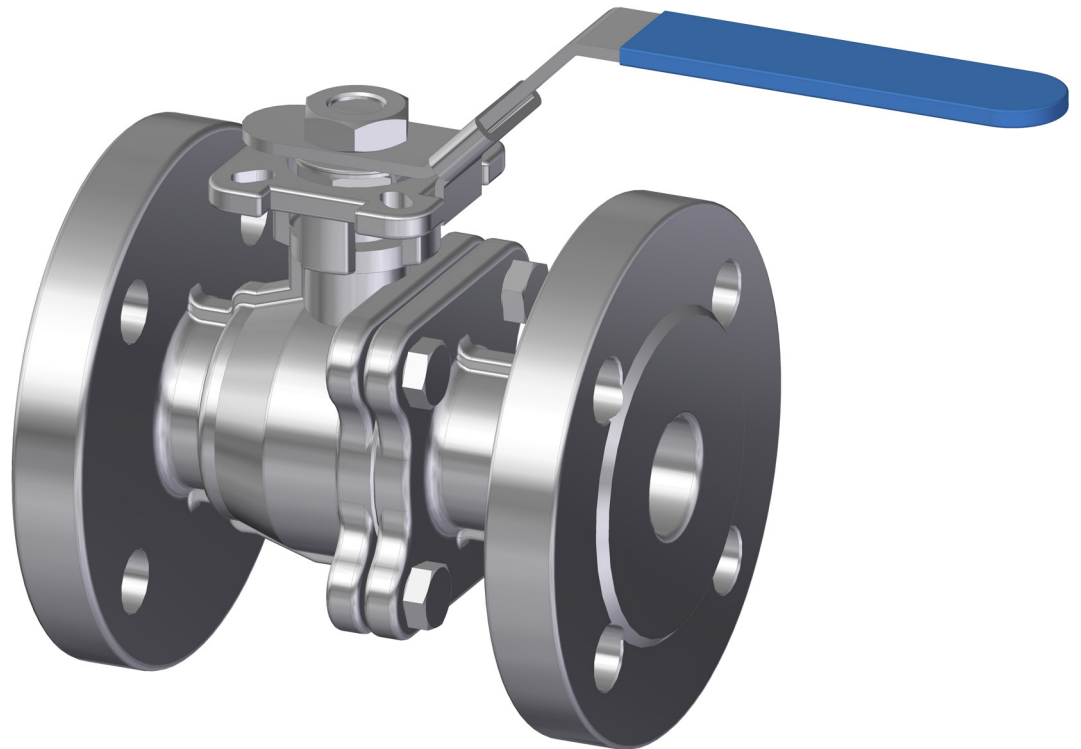


2PC BALL VALVE FLANGED RV-2F

USER MANUAL

1/2" - 8" (DN15-DN200)



APPLICATION

A split-body (2-piece) ball valve which offers a practical solution for various systems, providing reliable on/off or regulating functionality across a 0° - 90° range. The standard handle mechanism affords straightforward manual operation, ideal for quick on/off tasks. For more complex control or regulating tasks, these valves are readily adaptable to direct actuator mounting, thanks to their ISO 5211 compliant design and square shaft/stem - eliminating the need for additional brackets.

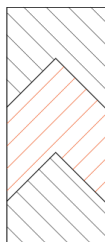
Constructed with CF8M grade stainless steel for the body and cap and F316 grade for the ball, the valve is robust for industrial use and compatible with a diverse range of media. Recognized for their cost-effectiveness, these valves provide a budget-friendly option while ensuring reliable performance.

They are routinely available with DN flanges, with ANSI flanges offered upon request to meet different installation standards.

