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Dixon 4DM4-S

Dixon Valve 4DM4-S Stainless Steel 303 Automatic Industrial Interchange Pneumatic Fitting User Manual

Model: 4DM4-S | Brand: Dixon

1. INTRODUCTION

This manual provides essential instructions for the safe and effective installation, operation, and maintenance of the Dixon Valve 4DM4-S Stainless Steel 303 Automatic Industrial Interchange Pneumatic Fitting. This fitting is designed for industrial pneumatic applications requiring quick connection and disconnection, offering durability and corrosion resistance.

2. SAFETY INFORMATION

Adherence to safety guidelines is crucial to prevent injury and equipment damage. Always follow standard industrial safety practices.

- **Pressure:** Ensure the pneumatic system pressure does not exceed the maximum rated pressure for this fitting or any connected components. Depressurize the system before connecting or disconnecting fittings.
- **Temperature:** Operate within the specified temperature range of -40°F to +250°F (-40°C to +121°C). Extreme temperatures can compromise seal integrity.
- **Installation:** Use appropriate tools and techniques for installation. Do not overtighten threads.
- **Personal Protective Equipment (PPE):** Always wear appropriate PPE, including eye protection, when working with pneumatic systems.
- **Compatibility:** Verify compatibility with other pneumatic components and the media being conveyed.

3. COMPONENTS AND FEATURES

The Dixon Valve 4DM4-S is an automatic industrial interchange pneumatic fitting, specifically a socket (coupler) with a 1/2" NPTF male thread connection. It is constructed from Stainless Steel 303 for corrosion resistance and features Nitrile (Buna-N) seals.



Figure 1: Angled view of the Dixon Valve 4DM4-S pneumatic fitting, showing the coupler end and the NPTF male threaded end. The knurled surface for grip is visible.

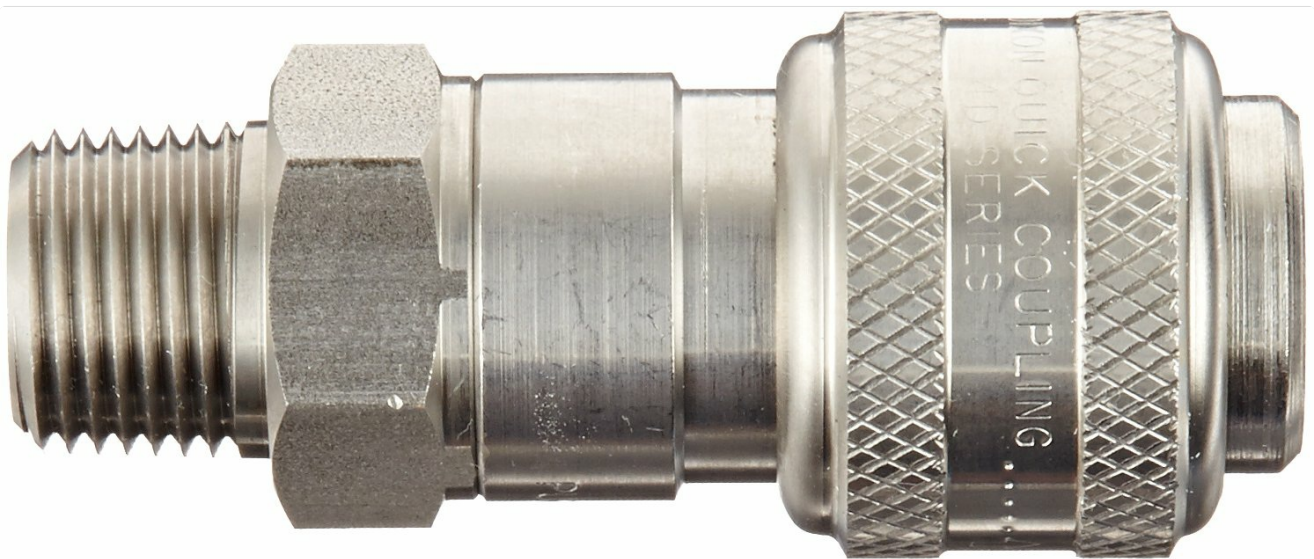


Figure 2: Side view of the Dixon Valve 4DM4-S pneumatic fitting, highlighting the 1/2" NPTF male thread and the automatic coupler mechanism. Markings for "DIXON QUICK COUPLING D SERIES" are visible on the coupler.

