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P2 Series

Use & Care Manual

1. INSTALLATION

1. Remove the union nuts and slide them onto the pipe.
2. Please refer to the appropriate connection style sub-section:
   - **a.** For socket style, solvent cement or fuse the end connectors onto the pipe ends. Be sure to allow sufficient cure time before continuing with the valve installation.
   - **b.** For threaded style, thread the end connectors onto the pipe ends.
3. Open and close the valve to ensure that the carrier is at the desired adjustment. If adjustment is required, ensure that the valve is in the closed position then remove the insert tool from the handle. For sizes 2-1/2" to 4", use the tool that accompanies the valve. Line up the moldings on the tool with the slots in the carrier. Tighten or loosen to the desired position then replace the tool on the handle.
4. Ensure that the valve is in the closed position, and that the socket o-rings are properly fitted in their grooves. If anchoring is required, insert the bracket bushings into the bottom of the valve (sizes 1/2" to 2" only). Carefully place the valve in the system between the two end connections and fix if necessary.
5. Tighten the union nut on the side opposite to that which is marked "ADJUST". Hand tightening is typically sufficient to maintain a seal for the maximum working pressure.

   Note: Over-tightening may damage the threads on the valve body and/or the union nut, and may even cause the union nut to crack.

6. Tighten the union nut on the side marked "ADJUST". Tightening the union nuts in this order results in the best possible valve performance due to optimum positioning and sealing of the ball and seat support system.

7. Open and close the valve to again ensure that the cycling performance is adequate. If adjustment is required, place the valve in the closed position, loosen the union nuts, remove the valve from the system, and then continue from Step 3.

8. Engage the Dual Block® system by affixing the molded piece (sizes 1/2" to 2") to the side of the valve body or by turning the red knob (sizes 2-1/2" to 4") to the locked position. This feature will prevent back-off of the union nuts during operation.

2. MAINTENANCE: DISASSEMBLY

1. If removing the valve from an operating system, isolate valve from the rest of the system. Be sure to depressurize and drain the isolated branch before continuing.

2. If necessary, detach the valve from the support structure by disassembling the connections to the optional bracket on the bottom of the valve body.

3. Unlock the Dual Block® system by compressing the two ends of the molded piece (sizes 1/2" to 2") or by turning the red knob (sizes 2-1/2" to 4") to the unlocked position. Loosen both union nuts and drop the valve out of the line. If retaining the socket o-rings, take care that they are not lost when removing the valve from the line.

4. Place the valve in the open position then line up the moldings on the wrench tool (sizes 1/2" to 2") with the slots in the carrier (found on the side marked "ADJUST"). Loosen and remove the carrier.

5. Carefully press the ball out of the valve body, taking care not to score or damage the outer surface.

6. Remove the handle by pulling upwards (sizes 1/2" to 2") or by removing the protective cap, bolt and washer (sizes 2-1/2" to 4").

7. On sizes 2-1/2" to 4", remove the throttling pad by loosening and removing the bolts, washers, nuts, and caps.

8. Press the stem into the valve body from above. On sizes 2-1/2" to 4", remove the lower stem by pushing it into the valve body from below.

9. The stem o-rings, body o-ring, ball seats, ball seat o-rings, and bushings (sizes 2-1/2" to 4") can now be removed and/or replaced.

Note: It is not typically necessary to disassemble the Dual Block® components.

3. MAINTENANCE: ASSEMBLY

Note: Before assembling the valve components, it is advisable to lubricate the o-rings with a water soluble lubricant. Be sure to consult trusted resources to determine specific lubricant-rubber compatibilities.

1. Replace the stem o-rings, body o-ring, ball seat o-rings, ball seats, and bushings (sizes 2-1/2" to 4") in their proper positions.

2. Insert the stem into position from inside the valve body. On sizes 2-1/2" to 4", insert the lower stem as well.

3. On sizes 2-1/2" to 4", replace the throttling pad and affix in position using the bolts, washers, and nuts. Replace the caps over the nuts.

4. Replace the handle. On sizes 2-1/2" to 4", affix using the bolt and washer, then replace the protective cap.

5. Carefully insert the ball into the valve body, taking care not to score or damage the outer surface. Ensure that the valve handle and ball position correspond to the same operating position.

6. Insert the threaded carrier and tighten into the valve body. Use the wrench tool to sufficiently tighten.

7. Place the end connectors into the union nuts, then thread onto the valve body taking care that the socket o-rings remain properly fitted in their grooves.

8. Engage the Dual Block® system by affixing the molded piece (sizes 1/2" to 2") to the side of the valve body or by turning the red knob (sizes 2-1/2" to 4") to the locked position.

4. TESTING & OPERATING

The purpose of system testing is to assess the quality of all joints and fittings to ensure that they will withstand the design working pressure, plus a safety margin, without loss of pressure or fluid. Typically, the system will be tested and assessed in sub-sections as this allows for improved isolation and remediation of potential problems. With this in mind, the testing of a specific installed valve is achieved while carrying out a test of the overall system.

Note: In any test or operating condition, it is important to never exceed the pressure rating of the lowest rated appurtenance in the system.

Important Points

1. Never test thermoplastic piping systems with compressed air or other gases including air-over-water boosters.

2. When testing, do not exceed the rated maximum operating pressure of the valve.

3. Avoid the rapid closure of valves to eliminate the possibility of water hammer which may cause damage to the pipeline or the valve.

The P2 Series offers an optional locking mechanism that prevents unintentional rotation. A padlock can be installed through the handle as an additional safety precaution.

Please contact customer service and technical support with regard to any concern not addressed in this manual.