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DCI International Integrated Master Shut-Off Valve with Regulator and Filter

DCI International Integrated Master Shut-Off Valve with Regulator and Filter User Manual

Model: Integrated Master Shut-Off Valve with Regulator and Filter

1. Introduction

This manual provides essential instructions for the safe and efficient installation, operation, and maintenance of the DCI International Integrated Master Shut-Off Valve with Regulator and Filter. This device is designed to control and filter the flow of air or other compatible fluids, while also regulating pressure within a system. Please read this manual thoroughly before installation or use.

2. Safety Information

Always observe the following safety precautions to prevent injury and damage to the equipment:

- Ensure the system is depressurized before installation, maintenance, or removal of the valve.
- Wear appropriate personal protective equipment (PPE) such as safety glasses.
- Do not exceed the maximum operating pressure of 150 PSI.
- Verify compatibility of the valve's materials with the fluid being used.
- Installation and maintenance should only be performed by qualified personnel.
- Regularly inspect the valve and connections for leaks or damage.

3. Product Overview and Components

The DCI International Integrated Master Shut-Off Valve with Regulator and Filter combines several critical functions into a single unit for streamlined system management.

Key Features:

- **Integrated Design:** Combines master shut-off valve, pressure regulator, and filter.
- **Regulator Type:** Non-relieving, piston type, capable of handling up to 150 PSI maximum input pressure.
- **Filter Element:** 40 micron filter for effective particulate removal.
- **Shut-Off Valve:** Diaphragm style for reliable flow control.
- **Connection:** Integrated 3/8" compression tube designed for adaptation to 7100 and 7099 manual shut-off valves.
- **Construction:** Stainless steel exterior finish for durability.



Figure 1: DCI International Integrated Master Shut-Off Valve with Regulator and Filter. This image displays the compact, stainless steel unit, highlighting its cylindrical regulator and various connection points.

4. Setup and Installation

Follow these steps for proper installation:

1. **Depressurize System:** Ensure the entire system where the valve will be installed is completely depressurized and isolated from any pressure source.
2. **Inspect Components:** Check the valve and all connection points for any signs of damage or debris.
3. **Connect Inlet:** Connect the system's pressure source line to the inlet compression fitting of the valve. Ensure a secure, leak-free connection.
4. **Connect Outlet:** Connect the regulated output line to the outlet compression fitting. The 3/8" compression tube is designed to adapt to DCI 7100 and 7099 manual shut-off valves.
5. **Mounting (Optional):** Secure the valve in a stable position if required by your system design.
6. **Initial Pressure Check:** Slowly re-pressurize the system and carefully check all connections for leaks using an appropriate leak detection method.

Note: *Ensure all connections are tightened to manufacturer specifications to prevent leaks and maintain system integrity.*

5. Operation

5.1. Master Shut-Off Valve

The integrated diaphragm-style master shut-off valve controls the main flow through the unit. To operate:

- **To Open:** Rotate the shut-off valve handle or lever to the fully open position. This allows fluid to flow through the filter and regulator.
- **To Close:** Rotate the shut-off valve handle or lever to the fully closed position. This will stop the flow of fluid through the unit.

5.2. Pressure Regulator

The non-relieving piston-type regulator allows for adjustment of the output pressure. To adjust the pressure:

1. Ensure the master shut-off valve is open and the system is pressurized.
2. Locate the pressure adjustment knob or screw on the regulator.
3. **To Increase Pressure:** Turn the adjustment knob clockwise.
4. **To Decrease Pressure:** Turn the adjustment knob counter-clockwise.
5. Monitor the output pressure using a pressure gauge (if installed downstream) until the desired pressure is achieved.

Caution: *Do not attempt to adjust the regulator beyond its specified operating range or force the adjustment mechanism.*

6. Maintenance

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

- **Filter Element:** The 40 micron filter element should be inspected periodically and replaced as needed. Frequency depends on the cleanliness of the fluid source. Refer to specific DCI International guidelines for filter replacement.
- **Cleaning:** Keep the exterior of the valve clean. Use a soft cloth and mild cleaning agents. Avoid abrasive cleaners or solvents that could damage the stainless steel finish or seals.
- **Leak Checks:** Periodically check all connections for leaks. Tighten fittings as necessary.
- **Visual Inspection:** Inspect the valve body, regulator, and shut-off mechanism for any signs of wear, corrosion, or damage. Replace damaged components or the entire unit if necessary.

Warning: *Always depressurize the system before performing any maintenance.*

7. Troubleshooting

This section addresses common issues you might encounter:

Problem	Possible Cause	Solution
No flow through the valve.	Master shut-off valve is closed. System is not pressurized. Inlet blocked.	Open the shut-off valve. Check system pressure. Inspect inlet for obstructions.
Incorrect output pressure.	Regulator not adjusted correctly. Regulator malfunction.	Adjust the regulator knob. If issue persists, contact support.
Leakage at connections.	Loose compression fittings. Damaged seals.	Depressurize system and tighten fittings. Inspect and replace seals if damaged.
Reduced flow or pressure.	Clogged filter element.	Inspect and replace the 40 micron filter element.

If you encounter problems not listed here or if solutions do not resolve the issue, please contact DCI International customer support.

8. Specifications

- **Product Type:** Integrated Master Shut-Off Valve with Regulator and Filter
- **Brand:** DCI International
- **Regulator Type:** Non-relieving, Piston Type
- **Maximum Operating Pressure:** 150 PSI (1.03 MPa)
- **Filter Element:** 40 Micron
- **Shut-Off Valve Type:** Diaphragm Style
- **Inlet Connection Type:** Compression

- **Outlet Connection Type:** Compression
- **Compression Tube Size:** 3/8 inch (for adaptation to DCI 7100 and 7099 manual shut-off valves)
- **Exterior Finish:** Stainless Steel
- **Number of Ports:** 1

9. Warranty Information

DCI International products are manufactured to high-quality standards. This product is covered by a manufacturer's warranty against defects in materials and workmanship. For specific warranty terms, duration, and claim procedures, please refer to the warranty card included with your product or visit the official DCI International website. Keep your purchase receipt as proof of purchase.

10. Customer Support

For technical assistance, replacement parts, or any questions regarding your DCI International Integrated Master Shut-Off Valve with Regulator and Filter, please contact DCI International customer support. Contact information can typically be found on the product packaging, the official DCI International website, or through your authorized distributor.
When contacting support, please have your product model information (Integrated Master Shut-Off Valve with Regulator and Filter) and ASIN (B009ME7W0Q) available.

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