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Belimo B213

Belimo B213 Ball Valve Instruction Manual

Model: B213

1. INTRODUCTION

This instruction manual provides essential information for the safe and efficient installation, operation, and maintenance of the Belimo B213 2-way 1/2-inch Stainless Steel Trim Ball Valve. Please read this manual thoroughly before proceeding with any procedures to ensure proper handling and to prevent potential hazards or damage to the product and system.

2. SAFETY INFORMATION

Adherence to safety precautions is critical during all stages of installation, operation, and maintenance. Failure to follow these instructions may result in personal injury, property damage, or equipment malfunction.

- Ensure the system is completely depressurized and drained before attempting any installation or maintenance.
- Wear appropriate personal protective equipment (PPE) such as safety glasses and gloves.
- Installation and service should only be performed by qualified and trained personnel.
- Do not exceed the maximum pressure and temperature ratings specified for the valve.
- Avoid applying excessive force to the valve body or connections during installation.

3. PRODUCT DESCRIPTION AND FEATURES

The Belimo B213 is a high-quality 2-way ball valve designed for reliable flow control in various applications, including HVAC and industrial fluid systems. It features a durable construction with a 1/2-inch connection size and stainless steel trim for enhanced corrosion resistance and longevity. The valve is characterized by a flow coefficient (Cv) of 4.7, indicating its flow capacity.



Figure 1: Belimo B213 2-way 1/2-inch Stainless Steel Trim Ball Valve. This image shows the brass-colored valve body with threaded ends and a mounting base at the bottom, featuring a small chain attached.

4. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of the Belimo B213 ball valve. It is recommended that installation be performed by a qualified technician.

- 1. System Preparation:** Ensure the system is completely shut down, depressurized, and drained before beginning installation.
- 2. Pipe Cleaning:** Clean the pipe ends thoroughly to remove any debris, rust, or old sealant that could interfere with a proper seal or damage the valve.
- 3. Thread Sealant:** Apply an appropriate thread sealant (e.g., PTFE tape or pipe dope) to the male pipe threads. Do not apply sealant to the first thread to prevent it from entering the valve and potentially causing blockages.
- 4. Valve Orientation:** Install the valve in the correct flow direction if indicated (though 2-way ball valves are generally bi-directional). Ensure there is sufficient space for operation and maintenance.
- 5. Tightening:** Thread the valve onto the pipe ends. Use a wrench on the valve body, not the handle or actuator mounting pad, to tighten connections. Avoid over-tightening, which can damage the valve or threads.
- 6. Leak Check:** After installation, slowly repressurize the system and carefully check all connections for leaks.

5. OPERATING INSTRUCTIONS

The Belimo B213 ball valve is designed for simple quarter-turn operation.

- Opening the Valve:** Rotate the valve handle or actuator 90 degrees (a quarter-turn) until it is parallel with

the pipeline. This position indicates the valve is fully open, allowing maximum flow.

- **Closing the Valve:** Rotate the valve handle or actuator 90 degrees (a quarter-turn) until it is perpendicular to the pipeline. This position indicates the valve is fully closed, stopping flow.

For precise flow control, the valve can be partially opened or closed, though it is primarily designed for on/off applications.

6. MAINTENANCE

The Belimo B213 ball valve is generally considered low-maintenance. Regular inspection is recommended to ensure continued reliable operation.

- **Periodic Inspection:** Visually inspect the valve and connections for any signs of leaks, corrosion, or physical damage.
- **Cleaning:** Keep the exterior of the valve clean. Avoid using harsh chemicals that could damage the valve materials.
- **Leak Detection:** If a leak is detected, immediately shut down and depressurize the system. Inspect the connections and seals. Do not attempt to repair under pressure.
- **Actuator Check (if applicable):** If an actuator is installed, ensure it operates smoothly and is securely attached.

For internal maintenance or seal replacement, it is advisable to consult a qualified professional or Belimo technical support.

7. TROUBLESHOOTING

This section addresses common issues that may arise during the use of the Belimo B213 ball valve.

