

TECHNICAL SPECIFICATIONS

3-Way Flanged Ball Valve-Size 1-1/2"

Series 300, 310, 500XP and 610XP



1. SCOPE

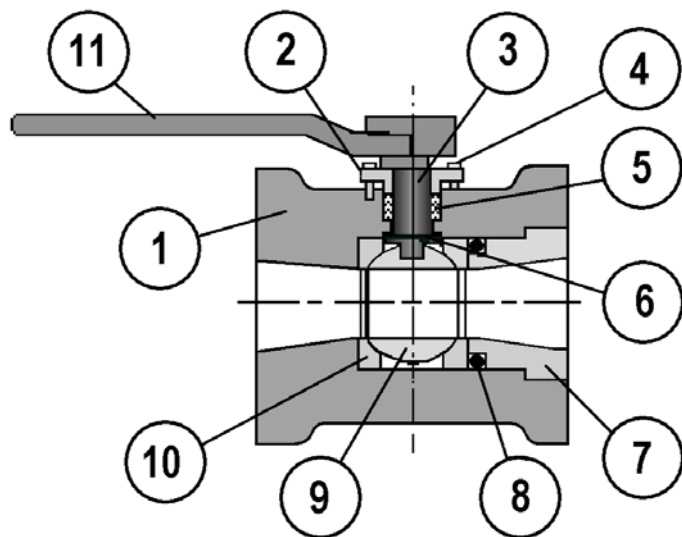
3-Way ball valves for corrosive chemical mixing and diverting service used in construction of pressurized piping systems.

2. SERVICE RATING

Temperature rating from -50 to 300° F as shown on pressure/temperature chart on the reverse side. See Catalog 1000-Supp for temperature limits for specific chemicals.

3. MATERIALS OF CONSTRUCTION

- (1) **Body:** Compression molded thermoset composite per Materials table, page 2.
- (2) **Gland:** Hastelloy-C with integral locking plate.
- (3) **Stem:** Hastelloy-C metal insert with molded composite on all wetted surfaces.
- (4) **Gland Bolts:** Hastelloy-C
- (5) **Stem Packing:** PTFE V-Rings.
- (6) **Thrust Washer:** Glass and carbon-filled PTFE
- (7) **Insert:** Compression molded graphite and novolac epoxy resin
- (8) **Seals:** PTFE-coated Viton O-ring.
- (9) **Ball:** Compression molded composite per Materials Table, page 2, "T" or "L" Port designs
- (10) **Seats:** Virgin PTFE. Glass-filled and cavity-filler seats available.
- (11) **Handle:** PPA-FRP All handles have locking provision. Gear operator and actuation available.



4. DESIGN

- Valves shall be flanged and conform to the face-to-face dimensions of ANSI/ASME B16.10.
- Valve shall have integral 4-bolt mounting pads and threaded holes for actuator mounting.
- Stems shall be blowout proof.
- Valves shall have a regular port with ball dimensions as shown on Page 2.
- Flanges shall be flat-faced with serrated finish to allow installation in metallic, lined metal, FRP, and thermoplastic piping systems.
- Flange bolt sizes and spacing shall conform to ANSI B16.5 Class 150. DIN, JIS and BS shall be available.
- Disassembly, maintenance and replacement of any parts shall not require machining or bonding.
- Ball and stem strength shall be sufficient to operate with abrasive particles filling the cavity.

5. QUALITY ASSURANCE

- The Manufacturer's facility shall be certified to ISO 9001 or equivalent. The Manufacturer shall be certified to the European Pressure Equipment Directive (PED) and the "CE" mark shall be affixed to each valve label.
- Each valve shall be hydrostatically shell tested at no less than 1.43x its rated cold working pressure for 3 minutes.
- Each valve shall be seat tested with air or water at 20 and 80 psig. No visible leakage shall be permitted for the duration of the tests.

