. Manually actuate with push-button to check for mechanical sticking.
Air leakage from fittings.	Loose fittings, damaged threads, or insufficient sealant.	Tighten all fittings. Apply Teflon tape to threaded connections. Replace damaged fittings.
Valve does not shift or shifts slowly.	Insufficient air pressure, internal contamination, or worn seals.	Ensure minimum operating pressure (approx. 22 PSI). Clean air supply. Inspect and replace internal seals if necessary.
Manual override button sticks.	Debris or mechanical issue.	Clean the button mechanism. If issue persists, valve may require replacement.

7. SPECIFICATIONS

Detailed specifications for the Baomain 4V210-08 4-Station Solenoid Valve Manifold:

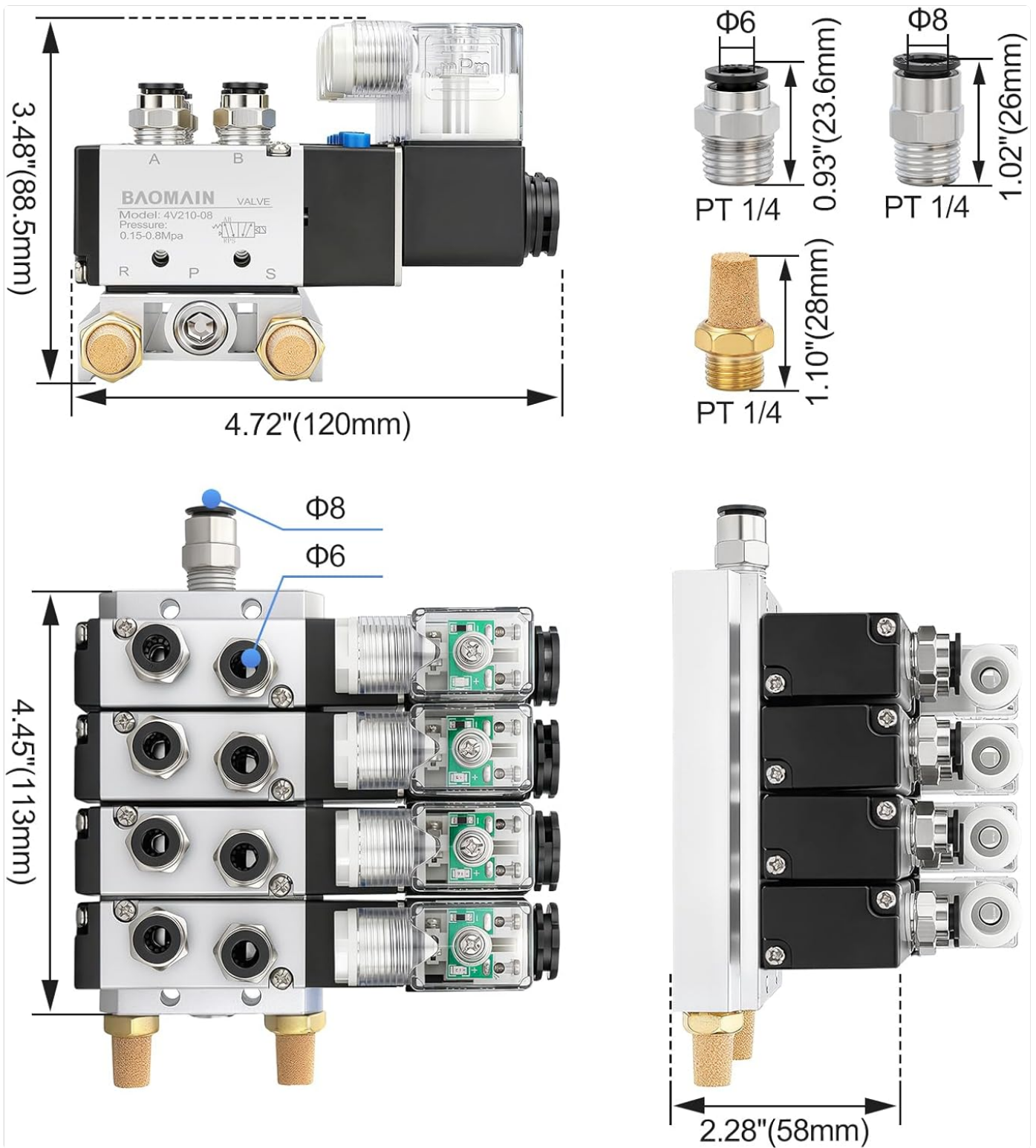


Figure 8: Product dimensions and port sizes.

Specification	Value
Model Number	4V210-08
Valve Type	5 Way 2 Position Solenoid Valve
Number of Stations	4
Operating Voltage	12V DC
Material	Aluminum Alloy

Specification	Value
Inlet Connection Type	Quick-Connect
Outlet Connection Type	PT
Outlet Connection Size	0.2 Inches (approx. 1/4" PT)
Maximum Operating Pressure	800 Kilopascal (8 Bar / 116 PSI)
Item Dimensions (L x W x H)	4.6 x 5.9 x 3.6 inches
Item Weight	2.38 pounds
UPC	711811447594

8. APPLICATIONS

The Baomain 4V210-08 solenoid valve manifold is a core pneumatic component suitable for a wide range of automation applications. Its modular design and reliable performance make it ideal for:

- Packaging machinery
- Automated production lines
- Printing machinery
- Warehousing equipment
- Other industrial automation systems requiring precise pneumatic control.

Applications

As a core pneumatic component for automation, it precisely drives various machinery and is widely used in key industries such as automotive, packaging, printing, textile, and logistics warehousing.



Figure 9: Examples of industrial applications for the solenoid valve manifold.

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Video 1: An overview of the Baomain 4V210-08 Electric Solenoid Valve, demonstrating its function and features.

9. WARRANTY AND SUPPORT

For information regarding warranty coverage, technical support, or replacement parts, please refer to the product packaging or contact Baomain customer service directly. Keep your purchase receipt for warranty claims.