

# TECHNICAL SPECIFICATIONS

## Threaded-End Ball Valves      Sizes 1/2" - 2"

### Series 410 Fiberglass Reinforced Polysulfone



#### 1. SCOPE

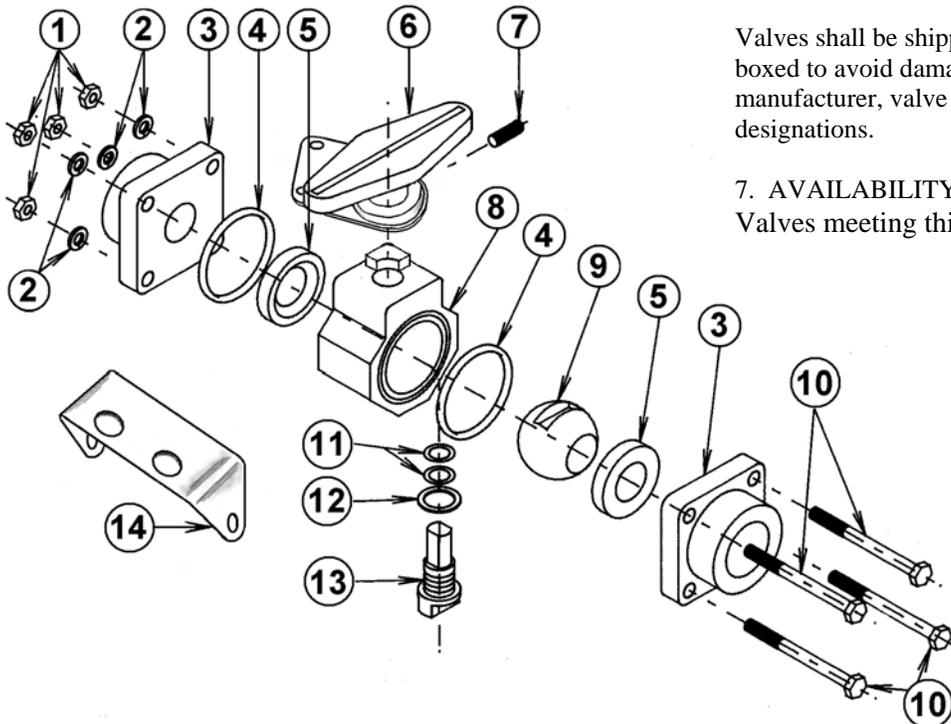
Threaded-end ball valves for corrosive chemical service used in construction of pressurized piping systems.

#### 2. SERVICE RATING

Temperature rating from -50 to 250° F as shown on pressure/temperature chart on the reverse side. See Catalog 1000 for temperature limits for specific chemicals.

#### 3. MATERIALS OF CONSTRUCTION

- (1) **Nuts:** 18-8 Stainless Steel.
- (2) **Lockwashers:** 18-8 Stainless Steel.
- (3) **End Cap:** Fiberglass and polysulfone resin.
- (4) **End Cap Seals:** Viton O-rings.
- (5) **Seats:** Self-relieving virgin or glass-filled PTFE.
- (6) **Handle:** Nylon 6/6. All handles have locking provision.
- (7) **Set Screw:** 18-8 Stainless Steel.
- (8) **Body:** Fiberglass and polysulfone resin.
- (9) **Ball:** Fiberglass and polysulfone resin.
- (10) **Tie-Bolts:** 18-8 Stainless Steel.
- (11) **Stem O-ring Seals:** Viton O-rings.
- (12) **Thrust Washer:** Glass and carbon-filled PTFE.
- (13) **Stem:** Hastelloy-C metal insert with molded fiberglass/polysulfone composite on all wetted surfaces.
- (14) **Locking Plate:** Epoxy-painted steel.



#### 4. DESIGN

- Threaded ends shall conform to NPT standards.
- Stems shall be blowout proof.
- Valves shall have a regular port with ball dimensions as shown on Page 2.
- The valve shall be capable of being removed from the line for maintenance without cutting the line.
- 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).
- Each valve shall have the body shell and stem seal tested with air at no less than 80 psig for 3 minutes. No visible leakage shall be permitted.
- Each valve shall be seat tested with air at 20 and 80 psig. The seat test pressure shall be applied successively to each end of the closed valve with the other end open to the atmosphere. No visible leakage shall be permitted for the duration of the tests.