FEATURES

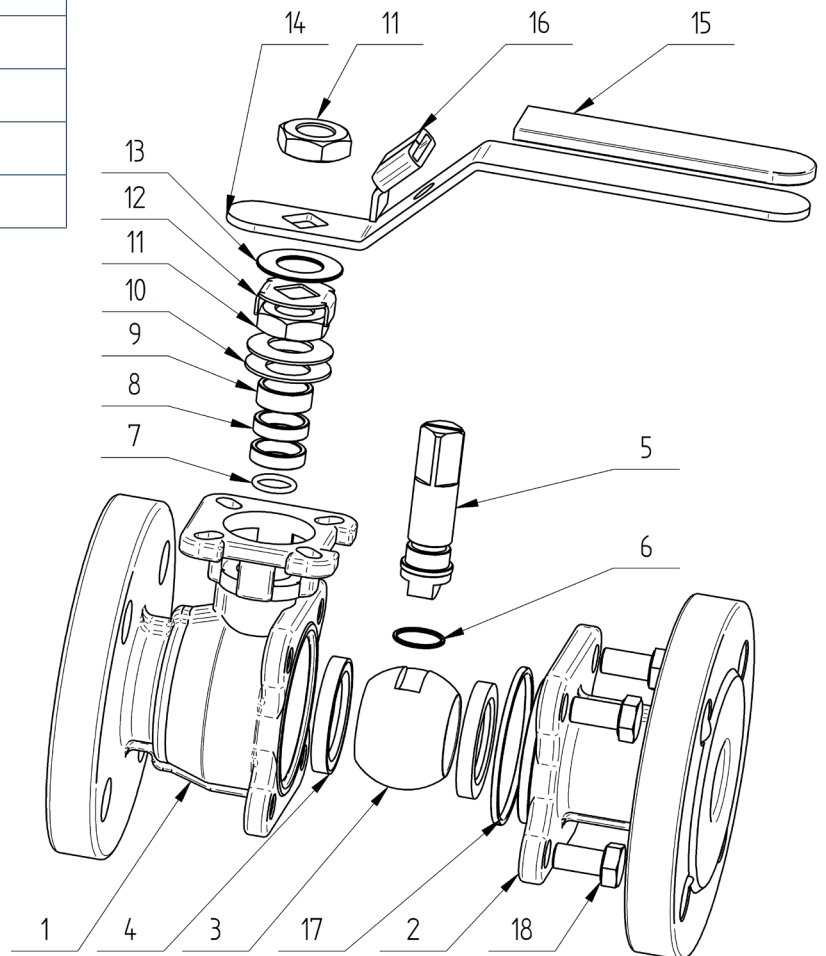
1. Full Bore Design: Offers a large flow passage with minimal resistance to fluid flow, ensuring efficient operation.
2. Quick Actuation: Engineered for rapid opening and closing times, featuring a soft seal that enhances performance and durability.
3. Maintenance-Friendly: The 2-piece design allows for straightforward assembly and disassembly. Maintenance can be performed in-situ, reducing downtime.
4. Safety Assured: Incorporates a blowout-proof stem design, heightening operational safety.
5. Enhanced Sealing: All stainless-steel valves come with V-type packing, designed to improve stability and seal integrity under increased load and temperature conditions.