4. SETUP AND INSTALLATION

Proper installation ensures leak-free operation and system integrity.

1. **Thread Preparation:** Apply an appropriate thread sealant (e.g., PTFE tape or pipe thread compound) to the 1/2" NPTF male threads of the fitting. Ensure the sealant is compatible with your pneumatic system and media.
2. **Connection to System:** Carefully thread the fitting into the corresponding female NPTF port on your pneumatic equipment or hose assembly. Hand-tighten first, then use a wrench on the hex portion of the fitting to tighten until snug. Avoid overtightening, which can damage threads or the fitting.
3. **Leak Testing:** After installation, slowly pressurize the system and check all connections for leaks using a leak detection solution or by listening for hissing sounds. Address any leaks immediately by depressurizing and re-

tightening or re-sealing the connection.

5. OPERATING INSTRUCTIONS

This automatic industrial interchange coupler is designed for quick and secure connections.

- **Connecting:** Ensure the pneumatic system is depressurized before connecting. Push the male plug (not included) firmly into the coupler. The coupler will automatically lock onto the plug. A slight tug can confirm a secure connection.
- **Disconnecting:** Depressurize the system before disconnecting. Pull back the knurled sleeve on the coupler to release the male plug.
- **Flow Direction:** This fitting allows bidirectional flow.

6. MAINTENANCE

Regular inspection and maintenance extend the life of the fitting and ensure reliable operation.

- **Visual Inspection:** Periodically inspect the fitting for signs of wear, corrosion, damage, or debris. Check the threads for integrity.
- **Seal Inspection:** The Nitrile (Buna-N) seals are critical for preventing leaks. If leaks occur or if the fitting becomes difficult to connect/disconnect, inspect the seals for damage or degradation. Replace seals as necessary.
- **Cleaning:** Keep the fitting clean and free of dirt, dust, and foreign particles, especially around the coupler mechanism. Use a clean cloth and appropriate cleaning agents if needed.
- **Lubrication:** A small amount of compatible lubricant can be applied to the coupler mechanism to ensure smooth operation, if recommended by the manufacturer.

7. TROUBLESHOOTING

Refer to the table below for common issues and their potential solutions.

Issue	Possible Cause	Solution
Air Leakage	Damaged or worn seals; improper thread sealant; loose connection; damaged threads.	Depressurize system. Inspect and replace seals. Reapply thread sealant. Tighten connection. Inspect threads for damage.
Difficulty Connecting/Disconnecting	Debris in coupler; damaged coupler mechanism; system under pressure during connection/disconnection.	Depressurize system. Clean coupler. Inspect for damage. Ensure system is depressurized before operation.
Reduced Flow	Obstruction in fitting or connected components.	Depressurize system. Disassemble and inspect for blockages.

8. SPECIFICATIONS

Key technical specifications for the Dixon Valve 4DM4-S fitting.

Model Number: 4DM4-S

Material: Stainless Steel 303

Seal Material: Nitrile (Buna-N)

Coupling Size: 1/2 inch

Thread Type: 1/2 inch - 14 NPTF Male
Temperature Range: -40°F to +250°F (-40°C to +121°C)
Hex Size: 1-1/16 inches
Maximum Outer Diameter (OD): 1.34 inches
Length: 3.17 inches
Item Weight: 0.5 Pounds (approximately 8 ounces)
Manufacturer: Dixon Valve & Coupling

9. WARRANTY AND SUPPORT

Dixon Valve products are manufactured to high standards. For specific warranty information, please refer to the documentation provided with your purchase or contact Dixon Valve & Coupling directly. For technical support or inquiries, please reach out to the manufacturer's customer service department.

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