#### 6. PACKING AND SHIPPING

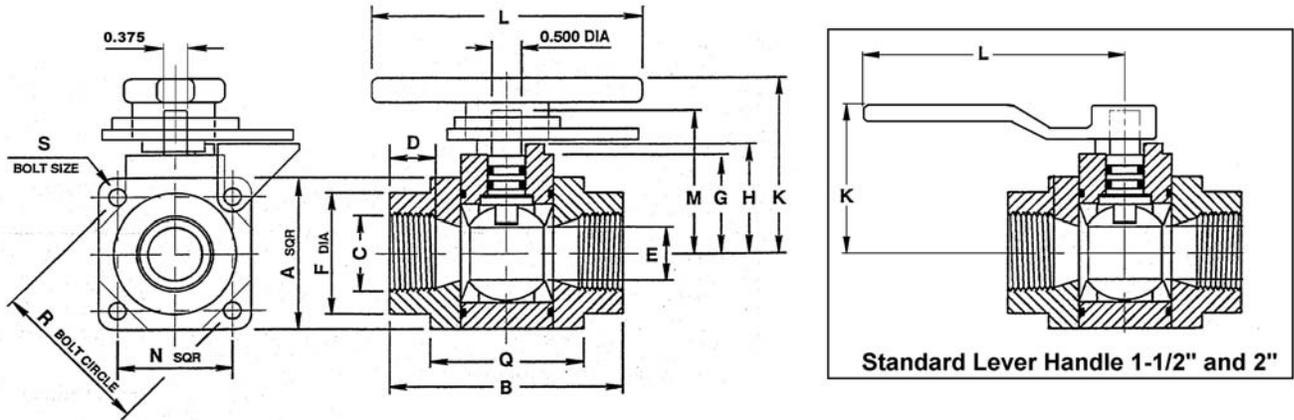
Valves shall be shipped in a closed position and properly boxed to avoid damage. Each valve shall be marked with the manufacturer, valve size, model, and valve component designations.

#### 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](http://www.nilcor.com)

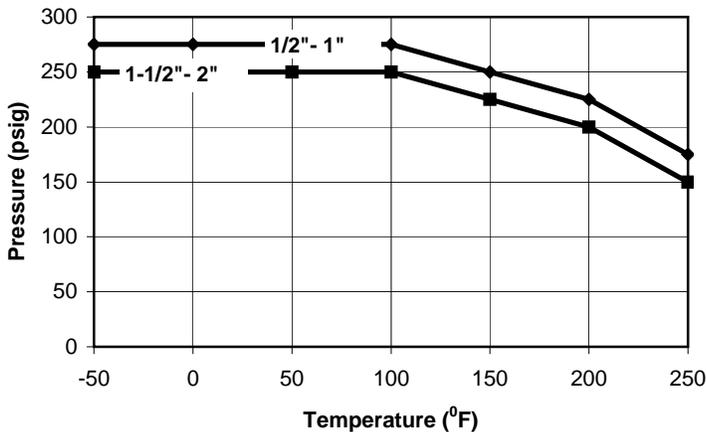
## Threaded End Ball Valve Dimensional Data and Operating Torque



| Valve Size | A    | B    | C (NPT) | D    | E    | F    | G    | H    | K    | L    | M    | N    | Q    | R    | S Body Bolts | Body Bolt Torque (in-lbs) | Actuation Torque (in-lbs) |
|------------|------|------|---------|------|------|------|------|------|------|------|------|------|------|------|--------------|---------------------------|---------------------------|
| 1/2"       | 2.50 | 3.88 | 1/2     | 0.56 | 0.66 | 2.00 | 1.63 | 1.88 | 3.10 | 4.50 | 2.36 | 1.88 | 2.54 | 2.65 | 1/4-20       | 25                        | 140                       |
| 3/4"       | 2.50 | 3.88 | 3/4     | 0.63 | 0.87 | 2.00 | 1.63 | 1.88 | 3.10 | 4.50 | 2.36 | 1.88 | 2.54 | 2.65 | 1/4-20       | 25                        | 140                       |
| 1"         | 2.50 | 3.88 | 1       | 0.75 | 0.88 | 2.00 | 1.63 | 1.88 | 3.10 | 4.50 | 2.36 | 1.88 | 2.54 | 2.65 | 1/4-20       | 25                        | 140                       |
| 1-1/2"     | 3.50 | 5.13 | 1-1/2   | 0.78 | 1.25 | 2.75 | 2.38 | 2.63 | 3.44 | 6.25 | 3.11 | 2.50 | 3.53 | 3.54 | 3/8-16       | 50                        | 190                       |
| 2"         | 4.38 | 5.63 | 2       | 0.81 | 1.50 | 3.25 | 2.94 | 3.19 | 4.00 | 6.25 | 3.81 | 3.00 | 4.14 | 4.24 | 1/2-13       | 100                       | 230                       |

Note: T-Handle standard on 1/2" - 1". Lever handle standard on 1-1/2" and 2"

### TEBV Pressure-Temperature Rating



| Cv Values and Weight Chart: |     |     |     |     |     |
|-----------------------------|-----|-----|-----|-----|-----|
| Valve Size                  | 1/2 | 3/4 | 1   | 1.5 | 2   |
| Cv                          | 9   | 30  | 29  | 44  | 52  |
| Weight (lbs)                | 1.5 | 1.5 | 1.5 | 3.5 | 5.0 |