V-Packing Section View

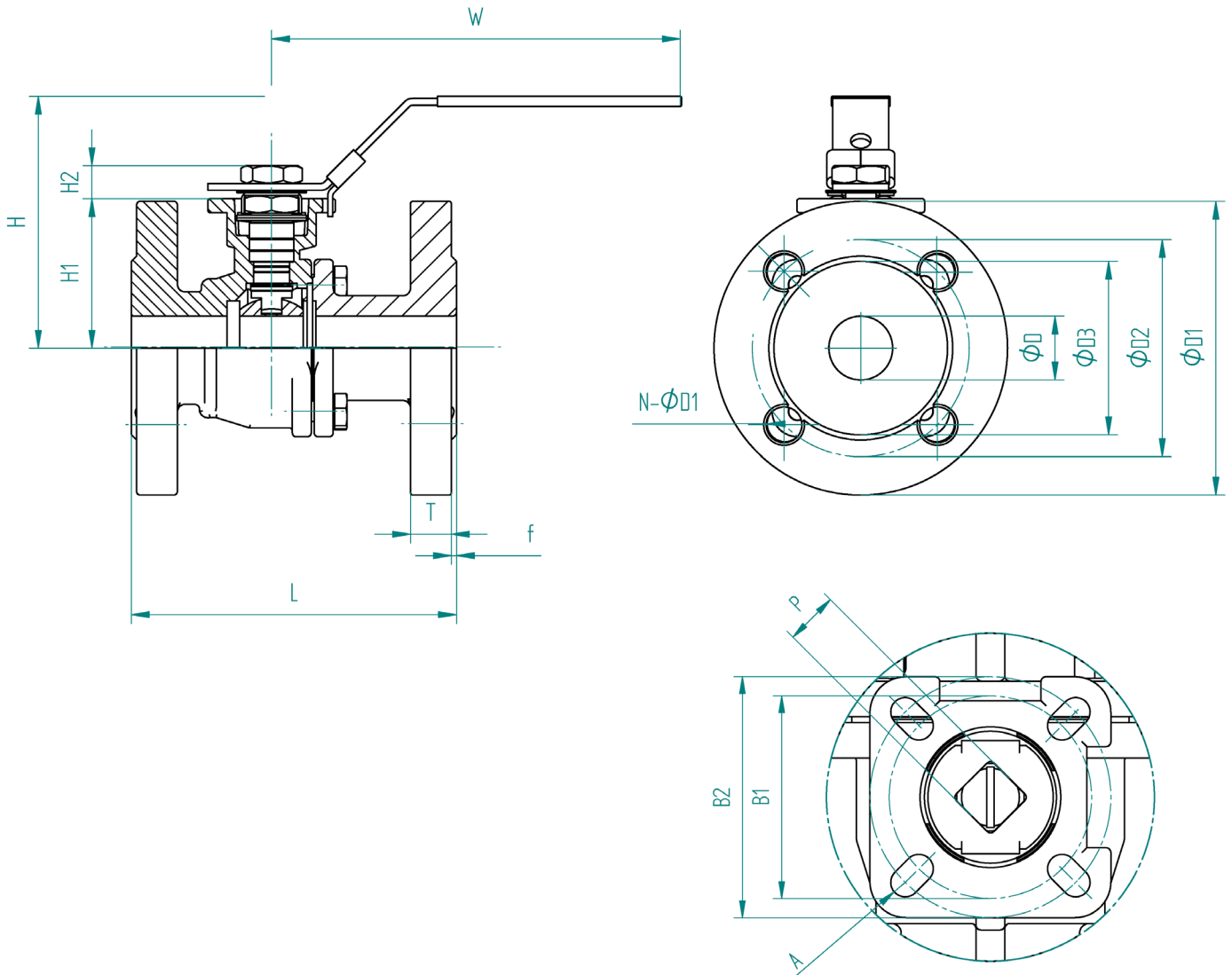


MATERIALS

| Item | Part | Material |
|------|----------------|-----------|
| 1 | Body | A351-CF8M |
| 2 | Cap | A351-CF8M |
| 3 | Ball | SS316 |
| 4 | Ball Seat | PTFE |
| 5 | Stem | SS316 |
| 6 | Thrust Washer | PTFE |
| 7 | O-Ring | VITON |
| 8 | Stem Packing | PTFE |
| 9 | Gland Nut | SS304 |
| 10 | Washer | SS301 |
| 11 | Nut | SS304 |
| 12 | Thrust Washer | SS304 |
| 13 | Washer | SS304 |
| 14 | Handle | SS304 |
| 15 | Handle Cover | Plastic |
| 16 | Locking Device | SS304 |
| 17 | Body Gasket | PTFE |
| 18 | Assembly Bolts | SS304 |