Problem	Possible Cause	Solution
Valve leaks at connections	Improperly tightened connections, damaged threads, insufficient thread sealant.	Depressurize system. Re-tighten connections. If leak persists, disassemble, inspect threads, reapply sealant, and reassemble. Replace if threads are damaged.
Valve leaks through the stem	Damaged stem packing.	Depressurize system. Tighten packing nut slightly (if adjustable). If leak persists, stem packing may need replacement by a qualified technician.
Valve difficult to operate (stiff)	Debris in the ball/seat area, lack of lubrication (rare for ball valves), internal damage.	Depressurize system. Cycle the valve a few times. If stiffness persists, the valve may need to be removed and inspected for internal debris or damage. Replacement may be necessary.
Valve not fully opening/closing	Obstruction, actuator malfunction (if present), internal damage.	Depressurize system. Inspect for external obstructions. If using an actuator, check its power and function. Internal inspection by a professional may be required.

If troubleshooting steps do not resolve the issue, contact Belimo technical support or a qualified service professional.

8. SPECIFICATIONS

Attribute	Detail
Brand	Belimo
Model	B213
Valve Type	2-Way Ball Valve
Connection Size	1/2 inch
Trim Material	Stainless Steel
Flow Coefficient (Cv)	4.7
ASIN	B008HOSBDO
UPC	645220680139
Manufacturer	Belimo
Package Dimensions	27.6 x 12 x 12 inches; 3 Pounds
Date First Available	December 11, 2014

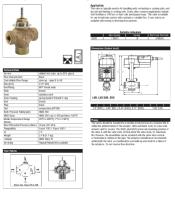
9. WARRANTY AND SUPPORT

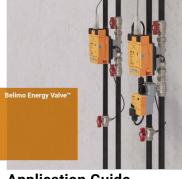
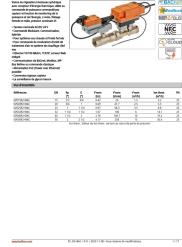
For detailed information regarding the warranty terms and conditions for your Belimo B213 ball valve, please refer to the official Belimo warranty statement provided with your purchase or visit the official Belimo website. For technical assistance, product inquiries, or to locate authorized service centers, please contact Belimo customer support directly.

Contact information can typically be found on the Belimo website or on the product packaging.

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Related Documents - B213

	<p>Belimo G320 3-Way Globe Valve with LVKX24-MFT Actuator: Technical Specifications and Installation Guide</p> <p>Detailed technical specifications, dimensions, application information, and wiring diagrams for the Belimo G320 3-way globe valve and LVKX24-MFT modulating fail-safe actuator. Includes installation notes and product data.</p>
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 Application Guide	<p>Belimo Energy Valve™ Application Guide: Optimize HVAC Systems</p> <p>Comprehensive application guide for the Belimo Energy Valve™, detailing its advanced features, HVAC applications, energy efficiency benefits, and IoT integration for smart building management. Learn about pressure independence, flow control, power control, and Delta T management for optimized HVAC systems.</p>
	<p>BELIMO F680HD Butterfly Valve & GRX24-MFT-T N4 Actuator Technical Data</p> <p>Comprehensive technical data sheets for BELIMO F680HD Butterfly Valve with Lug Types and GRX24-MFT-T N4 Actuator, including specifications, dimensions, materials, accessories, installation notes, and wiring diagrams.</p>
	<p>Belimo EV..R2+BAC Energy Valve Technical Datasheet</p> <p>Detailed technical specifications, features, and installation guidelines for the Belimo EV..R2+BAC Energy Valve. This smart control valve integrates energy metering, flow measurement, and advanced communication protocols like BACnet and Modbus for HVAC applications.</p>
	<p>Belimo 2018 Product Guide and Price List Americas - HVAC Valves & Actuators</p> <p>Explore the comprehensive 2018 Product Guide and Price List from Belimo Americas, featuring innovative HVAC valves, actuators, sensors, and control solutions for building efficiency and comfort. Find detailed product specifications and pricing.</p>
	<p>Belimo UGVL Universal Globe Valve Linkage & LVKX24-MFT Actuator Technical Data</p> <p>Comprehensive technical specifications, dimensions, and wiring diagrams for the Belimo UGVL Universal Globe Valve Linkage designed for LV and SV series actuators, and the Belimo LVKX24-MFT Modulating Fail-Safe Actuator.</p>