6. PACKING AND SHIPPING

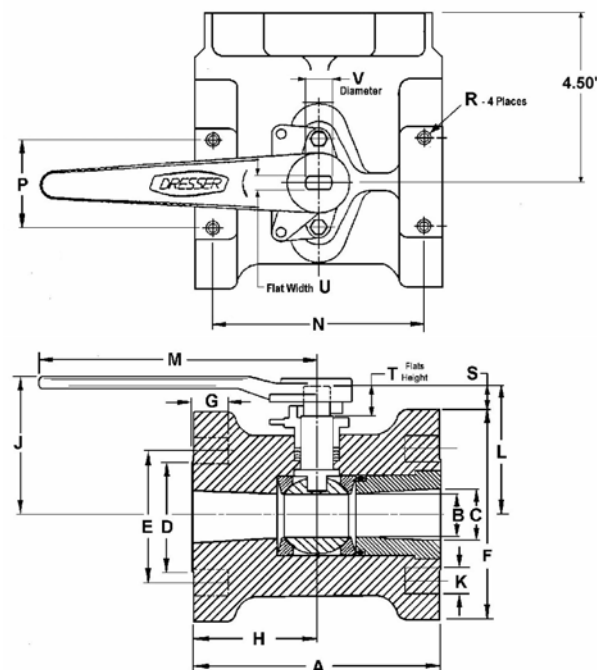
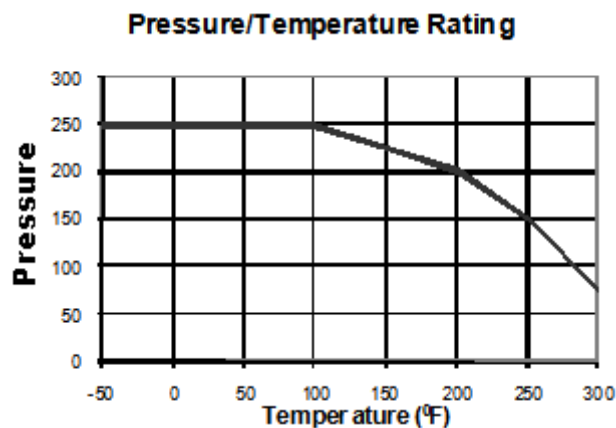
Valves shall be shipped in a closed position with both ends capped to exclude dirt and properly boxed to avoid damage. Each valve shall be marked with the manufacturer, valve size, model, serial number, and valve component designations.

7. AVAILABILITY

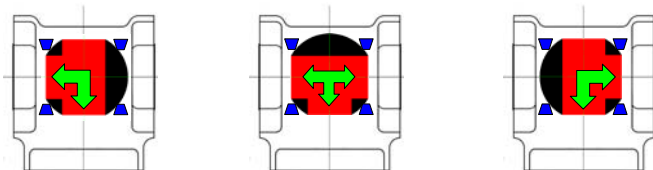
Valves meeting this specification are available from:

Nil-Cor[®], LLC
4855 Broadmoor Ave.
Kentwood, MI 49512
P: 616-554-3100
F: 616-554-5623
www.nilcor.com

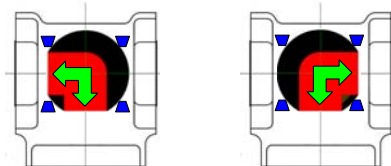
3-Way Flanged Ball Valve Dimensions And Technical Specifications, Size 1-1/2" only



T-Port Design



L-Port Design



| Body and Ball Materials | |
|-------------------------|----------------------|
| Model No. | Body Material |
| 300 | Graphite Fiber/VE |
| 310 | Glass Fiber/VE |
| 500XP | Graphite Fiber/Epoxy |
| 610XP | Glass Fiber/Epoxy |

| DIMENSIONS | | | | | | | | | | | | | |
|------------|------|------|------|------|------|------|------|------|------|-----|---------|------|------|
| SIZE | A | B | C | D | E | F | G | H | J | K | K (QTY) | L | M |
| 1-1/2" | 6.50 | 1.25 | 1.50 | 3.00 | 3.88 | 5.00 | 1.00 | 3.25 | 3.73 | .62 | 4 | 3.55 | 6.25 |

| Actuation Mounting Dimensions | | | | | | | | Actuation Torque (in-lbs.) | | | | |
|-------------------------------|------|------|--------------------------|------|------|-----------------|-----------------|----------------------------|-----------------------|-----|-------------|--------|
| Valve | | | | | | + .000- .010 | + .000- .010 | Valve Running | Breakaway | | Flow Coeff. | Weight |
| Size | N | P | R x (deep ¹) | S | T | U | V | Torque ⁽²⁾ | Torque ⁽³⁾ | | Max. Cv | (lbs.) |
| 1-1/2 | 5.62 | 1.75 | 5/16 - 18 x 1/2 | 1.05 | 0.70 | 0.375 | 0.500 | 125 | 190 | 230 | 115 | 6 |

- Minimum thread engagement required to develop design joint strength on the actuator mounting pad (composite valve body).
- Flowing fluid, ball in motion between 0 and 90 deg.
- Maximum breakaway torque for clean liquid service.