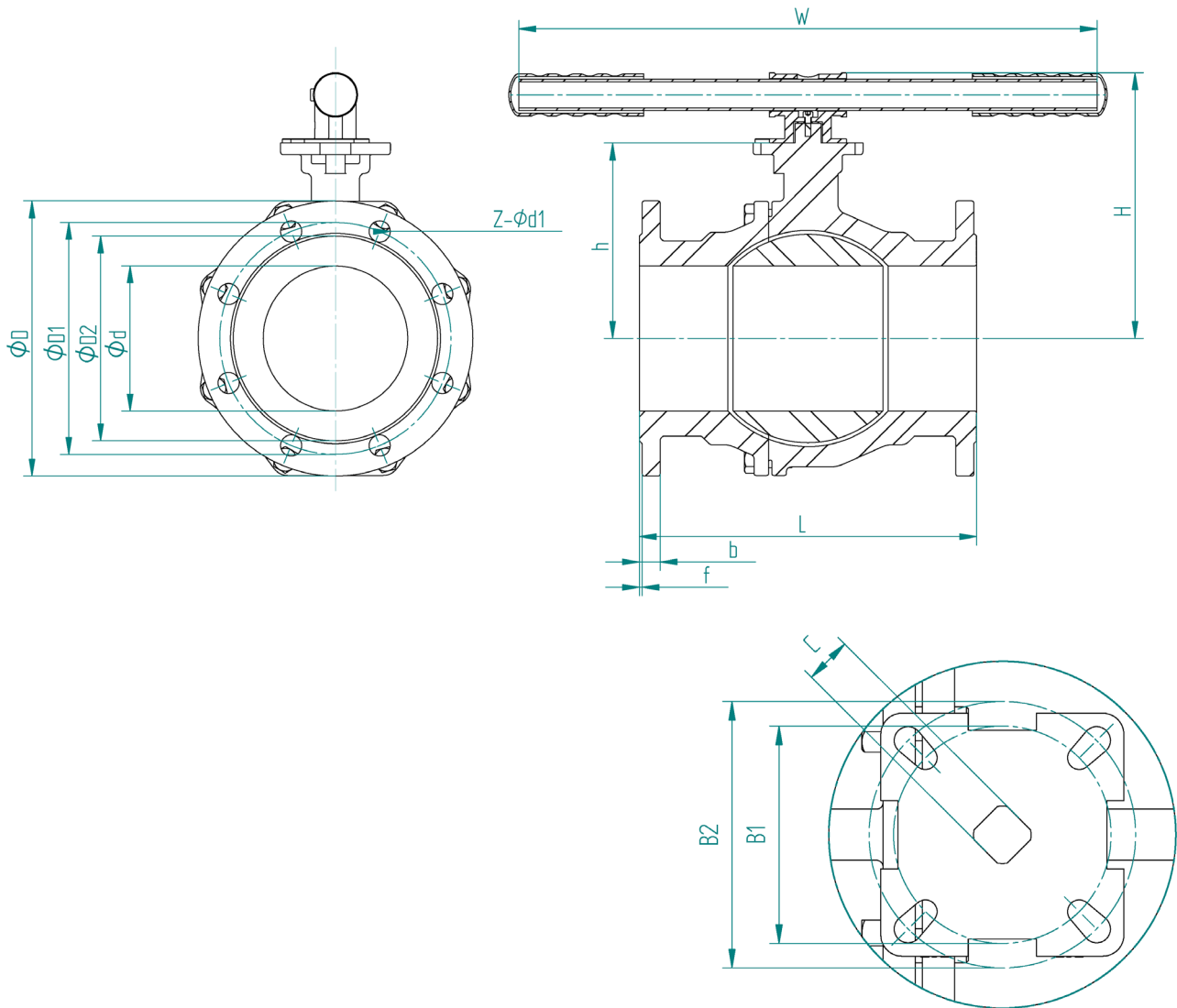


DIMENSIONS DN15 - DN100



| Size | D | L | D1 | D2 | D3 | T | f | H | W | P | B1/B2 | N-ØD1 | H1 | Weight (kg) | A | H2 |
|--------|----|-----|-----|-----|-----|----|---|-----|-----|----|-------------|-------|-------|-------------|-----|----|
| 1/2" | 15 | 115 | 95 | 65 | 45 | 14 | 2 | 80 | 140 | 9 | F03/ F04 | 4Ø14 | 48 | 2.91 | 3 | 8 |
| 3/4" | 20 | 120 | 105 | 75 | 58 | 16 | 2 | 85 | 140 | 9 | F03/ F04 | 4Ø14 | 53 | 3.38 | 3 | 8 |
| 1" | 25 | 125 | 115 | 85 | 68 | 18 | 2 | 95 | 160 | 11 | F04/ F05 | 4Ø14 | 59 | 3.73 | 3 | 11 |
| 1-1/4" | 32 | 130 | 140 | 100 | 78 | 18 | 2 | 108 | 160 | 11 | F04/ F05 | 4Ø18 | 71 | 4.95 | 3 | 11 |
| 1-1/2" | 38 | 140 | 150 | 110 | 88 | 18 | 3 | 114 | 185 | 14 | F05/ F07 | 4Ø18 | 76 | 6.1 | 3.5 | 14 |
| 2" | 50 | 150 | 165 | 125 | 102 | 20 | 3 | 124 | 185 | 14 | F05/ F07 | 4Ø18 | 85 | 8.9 | 3.5 | 14 |
| 2-1/2" | 65 | 170 | 185 | 145 | 122 | 18 | 3 | 148 | 230 | 17 | F07/ F10 | 4Ø18 | 101.5 | 12.8 | 4.5 | 17 |
| 3" | 76 | 180 | 200 | 160 | 138 | 20 | 3 | 158 | 250 | 17 | F07/ F10 | 8Ø18 | 111.5 | 18.9 | 4.5 | 17 |
| 4" | 94 | 190 | 220 | 180 | 158 | 20 | 3 | 191 | 320 | 17 | F07/ F10 | 8Ø18 | 141 | 26.6 | 4.5 | 22 |

DIMENSIONS DN125 - DN200



| Size | d | L | D | D1 | D2 | b | f | h | W | C | B1/B2 | Z- ϕ_{d1} | h | Weight (kg) |
|------|-----|-----|-----|-----|-----|----|---|-----|-----|----|---------|-----------------|-------|-------------|
| 5" | 125 | 325 | 250 | 210 | 188 | 22 | 3 | 260 | 600 | 22 | F10/F12 | 8- ϕ_{18} | 185 | 50.5 |
| 6" | 150 | 350 | 285 | 240 | 212 | 22 | 3 | 278 | 600 | 22 | F10/F12 | 8- ϕ_{22} | 202.5 | 76.8 |
| 8" | 200 | 400 | 340 | 295 | 268 | 24 | 3 | 340 | 800 | 27 | F12/F14 | 12- ϕ_{22} | 257 | 125 |

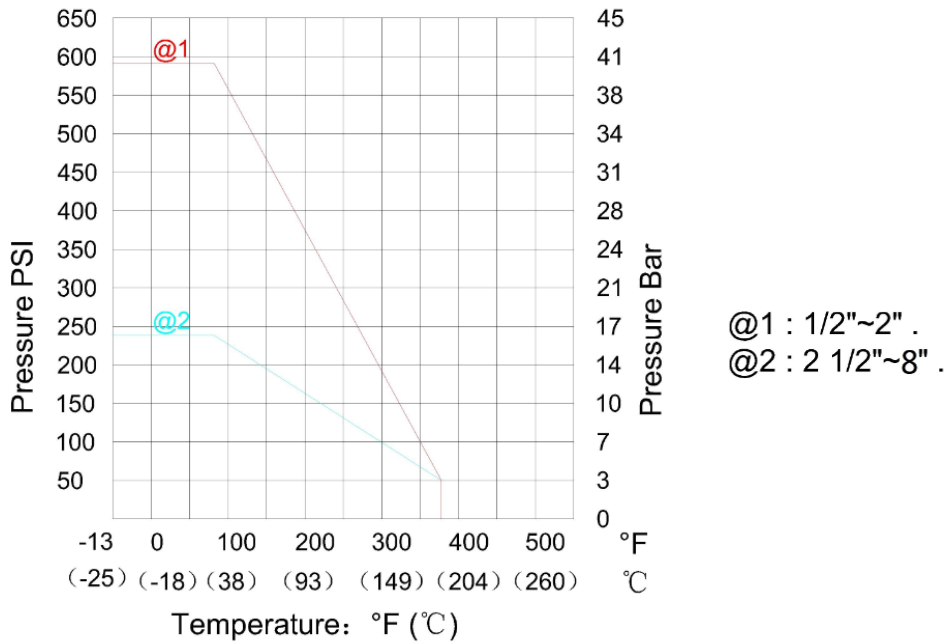
STANDARDS

- Flange: EN 1092-1
- Face to face:
 - DN15 - DN100: DIN 3202-F4
 - DN125 - DN200: DIN 3202-F5
- Top Flange: ISO 5211
- Pressure Test: API598

TECHNICAL PERFORMANCE

| | | |
|---------------------|---|-------------------------|
| Nominal Pressure | PN40 for DN15 - DN50 PN16 for DN65 - DN200 | |
| Shell Test | PN40 | 6MPa |
| | PN16 | 2.4MPa |
| Air seal test | | 0.6MPa |
| Service Temperature | | -25°C-180°C |
| Suitable Media | | Water, steam, oil, etc. |

PRESSURE-TEMPERATURE CHART



BALL VALVE TORQUE

The following torque values are net values excluding a safety factor. Please apply a safety factor of 30%.

| DN | Size | Torque (Nm) |
|-------|------|-------------|
| DN15 | ½" | 5 |
| DN20 | ¾" | 8 |
| DN25 | 1" | 10 |
| DN32 | 1¼" | 14 |
| DN40 | 1½" | 18 |
| DN50 | 2" | 25 |
| DN65 | 2½" | 48 |
| DN80 | 3" | 75 |
| DN100 | 4" | 110 |
| DN125 | 5" | 200 |
| DN150 | 6" | 300 |
| DN200 | 8" | 400 |

Note:

The above torque values were measured during wet (water and other non-lubricating media) on-off use. For dry use (non-lubricating, dry gas media), multiply values by 1.6. For lubricating media use (clean, non-abrasive lubricating media), multiply values by 0.85.

OPERATION

1. Turn the handle clockwise 1/4 circle (90°) to close the valve. Turn the handle counterclockwise 1/4 circle (90°) to open the valve. The direction of the arrow shows "ON" as "open", or "OFF" as "close" on the plastic cover of the handle.
2. When the handle is parallel to the pipeline, the valve is open. When the handle is at a 90° angle to the pipeline, the valve is closed.

FLOW CHARACTERISTICS

| Size | | Kv (m ³ /h) |
|-------|-----|------------------------|
| DN15 | ½" | 19 |
| DN20 | ¾" | 40 |
| DN25 | 1" | 65 |
| DN32 | 1¼" | 110 |
| DN40 | 1½" | 180 |
| DN50 | 2" | 365 |
| DN65 | 2½" | 495 |
| DN80 | 3" | 970 |
| DN100 | 4" | 1620 |
| DN125 | 5" | 2530 |
| DN150 | 6" | 4050 |
| DN200 | 8" | 8650 |

INSTALLATION

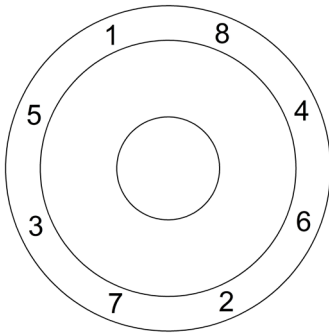
1. In order to prevent damage to the seat and ball surface, the pipeline needs to be flushed, free of dirt, welding residue, etc. Check the inside of the pipe and ball valve before installation. If necessary, clean with clean water and a soft brush.
2. Make sure that the valve pressure class and operating temperature is suitable for the intended use and pipeline settings. Please consult the pressure-temperature chart to verify.
3. Make sure that the flanges fit the valve and insert the valve.
4. The recommended tightening torques are shown in the table below.

BOLT TIGHTENING TORQUES

Recommended Torques:

| Size Range | Bolt Size | Min. Bolt Torque (Nm) | Max. Bolt Torque (Nm) |
|------------------------|-----------|-----------------------|-----------------------|
| ½"-1" (DN15-DN25) | M12 | 20 | 40 |
| 1¼"-5" (DN32-DN125) | M16 | 30 | 100 |
| 6"-8" (DN150-DN200) | M20 | 50 | 200 |

Bolt Tightening Cross Over Pattern



MAINTENANCE

1. Disassembly
 - 1.1 Loosen the nuts, the spring washers and the bolts. Remove the caps, the body gasket, the ball seats and the ball.
 - 1.2 Loosen the nut and spring washer and remove the handle.
 - 1.3 Loosen the gland nut to remove the stem and thrust washer. Remove the stem packing with a suitable tool. If the stem packing will not come off, break it apart to remove it completely.
2. Clean all metal parts with clean water and a soft brush. Clean PTFE (teflon) parts with clean water. Check all parts and replace if necessary.
3. Re-assemble the valve.

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